



EASTERN MICHIGAN UNIVERSITY
UNDERGRADUATE CATALOG
1992-1993

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**EASTERN MICHIGAN UNIVERSITY
BULLETIN
1992-93**

**THE UNDERGRADUATE CATALOG
133RD ANNUAL EDITION**

ACCREDITED BY:
The North Central Association of Colleges and Secondary Schools
Dr. Patricia Thrash, Director
159 North Dearborn
Chicago, Illinois 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.

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

1991-92 ACADEMIC CALENDAR

FALL SEMESTER, 1991

Aug. 31, Saturday Freshman residence hall move-in day
 Aug. 31, Sept. 1 & 2, Saturday,
 Sunday & Monday Freshman Orientation
 Sept. 2 & 3, Monday &
 Tuesday Upperclass residence hall move-in days
 Sept. 4, Wednesday Classes begin
 Nov. 27, Wednesday No 5 p.m. or 7 p.m. classes
 Nov. 28-Dec. 1, Thursday through Sunday Thanksgiving recess
 Dec. 2, Monday Classes resume
 Dec. 14 & 16-19, Saturday &
 Monday through Thursday Final examinations
 Dec. 19, Thursday Fall session closes
 Dec. 21, Saturday (afternoon) Fall Commencement

WINTER SEMESTER, 1992

Jan. 5, Sunday Move-in day and Winter Orientation
 Jan. 6, Monday Classes begin
 Feb. 23-March 1, Sunday through Sunday Winter recess
 March 2, Monday Classes resume
 April 5, Sunday Honors Convocation
 April 17-19, Friday through Sunday Spring recess
 April 20, Monday Classes resume
 April 21-25, Tuesday through Saturday Final examinations
 April 25, Saturday Winter session closes
 April 26, Sunday (afternoon) Winter Commencement

SPRING SESSION, 1992

May 4, Monday Move-in day
 May 5, Tuesday Classes begin
 May 25, Monday Memorial Day (no classes)
 June 23 & 24, Tuesday & Wednesday Final examinations
 June 24, Wednesday Spring session closes

SUMMER SESSION, 1992

June 28, Sunday Move-in day
 June 29, Monday Classes begin
 July 3, Friday Independence Day (no classes)
 Aug. 6 & 7, Thursday & Friday Six-week final examinations
 Aug. 18 & 19, Tuesday
 & Wednesday Seven and one-half week final examinations
 Aug. 21, Friday Summer session closes

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. 21-28, Sunday through Sunday Winter recess
 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

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 cur-

ricula 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 25,000 in the fall of 1989.

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 worldwide 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 at the back of the catalog. A map of Ypsilanti and the surrounding area is printed inside the back cover.

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 nontraditional 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 James Clifton ('96), Ypsilanti, vice-chairman; Robert A. DeMattia ('94), Northville; Anthony A. Derezhinski ('96), Ann Arbor, chairman; Thomas Guastello ('92), Grosse Pointe Farms; Philip Incarnati ('94), Ypsilanti; Richard N. Robb ('92), Ypsilanti; Robin W. Sternbergh ('98), Bloomfield Hills; and Gayle P. Thomas ('98), Dearborn.

Policies complied with by the University affirm the admission and participatory rights of all individuals, regardless of sex, 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; Management; Marketing; Operations Research and Information Systems.

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, exclu-

sive 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 139).

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 degree that is different from their first degree; however, they may pursue additional majors or minors at the undergraduate level. 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.

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 for posting to the student's record.

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
		4.5	FA 108 (3)		
	AP Studio Art: General Portfolio or drawing portfolio <i>NOTE: An additional three credit hours may be awarded to art majors and minors through departmental evaluation of art portfolio.</i>	3	FA 179 (3) or FA 379 (3)	See department head	
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 123	with special permission
		58	CHM 121 (3) and CHM 123 (3)	CHM 281	
	AP Chemistry	3	CHM 121 (3)	CHM 123	
		4	CHM 121 (3) and CHM 123 (3)	CHM 281	
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 102 (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	
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)	GER 221	
	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	
	College French II	45	FRN 122 (3)	FRN 221	
	College German I	44-53	GER 121 (3)	GER 122	
College German II	54	GER 122 (3)	GER 221		
College Spanish I	44-53	SPN 121 (3)	SPN 122		
College Spanish II	54	SPN 122 (3)	SPN 201		
History	CLEP American History I	50	HST 123 (3)	Most courses in the department	yes
	American History II	50	HST 124 (3)		
	Western Civ. I	50	HST 101 (3)		
	Western Civ. II	50	HST 102 (3)		
	AP United States History	3	HST 123 (3)	HST 124 (3)	
	AP United States History	4.5	HST 123 (3) and HST 124 (3)		
	AP European History	3	HST 101 (3)	HST 102	
	4.5	HST 101 (3) and HST 102 (3)			
Management	CLEP Intro to Business Management	50	MGT 382 (3)	MGT 386	yes
Marketing	CLEP Intro to Business Law	55		LAW 293 (3)	yes
Mathematics	CLEP College Algebra	58	MTH 105 (3)	MTH 118, MTH 119 or MTH 120 or MTH 122	yes
	Trigonometry	58	MTH 107 (2)	MTH 120 or MTH 122	
	Calculus**	55	MTH 120 (4)	MTH 121	
	AP Calculus AB	3	MTH 120 (4)	MTH 121	
	Calculus BC	3	MTH 120 (4) and MTH 121 (4)	MTH 122 or MTH 223	
Music	AP Music Listening and Literature	3	MUS 107 (2)		with special permission
	Music Theory	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	PLS 211 (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
Teacher Education	CLEP Human Growth and Dev.**	50	EDP 322/325 (4)		with special permission

UNIVERSITY HONORS PROGRAM

Director: Robert Holkeboer
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. Honors students and faculty serve on the Honors Advisory Council, which provides input to the director on all aspects of the academic program.

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

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 1991 levels are:

1991-92 Michigan Resident Rates

Undergraduate courses lower level (100-200)\$70
 upper level (300-400)\$74.25
 Graduate courses (500-600 level).....\$100

1991-92 Non-Resident Rates

Undergraduate courses lower level (100-200)\$178
 upper level (300-400)\$187
 Graduate courses (500-600 level).....\$235

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 non-resident 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.

Billing addresses only should be changed at the Student Accounting office.

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

The optional installment payment plan is offered in the fall and winter semesters only and is applicable only to tuition and room and board. A minimum of 50 percent must be paid initially and the remainder during the eighth week of the semester. An installment service fee of \$20 is assessed with the first installment payment and a late payment fee of \$20 per month to a maximum of \$100 per semester or session is assessed on past-due balances or if the second payment is not received by the due date.

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 in to 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 have 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

Program adjustments may be made prior to the beginning of classes without penalty. At least 50 percent of the increased tuition resulting from adjustments may be required at the time of adjustment prior to the fall and winter semesters, 100 percent in the spring and summer sessions. Actual dates and requirements are printed in the Class Schedule Bulletins.

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 Bulletins.

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.

An appeals policy exists for students or parents who feel that individual circumstances warrant exceptions

from the credit adjustment or University withdrawal adjustment policies above. The process is:

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 1991-92 estimated fee schedules at the end of this section.

A Health Care fee is charged at the rate of \$1.25 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 1990-91 motor vehicle rates are as follows:

Permit Type	1991/92 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	1991-92 Amount
Tuition for 15 hours	
Michigan resident.....	\$1,050
Out-of-state resident	\$2,670
Registration fee—All students	\$40
(Spring/Summer)	\$30
Student Government fee—All students	\$2
Health care fee—\$1.75 per credit hour	\$26.25
Student activity/facility fee	
<i>Fall or Winter</i> —students taking 4 or more credits	\$47
<i>Spring or Summer</i> —all students	\$23.50
Music fee—Music majors	\$60
Other students taking an applied music lesson	\$30-\$60
Residence hall room and board (double room with 20-meal plan).....	\$1,834.50

STUDENT EXPENSES

Estimated Academic Year Costs (Residence Hall and Commuter Students)

The following budget represents typical expenses for a single dependent student, Michigan or Ohio resident, taking 15 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	\$2,300
Books and academic supplies	\$500
Residence hall room and board	\$3,900
Total direct educational costs	\$6,700
Estimated additional costs of personal, transportation, and miscellaneous expenses	\$1,800

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 1992-93 costs):

Single dependent student (Residence hall with 20-meal plan)	\$8,500
Single dependent student (Commuting from home)	\$6,800
Single dependent student (Apartment)	\$8,500

The above budgets are based on Financial Aid average costs for 1991-92 with projected increases for 1992-93.

FINANCIAL AID

Four types of financial aid are available to Eastern Michigan University undergraduate students: 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 1991-92 academic year, more than 10,000 students received approximately \$30 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 \$4,000 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. Some student loans are not based on need and are available to parents of undergraduate students and to independent undergraduate students.

Application Forms:

Federally Approved Needs Analysis Forms: All students applying for financial aid based on need must complete either the Family Financial Statement (FFS) by American College Testing or the Financial Aid Form (FAF) by College Scholarship Service. These forms are available from high school counselors, community colleges' financial aid offices and Eastern Michigan's Office of Financial Aid.

Applications for academic scholarships and awards 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.

Pell Grants: These federally funded grants are available to undergraduate students who are enrolled on at least a half-time basis (6 credit hours) and have demon-

strated 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 \$150 to \$2,400 per year.

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 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 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.

College 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 work study position is determined by the skills required for the job and the student's experience. Federal law requires at least minimum wage.

Michigan Work Study: This state-funded work program provides part-time employment on the college campus or in private, profit-making businesses if the work is directly related to the student's career plans.

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 \$9,000. 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. Scholarships 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 last 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 \$29,000 (\$7,300/year for four years). To compete for the Presidential Scholarship, a student must be a high school senior with a minimum 3.65 GPA and a 25 ACT/1050 SAT minimum score. Students are invited to participate in a competitive examination on campus held in late 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. Ten students are awarded these Presidential Scholarships. 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 3.65 GPA and a 25 ACT/1050 SAT minimum score, compete in the Presidential Scholarship Competition, and score in the top 100. Some awards are available to students who do not compete in the Presidential Scholarship Competition and have a minimum 3.75 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. Transfer students and 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 annual funding available.

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 and demonstrated leadership activities. An upperclass student must have a mini-

mum 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, 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 a federally approved needs analysis form (either the Financial Aid Form by CSS or the Family Financial Statement by ACT). Eligible students 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.

Stafford Loans: This federally approved loan program provides funds through banks, savings and loan associations, and credit unions for 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 and sophomore years; up to \$4,000 per year for the next three years of undergraduate education and up to \$7,500 per year for graduate study. The cumulative maximum for an undergraduate degree is \$17,250. Student borrowers must begin repaying the loan six months after graduation, withdrawal, or dropping

below half-time enrollment status. Interest is at 8 percent for the first four years, 10 percent for the fifth through the tenth year of repayment. The loan amount is based on the grade level, previous student loan indebtedness, and financial need.

Three additional programs are available to Michigan residents—Michigan Adult Part-time Grant, Michigan Educational Opportunity Grant, and Michigan College 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; 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 (MAPIG) 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 (MEOG) 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 (MWSP) is a need-based program that provides work opportunities for undergraduates. Both nonprofit 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, P.O. Box 30026 Lansing, MI 48909, or contact Carol Kiojima 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, 300 E. Michigan Avenue, 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. Three and one-half, three, two and one-half, and two-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, and (3) qualify academically (minimum 2.0 "C" undergraduate, 3.0 "B" graduate). 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, Briggs 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; have repaid previous loans satisfactorily, and be in good academic standing.

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.
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

Grade	Significance	Grade points per semester hour
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, correspondence, 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.

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 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.
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 associate director, Academic 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.

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.

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 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 academic probation 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.

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 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 vice president for academic affairs.

Students with an approved retroactive withdrawal do not receive any consideration for tuition refund. Grades of "W" will be posted on their official academic records.

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 in EMU's five colleges as listed below:

DEPARTMENT NAME/SUBJECT AREA	PREFIX
Academic Affairs Division	AAD
African-American Studies	AAS
Accounting	ACC
Applied Music	AMU
Anthropology	ANT
Astronomy	AST
Associated Health Professions	AHP
Athletics	ATH
Business Education	BE
Biology	BIO
Botany	BOT
Chemistry	CHM
Classical Languages	CLA
Clinical Laboratory Sciences	CLS
College of Business	COB
College of Health and Human Services	HHS
Computer Science	CSC
Communication and Theatre Arts	CTA
CTA Communication	CTC
CTA Drama/Theatre for the Young	CTD
CTA Oral Interpretation	CTO
CTA Theatre Arts	CTR
CTA Speech	CTS
CTA Telecommunications and Film	CTF
CTA Activity	CTY
Curriculum and Instruction	CUR
Dance	DAN
Earth Science	GES
Economics	ECO
Educational Leadership	EDL
Educational Media	EDM
Educational Psychology	EDP
Educational Technology	EDT
English as a Second Language	ESL
Student Teaching	EDU
English	ENG
Elementary Science	ESC
English as a Second Language	ESL
Fine Arts (Art)	FA
Finance	FIN
Foreign Language	FLA
French	FRN
Guidance and Counseling	G&C
Geography	GEO
Geology	GLG
German	GER
Gerontology	GRT
Greek	GRK
Health Administration	HAD
Health Education	HED
Historic Preservation	GHP
History	HST
Human, Environmental, and Consumer Resources	HEC

HEC Dietetics	DTC
HEC Hospitality Management	HM
HEC Family and Consumer Science	FCS
HEC Fashion Merchandising	FM
HEC Interior Design	IDE
Interdisciplinary Technology	IDT
Industrial Education	IE
Industrial Technology	IT
Japanese	JPN
Journalism	JRN
Language	LNG
Latin	LAT
Law	LAW
Linguistics	LIN
Literature	LIT
Management	MGT
Microbiology	MIC
Marketing	MKT
Military Science	MS
Mathematics	MTH
Music	MUS
Nursing	NUR
Operations Research and Information Systems	ORI
Occupational Therapy	OT
Physical Education	PED
Physical Education Activity—General	PEG
Physical Education Activity—Majors	PEP
Philosophy	PHI
Physics	PHY
Political Science	PLS
Psychology	PSY
Reading	RDG
Recreation	REC
Real Estate	RES
Special Education—Emotionally Impaired	SEI
Social Foundations of Education	SFD
Special Education—General	SGN
Special Education—Hearing Impaired	SHI
Special Education—Learning Disabled	SLD
Special Education—Speech and Language Impaired	SLI
Special Education—Mentally Impaired	SMI
Sociology	SOC
SOC Criminology	CRM
Special Education—Physically and Otherwise Health Impaired	SPI
Spanish	SPN
Special Education—Visually Impaired	SVI
Social Work	SWK
Teaching English as a Second Language (TESOL)	TSL
Women's Studies	WMS
Zoology	ZOO

Prefix changes in some departments (Human, Environmental, and Consumer Resources; Sociology, Anthropology, and Criminology; and Communications and Theatre Arts) may not yet be reflected in the University Bulletin. In such cases, use the department prefix as the course prefix.

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 a minimum of 40 semester hours in 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.

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, theatre arts.

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 36.

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 may request 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).

2. A course in speech communication

Complete one of the following courses:

- CTS 121 Fundamentals of Speech (2 sem hrs.)
- CTS 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 324 Principles of Technical Communication

ENG 225 Intermediate English Composition

ENG 226 Report and Research Writing

3b. An upper level course in speech communication

Complete one of the following courses:

CTC 224 Public Speaking

CTC 225 Listening Behavior

CTC 226 Nonverbal Communication

CTC 227 Interpersonal Communication

*CTC 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 123/124 Beginning Ancient Greek

FRN 121/122 Beginning French

FRN 233/234 Intermediate French

GER 121/122 Beginning German

GER 233/234 Intermediate German

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 Elementary Social Statistics

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.

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 Introduction to Business Information Systems

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 Elementary Teachers
 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:
 HST 101 History of Western Civilization to 1648
 HST 102 History of Western Civilization, 1648-World War I
 HST 103 Twentieth Century Civilization
 HST 106 History of Non-Western Civilization
 HST 123 History of the U.S. to 1877
 HST 124 History of the U.S., 1877-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 36.

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:
HST 102 (follows 101) History of Western Civilization: 1648-World War I
HST 103 (follows 102) Twentieth Century Civilization
HST 124 (follows 123) History of the U.S.: 1877-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 III (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 African American Studies: An Introduction
*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 People and 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
*HST 305 History of Indians in the United States
*HST 315 History of Black Americans
*HST 336 History of Women in the United States and Great Britain, 1800 to the Present
*HST 341 The Middle East, 1798 to the Present
*HST 342 North Africa, 1798 to the Present
*HST 348 Sub-Saharan Africa in the Twentieth Century
*HST 356 Latin America: National Period
*HST 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 36.

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 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
- FRN 341/342 Survey of French Literature
- GER 221/222 Intermediate German
- 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 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 CTO 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 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:
 HST 100 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 2-D 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 the Theatre
 *CTA 151 Introduction to Black Theatre
 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 104H/HST 104H
 Quest for Power: Famous Figures in History
 3 creditsArea: LIT or HST

CLA 106H/LIT 106H
 Rome and America
 6 creditsArea: LIT

HST 127H
 The Splendid Centuries of Austria
 3 creditsArea: HST

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

FA 151H/HST 151H
Reason and Revolution
3 credits Area: FA or HST

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

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

179H, 279H, 379H, 479H
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, crimi-

nal 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 are eligible for graduation.

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 Technologists. 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 places specified by the State Board of Nursing, usually twice a year. Candidates should file application immediately after the official completion date of degree requirements. Upon receipt of the application and all credentials, a temporary permit to practice will be issued and an examination date assigned. Licensure is granted upon successful completion of the State Board of Nursing licensure examination.

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.

ADVISING: SEQUENCE OF COURSES

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

Fall Semester	FIRST YEAR Winter Semester	Spring/Summer Semester
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Fall Semester	SECOND YEAR Winter Semester	Spring/Summer Semester
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Fall Semester	THIRD YEAR Winter Semester	Spring/Summer Semester
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Fall Semester	FOURTH YEAR Winter Semester	Spring/Summer Semester
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Advising Contact: (Academic Advising Center) _____

Department Advisor: _____ Office #: _____ Building: _____

ADVISING: SEQUENCE OF COURSES

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

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

Fall Semester

Winter Semester

Spring/Summer Semester

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Advising Contact: (Academic Advising Center) _____

Department Advisor: _____ Office #: _____ Building: _____

STUDENT SERVICES

ACADEMIC ADVISING

Edgar L. Jones, Interim 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 intensive 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 actions 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.

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 (487-3116), 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.
Interim 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. Ser-

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

University 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
- Peer Educators
- Health Education
- Immunizations
- Physical Exams
- Counseling

In addition to the above services, University 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, the Health Center can perform the services. 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 Snow Health Center 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 Insurance Office at Snow Health Center.

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

CHILDREN'S INSTITUTE

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.

Evening care operates from 4:45 p.m. until 9:45 p.m. for children 3 through 12 years of age, Monday through Thursday during the fall and winter terms, if sufficient enrollment exists.

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 first through fourth grades are invited to attend. Children entering kindergarten may attend a special kindergarten camp. 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 evening programs 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 five-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 drug and alcohol 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) meet on campus.

Several student-run programs exist: Student Action Team uses student leadership to coordinate campus-wide special events; Campus Peers use trained peers to education 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.

Our lending library 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 Office, located on the third floor of Snow Health Center, 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.

COUNSELING

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

Counseling Services provides personal 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.

Professional staff members and graduate students from the departments of Psychology and Guidance and Counseling provide confidential individual and group counseling. Special workshops and programs on managing test anxiety, couple communication, coping with grief and others are offered in classrooms, residence halls and at Snow Health Center.

The Campus Peer Program, sponsored by Counseling Services and the Health Center, 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' hours are 8 a.m. to 12 noon, 1 p.m. to 5 p.m. Monday through Friday.

EMPLOYEE ASSISTANCE PROGRAM (EAP)

Snow Health Center
487-1109

The EAP, located in Snow Health Center, provides confidential assessment, brief counseling, referral and follow-up services to employees and their family members who are experiencing personal or work-related problems. The EAP can assist with: family or relationship problems; stress; legal or financial difficulties; alcohol or drug abuse; eating problems or disorders; depression or anxiety; grief and loss; and other personal concerns. EAP also provides consultation services to Human Resources, supervisors, managers, administrators, and union representatives related to intervening with employees who are having job performance or attendance problems and who may have a personal problem. Educational programs for staff and faculty and supervisory development programs will also be offered by the EAP.

The EAP office is open from 8 a.m. to 5 p.m. Monday through Friday. Evening and early morning hours are available by request. If EAP staff is not available, please leave a message on the confidential answering machine and your call will be returned as soon as possible. All EAP services are provided free of charge.

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. Freshpersons 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 Orientation 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.

Freshpersons 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 New Students:** Open only to new freshpersons. 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.
- **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, one of the nation's prototypes for campus dining since it opened its doors in the fall of 1989, 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 QUICKFXXX, 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. QUICKFXXX is open seven days a week.

Dining Commons One, our primary residence hall dining facility, was gutted and renovated during the summer of 1990 and 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 the very new 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 Dr. Eats, offering stir fry, burgers made to order, deli sandwiches and more. Also open now are a Dominos 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.

NOTE: All 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.

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; Beatha 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 complex 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.

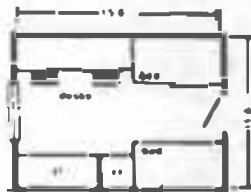
Pittman-Hill are contemporary 11-story, high-rise towers and the most recently constructed campus residential units. Both halls have ample social and study space on each floor and each room offers a panoramic view of the campus and surrounding area. Marvin Pittman was director of rural education and 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:

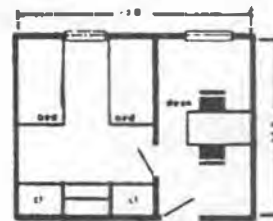
The Brown-Munson Apartments were remodeled from a residence hall facility to 207 single-student apartments in the early 1970s. They are designed primarily for two tenants, although some single and multiple occupancy units are available. Apartments are furnished, carpeted and air-conditioned, and all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

Typical Residence Hall Room Floor Plans

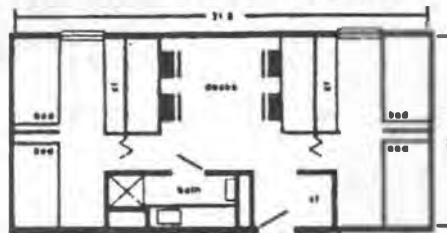
Wise Hall



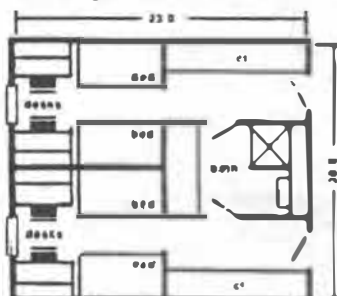
Jones Hall



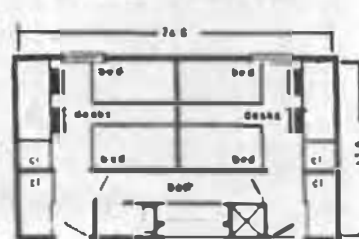
Downing, Buell, and Goddard Halls



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



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



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.

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
221 Goodison Hall
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, Parents 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 Martin Luther King Jr./Cesar Chavez/Rosa Parks Lecture Series, the Athletic Department's convoys, 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 Production and Inventory Control Society
- 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
- English Club

Entrepreneurs' Association
 Finance Club
 French Club
 Health Administration Student Organization
 Information Systems Club
 Internedia Gallery/Group
 Legal Assistance Club
 Legal Careers Association
 Living History Club
 Marketing Students Association
 National Association of Black Accountants
 National Computer Graphics Association
 Phi Alpha Theta History Honor Society
 Philosophy Club
 Professional Association for Industrial Distribution
 (P.A.I.D.)
 Semper Fidelis Society
 Silversmith's Guild at EMU
 Society for Creative Anachronism
 Society for Technical Communication
 Society for the Advancement of Management
 Society of Plastic Engineers
 Student Council for Exceptional Children
 Student Dietitian Association
 Student Michigan Education Association
 Student Occupational Therapy Association
 Student Psychology Association
 Student Social Work Organization
 Students in Design
 Turkish Student Association
 United Ministries in Higher Education
 University Organists' Association

Advisory

Hispanic Student Association
 Hong Kong and Macau Student Association
 Student Government at EMU

Athletic/Recreational

Aiki Hei Jo Shin Dojo (Aiki Club)
 Ballroom Dance Club at EMU
 Bujinkan Ninjustu Club at EMU
 EMU Women's Soccer Club
 Flying Club
 Hockey Club
 Hong Kong and Macau Student Association
 Professional Association for Industrial Distribution
 (P.A.I.D.)
 Rifle Team at EMU
 Ski Club
 Society for Creative Anachronism
 Society of Physics Students
 Turkish Student Association
 Water Polo Club

Communications

Association of Black Communicators
 Eastern Times
 English Club
 Hong Kong and Macau Student Association
 Society for Technical Communication, Inc.
 Society of Physics Students

Spirit and Truth Fellowship
 Student Organization for African-American Unity
 Turkish Student Association
 Wo/Men in Communications, Inc.

Cultural/Entertainment/Coordinating

Alpha Phi Alpha Fraternity, Inc.
 B'nai B'rith Hillel Extension
 Campus Life Council
 Caribbean Student Association
 English Club
 General Union of Palestinian Students
 Hellenic Student Association
 Hispanic Student Association
 Hong Kong and Macau Student Association
 Honors Student Organization
 INDUS (Indian Student Association)
 Internedia Gallery/Group
 International Student Association
 Jazz Alive at EMU
 Legal Careers Association
 Living History Club
 National Association for the Advancement of Col-
 ored People (NAACP)
 Pakistan Student Association
 Palestine Democratic Youth Organization
 Phi Beta Sigma Fraternity, Inc.
 Phi Beta Sigma Sweethearts
 Phi Eta Psi Fraternity, Inc.
 Society for Creative Anachronism
 Society of Physics Students
 Spanish Club
 Student Dietitian Association
 Student Organization for African-American Unity
 Student Organization United for Peace (S.O.U.P.)
 Student Psychology Association
 Table Top Entertainment
 Turkish Student Association
 United Ministries in Higher Education

Ethnic/Minority

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 Taiwan
 Delta Sigma Theta Sorority
 Hellenic Student Association
 Hispanic Student Association
 Japanese Student Association
 Korean Student Association
 Lesbian, Gay and Bi-Sexual Student Association
 Malaysian Student Association
 Minority Preprofessional Psychology Association
 National Association of Black Accountants
 National Association for the Advancement of Col-
 ored People (NAACP)
 Native American Indian Student Organization
 Omega Pearls

Palestine Democratic Youth Organization
 Student Organization for African-American Unity
 Thai Student Association
 Turkish Student Association

Honorary

Alpha Phi Alpha Fraternity, Inc.
 Beta Gamma Sigma
 Chi Gamma Iota Veterans Society
 Golden Key National Honor Society
 Kappa Delta Pi
 Mortar Board, Inc.
 Phi Alpha Theta
 Stoic Society
 Turkish Student Association

Political

Alpha Phi Alpha Fraternity, Inc.
 Black Student Union
 College Republicans
 National Organization to Reform Marijuana Laws
 (NORML)
 Student Organization for African-American Unity
 Student Organization United for Peace (S.O.U.P.)
 Students for Huron Restoration

Religious

Bahai Club at EMU
 B'nai B'rith Hillel Extension
 B.A.S.I.C. Brothers and Sisters in Christ
 Bahai' Club at EMU
 Campus Crusade for Christ
 Christian Life at EMU
 Christians in Action
 Gospel Choir
 Holy Trinity Chapel Peer Ministers
 InterVarsity Christian Fellowship
 Labor of Love Fellowship
 Latter-Day Saint Student Association
 Muslim Students Association
 Spirit and Truth Fellowship
 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
 Circle K Club
 English Club
 Golden Key
 Hispanic Student Association
 Holy Trinity Chapel Peer Ministers
 Hong Kong and Macau Student Association
 International Student Association
 Mortar Board
 National Association for the Advancement of Col-
 ored People (NAACP)
 Omega Pearls

Phi Beta Sigma Fraternity, Inc.
 Phi Beta Sigma Sweethearts
 Spirit and Truth Fellowship
 Stoic Society
 Student Council for Exceptional Children
 Student Organization for African-American Unity
 Students for Huron Restoration
 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
 English Club
 Hispanic Student Association
 Honors Student Organization
 International Student Association
 Lesbian, Gay and Bi-Sexual Student Association
 National Association for the Advancement of Col-
 ored People (NAACP)
 Omega Xi
 Panhellenic Council
 Phi Beta Sigma Fraternity
 Phi Beta Sigma Sweethearts
 Phi Eta Psi Fraternity
 Student Council for Exceptional Children
 Student Organization for African-American Unity
 Student Organization United for Peace (S.O.U.P.)
 Student Psychology Association
 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 Kappa Psi Business
 Alpha Phi Alpha
 Alpha Phi Omega
 Beta Alpha Psi
 Black Greek Council
 Delta Sigma Phi
 Greek Council
 Inter-Fraternity Council
 Kappa Delta Pi
 Kappa Phi Alpha
 Lambda Chi Alpha
 Omega Psi Phi
 Phi Alpha Theta
 Phi Beta Sigma
 Phi Eta Psi
 Phi Sigma Kappa
 Phi Sigma Phi

Pi Sigma Alpha
Pi Theta Epsilon
Sigma Phi Epsilon
Sigma Nu

Sorority—All sub classifications

Alpha Gamma Delta
Alpha Kappa Alpha
Alpha Sigma Tau
Alpha Xi Delta
Chi Phi Kappa
Delta Sigma Theta
Delta Zeta
Panhellenic Council
Phi Beta Sigma Sweethearts
Sigma Gamma Rho
Sigma Kappa
Sigma Nu Phi
Sigma Sigma Sigma
Zeta Phi Beta

DEAN OF STUDENTS

Bette C. White
Dean

Gregory A. Peoples
Associate Dean
205 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
Director
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

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
205 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

Barbara Gentry
Coordinator
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

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 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

John Nordlinger
Associate Director

Carole Huston
Associate 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 I A level in both men's and women's sports.

In 1971, EMU joined the Mid-American Conference (MAC), which is composed of nine schools, including EMU's sister institutions, Central and Western Michigan, and 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 (487-1319) that checks out equipment ranging from backpacks to toboggans for Rec/TM 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 by a student club.

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 audiovisual 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 impact assessments, public opinion, and demographic surveys, training programs, evaluation of personnel systems, and scientific analysis of environmental concerns. Twice a year, ICARD publishes an economic forecasting newsletter, *Michigan Economic Developments*, and an Economic Analysis Forum is held on campus each spring. ICARD also publishes a Regional Economic Forecast for Michigan twice a year that can be obtained on a subscription basis.

At an office in downtown Ypsilanti, ICARD also hosts the Higher Education Consortium for Economic Development, with participation from Cleary College, Concordia College, Eastern Michigan University, The University of Michigan, and Washtenaw Community College. 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 Projects, 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.

LEARNING RESOURCES AND TECHNOLOGIES

Morell D. Boone
Dean

Jennie Meyer Howard
Associate Dean

Sandra G. Yee
Library Department Head

487-3316

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

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

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

Instructors: Sarah Cogan, Edna Ewell, Barbara Glover, Rhonda Fowler-Holland, Jane Keefer, 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 Services) 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.

Learning Technologies provides computing applications support to students and faculty by managing mainframe and workstation services and facilities.

The Library is essential to the instructional programs of the University. It houses more than 600,000 volumes, 192,000 government documents and 650,000 microforms. Books, bound and current periodicals, and microforms are organized by a subject divisional system in three major areas: education and psychology, humanities and social sciences, and science and technology.

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, typing and microform viewing rooms and a center for copying paper and microform materials. 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.

A Library Orientation 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 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. Such instruction ranges from the development of basic reading, writing or study abilities to the mastery of more specialized foreign language or computer 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. Workshops, such as test-taking, vocabulary-building and time management, to enhance and sharpen students' academic success skills.
4. Audio-tape recordings and phono discs with available stereo and video equipment for personal use or class assignment.
5. A Foreign Language Laboratory equipped with audio-aural assignments for students taking classes in the Department of Foreign Languages and Bilingual Studies.
6. Microcomputers currently used for direct support of instruction and a growing library of self-help software and instructor-generated materials for use by individual students.

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 10 years ago and currently provides services to more than 2,000 U.S. libraries.

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

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 state-wide 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 center'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 Joint 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 center houses the nation's leading collection of consumer education resources. A 1982 center 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 \$1.5 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

COLLEGE OF ARTS AND SCIENCES

Programs of Study and Course Descriptions

Dean: Barry A. Fish
Associate Dean: Barbara Richardson
411 Pray-Harrold
487-4344

DEPARTMENTS AND PROGRAMS

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

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 also offers students additional opportunities for enrichment and career exploration through independent study, research programs and special projects, 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 requires, in addition, 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

Ed Jones
Acting 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 soci-	

ology 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

Ed Jones
Acting 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 poli-

cies. Students interested in this program should meet with the director of the Academic Advising Center to discuss their goals. The following should be summarized in a written statement submitted to the 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 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 director to the Office of the Registrar.

COLLEGE OF ARTS AND SCIENCES COURSES

AAD 179 Academics, Affiliation, and Achievement 3 sem hours

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-Harrold
 487-3460

Professor: Ronald C. Woods
 Associate Professor: Clovis E. Semmes

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.

MAJOR IN AFRICAN AMERICAN STUDIES

Sem hours

Academic 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, HST 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: CTR 151 Black Theater: An Introduction, CTR 251 Black Theater: 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, HST 342 North Africa, 1798-Present, HST 347 Sub-Saharan Africa to 1885, HST 348 Twentieth Century Africa, HST 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 IN AFRICAN AMERICAN STUDIES

Semhours

Academic 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 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, HST 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:

CTR 151 Black Theater: An Introduction, CTR 251 Black Theater: 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, HST 342 North Africa, 1798-Present, HST 347 Sub-Saharan Africa to 1885, HST 348 Twentieth Century Africa, HST 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 sem hours

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 sem hours

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 Introduction to African American Studies.

AAS 221 African American Social Movements. 3 sem hours

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 Introduction to African American Studies.

AAS 231 Urbanization and the African American Community. 3 sem hours

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 Introduction to African American Studies.

AAS 277, 278, 279 Special Topics. 1, 2, 3 sem hours

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 Introduction to African American Studies or department permission.

AAS 297, 298, 299 Independent Study. 1, 2, 3 sem hours

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 Introduction to African American Studies or department permission.

AAS 311 The African Diaspora. 3 sem hours

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 Introduction to African American Studies or department permission.

AAS 351 The Social Context of African American Health. 3 sem hours

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 Introduction to African American Studies or departmental permission.

AAS 361 The African American Family. 3 sem hours
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 Introduction to African American Studies or departmental permission.

AAS 377, 378, 379 Special Topics. 1, 2, 3 sem hours

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 Introduction to African American Studies or department permission.

AAS 401 African American Studies Research Seminar. 3 sem hours

Provides intensive exposure to research methods in African American studies, and offers an opportunity for primary research in the field.

Prereq: AAS 201 Foundations of Knowledge in African American Studies and jr./sr. standing, or department permission.

AAS 441 Law in the African American Experience. 3 sem hours

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 Introduction to African American Studies and junior/senior standing, or departmental permission.

AAS 477, 478, 479 Special Topics. 1, 2, 3 sem hours

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 Introduction to African American Studies or department permission.

AAS 497, 498, 499 Independent Study. 1, 2, 3 sem hours

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 African American Studies Research Seminar 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 Rubenfeld, Richard E. Washington

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

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 and in the Arts Management program.

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

Major:

Art

Minors:

Art
 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 Rubenfeld
 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 ART EDUCATION (TEACHING)

The art education curriculum, leading to a Bachelor of Art Education degree, satisfies all major and minor requirements for graduation. A maximum of 60 semester hours in fine arts courses is allowed. Elementary or secondary provisional certification is available*; if an Elementary Provisional Certificate in teaching is desired, consult with the director of Academic Records and Certification regarding special requirements.

Basic Studies

Refer to the basic studies requirements in the catalog on pages 32-36. One course in art, dance, music, or theatre arts will be met by the fine arts courses below.

**Note:* Junior-Senior High School Certification requires that at least one social science or humanities course must be selected in cross-cultural or international studies.

	Sem hours
Education	36
EDP 322 Human Development and Learning	4
CUR 305 Curriculum and Methods	3
SGN 300 The Exceptional Student in the Regular Classroom	3
RDG 311 Teaching of Reading in the Secondary Schools	3
EDP 340 Introduction to Measurement and Evaluation	2
SFD 328 Social Aspects of Teaching	3
EDT 300 Introduction to Computer Applications	1
EDM 345 Media for Classroom Teachers	1
FA 317 Teaching of Art	2
FA 416 Art Methods and Materials	2
EDU 495 Student Teaching	6
EDU 496 Student Teaching	6
Fine arts	54-60
1. Required courses	27
FA 107 Art Survey I	3
FA 108 Art 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
2. Restricted electives	27
Elect nine of the following courses:	
FA 235 Textiles	3
FA 201 Graphic Design	3
FA 304 Photography	3
FA 305 Printmaking	3
FA 307 Ceramics	3
FA 310 Sculpture	3
FA 313 Painting	3

FA 314 Painting - Watercolor I	3
FA 320 Jewelry	3
FA 432 Drawing III	3
3. Electives in art	0-6
Physical education and health	2
Physical education activity courses	2
(Any two courses in Military Science may be applied.)	
Total	124-142

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 page 32-36. 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 Art History Survey I	3
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
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

BACHELOR OF FINE ARTS PLUS TEACHER CERTIFICATION

	Sem hours
Education (see education requirements, page 304) ...	36
Fine arts	54-60
1. Required courses	27
FA 107 Art Survey I	3
FA 108 Art 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
2. Restricted electives	18
Elect six of the following courses	
FA 235 Textiles	3
FA 201 Graphic Design	3
FA 304 Photography	3
FA 305 Printmaking	3
FA 307 Ceramics	3
FA 310 Sculpture	3
FA 313 Painting	3
FA 314 Painting—Watercolor I	3
FA 320 Jewelry	3
FA 432 Drawing III	3
3. Area of concentration	9
Select a sequence of three advanced courses from one of the above areas (18 hour group).	
4. Electives in art	0-6
No more than 60 semester hours in art courses may be applied to the 124 hours required for graduation.	
Physical education and health	2
Physical education activity courses	2
(Any two courses in Military Science may be applied.)	

ART MAJOR

Students may elect the following 30 semester hour major, but one of the preceding 54-60 semester hour majors is advised.

Teacher certification in art is not obtainable using the 30 hour major.

	Sem hours
Academic major in art	30
1. Required courses	18
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 124 Drawing II	3
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.	

ART MAJOR (TEACHING)

	Sem hours
Teaching major in art	34
1. Required courses	22
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 124 Drawing II 3
 FA 231 Three-Dimensional Design 3
 FA 317 Teaching of Art 3
 FA 416 Art Methods and Materials 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 DEPARTMENT OF ART

ART (TEACHING)

- | | Sem hours |
|---|-----------|
| Teaching minor in art | 25 |
| 1. Required courses | 9 |
| FA 101 Introduction to Art or FA 123 Drawing I | 3 |
| FA 122 Two-Dimensional Design | 3 |
| One art history course (FA 108 Art 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, 166, and 167 Studio Experience, Non-Major; FA 300 Art for the Elementary Teacher may be used as electives. | |
| 3. Art methods requirements | 4 |
| FA 317 Teaching of Art | 2 |
| FA 416 Methods and Materials | 2 |

ART

- | | Sem hours |
|---|-----------|
| Academic 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 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, 166, and 167 Studio Experience, Non-Major; FA 300 Art 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 Art Survey I, FA 108 Art Survey II, FA 215 History of 19th-Century Art, FA 216 History of Contemporary Art I on the major with studio courses.

- | | Sem hours |
|---|-----------|
| Academic minor in art history | 20 |
| 1. Required courses | 14 |
| FA 107 Art History Survey I | 3 |
| FA 108 Art History Survey II | 3 |
| 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 sem hours
 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 sem hours
 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 sem hours
 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 36.*

FA 165 Graphic Design for Non-Majors. 3 sem hours
 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 sem hours
 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 sem hours
 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 sem hours
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 36.

ART EDUCATION COURSES

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

FA 300 Art Integration for the Elementary Teacher. 4 sem hours
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 sem hours
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 sem hours
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 sem hours
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 Teaching of Art, junior standing.

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

FA 497, 498, 499 Independent Study: Art Education. 1, 2, 3 sem hours
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 sem hours
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 sem hours
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 sem hours
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 Drawing I.

FA 201 Graphic Design. 3 sem hours
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 123 Drawing I, FA 124 Drawing II.

FA 205 Letterforms and Typography. 3 sem hours
Includes free-hand lettering, constructed alphabets, invented signs; emphasizes the importance of typographic design.

Prereq: FA 201 Graphic Design.

FA 210 Life Drawing. 3 sem hours
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 Drawing I and FA 124 Drawing II or department permission.

FA 231 Three-Dimensional Design. 3 sem hours
Basic study of three-dimensional structures and systems.

FA 232 Representational Drawing. 3 sem hours
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 Drawing II.

FA 235 Textiles. 3 sem hours
An introductory textiles class dealing with concepts of design as they relate to fiber structures and fabric processes.

Prereq: FA 122 Two-Dimensional Design and FA 123 Drawing I.

FA 302 Graphic Design. 3 sem hours
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 Graphic Design.

FA 304 Beginning Photographic Imagery. 3 sem hours
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 Two-Dimensional Design and FA 123 Drawing I.

FA 305 Printmaking. 3 sem hours
Acquaintance with graphic techniques; woodcut and silkscreen.
Prereq: FA 210 Life Drawing. Art majors only.

FA 306 Printmaking. 3 sem hours
Advanced graphic techniques with emphasis on development of individual style through experimentation with etching and processes.
Prereq: FA 305 Printmaking. Art majors only.

FA 307 Ceramics. 3 sem hours
Basic ceramics, including wheel throwing and handbuilding techniques, compounding earthenware and stoneware clay bodies, formulating glazes, firing electric and gas kilns.
Prereq: FA 231 Three-Dimensional Design or department permission.

FA 308 Ceramics. 3 sem hours
Advanced ceramic techniques, emphasis on personal expression, compounding of individual clay bodies and glazes, loading and firing of kilns.
Prereq: FA 307 Ceramics. Art majors only.

FA 310 Sculpture. 3 sem hours
Exploratory experiences in volume and space; the use of clay, stone, wood, metal, etc.
Prereq: FA 231 Three-Dimensional Design. Art majors only.

FA 311 Sculpture. 3 sem hours
Continuing experiences in volume and space; development of further skills with sculpture materials and concepts.
Prereq: FA 310 Sculpture. Art majors only.

FA 313 Painting. 3 sem hours
Painting problems; development of technique and concepts through experimentation with painting media.
Prereq: FA 122 Two-Dimensional Design and FA 124 Drawing II. Art majors only.

FA 314 Painting—Watercolor I. 3 sem hours
Intensive exploration of watercolor techniques with emphasis on developing individuality and self-expression related to the medium. *Art majors only.*
Prereq: FA 122 Two-Dimensional Design and FA 124 Drawing II.

FA 316 Life Drawing. 3 sem hours
Advanced study problems; the human form as composition and design; varied media.
Prereq: FA 210 Life Drawing. Art majors only.

FA 320 Jewelry. 3 sem hours
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. *Art majors only.*
Prereq: FA 231 Three-Dimensional Design or department permission.

FA 321 Jewelry. 3 sem hours
Processes and techniques applied toward a professional development in jewelry design. Advanced processes, casting, setting of precious stones.
Prereq: FA 320 Jewelry or equivalent.

FA 323 Intermediate Photographic Imagery. 3 sem hours
Advanced black and white techniques and alternative processes are demonstrated. Development of personal vision is realized through individual projects and discussion.
Prereq: FA 304 Beginning Photographic Imagery. Art major or department permission.

FA 324 Design and Development of Public Works of Art. 3 sem hours
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 sem hours
Deals intensively with conceptual and technical issues, concentrating on mastery of the tools, materials, and techniques in producing layouts and comprehensives.
Prereq: FA 205 Letterforms and Typography.

FA 348 Logos and Symbols. 3 sem hours
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 Letterforms and Typography.

FA 355 Textiles. 3 sem hours
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 Textiles. Art majors only.

FA 356 Textiles. 3 sem hours
An intermediate textiles class dealing with concepts and design as they relate to basic fabric processes of surface decoration and manipulation.
Prereq: FA 235 Textiles. Art majors only.

FA 377, 378, 379 Special Topics: Studio Art. 1, 2, 3 sem hours
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 387 Cooperative Education: Studio Art.** 3 sem hours
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 sem hours
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 Printmaking. Art majors only.
- FA 406 Printmaking.** 3 sem hours
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 Printmaking. Art majors only.
- FA 407 Ceramics.** 3 sem hours
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 Ceramics. Art majors only.
- FA 408 Ceramics.** 3 sem hours
Summation of the undergraduate ceramics program; emphasis on individual style, production techniques, studio management, exhibition programs.
Prereq: FA 407 Ceramics. Art majors only.
- FA 409 Advanced Photographic Imagery.** 3 sem hours
The contextual development of personal vision is emphasized through discussion of the student's work in relationship to established photographers' work.
Prereq: FA 304 Beginning Photographic Imagery, FA 323 Intermediate Photographic Imagery.
- FA 410 Metal Casting Techniques.** 3 sem hours
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 Sculpture or department permission.
- FA 411 Sculpture.** 3 sem hours
Advanced sculpture problems, including steel and open form construction; intensive study of contemporary methods and techniques of sculpture.
Prereq: FA 311 Sculpture or department permission. Art majors only.
- FA 412 Sculpture.** 3 sem hours
Advanced sculpture problems; development of individual style in three-dimensional form.
Prereq: FA 411 Sculpture. Art majors only.
- FA 413 Painting.** 3 sem hours
Further development of painting skills and aesthetic understanding of the two-dimensional surface complex. Emphasis on development of individual style.
Prereq: FA 313 Painting. Art majors only.
- FA 414 Painting—Watercolor II.** 3 sem hours
Further development of painting skills and aesthetic understanding of the two-dimensional surface complex. Emphasis on development of individual style.
Prereq: FA 314 Painting—Watercolor I. Art majors only.
- FA 418 Portraiture.** 3 sem hours
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 Life Drawing.
- FA 419 Life Drawing.** 3 sem hours
The study of the human form as part of the development of a personal style in art.
Prereq: FA 316 Life Drawing. Art majors only.
- FA 423 Painting—Watercolor III.** 3 sem hours
Further development of individual style in watercolor.
Prereq: FA 414 Painting—Watercolor II. Art majors only.
- FA 424 Painting—Watercolor IV.** 3 sem hours
Further development of individual style in watercolor.
Prereq: FA 423 Painting—Watercolor III. Art majors only.
- FA 432 Drawing III.** 3 sem hours
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 Life Drawing. Art majors only.
- FA 439 Life Drawing.** 3 sem hours
The study of the human form as part of the development of a personal style of art.
Prereq: FA 419 Life Drawing. Art majors only.
- FA 441 Studies in Clay and Glazes.** 3 sem hours
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 Ceramics or department permission.
- FA 442 Jewelry.** 3 sem hours
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 Jewelry. Art majors only.

FA 443 Jewelry. 3 sem hours
Individual advanced problems in jewelry and metal-working.

Prereq: FA 442 Jewelry. Art majors only.

FA 449 Photography Portfolio 3 sem hours
Development of a unified body of work representing the undergraduate photographic experience and culminating in a photographic project.

Prereq: FA 409 Advanced Photographic Imagery.

FA 455 Textiles. 3 sem hours
Advanced problems in fiber structure and fabric processes. Emphasis on innovative development of images.

Prereq: FA 355 Textiles or FA 356 Textiles. Art majors only.

FA 460 Advanced Graphic Design. 3 sem hours
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 Logos and Symbols.

FA 462 Advanced Illustration. 3 sem hours
Deals with attitudes, philosophies, aesthetics, techniques, and experiences as demonstrated in contemporary illustration. Emphasis on problems confronting a professional illustrator.

Prereq: FA 302 Graphic Design and FA 346 Advertising Layout Design.

FA 464 Corporate Identity and Graphic Systems. 3 sem hours

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 Logos and Symbols.

FA 477, 478, 479 Special Topics: Studio Art. 1, 2, 3 sem hours

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 sem hours each
Further development of individual painting style.

Prereq: FA 413 Painting. Art majors only.

FA 487 Cooperative Education: Studio Art. 3 sem hours
Continuation of FA 387 Cooperative Education: Studio Art.

Prereq: FA 387 Cooperative Education: Studio Art. Approval by graphic design area.

FA 497, 498, 499 Directed Studio Problems. 1, 2, 3 sem hours

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 sem hours
A survey of the development of the visual arts from cave art to the early Renaissance.

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

FA 215 History of 19th-Century Art. 3 sem hours
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 Art History Survey I and FA 108 Art History Survey II.

FA 216 History of Contemporary Art I. 3 sem hours
A survey of the visual arts of the 20th century, from Post-Impressionism through the latest contemporary developments.

Prereq: FA 215 History of 19th-Century Art or department permission.

FA 222 African and African American Art. 3 sem hours

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 sem hours

A survey of American art, including European influences and the evolution of native American characteristics.

Prereq: FA 107 Art History Survey I and FA 108 Art History Survey II, or department permission.

FA 336 History of Impressionism and Post-Impressionism. 3 sem hours

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 Art History Survey I or FA 215 History of 19th-Century Art.

FA 340 History of Classical Art. 3 sem hours
A study of the art and architecture of the classical civilization of Greece and Rome.

Prereq: FA 107 Art History Survey I or department permission.

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

FA 377, 378, 379 Special Topics: Art History. 1, 2, 3 sem hours
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 sem hours
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 sem hours
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 Art History Survey I or FA 108 Art History Survey II or FA 421 History of Oriental Art or department permission.

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

FA 429 History of American Architecture. 3 sem hours
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 Art History Survey I or FA 108 Art History Survey II or department permission.

FA 436 Women in Art. 3 sem hours
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 Art History Survey II or department permission.

FA 440 History of Contemporary Art II. 3 sem hours
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 History of Contemporary Art I.

FA 477, 478, 479 Special Topics: Art History. 1, 2, 3 sem hours
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 Education. 1, 2, 3 sem hours
Advanced study on an individual basis in areas in which the department does not have regular course work.
Prereq: Department permission.

BIOLOGY

William E. Fennel
 Department Head
 316 Mark Jefferson
 487-4242

Professors: Howard D. Booth, William E. Fennel, Najati S. Ghosheh, Edith M. Hurst, Dennis C. Jackson, Stephen C.Y. Liu, Merlyn C. Minick, Suzanne J. Stevens, Paul A. Volz, Glenn K. Walker, Shih-An Yu
Associate Professors: Catherine E. Bach, Gary L. Hannan, Paul W. Milske, Robert K. Neely, P. George Simone, James L. Vanden Bosch, Elizabeth L. Waffle
Assistant Professors: Jamin Eisenbach, William L. Guy, Allen Kurta, John A. Novak, 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. It participates in a joint curriculum in natural resources with the University of Michigan and provides programs in pre-forestry, pre-medicine, pre-osteopathic medicine, 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

Concentrations:

Ecosystem Biology (aquatic and terrestrial)
 General biology
 Microbiology
 Physiology

Minors:

Biology
 Botany
 Zoology
 Conservation and resource use

Pre-professional programs:

Pre-chiropractic
 Pre-forestry
 Pre-medicine
 Pre-osteopathic medicine
 Pre-optometry
 Pre-podiatry
 Joint Curriculum in Natural Resources with the University of Michigan

Advising procedures are posted opposite the biology office (316 Mark Jefferson) or the department office may be contacted for additional information.

Special Advising Requirements

Prospective biology majors/minors should record their majors/minors through the Academic Advising Center (Pierce Hall) or the Biology Department 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.

Joint curriculum in natural resources students must meet with the advising coordinator to establish a program between EMU and the University of Michigan.

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
 General biology: Paul W. Milske
 Microbiology: Stephen C.Y. Liu
 Physiology: P. George Simone
 Ecosystem biology: Robert K. Neely
 Conservation and resource use: Catherine E. Bach
 Joint curriculum in natural resources: Catherine E. Bach
 Pre-medical, pre-osteopathic medical, pre-optometry, pre-podiatry, and pre-chiropractic: Edith M. Hurst
 Elementary science education: Suzanne J. Stevens
 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

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 General Chemistry I, CHM 122 General Chemistry I Laboratory, CHM 123 General Chemistry II, CHM 124 General Chemistry II Laboratory, CHM 270 Organic Chemistry, and CHM 271 Organic Chemistry Laboratory (or CHM 371, 372, 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 Calculus I and MTH 121 Calculus II.

The following courses may NOT be counted on 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
Academic 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)

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)	51
1. Required courses	20
BIO 314 Energy Analysis and 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, 122 General Chemistry I	4
CHM 123, 124 General Chemistry II	4
CHM 270 Organic Chemistry	4
CHM 271 Organic Chemistry Laboratory	1
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 (TEACHING AND NON-TEACHING)

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; or seeking to teach at the secondary level

or in a community or four-year college may select the general biology concentration as preparation for continuing in a professional or graduate school program.

Students applying for teaching certification at the secondary level MUST select the general biology area of concentration. They may not use the botany or zoology minor as the required teaching minor for certification.

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 credits in biology, botany, microbiology, or zoology except BIO 205 Field Biology, BIO 207 Elements of Ecology, ZOO 326 Human Physiology, ESC 302 Elementary School Science, ESC 303 Science for the Elementary Teacher, and BIO 403 Methods 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; entry into a professional program in medicine, osteopathic medicine, 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, CHM 372, and CHM 373), biochemistry courses (CHM 451, CHM 452, and CHM 453), and physics courses (PHY 223 and PHY 224) rather than the lower numbered courses.

	Sem hours
Microbiology concentration	29
1. Required courses	17
MICR 329 General Microbiology	5
MICR 333 Principles of Immunology	3
MICR 335 Immunology and Serology Lab	2
MICR 444 Microbial Physiology	3
MICR 452 Advanced Microbiology	4
2. Electives	12
Choose at least one course from each of the following:	
Group A—Advanced Genetics	
MICR 454 Molecular Biology of Bacteria and Viruses, MICR 541 Microbial Genetics*, BIO 542 Molecular Genetics*	
Group B—Cellular/Molecular Biology	
MICR 340 Basic Virology, BIO 461 Oncology, BIO 540 Cell Biology*	
Group C—Medical Microbiology	
MICR 432 Clinical Microbiology, BOT 446 Medical Mycology, ZOO 462 Parasitology	
Group D—Environmental/Field and Applied Microbiology	
BOT 404 Mycology, BOT BOT 430 Plant Morphology I—Algae and Fungi, 451 Freshwater Algae, BOT 453 Taxonomy and Ecology of Diatoms, MICR 442 Microbial Ecology, MICR 445 Food Microbiology, ZOO 480 Protozoology.	
*Qualified students may take graduate level courses (listed in the graduate catalog) with approval of their adviser.	
3. Required biochemistry minor	22
CHM 121, 122, 123, 124 General Chemistry I and II	8
CHM 270 Organic Chemistry	4
CHM 271 Organic Chemistry Laboratory	1
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: MICR 497, 498, 499 Special Problems in Microbiology (one, two, three credits); MICR 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	
MICR 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	
MICR 329 General Microbiology	
ZOO 317 Human Gross Anatomy, ZOO 323 Animal Embryology, ZOO 431 Comparative Anatomy of Vertebrates, ZOO 404 Manalian Histology, ZOO 417 Neuroanatomy	
4. Chemistry Requirement	3
CHM 451 Biochemistry I	3

MINORS OFFERED IN THE DEPARTMENT OF BIOLOGY

BIOLOGY MINOR

Students minoring in biology are strongly advised to take CHM 119 Fundamentals of Chemistry or CHM 121 and 122 General Chemistry I and CHM 123 and 124 General Chemistry II.

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
Academic 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 205 Field Biology, and BIO 403 Methods and Materials for Teaching Biology. Either BIO 204 Biology of Cancer or BIO 239 Biology of Aging may be used in this minor, but <i>not</i> both courses.	

**No more than two hours of electives on the minor may be taken in any combination of BIO, BOT, or ZOO 497, 498, Special Problems courses (one, two, three credits. BIO, BOT, MICR, or ZOO 387, 487 Cooperative Education courses (three credits each) will not count on this minor.*

BIOLOGY MINOR (TEACHING)

Students minoring in biology are strongly advised to take CHM 119 Fundamentals of Chemistry or CHM 121 and 122 General Chemistry I and CHM 123 and 124 General Chemistry II. An additional four cognate hours of sciences must be completed to meet North Central Association requirements (24 semester hours) for teaching this minor at the junior-senior high school level. The methods course, BIO 403 Methods and Materials for Teaching Biology, may be included in these four additional hours.

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
Teaching 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 205 Field Biology, and BIO 403 Methods and Materials for Teaching Biology. Either BIO 204 Biology of Cancer or BIO 239 Biology of Aging may be used in this minor, but <i>not</i> both courses.	

**No more than two hours of electives on the minor may be taken in any combination of BIO, BOT, or ZOO 497, 498, Special Problems courses (one, two, three credits. BIO, BOT, MICR, or ZOO 387, 487 Cooperative Education courses (three credits each) will not count on this minor.*

BOTANY MINOR

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

Sem hours

Academic minor in botany 20

ZOOLOGY MINOR

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

Sem hours

Academic minor in Zoology 20

MINOR IN 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

Academic 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
- CHM 115 Chemistry and Society; CHM 415 Environmental Chemistry
- ECO 201, 202 Principles of Economics I and II, ECO 336 Economics of Environment and Natural Resources, ECO 337 Energy Economics and Policies
- GES 114 National Parks and Monuments, GES 208 Natural Environmental Hazards, GES 200 The Oceans, GES 215 Land Use Planning, GLG 229 Rocks of Michigan, GEO 235 Economic Geography, GES 305 Aerial Photography Interpretation, GEO 310 Energy

Awareness, GEO 320 Geography of U.S. and Canada, GES 324 Weather, GES 327 Soils 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 it 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 and 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 Principles of Economics I and II 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 The American Economy.*

JOINT CURRICULUM IN NATURAL RESOURCES

COOPERATIVE PROGRAM BETWEEN EASTERN MICHIGAN UNIVERSITY AND THE SCHOOL OF NATURAL RESOURCES AT THE UNIVERSITY OF MICHIGAN

The joint curriculum in natural resources includes three years at Eastern Michigan University, and four semesters plus a master's project at the School of Natural Resources (SNR) at the University of Michigan.

Students completing this curriculum receive a B.S. degree in biology from EMU after the first two semesters at the SNR. They are credited with the general biology concentration within the biology major. They must complete a minor at EMU. Students should contact the adviser for the selection of a suitable minor. After completing their work at the SNR, students will receive the appropriate master's degree in Natural Resources from the University of Michigan.

The School of Natural Resources offers three master's level degrees: Master of Forestry (M.F.), Master of Landscape Architecture (M.L.A.), and Master of Science

(M.S.). Students specializing in forest resource management will receive either a M.F. or M.S. degree depending upon the curriculum followed and their specific area of interest in forest resource management. Students specializing in landscape architecture will receive the M.L.A., and those students specializing in one of the other fields of study will receive the M.S. degree.

A complete listing of the available programs at the SNR can be obtained from the joint curriculum adviser. Students who wish to be accepted in the joint curriculum must see the adviser before their third semester at EMU. Only with the adviser's approval can they take full advantage of the career flexibility built into the programs offered by the SNR.

Curriculum at Eastern Michigan University

Area	Sem hours
Required general biology major	30
BOT 221 General Botany	4
ZOO 222 General Zoology	4
BIO 301 Genetics	3
BIO 320 Introduction to Cell Physiology	4
BIO 420 General Ecology	4
One taxonomic field course (in either botany or zoology)	3
Electives from BIO, BOT, ZOO, and MICR	8
Required chemistry cognates	13
CHM 121, 122 General Chemistry I	4
CHM 123, 124 General Chemistry II	4
CHM 270, 271 Organic Chemistry	5
Required physics cognates	8
PHY 221 Mechanics, Sound, and Heat	4
PHY 222 Electricity and Light	4
Required mathematics, joint curriculum	7
CSC 137 Introduction to FORTRAN Programming	3
or CSC 138 Computer Science I	3
MTH 120 Calculus I (note prerequisites)	4
Required minor	20
Total semester hours at EMU including basic studies	94

Sample Curriculum at the University of Michigan

Senior Year (student must contact adviser at SNR)	
<i>Fall Courses</i>	Sem Hours
NR 438 Natural Resources Statistics	4
NR 521 Biological Management	3
Natural Resource Elective	4
Cognate (elective taken outside SNR but within the University of Michigan)	4
Total	15
<i>Winter Courses</i>	
NR 470 Natural Resource Economics	3
Natural Resource Electives (2 courses)	7
Cognate	5
Total	15
Fourth Year at SNR	30
EMU Total	124

PRE-PROFESSIONAL PROGRAMS

PRE-FORESTRY

The three years at EMU of the joint curriculum described above, with appropriate choice of electives, may be expected to meet the requirements of many professional schools. However, students are reminded that forestry schools set their own requirements for admission and 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. Some flexibility in the sequence of courses is allowed to meet the needs of the individual students and the professional schools they wish to attend.

The curriculum above is designed for such diverse fields as conservation education, wildlife management, and fisheries biology, as well as forestry.

PRE-MEDICAL AND PRE-OSTEOPATHIC MEDICAL

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, should be consulted. The introductory chapters of this book should be read by every prospective medical student.

If students electing the pre-medical sequence are not achieving at least a 2.75 grade point average, 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

CHM 121, 122, 123, 124 General Chemistry I and II	8
CHM 371, 372 Organic Chemistry I and II	6
CHM 373 Organic Chemistry Laboratory	2
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	4
BOT 221 General Botany	4
*Mathematics	2-4
Basic studies	2-6
**Second semester	13-19
CHM 123, 124 General Chemistry II	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 Algebra. Students with only one year of algebra take MTH 104 Intermediate Algebra, followed by MTH 105 Algebra. Students without trigonometry take MTH 107 Plane Trigonometry.

**Prior to registering for the second semester the student should see the pre-medical coordinator.

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 requirements, see the advising coordinator for premedical programs.

BIOLOGY COURSES

BIO 105 Biology and the Human Species. 4 sem hours
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 General Botany, and/or ZOO 222 General Zoology. Does not count toward the major or minor.

BIO 204 The Biology of Cancer. 2 sem hours
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 sem hours
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 General Botany or ZOO 222 General Zoology except by department permission.
Prereq: BIO 105 Biology and the Human Species or equivalent or department permission. Does not count toward the major or minor.

BIO 207 Elements of Ecology. 2 sem hours
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 Biology and the Human Species or equivalent. Does not count toward the major.

BIO 224 Principles of Conservation. 4 sem hours
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 sem hours
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 sem hours
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 Biology and the Human Species or equivalent.

BIO 277, 278, 279 Special Topics in Biology. 1, 2, 3 sem hours
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 sem hours
A lecture course emphasizing the basic principles of inheritance with their application to plants and animals.
Prereq: BOT 221 General Botany and ZOO 222 General Zoology or equivalent.

BIO 302 Genetics Lab. 2 sem hours
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 Genetics (may be taken concurrently).

BIO 307 Introduction to Hematology. 3 sem hours
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 Introduction to Hematology.

Prereq: Department permission.

BIO 314 Energy Analysis and Environmental Decision-Making. 3 sem hours

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 Biology and the Human Species or equivalent; one year of high school algebra or MTH 104 Intermediate Algebra.

BIO 320 Introduction to Cell Physiology. 4 sem hours

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 General Botany, ZOO 222 General Zoology, CHM 121, 122 General Chemistry I and CHM 123, 124 General Chemistry II, CHM 270, 271 Organic Chemistry or equivalent.

BIO 334 Immunohematology/Urinalysis. 3 sem hours

A lecture and laboratory course dealing with the principles of immunohematology and the theory and practice of urinalysis.

Prereq: ZOO 201/202 Human Anatomy and Physiology I and II or ZOO 222 General Zoology and ZOO 326 Human Physiology. BIO 307 Introduction to Hematology and MICR 333 Principles of Immunology.

BIO 387 Cooperative Education in Biology. 3 sem hours

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 sem hours

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 General Botany, ZOO 222 General Zoology, and department permission. Junior standing. Not open to students on academic probation.

BIO 407 Advanced Hematology. 3 sem hours
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 Advanced Hematology.

Prereq: BIO 307 Introduction to Hematology. Coreq: MICR 333 Principles of Immunology.

BIO 410 Limnology. 3 sem hours
A lecture, laboratory, and field course dealing with physicochemical and biological interrelationships in standing waters.

Prereq: BIO 420 General Ecology and one taxonomic field course, or department permission.

BIO 412 Biogeography. 2 sem hours

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 sem hour

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 sem hour

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 sem hour

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 sem hours

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 General Botany, ZOO 222 General Zoology, and one taxonomic field course or department permission.

BIO 433 Stream Ecology. 3 sem hours
A field biology course that includes the study of physicochemical and biological aspects of stream ecosystems. Includes a study of laboratory and field methods.
Prereq: BIO 420 General Ecology and one taxonomic field course, or department permission.

BIO 434 Advanced Immunohematology. 3 sem hours
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 Advanced Immunohematology.
Prereq: BIO 307 Introduction to Hematology and CLS 335 Clinical Immunology.

BIO 435 Wetland Ecosystems. 3 sem hours
Advanced field ecology course in the theory and method of study of wetland ecosystems.
Prereq: BIO 420 General Ecology and one taxonomic field course, or department permission.

BIO 436 Terrestrial Ecosystems. 3 sem hours
Advanced field ecology course in the theory and methods of study of the structure and dynamics of terrestrial ecosystems.
Prereq: BIO 420 General Ecology, BOT 354 Trees and Shrubs, or BOT 455 Systematic Botany.

BIO 461 Oncology. 3 sem hours
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: MICR 329 General Microbiology or equivalent; CHM 270, 271 Organic Chemistry.

BIO 477, 478, 479 Special Topics in Biology. 1, 2, 3 sem hours
An examination of advanced topics in biology not covered in other department offerings.
Prereq: Department permission.

BIO 480 Radiation Biology. 3 sem hours
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 sem hours
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 Cooperative Education in Biology.

BIO 488 Honors Practicum in Ecosystem Biology. 2 sem hours
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 sem hours
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 sem hours
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 sem hour
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 sem hours
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 sem hours
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 sem hours
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 Biology and the Human Species or equivalent. Cannot be taken concurrently with ZOO 222 except by department permission.

BOT 234 General Field Botany. 1 sem hour
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 sem hours
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 sem hours
A taxonomic field course on identification of native trees and shrubs in winter and summer conditions. Counts as taxonomic field course.

BOT 387 Cooperative Education in Botany. 3 sem hours
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 sem hours
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 General Botany.

BOT 412 Plant Anatomy. 3 sem hours
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 General Botany.

BOT 442 Plant Physiology. 3 sem hours
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 General Botany, CHM 270, 271 Organic Chemistry or equivalent, and BIO 320 Introduction to Cell Physiology.

BOT 446 Medical Mycology. 4 sem hours
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: MICR 328 Introductory Microbiology or MICR 329 General Microbiology or BOT 404 Mycology.

BOT 450 Aquatic Tracheophyta. 3 sem hours
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 General Botany.

BOT 451 Freshwater Algae. 3 sem hours
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 General Botany.

BOT 453 Taxonomy and Ecology of Diatoms. 3 sem hours.
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 Freshwater Algae or department permission.

BOT 455 Systematic Botany. 3 sem hours
Covers the essential of the collection, identification, and classification of flowering plants. The students 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 General Botany.

BOT 477, 478, 479 Special Topics in Botany. 1, 2, 3 sem hours
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 sem hours
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 Cooperative Education in Botany.

BOT 497, 498, 499 Special Problems in Botany. 1, 2, 3 sem hours
Individual work in some areas 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

(See required courses for elementary education curricula on page 297)

BIO 205 Field Biology. 4 sem hours
(See Biology Courses.)

ESC 302 Elementary School Science. 3 sem hours
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 Science for the Elementary Teacher.

ESC 303 Science for the Elementary Teacher. 3 sem hours
Important biological concepts, especially relating to the interrelationships of organisms with in their environment; the investigative or "discovery" approach; methodology involved in the new approaches to teaching science. One hour of lecture and four hours weekly in 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 sem hours
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

MICR 277, 278, 279 Special Topics in Microbiology. 1, 2, 3 sem hours
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

MICR 328 Introductory Microbiology. 3 sem hours
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 Biology and the Human Species and CHM 120 Fundamentals of Chemistry, or ZOO 201 and 202 Human Anatomy and Physiology I and II, or department permission.

MICR 329 General Microbiology. 5 sem hours
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 MICR 328 Introductory Microbiology.
Prereq: BOT 221 General Botany or ZOO 222 General Zoology or ZOO 326 Human Physiology and CHM 270, 271 Organic Chemistry. A biochemistry course recommended.

MICR 333 Principles of Immunology. 3 sem hours
A lecture course presenting the theory and basic principles of immunology and serology including antigen-antibody reactions; immunoglobulin production; cellular immunity; hypersensitivity.
Prereq: MICR 328 Introduction to Microbiology or MICR 329 General Microbiology.

MICR 335 Immunology and Serology Laboratory. 2 sem hours
A laboratory course designed to accompany or follow MICR 333 Principles of Immunology. Theory and practice in serological techniques with emphases on antigen-antibody reactions such as reprecipitation, agglutination, viral neutralization, and complement fixation. Not open to those with credit in CLS 335 Clinical Immunology.
Prereq: MICR 333 Principles of Immunology. (May be taken concurrently.)

MICR 340 Basic Virology. 3 sem hours
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 their control.
Prereq: MICR 329 General Microbiology and an organic chemistry course.

MICR 387 Cooperative Education in Microbiology. 3 sem hours
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 (MICR 387 and MICR 487) alternated with full-time attendance at the University. Graded on a credit/no credit basis.
Prereq: MICR 329 General Microbiology and junior standing. Admittance to program by application only.

MICR 432 Clinical Microbiology. 4 sem hours
Lecture and laboratory. Mechanisms of pathogenesis and the specific bacterial and viral etiological agents of human disease. Methods of detection, isolation, enumeration, and identification used in clinical laboratories. Not open to those with credit in CLS 432 Clinical Microbiology.
Prereq: MICR 329 General Microbiology or department permission.

MICR 442 Microbial Ecology. 3 sem hours
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 General Botany or ZOO 222 General Zoology, and MICR 329 General Microbiology or equivalent.

MICR 444 Microbial Physiology. 3 sem hours
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: MICR 329 General Microbiology, CHM 270, 271 Organic Chemistry; CHM 351 Introductory Biochemistry and CHM 352 Biochemistry Laboratory recommended.

MICR 445 Food Microbiology. 3 sem hours
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: MICR 328 Introductory Microbiology or MICR 329 General Microbiology.

MICR 452 Advanced Microbiology. 4 sem hours
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: MICR 329 General Microbiology, MICR 444 Microbial Physiology, and a biochemistry course.

MICR 454 Molecular Biology of Bacteria and Viruses. 3 sem hours

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: MICR 329 General Microbiology or equivalent, BIO 301 Genetics, a course in physiology, and a course in organic chemistry (lecture and laboratory). BIO 427 Introduction to Molecular Genetics recommended.

MICR 477,478,479 Special Topics in Microbiology. 1, 2, 3 sem hours

An examination in 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.

MICR 487 Cooperative Education in Microbiology. 3 sem hours

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 (MICR 387 and MICR 487) alternated with full-time attendance at the University. Graded on a credit/no credit basis.

Prereq: MICR 387 Cooperative Education in Microbiology.

MICR 497,498, 499 Special Problems in Microbiology. 1, 2, 3 sem hours

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 sem hours

An intensive lecture and laboratory course in vestigating human anatomy and physiology with emphasis on both normal and pathological conditions, in a two-semester sequence. First semester will cover the basic structure and 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 Fundamentals of Chemistry.

ZOO 202 Human Anatomy and Physiology II. 3 sem hours

An intensive lecture and laboratory course in vestigating 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 Fundamentals of Chemistry and ZOO 201 Human Anatomy and Physiology I.

ZOO 222 General Zoology. 4 sem hours

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 Biology and the Human Species or equivalent. Cannot be taken concurrently with BOT 221 except by department permission.

ZOO 223 Field Bird Study. 1 sem hour
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 sem hours

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 sem hours

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 General Zoology.

ZOO 310 Natural History of Vertebrates. 3 sem hours

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 General Zoology.

ZOO 317 Human Gross Anatomy. 5 sem hours

A lecture, demonstration, and laboratory course on gross anatomy of the human body with emphasis on the extremities.
Prereq: BIO 105 Biology and the Human Species and department permission.

ZOO 318 Laboratory in Human Anatomy. 2 sem hours

Laboratory with prosection and dissection of human cadaver by students. Designed to accompany lecture material in PED 200 Anatomy and Physiology.
Coreq: PED 200 Anatomy and Physiology.

ZOO 323 Animal Embryology. 3 sem hours

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 General Zoology.

ZOO 326 Human Physiology. 3 sem hours

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 General Zoology is prerequisite. Credit will be given for both ZOO 326 and ZOO 427 Vertebrate Physiology on the minor.

Prereq: BIO 105 Biology and the Human Species. Open to Dietetics and Occupational Therapy majors only.

ZOO 366 Economic Zoology. 2 sem hours

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 sem hours

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 sem hours

A lecture/laboratory course dealing with the structure and properties of mammalian organs and their component tissues.
Prereq: ZOO 222 General Zoology.

ZOO 417 Neuroanatomy. 3 sem hours

A lecture/laboratory course concerned with the study of the human nervous system; lesions and resulting disabilities.
Prereq: ZOO 317 Human Gross Anatomy and department permission.

ZOO 421 Entomology. 3 sem hours

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 General Zoology.

ZOO 422 Ichthyology. 3 sem hours

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 General Zoology.

ZOO 425 Ornithology. 3 sem hours

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 General Zoology.

ZOO 427 Vertebrate Physiology. 3 sem hours

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. Credit will not be given for ZOO 326 Human Physiology on the major.
Prereq: ZOO 222 General Zoology, BIO 320 Introduction to Cell Physiology, CHM 270, 271 Organic Chemistry, or department permission. Physics is desirable.

ZOO 430 Invertebrate Zoology. 4 sem hours
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 General Zoology.

ZOO 431 Comparative Anatomy of Vertebrates. 4 sem hours

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.

Prereq: ZOO 222 General Zoology.

ZOO 437 Invertebrate Physiology. 3 sem hours

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 inverts 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 General Zoology, CHM 270, 271 Organic Chemistry, BIO 320 Introduction to Cell Physiology. ZOO 430 Invertebrate Zoology is recommended.

ZOO 462 Parasitology. 3 sem hours

A survey of animal parasites that affect other animals including the human. Lecture and laboratory.

Prereq: ZOO 222 General Zoology.

ZOO 474 Herpetology. 3 sem hours

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 General Zoology and one of the following: BIO 420 General Ecology, ZOO 310 Natural History of Vertebrates, or ZOO 431 Comparative Anatomy of Vertebrates.

ZOO 477, 478, 479 Special Topics in Zoology. 1, 2, 3 sem hours

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 sem hours

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 General Zoology.

ZOO 482 Aquatic Entomology. 3 sem hours

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 General Zoology. ZOO 421 Entomology recommended.

ZOO 485 Mammalogy. 3 sem hours

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 General Zoology and one of the following: ZOO 310 Natural History of Vertebrates, BIO 420 General Ecology, or ZOO 431 Comparative Anatomy of Vertebrates.

ZOO 487 Cooperative Education in Zoology. 3 sem hours

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: ZOO 387 Cooperative Education in Zoology.

ZOO 497, 498, 499 Special Problems in Zoology. 1, 2, 3 sem hours

Individual work in some area of zoology under direction of a staff 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.

CHEMISTRY

Judith T. Levy
 Department Head
 225 Mark Jefferson
 487-0106

Professors: Michael J. Brabec; Stephen W. Brewer; Ronald W. Collins; Edward L. Compere, Jr.; 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: 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, laser-Raman, and Fourier-transform IR spectrophotometers; gas chromatographs and high performance liquid chromatographs; X-ray diffraction and X-ray fluorescence apparatus; preparative and analytical ultracentrifuges; fluorometers; a DTA-DSC-TGA thermal analysis system; and a titration microcalorimeter. The department also has a Bruker 250 MHz superconducting nuclear magnetic resonance spectrometer (NMR), as well as a smaller 60 MHz proton NMR. 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 a variety of honors courses for which any student taking chemistry can apply. Specifically, these include 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:

General Chemistry

Curricula:

Professional chemistry
 Professional biochemistry
 General biochemistry
 Biochemistry/toxicology

Minors:

Chemistry
 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

MAJOR IN GENERAL CHEMISTRY

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
Academic major in general chemistry	30
1. Required courses	25
CHM 121-124 General Chemistry I and II with labs	8
*CHM 261 Introduction to Physical Chemistry	3
CHM 281 Quantitative Analysis	4

- CHM 371, 372 Organic Chemistry I and II6
 CHM 373 Organic Chemistry Laboratory2
 CHM 381 Instrumentation for Chemical
 Technology2
**Prerequisites for CHM 261 include MTH 120 Calculus I, PHY 223, and either PHY 222 or 224, a total of 13-14 semester hours, all of which are required for a chemistry major.*

2. Electives 5
 Choose five credits from 300- and 400-level courses in chemistry.

MAJOR IN GENERAL CHEMISTRY (TEACHING)

Students planning to teach chemistry at the secondary school level must take additional science course work to meet the standards of the National Council for the Accreditation of Teacher Education (NCATE). The methods course for those students who plan to teach chemistry at the junior-senior high level is PHY 325 Methods of Teaching the Physical Sciences.

NCATE standards require 32 semester hours in chemistry, including a biochemistry course, and supplementary science to total at least 16 semester hours consisting of at least one course from each of physics, biology, and earth science. (The physics courses used as prerequisites for CHM 261 are counted toward the 16 credits of supplemental science.)

	Sem hours
Teaching major in general chemistry	35
1. Required courses	31
CHM 121-124 General Chemistry I and II with labs	8
*CHM 261 Introduction to Physical Chemistry	3
CHM 281 Quantitative Analysis	4
CHM 351 Introductory Biochemistry	3
CHM 371, 372 Organic Chemistry I and II	6
CHM 373 Organic Chemistry Laboratory	2
CHM 381 Instrumentation for Chemical Technology	2
PHY 325 Methods of Teaching the Physical Sciences	3
<i>*Prerequisites for CHM 261 include MTH 120 Calculus I, PHY 223, and either PHY 222 or 224, a total of 13-14 semester hours, all of which are required for a chemistry major.</i>	
2. Electives	4
Choose four 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 and 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, 372 Organic Chemistry I and II	6
CHM 373 Organic Chemistry Laboratory	2
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 and 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 and II; CHM 413 Toxi- cology Laboratory; CHM 414 Regulatory Toxi- cology; CHM 451, 452 Biochemistry I and II; CHM 453 Biochemistry Laboratory; CHM 475 Introduction to Polymer Chemistry; CHM 480 Computer Instrument Interfacing; CHM 485 In- troduction to Radiotracer Techniques; CHM 477, 478 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 Chemis- try and Spectroscopy; CHM 562 Statistical Me-	

chanics and Chemical Kinetics; CHM 565 Nuclear Chemistry; CHM 571 Advanced Organic Chemistry; CHM 572 Spectrometric Organic Structure Determination; CHM 574 Advanced Organic Chemistry Topics

Mathematics and computer science

CSC 237 Computer Programming and Numeric Methods, CSC 337 Programming Languages, MTH 425 Mathematics for Scientists, other 400-level courses with department permission

Physics

PHY 330 Intermediate Mechanics I, PHY 440 Optics, PHY 450 Electricity and Magnetism, PHY 452 Electrical Measurements, PHY 456 Electronics, PHY 460 Heat and Thermodynamics, 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 and 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, 372 Organic Chemistry I and II	6
CHM 373 Organic Chemistry Laboratory	2
CHM 451, 452 Biochemistry I and 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 and II	8
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	7
Choose four credits from the following:	
CHM 411 Toxicology I; CHM 412 Toxicology II; CHM 413 Toxicology Laboratory; CHM 414	

Regulatory Toxicology; CHM 433 Inorganic-Organic Synthesis Laboratory; CHM 475 Introduction to Polymer Chemistry; CHM 477, 478 Special Topics in Chemistry; CHM 480 Computer Instrument Interfacing; CHM 481 Instrumental Analysis; CHM 485 Introduction to Radio tracer 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 those students with an interest in biochemistry but who require a less extensive background. It is often selected by those 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	51-54
1. Required courses	46-49
CHM 121-124 General Chemistry I and II with labs	8
CHM 261 Introduction to Physical Chemistry	3
*CHM 270 Organic Chemistry	4
*CHM 271 Organic Chemistry Laboratory	1
(*Pre-medicine and pre-dentistry students should substitute CHM 371 Organic Chemistry I, CHM 372 Organic Chemistry II, and CHM 373 Organic Chemistry Laboratory to satisfy most medical and dental school requirements for organic chemistry.)	
CHM 281 Quantitative Analysis	4
CHM 381 Instrumentation for Chemical Technology	2
CHM 451, 452 Biochemistry I and II	6
CHM 453 Biochemistry Laboratory	2
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 or PHY 224 Electricity and Light	4-5
2. Electives	5
Choose five credits from any biology courses numbered 300 or above.	

GENERAL BIOCHEMISTRY CURRICULUM (TEACHING)

This curriculum may be used for those planning to teach chemistry at the junior-senior high school. The methods course requirements for students in the teaching curriculum may be satisfied by taking PHY 325 Methods of Teaching Physical Sciences.

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	54-57
1. Required courses	49-52
CHM 121-124 General Chemistry I and II with labs	8
CHM 261 Introduction to Physical Chemistry	3
*CHM 270 Organic Chemistry	4
*CHM 271 Organic Chemistry Laboratory	1
(<i>*Pre-medicine and pre-dentistry students should substitute CHM 371 Organic Chemistry I, CHM 372 Organic Chemistry II, and CHM 373 Organic Chemistry Laboratory 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, 452 Biochemistry I and II	6
CHM 453 Biochemistry Laboratory	2
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 or PHY 224 Electricity and Light ...	4-5
PHY 325 Methods of Teaching Physical Sciences	3
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 and II with labs	8
CHM 261 Introduction to Physical Chemistry	3
CHM 281 Quantitative Analysis	4
CHM 371, 372 Organic Chemistry I and II	6
CHM 373 Organic Chemistry Laboratory	2
CHM 381 Instrumentation for Chemical Technology	2
CHM 411, 412 Toxicology I and II	4
CHM 413 Toxicology Laboratory	2
CHM 451, 452 Biochemistry I and II	6
CHM 453 Biochemistry Laboratory	2
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 Anatomy for Occupational Therapy Students	4-5
MTH 120 Calculus I	4
PHY 223 Mechanics, Sound, and Heat	5
PHY 222 or PHY 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 (MTH 270 Elementary Statistics I or PSY 205 Quantitative Methods)	3

MINORS OFFERED IN THE DEPARTMENT OF CHEMISTRY

CHEMISTRY MINOR

	Sem hours
Academic minor in chemistry	20
1. Required courses	17
CHM 121-124 General Chemistry I and II with labs	8
CHM 270 Organic Chemistry and	4
CHM 271 Organic Chemistry Laboratory	1
CHM 281 Quantitative Analysis	4
(The CHM 371, 372, 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

CHEMISTRY MINOR (TEACHING)

	Sem hours
Teaching minor in chemistry	24
1. Required courses	17
CHM 121-124 General Chemistry I and II with labs	8
CHM 270 Organic Chemistry and	4
CHM 271 Organic Chemistry Laboratory	1
CHM 281 Quantitative Analysis	4
(The CHM 371, 372, 373 Organic Chemistry sequence may be substituted for CHM 270, 271 Organic Chemistry if a stronger background is desired.)	
2. Electives	7
Choose from courses numbered above 200 in chemistry	

North Central Association requirements specify that students seeking to teach chemistry at the junior-senior high school level take an additional four semester hours of science (24 semester hours). The methods course, PHY 325 Methods of Teaching the Physical Sciences, may be included in that total.

BIOCHEMISTRY MINOR

	Sem hours
Academic minor in biochemistry	22
Required courses	
CHM 121-124 General Chemistry I and II with labs	8
CHM 270 Organic Chemistry	4
CHM 271 Organic Chemistry Laboratory	1
CHM 281 Quantitative Analysis	4
CHM 351 Introductory Biochemistry	3
CHM 453 Biochemistry Laboratory	2
(The CHM 451, 452 Biochemistry I and II sequence may be substituted for CHM 351 Introductory Biochemistry if a stronger background is desired.)	

BIOCHEMISTRY MINOR (TEACHING)

	Sem hours
Teaching minor in biochemistry	24
Required courses	22
CHM 121-124 General Chemistry I and II with labs	8
CHM 270 Organic Chemistry	4
CHM 271 Organic Chemistry Laboratory	1
CHM 281 Quantitative Analysis	4
CHM 351 Introductory Biochemistry	3

CHM 453 Biochemistry Laboratory 2
(The CHM 451, 452 Biochemistry I and II
sequence may be substituted for CHM 351
Introductory Biochemistry if a stronger
background is desired.)

An additional two semester hours of sciences (cognates) must be completed to meet North Central Association requirements (24 semester hours) for teaching chemistry at the junior-senior high school level. The methods course, PHY 325 Methods of Teaching the Physical Sciences, may be included in that total.

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. 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. A central agency, the American Association of Dental Schools Application Service, is utilized by virtually all dental schools.

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 and II with
labs, CHM 371, 372, 373 Organic Chemistry
I and II and 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; 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 (CTS 121 or 124 Fundamentals of Speech, CTC 225 Listening Behavior, CTC 226 Non-verbal Communication, CTC 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, 372, 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 sem hours

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 Science for Elementary Teachers.

CHM 105 Survey of Chemistry. 5 sem hours

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 Fundamentals of Chemistry or CHM 120 Fundamentals of Organic and Biochemistry. Does not count on major or minor. Lecture: three hours per week. Laboratory: four hours per week.

CHM 115 Chemistry and Society. 3 sem hours

Examines the relevance of chemistry to the problem of man's relationship to his environment. It is designed for humanities and other non-science majors. No previous mathematics or chemistry is required. CHM 116 Chemistry and Society Laboratory 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 sem hour

Laboratory experiments based on environmental problems such as water and air pollution, drugs, and pesticides. The laboratory may be taken concurrently with CHM 115 Chemistry and Society to satisfy the science requirement. Does not count on major or minor. Laboratory: two hours per week.

Coreq: CHM 115 Chemistry and Society.

CHM 119 Fundamentals of Chemistry. 4 sem hours
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 General Chemistry I. Does not count on major or minor. Lecture: three hours per week. Laboratory: two hours per week.
Prereq: MTH 104 Intermediate Algebra or one year of high school algebra.

CHM 120 Fundamentals of Organic and Biochemistry. 4 sem hours
A survey of organic chemistry and biochemistry; completes the study of chemistry begun in Chemistry 119 Fundamentals of Chemistry 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 Fundamentals of Chemistry or one year of high school chemistry.

CHM 121 General Chemistry I. 3 sem hours
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 Fundamentals of Chemistry; two years of high school algebra or MTH 105 College Algebra.
Coreq: CHM 122 General Chemistry I Laboratory.

CHM 122 General Chemistry I Laboratory. 1 sem hour
The laboratory class to accompany CHM 121 General Chemistry I Lecture. 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 General Chemistry I.

CHM 123 General Chemistry II. 3 sem hours
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 General Chemistry I and CHM 122 General Chemistry I Laboratory.
Coreq: CHM 124 General Chemistry II Laboratory.

CHM 124 General Chemistry II Laboratory. 1 sem hour
The techniques learned in CHM 122 are reemphasized and supplemented. Laboratory: three hours per week.
Coreq: CHM 123 General Chemistry II.

CHM 134 Honors General Chemistry II. 4 sem hours
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 General Chemistry I and lab, and consent of Honors Committee.

CHM 177, 178, 179 Special Topics in Chemistry. 1, 2, 3 sem hours
Covers specific chemical topics not discussed in any regular, introductory chemistry course.
Prereq: Department permission.

CHM 232 Inorganic Chemistry. 2 sem hours
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 General Chemistry II and CHM 124 General Chemistry II Lab or CHM 134 Honors General Chemistry II Lab.

CHM 241 Materials Science. 3 sem hours
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 General Chemistry II and CHM 124 General Chemistry II Lab or CHM 134 Honors General Chemistry II Lab; PHY 221 or PHY 223 Mechanics, Sound, and Heat.

CHM 242 Materials Science Laboratory. 1 sem hour
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 Materials Science.

CHM 261 Introduction to Physical Chemistry. 3 sem hours
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 General Chemistry II, CHM 124 General Chemistry II Lab or CHM 134 Honors General Chemistry II Lab, MTH 120 Calculus I, PHY 223 Mechanics of Sound and Heat. Co- or prereq: PHY 222 or 224 Electricity and Light; or ganic chemistry and quantitative analysis recommended.

CHM 270 Organic Chemistry. 4 sem hours
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 Organic Chemistry. Lecture: four hours per week.
Prereq: CHM 123 General Chemistry II and CHM 124 General Chemistry II Lab or CHM 134 Honors General Chemistry II Lab.

CHM 271 Organic Chemistry**Laboratory. 1 sem hour**

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 Organic Chemistry.

CHM 277, 278, 279 Special Topics in**Chemistry. 1, 2, 3 sem hours**

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 sem hours

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 General Chemistry II and CHM 124 General Chemistry II Lab or CHM 134 Honors General Chemistry II Lab.

CHM 282 Honors Quantitative Analysis. 4 sem hours

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 General Chemistry II, CHM 124 General Chemistry II Lab or CHM 134 Honors General Chemistry II Lab, and consent of Honors Committee.

CHM 287, 288, 289 Cooperative Education in**Chemistry. 1, 2, 3 sem hours**

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 General Chemistry II and CHM 124 General Chemistry II Lab or CHM 134 Honors General Chemistry II Lab. Admission by application only. Sophomore standing.

CHM 297 Undergraduate Research in**Chemistry. 1 sem hour**

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 sem hour**

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 chemistry 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 sem hours

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 General Chemistry II and CHM 124 General Chemistry II Lab or CHM 134 Honors General Chemistry II Lab; CHM 270 Organic Chemistry.

CHM 341 Principles of Metallurgy. 3 sem hours

Covers the winning and refining, structure, diffusion, heat treatment, hardening, and corrosion of metals. Lecture: three hours per week.

Prereq: CHM 123 General Chemistry II and CHM 124 General Chemistry II Lab or CHM 134 Honors General Chemistry II Lab.

CHM 342 Experimental Metallurgy. 1 sem hour

Laboratory activity in metallography, testing of physical properties, treatment, finishing, and analysis of metals and alloys. Laboratory: three hours per week.

Prereq: CHM 242 Materials Science Laboratory or CHM 341 Principles of Metallurgy. CHM 341 may be taken as coreq.

CHM 351 Introductory Biochemistry. 3 sem hours

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 Biochemistry I. Lecture: three hours per week.

Prereq: CHM 270 Organic Chemistry or equivalent.

CHM 363 Chemical Thermodynamics. 2 sem hours

The principles of thermodynamics and the equilibrium properties of systems. Lecture: two hours per week.

Prereq: CHM 281 Quantitative Analysis and MTH 223 Multivariable Calculus. Students with less than a "B" average in the prerequisites should take CHM 261 Introduction to Physical Chemistry first.

CHM 364 Chemical Kinetics. 2 sem hours

The study of rates of chemical reactions and transport processes. Lecture: two hours per week.

Prereq: CHM 363 Chemical Thermodynamics. Pre- or coreq: MTH 325 Differential Equations.

CHM 365 Physical Chemistry**Laboratory. 2 sem hours**

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 Chemical Kinetics.

CHM 371 Organic Chemistry I. 3 sem hours

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 Organic Chemistry.

Prereq: CHM 123 General Chemistry II and CHM 124 General Chemistry II Lab or CHM 134 Honors General Chemistry II Lab.

CHM 372 Organic Chemistry II. 3 sem hours

A continuation of CHM 371 Organic Chemistry. CHM 371 and 372 constitute the customary year of foundation/lecture work in organic chemistry. Lecture: three hours per week.

Prereq: CHM 371 Organic Chemistry I.

CHM 373 Organic Chemistry

Laboratory.

2 sem hours

Covers the basic techniques involved in organic chemistry. Laboratory: six hours per week.

Prereq or coreq: CHM 372 Organic Chemistry II.

CHM 376 Honors Organic Chemistry

Laboratory.

2 sem hours

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 Organic Chemistry II and consent of Honors Committee.

CHM 377, 378, 379 Special Topics in

Chemistry.

1, 2, 3 sem hours

Covers specific chemical topics not discussed in any regular chemistry course at this level.

Prereq: Department permission.

CHM 381 Instrumentation for Chemical

Technology.

2 sem hours

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 Quantitative Analysis, CHM 270 Organic Chemistry, and CHM 271 Organic Chemistry Laboratory or equivalent.

CHM 387, 388, 389 Cooperative Education in

Chemistry.

1, 2, 3 sem hours

Full- or part-time employment at an industrial, federal, or state agency chemistry laboratory providing an applied experience in chemistry. A 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 sem hour

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 sem hours

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 Organic Chemistry or CHM 371, 372 Organic Chemistry I and II.

CHM 412 Toxicology II.

2 sem hours

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 Toxicology I. Biochemistry recommended.

CHM 413 Toxicology Laboratory.

2 sem hours

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 Toxicology I. CHM 282 Quantitative Analysis recommended.

CHM 414 Regulatory Toxicology.

2 sem hours

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 Organic Chemistry or CHM 372 Organic Chemistry II.

CHM 415 Environmental Chemistry.

3 sem hours

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 General Chemistry II and CHM 124 General Chemistry II Lab or CHM 134 Honors General Chemistry II Lab. A course in organic chemistry and/or quantitative analysis recommended.

CHM 416 Advanced Topics in

Toxicology.

2 sem hours

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 Toxicology I, ZOO 326 Human Physiology, ZOO 427 Vertebrate Physiology, or equivalent.

CHM 432 Advanced Inorganic

Chemistry.

3 sem hours

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 Quantum Chemistry or department permission. CHM 232 Inorganic Chemistry also is recommended.

CHM 433 Inorganic-Organic Synthesis**Laboratory. 2 sem hours**

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 Quantitative Analysis and CHM 373 Organic Chemistry Laboratory.

CHM 451 Biochemistry I. 3 sem hours

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 General Chemistry II and CHM 124 General Chemistry II Lab or CHM 134 Honors General Chemistry II Lab, and CHM 270 Organic Chemistry or equivalent

CHM 452 Biochemistry II. 3 sem hours

Continues the survey of biochemistry begun in CHM 451 Biochemistry. Considers the dynamic aspects of biochemistry, especially metabolism, biosynthesis, and regulation. Lecture: three hours per week.

Prereq: CHM 451 Biochemistry I.

CHM 453 Biochemistry Laboratory. 2 sem hours

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 Organic Chemistry Laboratory or equivalent and CHM 281 Quantitative Analysis strongly recommended. Coreq: CHM 351 Introductory Biochemistry or equivalent.

CHM 464 Quantum Chemistry. 2 sem hours

The study of quantum mechanics and its application to atomic structure, molecular bonding, and spectroscopy. Lecture: two hours per week.

Prereq: CHM 123 General Chemistry; MTH 325 Differential Equations; PHY 223 Mechanics, Sound, Heat; and PHY 224 Electricity and Light. Students with less than a "B" average in the prerequisites should take CHM 261 Introduction to Physical Chemistry first. CHM 363 Chemical Thermodynamics and CHM 364 Chemical Kinetics are recommended.

CHM 475 Introduction to Polymer Chemistry. 3 sem hours

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, 124 General Chemistry II and lab, CHM 270 Organic Chemistry, or CHM 371, 372 Organic Chemistry I and II or equivalent.

CHM 477, 478, 479 Special Topics in**Chemistry. 1, 2, 3 sem hours**

Covers specific chemical topics not discussed in any regular chemistry courses at this level.

Prereq: Department permission.

CHM 480 Computer/Instrument**Interfacing. 2 sem hours**

Introduction to the techniques of interfacing the micro-computer to various laboratory analytical instruments. Lecture: one hour per week. Laboratory: three hours per week.

Prereq: CHM 281 Quantitative Analysis, CHM 381 Instrumentation for Chemical Technology, or CHM 481 Instrumental Analysis or department permission.

CHM 481 Instrumental Analysis. 4 sem hours

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 Quantitative Analysis and CHM 365 Physical Chemistry Laboratory.

Prereq or coreq: CHM 464 Quantum Chemistry.

CHM 485 Introduction to Radiotracer**Techniques. 3 sem hours**

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 General Chemistry II and CHM 124 General Chemistry II Lab or CHM 134 Honors General Chemistry II Lab, and either CHM Quantitative Analysis or one science laboratory course above the 500 level, or department permission.

CHM 487, 488, 489 Cooperative Education in**Chemistry. 1, 2, 3 sem hours**

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 sem hours**

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 McCracken, Thomas J. Murray, Kenneth W. Stevens, Katherine Strand-Evans

Associate Professors: William V. Swisher, Mary Ann Watson, Arthur J. Yahrmatter, Patricia M. Zimmer

Assistant Professors: John Capecci, Geoffrey Hammill, James Robinson, Marvin Sims, Karen Smith

Instructor: Michael Tew

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)
 Comprehensive major in communication and theatre arts (Areas of concentration: communication, oral interpretation, speech improvement, telecommunications and film, theatre arts, drama/theatre for the young)
 CTA secondary education program
 Telecommunications and film
 Theatre arts

Interdisciplinary major in literature and drama/
theatre for the young
Interdisciplinary major in public relations

Minors:

Communication
Communication for elementary and special edu-
cation
Comprehensive minor in communication and
theatre arts
Drama/theatre for the young
Musical theatre
Telecommunications and film
Theatre arts

**Joint program with the Department of Interdis-
ciplinary Technology:**

Communication technology curriculum

Advising is by assignment to a personal adviser
who shares the student's interests and objectives. Coor-
dinators listed below should be consulted by each pro-
spective major or minor student.

Advising Coordinators:

Arts management curriculum: Kenneth Stevens
Communication major and minor: Gary Evans
Communication minor for elementary and second-
ary 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 commu-
nication; a Master of Arts emphasizing interpretation/
performance studies; a Master of Arts in drama/theater
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.

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 practi-

cal 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 devel-
opment 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 diffi-
culties 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
Academic major in arts management	39-47
1. Required courses	23
<i>Arts fundamentals</i>	
CTR 150 Introduction to Theatre	3
CTR 155 Play Production	3
FA 107, 108 Art History Survey I and II	6
MUS 107 Music Appreciation	2
PEG 161 Modern Dance	1
<i>Media and arts management</i>	
CTT 334 Radio-Television News	3
CTR 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	
IED 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.

MAJOR IN COMMUNICATION

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
Academic major in communication	35-36
1. Required courses	2-3
<i>Foundation level</i>	
CTS 121 or 124 Fundamentals of Speech	2-3
2. Restricted electives	18
Choose two courses from the following:	
CTC 224 Public Speaking, CTC 225 Listening Behavior, CTC 226 Non- verbal Communication, CTC 227 Interpersonal Communication	6
<i>Intermediate level</i>	
Choose two courses from the following:	
CTC 350 Persuasion, CTC 354 Organizational Communication, CTC 356 Argumentation and Debate, CTC 359 Small Group Communication	6
<i>Advanced level</i>	
Choose two courses from the following:	
CTC 440 Survey of Public Address, CTC 460 Theories of Speech Criticism, CTC 475 Research in Speech Communication, CTC 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

	Sem hours
Interpersonal communication option	12-16
Choose 12-16 additional credits from the following:	
CTC 225 Listening Behavior; CTC 226 Non- verbal Communication; CTC 227 Interpersonal Communication; CTC 350 Persuasion; CTC 357 Interviewing as Communication; CTC 359 Small Group Communication; CTC 372 Assertive Communication; CTC 375 Interracial/ Interethnic Communication; CTC 475 Research in Speech Communication; CTC 485 Theories of Speech Communication Behavior; CTC 387, 388, 389 Cooperative Education in Communication; CTC 487, 488, 489 Internships in Communication; CIY 166, 266, 366, 466 Forensics	

Organizational communication option 12-16
Choose 12-16 additional credits from the following:

- CTC 225 Listening Behavior, CTC 226 Non-verbal Communication, CTC 321 Parliamentary Procedure and Meeting Management, CTC 350 Persuasion, CTC 352 Communication in Negotiation, CTC 353 Organizational Communication in Unions, CTC 354 Organizational Communication, CTC 357 Interviewing as Communication, CTC 359 Small Group Communication, CTC 372 Assertive Communication, CTC 374 Intercultural Communication, CTC 375 Interracial/Interethnic Communication, CTC 475 Research in Speech Communication, CTC 485 Theories of Speech Communication Behavior
- CTC 387, 388, 389 Cooperative Education in Communication
- CTC 487, 488, 489 Internships in Communication
- CIY 166, 266, 366, 466 Forensics

Speech communication option 12-16
Choose 12-16 additional credits from the following:

- CTC 224 Public Speaking, CTC 226 Non-verbal Communication, CTC 227 Interpersonal Communication, CTC 321 Parliamentary Procedure and Meeting Management, CTC 350 Persuasion, CTC 356 Argumentation and Debate, CTC 357 Interviewing as Communication, CTC 359 Small Group Communication, CTC 440 Survey of Public Address, CTC 460 Theories of Speech Criticism
- CTC 387, 388, 389 Cooperative Education in Communication
- CTC 487, 488, 489 Internships in Communication
- CIY 166, 266, 366, 466 Forensics

Substitution options:

With department permission, 10 semester hours of course work in telecommunications, interpretation, or performance studies may be substituted to fulfill the credit requirement for the major option in speech communication.

Telecommunications	13
1. Required courses	7
CTT 130 Introduction to Telecommunications and Film	3
CTT 131 Introduction to Audio Production and Direction	2
CTT 132 Introduction to Video Production and Direction	2
2. Electives	6
Choose one course from the following:	
CTT 145 Introduction to Film Appreciation, CTT 241 Radio-Television-Film Announcing, CTT 331 Fundamentals of Radio Production and Direction, CTT 332 Fundamentals of Television Production and Direction, CTT	

333 Fundamentals of Film Production and Direction, CTT 334 Radio-Television News, CTT 344 Continuity Writing for Radio-Television-Film

Choose one course from the following:

CTT 431 Advanced Radio Production and Direction, CTT 432 Advanced Television Production and Direction, CTT 433 Advanced Film Production and Direction, CTT 445 Film Theory and Criticism, CTT 446 Contemporary Problems in Telecommunications, CTT 447 Radio-Television Station Management

- Interpretation/performance studies** 10
1. **Required course** 3
CTO 210 Interpretative Reading
 2. **Electives** 7
Choose one course from the following:
CTO 311 Interpretation of Prose, CTO 314 Interpretation of Drama, CTO 412 Oral Interpretation of Poetry
Choose either CTO 411 Advanced Problems in Interpretation or CTO 414 Development and Theory of Oral Interpretation
One semester hour of credit in an interpretation activity course

COMMUNICATION TECHNOLOGY CURRICULUM

See the Department of Interdisciplinary Technology for program requirements.

COMPREHENSIVE MAJOR IN COMMUNICATION AND THEATRE ARTS

The comprehensive major of 36 semester hours 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.

- | | |
|--|------------------|
| | Sem hours |
| Comprehensive major in communication and theatre arts | 30-43 |
| 1. Required core course | 2-3 |
| CTS 121 or 124 Fundamentals of Speech | |
| 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:

CTC 224 Public Speaking, CTC 227 Interpersonal Communication, CTC 350 Persuasion, CTC 356 Argumentation and Debate, CTC 359 Small Group Communication

Interpretation/performance studies:

CTO 210 Interpretative Reading

Speech improvement:

CTO 102, 202, 302, 402 Voice Development (one credit each), CTO 205 Voice and Articulation, CTO 404 Dynamic Speaking Skills*

Telecommunications and film:

CTT 130 Introduction to Telecommunications and Film, CTT 131 Introduction to Audio Production and Direction, CTT 132 Introduction to Video Production and Direction, CTT 141 Introduction to Radio-TV-Film Production,* CTT 145 Introduction to Film Appreciation, CTT 445 Film Theory and Criticism, CTT 446 Contemporary Problems in Telecommunications

*Department permission required.

Theatre arts:

CTR 150 Introduction to Theatre, CTR 151 Black Theatre: An Introduction, CTR 152 Introduction to Technical Theatre, CTR 153 Introduction to the Theatre Crafts, CTR 155 Play Production, CTR 158 Fundamentals of Acting, CTR 251 Black Theatre: Creative Problems, CTR 254 Stage Makeup, CTR 450 History of the Theatre to 1642, CTR 451 History of the Theatre: 1642 to the Present

Drama/theatre for the young:

CTD 222 Drama and Play in Human Experience, CTD 322 Theatre for the Young, CTD 323 Improvising and Role Play, CTD 327 Plays for the Young, CTD 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

COMMUNICATION AND THEATRE ARTS SECONDARY EDUCATION PROGRAM (TEACHING)

Students who intend to apply for certification to teach speech communication and theatre arts at the secondary level should consult with the department head the first term they are enrolled at EMU. Students will be advised of various University requirements that need to be fulfilled and will be directed to departmental advisers who can help them plan course selections to greatest advantage.

MAJOR IN TELECOMMUNICATIONS AND FILM

	Sem hours
Academic major in telecommunications and film	30-34
1. Required foundation courses.....	11
CIT 130 Introduction to Telecommunications and Film	3
CTT 131 Introduction to Audio Production and Direction	2
CIT 132 Introduction to Video Production and Direction	2
Choose one course from the following:	
CIT 145 Introduction to Film Appreciation or CIT 236 History and Criticism of Radio and Television	3
Choose one of the following:	
CTY 165 Television Laboratory or CTY 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):	
CIT 231 Music Repertoire and Recording Techniques, CTT 241 Radio-Television-Film Announcing, CIT 331 Fundamentals of Radio Production and Direction, CTT 332 Fundamentals of Television Production and Direction, CIT 333 Fundamentals of Film Production and Direction, CTT 341 Radio-Television-Film Dramatic Performance, CIT 431 Advanced Radio Production and Direction, CIT 432 Advanced Television Production and Direction, CTT 433 Advanced Film Production and Direction	
<i>Writing courses</i>	3
Choose one course from the following:	
CIT 334 Radio-Television News, CIT 344 Continuity Writing for Radio-Television-Film, CIR 360 Dramatic Composition	
<i>Theory courses</i>	6
Choose six credits from the following (at least three credits must be the 400 level):	
CIT 145 Introduction to Film Appreciation, CIT 236 History and Criticism of Radio and Television, CTT 335 Studies in Film, CIT 336 Studies in Telecommunications, CIT 445 Film Theory and Criticism, CIT 446 Contemporary Problems in Telecommunications, CIT 447 Radio-Television Station Management, CTT 479 Special Topics (must be approved by adviser)	
<i>Internship or cooperative education</i>	1-3
CIT 487, 488, 489 Internship in Telecommunications and Film; CIT 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 CTS 121 and 124 Fundamentals of Speech) or journalism.

MAJOR IN THEATRE ARTS

	Sem hours
Academic major in theatre arts	30-33
1. Required courses	23
CIR 150 Introduction to Theatre	3
(may be bypassed by examination or interview for no credit)	
CTR 152 Introduction to Technical Theatre ...	3
CIR 155 Play Production	3
CIR 158 Fundamentals of Acting	3
CIR 355 Play Direction	3
CIR 450 History of the Theatre to 1642.....	3
CIR 451 History of the Theatre: 1642 to the Present	3
CTY 167 and either 267 or 367 or 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 CIR 106 Introduction to Performing Arts, CIR 126 The Age of Shakespeare, CIR 153 Introduction to Theatre Crafts, CIR 555 Play Production Junior-Senior High School) or from the following department area courses:	
Drama/Theatre for the Young (CTD 322 Theatre for the Young or CTD 323 Improvising and Role-Play)	
Oral Interpretation (CTO 314 Interpretation of Drama or CTO 410 Oral Interpretation of Shakespeare)	
Telecommunications and Film (CTT 332 Fundamentals of Television Production and Direction or CIT 341 Radio-Television-Film Dramatic Performance)	

INTERDISCIPLINARY MAJOR IN CHILDREN'S LITERATURE AND DRAMA/ THEATRE FOR THE YOUNG (TEACHING AND NON-TEACHING)

This major may be used for the Bachelor of Science or Bachelor of Arts degrees without teacher certification, as well as on the elementary education curriculum with certification. For full details, see the Department of English Language and Literature.

GROUP MAJOR IN LITERATURE, LANGUAGE, COMMUNICATION, AND THEATRE ARTS (TEACHING)

For details concerning this major, see group majors and minors for elementary and early childhood teachers in the Department of Teacher Education, College of Education.

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.

	Sem hours
Interdisciplinary major in public relations	41-42
1. Required fundamental courses	17-18
JRN 215 News Writing and Reporting	3
JRN 312 Introduction to Public Relations	3
JRN 314 Writing for Public Relations	3
CTS 121 or 124 Fundamentals of Speech	2-3
CTT 141 Introduction to Radio-TV-Film Production	3
CTC 224 Public Speaking or CTC 350 Persuasion	3
2. Required Advanced Courses	12
JRN 306 Feature Writing	3
JRN 408 Case Studies in Public Relations	3
CTT 334 Radio-Television News or CTT 344 Continuity Writing for Radio, Television, Film	3
CTC 354 Organizational Communication or CTC 357 Interviewing as Communication ..	3
3. Restricted electives	12
JRN307 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; CTC 224 Public Speaking or CTC 350 Persuasion (whichever is not chosen above); CTC 227 Interpersonal Communication or CTC 359 Small Group Communication; CTT 334 Radio-Television News or CTT 344 Continuity Writing for Radio, Television, Film (whichever is not chosen above); *CTT 387, 388, 389 Cooperative Education in Radio- Television-Film; CTT 487, 488, 489 Internship in Radio-Television-Film	

A maximum of six hours may be chosen from:
FA 189 Graphic Arts for the Non-Major, 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 (with MKT 360 Principles of Marketing and MKT 369 Advertising highly recommended and 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.

MINORS OFFERED IN THE DEPARTMENT OF COMMUNICATION AND THEATRE ARTS COMMUNICATION MINOR

	Sem hours
Minor in communication	20-21
1. Required course	2-3
<i>Foundation level</i>	
CTS 121 or 124 Fundamentals of Speech	2-3
2. Restricted electives	18
Choose two courses from the following:	
CTC 224 Public Speaking, CTC 225 Listening Behavior, CTC 226 Non- verbal Communication, CTC 227 Interpersonal Communication	
<i>Intermediate level</i>	
Choose two courses from the following:	
CTC 350 Persuasion, CTC 354 Organizational Communication, CTC 356 Argumentation and Debate, CTC 359 Small Group Communication	
<i>Advanced level</i>	
Choose two courses from the following:	
CTC 440 Survey of Public Address, CTC 460 Theories of Speech Criticism, CTC 475 Research in Speech Communication, CTC 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
CTT 130 Introduction to Telecommunications and Film	3
CTT 131 Introduction to Audio Production and Direction	2
CTT 132 Introduction to Video Production and Direction	2
2. Restricted electives	4
Choose one course from the following:	
CTT 145 Introduction to Film Appreciation, CTT 241 Radio-Television-Film Announcing, CTT	

331 Fundamentals of Radio Production and Direction, CTT 332 Fundamentals of Television Production and Direction, CIT 333 Fundamentals of Film Production and Direction, CTT 334 Radio-Television News, CTT 344 Continuity Writing for Radio-Television-Film

Choose one course from the following:

CTT 431 Advanced Radio Production and Direction, CTT 432 Advanced Television Production and Direction, CTT 433 Advanced Film Production and Direction, CTT 445 Film Theory and Criticism, CIT 446 Contemporary Problems in Telecommunications, CTT 447 Radio-Television Station Management

Interpretation/performance studies 10

1. Required course 3
CTO 210 Interpretative Reading

2. Restricted electives 7

Choose one course from the following:

CTO 311 Interpretation of Prose, CTO 314 Interpretation of Drama, CTD 324 Oral Interpretation of Children's Literature, CTO 412 Oral Interpretation of Poetry

Choose either CTO 411 Advanced Problems in Interpretation or CTO 414 Development and Theory of Oral Interpretation

One semester hour of credit in an oral interpretation activity course

COMMUNICATION MINOR FOR ELEMENTARY AND SPECIAL EDUCATION STUDENTS (TEACHING)

This minor is limited to the specified teaching group.

Minor in communication Sem hours
20-21

1. Required courses 11-12

CTS 121 or 124 Fundamentals of Speech 2-3

Choose one course from the following:

CTO 205 Voice and Articulation, CTO 210 Interpretative Reading, CTO 301 Speech Science, CTO 400 Phonetics and Dialects of Spoken English 3

Choose one course from the following:

CTR 155 Play Production, CTD 222 Drama and Play in Human Experience, CTR 252 Stagecraft, CTD 323 Improvising and Role-Play 3

Choose one course from the following:

CTC 224 Public Speaking, CTC 350 Persuasion, CTC 356 Argumentation and Debate, CTC 359 Small Group Communication 3

2. Electives 8-9

Choose eight to nine credits from the above courses or from the following:

CTT 141 Introduction to Radio-Television-Film Production, CTY 165 Television Laboratory, CTY 166 Forensics, CTY 167 Theatre Practice, CTY 168 Oral Interpretation, CTY 169 Radio Station WQBR, CTD 322 Theatre for the Young, CTD 497 Independent Study in Drama/Theatre for the Young

COMPREHENSIVE MINOR IN COMMUNICATION AND THEATRE ARTS

Comprehensive minor in communication and theatre arts Sem hours
20-28

1. Required core course 2-3
CTS 121 or 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 99.

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

MINOR IN DRAMA/THEATRE FOR THE YOUNG (TEACHING AND NON-TEACHING)

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.

Drama/theatre for the young is an unrestricted minor, used on non-teaching as well as on teaching programs for both elementary and secondary education students.

	Sem hours
Minor in drama/theatre for the young	20-21
1. Required courses	14-15
CTS 121 or 124 Fundamentals of Speech	2-3
CTD 222 Drama and Play in Human Experience	3
CTD 322 Theatre for the Young	3
CTD 323 Improvising and Role-Play	3
CTD 324 Oral Interpretation of Literature for the Young	3
2. Electives	5-6
Choose five to six credits from the following:	
CTD 326 Developmental Drama/Theatre with the Handicapped, CTD 327 Plays for the Young, CTD 429 History and Theory of Developmental Drama/Theatre, CTD 504 Oral Literature and Language with the Young, CTD 522 TIE: Theatre-In-Education, CTD 523 Pupperty: Catalyst in Human Development, CTD 524 Developmental Drama/Theatre with Handicapped Persons, CTD 525 Developmental Drama/Theatre in Recreational Settings, CTD 528 Developmental Drama/Theatre in Religion, CTD 565 Studies in Drama/Theatre for the Young (all 500-level courses are available for undergraduate credit to qualified seniors)	
CTY 168, 268, 368, 468 Oral Interpretation	
CTD 377, 378, 379 Special Topics	
CTD 477, 478, 479 Special Topics (478 Touring to Young Audiences)	
CTD 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	

MINOR IN 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>	
CTR 155 Play Production, CTR 258 Mime/Pantomime and Mask, CTR 457 Tryouts and Auditions, CTR 461 Musical Theatre Acting, CTR 462 Directors on Directing, CTR 463 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	

Music:

MUS 101 Music Theory, MUS 104 Elements of Music, MUS 305 Keyboard Skills, MUS 326 Conducting

MINOR IN TELECOMMUNICATIONS AND FILM

	Sem hours
Minor in telecommunications and film	24
1. Required foundation courses	7
CTT 130 Introduction to Telecommunications and Film	3
CTT 131 Introduction to Audio Production and Direction	2
CTT 132 Introduction to Video Production and Direction	2
2. Restricted electives	13
Choose one of the following:	
CTT 145 Introduction to Film Appreciation or CTT 236 History and Criticism of Radio and Television	
Choose one of the following:	
CTY 165 Television Laboratory or CTY 169 Radio Station WQBR	
Choose three credits from each of the area courses listed under the major (page 100) 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 CTS 121 and 124 Fundamentals of Speech) or journalism.	

MINOR IN THEATRE ARTS

	Sem hours
Minor in theatre arts	20-24
1. Required courses	19
CTR 150 Introduction to Theatre	3
(may be bypassed by examination or interview for no credit)	
CTR 152 Introduction to Technical Theatre	3
CTR 155 Play Production	3
CTR 158 Fundamentals of Acting	3
CTR 355 Play Direction	3
CTR 450 History of the Theatre to 1642 or CTR 451 History of the Theatre: 1642 to the Present	3
CTY 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 100).	

ACTIVITY COURSES

CTY 165, 265, 365, 465 Television**Laboratory. 1 sem hour 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: CTT Introduction to Telecommunications and Film, CTT 131 Introduction to Audio Production and Direction, and CTT 132 Introduction to Video Production and Direction, or department permission.

CTY 166, 266, 366, 466 Forensics. 1 sem hour 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.

CTY 167, 267, 367, 467 Theatre**Practice. 1 sem hour 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: CTR 155 Play Production, CTR 152 Introduction to Technical Theatre, or CTR 252 Stagecraft 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: CTY 167 Theatre Practice and CTR 355 Play Direction.

367—Directing an Experimental Series production.

Prereq: CTY 167 Theatre Practice and CTR 355 Play Direction.

467—Additional experience in the responsibilities listed for 367.

Prereq: CTY 167 Theatre Practice, CTY 267 Theatre Practice, or CTY 367 Theatre Practice.

CTY 168, 268, 368, 468 Interpretation. 1 sem hour

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: CTO 210 Interpretative Reading or department permission.

CTY 169, 269, 369, 469 Radio Station**WQBR. 1 sem hour 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: CTT 130 Introduction to Telecommunications and Film, CTT 131 Introduction to Audio Production and Direction, and CTT 132 Introduction to Video Production and Direction, or department permission.

FUNDAMENTALS OF SPEECH COURSES

CTS 121 Fundamentals of Speech. 2 sem hours

Theory and practice in the principles of effective speech composition and presentation. *Not open to students with credit in CTS 124 Fundamentals of Speech.*

CTS 124 Fundamentals of Speech. 3 sem hours

More intensive theory and practice in the principles of effective speech composition. *Not open to students with credit in CTS 121 Fundamentals of Speech.*

COMMUNICATION COURSES

CTC 177, 178, 179 Special Topics in**Communication. 1, 2, 3 sem hours**

Offered on an experimental basis or for special purposes.

Prereq: Department permission.

CTC 224 Public Speaking. 3 sem hours

The characteristics of various types of speeches and speech situations and practice in the preparation and delivery of speeches for various occasions.

Prereq: CTS 121 or CTS 124 Fundamentals of Speech.

CTC 225 Listening Behavior. 3 sem hours

The study of the behavior, processes, and theory of human listening; practice in improving listening skills.

Prereq: CTS 121 or CTS 124 Fundamentals of Speech.

CTC 226 Non-verbal Communication. 3 sem hours

An examination of non-verbal and situational behaviors, relationships, objects, and events surrounding speech communication acts.

Prereq: CTS 121 or CTS 124 Fundamentals of Speech.

CTC 227 Interpersonal**Communication. 3 sem hours**

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: CTS 121 or 124 Fundamentals of Speech.

CTC 277, 278, 279 Special Topics in Communication. 1, 2, 3 sem hours
Offered on an experimental basis or for special purposes.
Prereq: Department permission.

CTC 307 The Teaching of Speech. 3 sem hours
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 curriculum. Does not count on the major or minor. Not open to students on academic probation.
Prereq: Four courses in communication and theatre arts.

CTC 321 Parliamentary Procedure and Meeting Management. 3 sem hours
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: CTS 121 or CTS 124 Fundamentals of Speech.

CTC 350 Persuasion. 3 sem hours
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: CTS 121 or CTS 124 Fundamentals of Speech.

CTC 352 Communication in Negotiation. 3 sem hours
Practical communication skills for negotiating a labor union collective bargaining agreement and effective grievance handling.
Prereq: CTS 121 or CTS 124 Fundamentals of Speech, or department permission.

CTC 353 Organizational Communication in Unions. 3 sem hours
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: CTS 121 or CTS 124 Fundamentals of Speech, or department permission.

CTC 354 Organizational Communication. 3 sem hours
An investigation of information patterns and persuasion in the formal organization.
Prereq: CTS 121 or CTS 124 Fundamentals of Speech.

CTC 356 Argumentation and Debate. 3 sem hours
Emphasizes the principles of logical reasoning and oral presentation of reasoned discourse in group situations. Exercise in debate and in general argumentative speaking.
Prereq: CTS 121 or CTS 124 Fundamentals of Speech.

CTC 357 Interviewing as Communication. 3 sem hours
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: CTS 121 or CTS 124 Fundamentals of Speech, or department permission.

CTC 359 Small Group Communication. 3 sem hours
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: CTS 121 or CTS 124 Fundamentals of Speech.

CTC 372 Assertive Communication. 3 sem hours
Individualized approach to study and training in effective assertive communication for social, conversational, and career-oriented situations.
Prereq: CTS 121 or CTS 124 Fundamentals of Speech, or department permission.

CTC 374 Intercultural Communication. 3 sem hours
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: CTS 121 or CTS 124 Fundamentals of Speech, or department permission.

CTC 375 Interracial/Interethnic Communication. 3 sem hours
The analysis of how ethnocentric attitudes toward perceived racial/ethnic minority group speakers/listeners influence interpersonal communication transactions.
Prereq: CTS 121 or CTS 124 Fundamentals of Speech.

CTC 377, 378, 379 Special Topics in Communication. 1, 2, 3 sem hours
These courses are offered on an experimental basis or for some special need.

CTC 387, 388, 389 Cooperative Education in Communication. 1, 2, 3 sem hours
One term of supervised education work in speech communication. An evaluation is required at the end of each employment period.
Prereq: Nine credit hours in speech communication, approval by Cooperative Education Office, and department permission.

CTC 440 Survey of Public Address. 3 sem hours
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.

CTC 460 Theories of Speech Criticism. 3 sem hours
A study of the theoretical and critical works from various eras of western culture.

Prereq: Three courses in communication, junior standing, or department permission.

CTC 475 Research in Speech Communication. 3 sem hours

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.

CTC 477, 478, 479 Special Topics in Communication. 1, 2, 3 sem hours

These courses are offered on an experimental basis or for some special need.

CTC 485 Theories of Speech Communication Behavior. 3 sem hours

Study of theories that have made significant contributions to understanding of speech communication behavior.

Prereq: Three courses in communication, junior standing, or department permission.

CTC 487, 488, 489 Internship in Communication. 1, 2, 3 sem hours

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: At least 20 semester hours of speech communication courses and department permission.

CTC 497, 498, 499 Independent Study. 1, 2, 3 sem hours

Advanced study on individual basis in areas in which the department does not offer a formal course. Normally such work is restricted to proficient students in the senior year under the general conditions prescribed for honors courses.

Prereq: Department permission.

INTERPRETATION/PERFORMANCE STUDIES

CTO 102 Voice Development. 1 sem hour

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.

CTO 202, 302, 402 Voice Development. 1 sem hour 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: CTO 102 Voice Development or department permission.

CTO 205 Voice and Articulation. 3 sem hours

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: CTS 121 or CTS 124 Fundamentals of Speech, or department permission.

CTO 210 Interpretative Reading. 3 sem hours

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: CTS 121 or CTS 124 Fundamentals of Speech.

CTO 301 Speech Science. 3 sem hours

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: CTO 205 Voice and Articulation, CTO 210 Interpretative Reading, CTT 241 Radio-Television-Film Announcing, CTR 158 Fundamentals of Acting, or department permission.

CTO 311 Interpretation of Prose. 3 sem hours

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: CTO 210 Interpretative Reading.

CTO 314 Interpretation of Drama. 3 sem hours

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: CTO 210 Interpretative Reading or department permission.

CTO 377, 378, 379 Special Topics in Oral Interpretation. 1, 2, 3 sem hours

These courses are offered on an experimental basis or for some special need.

CTO 400 Phonetics and Dialects of Spoken English. 3 sem hours

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: CTO 301 Speech Science, CTO 205 Voice and Articulation, or department permission.

CTO 404 Dynamic Speaking Skills. 3 sem hours

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 CTO 102 Voice Development or CTO 205 Voice and Articulation, or take CTO 402 Voice Development concurrently.

CTO 405 Voice and Dialects. 3 sem hours
Advanced projects in preparing oral presentations and characterizations in regional and foreign dialects.
Prereq: CTO 102 Voice Development or CTO 402 Voice Development or CTO 205 Voice and Articulation, or department permission.

CTO 410 Oral Interpretation of Shakespeare. 3 sem hours
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: CTO 210 Interpretative Reading and two courses in literature, one of which should be either LIT 210 Shakespeare or LIT 103 The Reading of Literature: Drama, or department permission.

CTO 411 Advanced Problems in Interpretation. 3 sem hours
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.

CTO 412 Oral Interpretation of Poetry. 3 sem hours
The application of the principles of oral interpretation to the reading of poetry, with emphasis on modern and contemporary poetry.
Prereq: CTO 210 Interpretative Reading.

CTO 414 Development and Theory of Oral Interpretation. 3 sem hours
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.

CTO 477, 478, 479 Special Topics in Oral Interpretation. 1, 2, 3 sem hours
These courses are offered on an experimental basis or for some special need.

TELECOMMUNICATIONS AND FILM COURSES

CTT 130 Introduction to Telecommunications and Film. 3 sem hours
An introduction to mass media and telecommunication systems in the United States. Emphasis on development of telecommunications industries including radio-tele-

vision-film, programming, new technology, regulation, and financial support.

Prereq: CTS 121 or CTS 124 Fundamentals of Speech.

CTT 131 Introduction to Audio Production and Direction. 2 sem hours
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, CTT 131 is essential to all other advanced production courses, including video and film. As such, CTT 131 must be taken before CTT 132 or other courses in the production curriculum. Students will be instructed in audio equipment, terminology, production process, scripting, performance, and techniques. Additionally, students will be acquainted with the role of audio in such visual media as television and film.

CTT 132 Introduction to Video Production and Direction. 2 sem hours
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. Productions will include exercises, demonstrations, and complete productions written, performed, and directed by students. This course is required for all majors and minors in Telecommunications and Film. CTT 132 is designed as an introductory course in Video production. It will cover such important topics as video equipment, terminology, performance, basic aesthetics, scripting, studio production and direction, graphics, and crew positions. By the end of the course, students will be able to produce and direct a simple studio video production.

Prereq: CTT 131 Introduction to Audio Production and Direction.

CTT 141 Introduction to Radio-TV-Film Production. 3 sem hours
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: CTT 130 Introduction to Telecommunications and Film.

CTT 145 Introduction to Film Appreciation. 3 sem hours
An introduction to the history and aesthetics of the motion picture with attention to the impact of technology, narrative technique, sociological influences, industry practices, and critical approaches including genres and auteurism. Not open to those with credit in LIT 245 Introduction to Film.

CTT 177, 178, 179 Special Topics in**Telecommunications and Film. 1, 2, 3 sem hours**

These courses are offered on an experimental basis or for some special need.

CTT 230 Mass Media in America. 3 sem hours

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.

CTT 231 Music Repertoire and Recording**Techniques. 3 sem hours**

An introduction to the practical problems of recording music ensembles from soloists to symphony orchestras. Students will research, write, and produce scripts for music programs on serious jazz and specialized music repertoire. 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: CTT 130 Introduction to Telecommunications and Film and CTT 131 Introduction to Audio Production and Direction and CTT 132 Introduction to Video Production and Direction, or department permission.

CTT 236 History and Criticism of Radio and Television. 3 sem hours

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: CTT 130 Introduction to Telecommunications and Film.

CTT 241 Radio-Television-Film**Announcing. 3 sem hours**

A study of the various types of radio, television, and film non-dramatic speaking such as music (DJ), commercials, interviews, and documentaries. Practice and evaluation of announcing types and styles.

Prereq: CTT 130 Introduction to Telecommunications and Film and CTT 131 Introduction to Audio Production and Direction and CTT 132 Introduction to Video Production and Direction, or department permission.

CTT 277, 278, 279 Special Topics in**Telecommunications and Film. 1, 2, 3 sem hours**

These courses are offered on an experimental basis or for some special need.

CTT 331 Fundamentals of Radio Production and Direction. 3 sem hours

The fundamentals of preparation, production, direction, and evaluation of non-dramatic radio programs.

Prereq: CTT 130 Introduction to Telecommunications and Film. CTT 131 Introduction to Audio Production and Direction and CTT 132 Introduction to Video Production and Direction, or department permission.

CTT 332 Fundamentals of Television Production and Direction. 3 sem hours

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: CTT 130 Introduction to Telecommunications and Film, CTT 131 Introduction to Audio Production and Direction, and CTT 132 Introduction to Video Production and Direction, or department permission.

CTT 333 Fundamentals of Film Production and Direction. 3 sem hours

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: CTT 130 Introduction to Telecommunications and Film, CTT 131 Introduction to Audio Production and Direction, and CTT 132 Introduction to Video Production and Direction, or department permission.

CTT 334 Radio-Television News. 3 sem hours

A study of the principles, techniques, and forms of broadcast journalism. Emphasis is placed on broadcast news writing, editing, and delivery.

Prereq: CTT 130 Introduction to Telecommunications and Film, CTT 131 Introduction to Audio Production and Direction, and CTT 132 Introduction to Video Production and Direction, for majors and minors, or JRN 215 News Writing and Reporting for majors/minors in journalism or public relations, or department permission.

CTT 335 Studies in Film. 3 sem hours

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: CTT 130 Introduction to Telecommunications and Film, CTT 131 Introduction to Audio Production and Direction, and CTT 132 Introduction to Video Production and Direction, or department permission.

CTT 336 Studies in Telecommunications. 3 sem hours

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: CTT 130 Introduction to Telecommunications and Film, CTT 131 Introduction to Audio Production and Direction, and CTT 132 Introduction to Video Production and Direction, or department permission.

CTT 341 Radio-Television-Film Dramatic Performance. 3 sem hours

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: CTT 130 Introduction to Telecommunications and Film, CTT 131 Introduction to Audio Production

and Direction, and CTT 132 Introduction to Video Production and Direction, or department permission. CTO 210 Interpretative Reading or CTR 158 Fundamentals of Acting recommended.

CTT 344 Continuity Writing for Radio-Television-Film. 3 sem hours

A study of the forms of non-dramatic writing for radio, television, and film, including commercials, public service announcements, music continuity, and narrations. *Prereq: CTT 130 Introduction to Telecommunications and Film, CTT 131 Introduction to Audio Production and Direction, and CTT 132 Introduction to Video Production and Direction, or department permission.*

CTT 377, 378, 379 Special Topics in Telecommunications and Film. 1, 2, 3 sem hours
These courses are offered on an experimental basis or for some special need.

CTT 387, 388, 389 Cooperative Education in Radio-Television-Film. 1, 2, 3 sem hours

One term of supervised education work in radio-television-film. An evaluation is required at the end of each employment period. *Prereq: Nine credit hours in radio-television-film, approval by Cooperative Education Office, and department permission.*

CTT 431 Advanced Radio Production and Direction. 3 sem hours

A continuation of CTT 331 Fundamentals of Radio Production and Direction. Advanced theory and practical experience in production of longer, more complex dramatic and non-dramatic material for radio. *Prereq: CTT 331 Fundamentals of Radio Production and Direction or department permission.*

CTT 432 Advanced Television Production and Direction. 3 sem hours

A continuation of CTT 332 Fundamentals of Television Production and Direction. 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: CTT 332 Fundamentals of Television Production and Direction or department permission.*

CTT 433 Advanced Film Production and Direction. 3 sem hours

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: CTT 333 Fundamentals of Film Production and Direction and department permission.*

CTT 445 Film Theory and Criticism. 3 sem hours
An intensive study of the key theories of film structure, historical development, and sociological function. Em-

phasis upon theories of editing, auteur criticism, genres, and textual analysis.

Prereq: CTT 145 Introduction to Film Appreciation or LIT 245 Introduction to Film or department permission.

CTT 446 Contemporary Problems in Telecommunications. 3 sem hours

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.*

CTT 447 Radio-Television Station Management. 3 sem hours

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.*

CTT 477, 478, 479 Special Topics in Telecommunications and Film. 1, 2, 3 sem hours

These courses are offered on an experimental basis or for some special need.

CTT 487, 488, 489 Internship in Radio-Television-Film. 1, 2, 3 sem hours

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: At least 20 semester hours of radio-television-film courses and department permission.*

CTC 497, 498, 499 Independent Study. 1, 2, 3 sem hours

Advanced study on an individual basis in areas in which the department does not offer a formal course. Normally such work is restricted to students in the senior year under the conditions prescribed for honors courses. *Prereq: Department permission.*

THEATRE ARTS COURSES

CTR 106 Introduction to Performing Arts. 3 sem hours

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 Introduction to the Performing Arts.

CTR 126 The Age of Shakespeare. 3 sem hours

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 36.*

CTR 150 Introduction to Theatre. 3 sem hours
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.

CTR 151 Black Theatre: An Introduction. 3 sem hours
An introductory survey of the roots, purposes, and contemporary manifestations of theatre and drama reflecting the black experience.

CTR 152 Introduction to Technical Theatre. 3 sem hours
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.

CTR 153 Introduction to the Theatre Crafts. 2 sem hours
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.*

CTR 155 Play Production. 3 sem hours
An introduction to the process of analyzing, directing, and staging plays; demonstration and practice. Laboratory hours by arrangement.
Prereq: CTR 150 Introduction to Theatre strongly recommended for department majors and minors.

CTR 158 Fundamentals of Acting. 3 sem hours
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.

CTR 177, 178, 179 Special Topics in Theatre. 1, 2, 3 sem hours
These courses are offered on an experimental basis or for special need.

CTR 251 Black Theatre: Creative Problems. 3 sem hours
A consideration of those creative aspects of the theatre performance particular to the black theatre.

CTR 252 Stagecraft. 3 sem hours
A study and application of the technical elements of play production with emphasis on stage mechanics, construction, and scene painting. Laboratory hours will be ar-

anged in order to ensure adequate practical experience in the scenic arts and crafts.

Prereq: CTR 155 Play Production strongly recommended for department majors and minors.

CTR 254 Stage Makeup. 1 sem hour
The theory and techniques of theatrical makeup. Laboratory hours to be arranged.

CTR 258 Mime/Pantomime and Mask. 3 sem hours
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.

CTR 277, 278, 279 Special Topics in Theatre. 1, 2, 3 sem hours
These courses are offered on an experimental basis or for special need.

CTR 351 Scene Design. 3 sem hours
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: CTR 152 Introduction to Technical Theatre, CTR 252 Stagecraft, CTR 155 Play Production, or department permission.

CTR 355 Play Direction. 3 sem hours
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: CTR 155 Play Production or department permission.

CTR 358 Characterization. 3 sem hours
The creation of character and characterization by the actor. Analysis, development, and performance of roles studied in depth.
Prereq: CTR 158 Fundamentals of Acting or department permission.

CTR 360 Dramatic Composition. 3 sem hours
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: CTR 155 Play Production or department permission.

CTR 361 Dramatic Writing. 2 sem hours
Intensive concentration on the writing of a significant example of adult or children's drama for the stage or the broadcast media.
Prereq: CTR 360 Dramatic Composition or department permission.

CTR 362 Stage Lighting. 2 sem hours
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: CTR 152 Introduction to Technical Theatre, CTR 252 Stagecraft, CTR 155 Play Production, or department permission.

CTR 363 Stage Costume: History and Theory. 3 sem hours

A survey of the principles and practices of stage costuming from antiquity to present.

Prereq: CTR 155 Play Production or department permission.

CTR 364 Stage Costume: Design and Construction. 3 sem hours

The fundamentals of designing theatrical costumes and a study of specific construction problems found in the making of period costumes.

Prereq: CTR 363 Stage Costume: History and Theory or department permission.

CTR 377, 378, 379 Special Topics in Theatre. 1, 2, 3 sem hours

These courses are offered on an experimental basis or for special need.

CTR 387, 388, 389 Cooperative Education in Arts Management, Costuming, and Technical Theatre. 1, 2, 3 sem hours

One term of supervised work in arts management, costuming, and technical theatre. An evaluation is required at the end of each employment period.

Prereq: Nine semester hours in arts management, approval by Cooperative Education Office, and department permission.

CTR 450 History of the Theatre to 1642. 3 sem hours

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.

CTR 451 History of the Theatre: 1642 to the Present. 3 sem hours

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.

CTR 452 Arts Management. 3 sem hours

A study of managerial practices of arts organizations and agencies. Emphasis on facility planning, personnel, income sources, promotion, budget development, and management.

CTR 453 Marketing the Arts. 3 sem hours
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 Principles of Marketing.

CTR 454 Law, Public Policy, and the Arts. 3 sem hours

Examination of the impact of public policy and law on the 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.

CTR 456 Experimental Approaches to Directing. 1 sem hour

Study of non-traditional possibilities for using the dynamics of theatre to enhance a performance.

Prereq: One course in acting or department permission.

CTR 457 Tryouts and Auditions. 1 sem hour

Intensive study in the preparation of tryout and audition material for the actor.

Prereq: One course in play direction or department permission.

CTR 458 Style for the Actor. 3 sem hours

Theoretical and practical considerations involved in the acting of selected non-realistic styles of drama.

Prereq: One course in acting or department permission.

CTR 459 Style for the Director. 3 sem hours

Theoretical and practical considerations involved in the direction of selected non-realistic styles of drama.

Prereq: One course in play direction or department permission.

CTR 461 Musical Theatre Acting. 2 sem hours

Analysis and application of the performance skills needed by the actor/singer in musical theatre.

Prereq: Nine hours in theatre arts or department permission.

CTR 462 Directors on Directing. 2 sem hours

Study of selected noted stage directors past and present.

Prereq: Nine hours in theatre arts or department permission.

CTR 463 The American Musical Stage: 1900 to 1940. 2 sem hours

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.

CTR 477, 478, 479 Special Topics. 1, 2, 3 sem hours

These courses are offered on an experimental basis or for some special need.

CTR 487, 488, 489 Internship in Arts Management. 1, 2, 3 sem hours
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..

CTR 496 Seminar in Theatre. 2 sem hours
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.

CTR 497, 498, 499 Independent Study. 1, 2, 3 sem hours
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.

DRAMA/THEATRE FOR THE YOUNG

CTD 222 Drama and Play in Human Experience. 3 sem hours
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.

CTD 322 Theatre for the Young. 3 sem hours
An introductory study of the development, philosophy and techniques of theatre for the young.

CTD 323 Improvising and Role-Play. 3 sem hours
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.

CTD 324 Oral Interpretation of Literature for the Young. 3 sem hours
Selection and evaluation of literature for oral interpretation with and for young people. Focus is on the use of narrative prose and folktales.

CTD 326 Developmental Drama/Theatre with the Handicapped. 2 sem hours
Study of principles, theories and practices of developmental drama/theatre as related to handicapped persons. Application to educational, recreational and institutional settings stressed.

CTD 327 Plays for the Young. 3 sem hours
A study of dramatic literature for the young from developmental and artistic viewpoints in the total educational experience of children and adolescents.

CTD 377, 378, 379 Special Topics in Drama/Theatre for the Young. 1, 2, 3 sem hours
These courses are offered on an experimental basis or for some special need.

CTD 387, 388, 389 Cooperative Education in Drama/Theatre for the Young. 1, 2, 3 sem hours
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: Approval by Cooperative Education Office and department permission.

CTD 429 History and Theory of Developmental Drama/Theatre. 3 sem hours
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.

CTD 477, 478, 479 Special Topics in Drama/Theatre for the Young. 1, 2, 3 sem hours
These courses are offered on an experimental basis or for some special need.

CTD 487, 488, 489 Internship in Drama/Theatre for the Young. 1, 2, 3 sem hours
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.

CTD 497, 498, 499 Independent Study in Drama/Theatre for the Young. 1, 2, 3 sem hours
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.

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, Michael Zeiger
Instructors: Augustine Ikeji, Zenia Jones, Pamela A. Moore

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 and Minors:
 Computer science (teaching and non-teaching)

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

	Sem hours
Academic 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:	
<i>Group A</i>	
CSC 430 Compiler Construction	
CSC 431 Systems Programming	
CSC 433 Computer Operating Systems	
CSC 441 Computing Network Principles	
<i>Group B</i>	
CSC 432 Switching Theory	
CSC 435 Introduction to Microprocessors	
CSC 437 Microcomputer Graphics or CSC 438 Computer Graphics	
CSC 442 Database Principles	
CSC 443 Software Engineering Principles	
MTH 436 Numerical Analysis	
3. Additional required mathematics courses ...	17-19
MTH 120, 121 Calculus I and II	8
MTH 122 Elementary Linear Algebra	3
MTH 360 Statistical Methods or MTH 370 Probability and Statistics I	3 or 4
Choose one course from the following: 3 or 4	
MTH 223 Multivariable Calculus, MTH 319 Mathematical Modeling, MTH 325 Differential Equations, MTH 411 Modern Algebra with Applications, MTH 418 Applied Linear Algebra, MTH 425 Mathematics for Scientists, MTH 436 Numerical Analysis, MTH 471 Probability and Statistics II, MTH 475 Applied Combinatorics	

COMPUTER SCIENCE MAJOR (TEACHING)

	Sem hours
Teaching major in computer science	33
1. Required courses	30
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 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

2. **Elective from the following courses** 3
 ANT 378 Contemporary Issues in Developing and
 Modern Technological Societies
 ECO 386 Technology and Economic Growth
 HST 290 History of Technology
 IDT 495 Technology, Values, and the Future
 PLS 382 Politics and the 21st Century
 SOC 462 Complex Organizations
3. **Additional required course** 3
 CSC 346 Methods of Teaching Computer Science
 in the Secondary Schools

MINORS OFFERED IN THE DEPARTMENT OF COMPUTER SCIENCE

COMPUTER SCIENCE MINOR

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
Academic 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 136 Computers for the Non-Specialist*; 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 or CSC 438 Computer Graphics; CSC 441 Computing Network Principles, CSC 442 Database Principles, CSC 443 Software Engineering Principles, MTH 436 Numerical Analysis	
*CSC 136 may be counted only if taken prior to or concurrently with CSC 138 Computer Science I.	

COMPUTER SCIENCE MINOR (TEACHING)

	Sem hours
Teaching minor in computer science	24
1. Required courses	21
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

CSC 334 Data Structures

CSC 336 Programming Languages for
 Educators

CSC 340 Applications in Computer Science....3

2. **Additional required course** 3
 CSC 346 Methods of Teaching Computer Science
 in the Secondary Schools

COMPUTER SCIENCE COURSES

**CSC 136 Computers for the
Non-Specialist. 3 sem hours**
 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. Counts toward the computer science non-teaching minor if taken prior to or concurrently with CSC 138 Computer Science I. Not open to computer science non-teaching majors.

**CSC 137 Introduction to FORTRAN
Programming. 3 sem hours**
 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 Introduction to FORTRAN Programming and CSC 237 Computer Programming and Numeric Methods. 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 sem hours
 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 and trigonometry, or MTH 105 College Algebra and MTH 107 Trigonometry.

**CSC 237 Computer Programming and Numeric
Methods. 3 sem hours**
 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 Introduction to FORTRAN Programming and CSC 237 Computer Programming and Numeric Methods. Does not count toward computer science major or minor.
Prereq or coreq: MTH 121 Calculus II.

CSC 238 Computer Science II. 3 sem hours
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 Computer Science I.

CSC 239 Assembly and Machine Language Programming. 3 sem hours
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 Introduction to FORTRAN Programming, CSC 138 Computer Science I, CSC 237 Computer Programming and Numeric Methods, or ORI 219 File Processing and COBOL Programming.

CSC 330 Discrete Mathematical Structures. 3 sem hours
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 Computer Science II, CSC 239 Assembly and Machine Language Programming, and MTH 122 Elementary Linear Algebra. CSC 239 may be taken concurrently.

CSC 334 Data Structures. 3 sem hours
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 Computer Science II and CSC 239 Assembly and Machine Language Programming.

CSC 336 Programming Languages for Educators. 3 sem hours
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 Programming Languages for Educators and CSC 337 Programming Languages.

Prereq: CSC 238 Computer Science II or equivalent and CSC 239 Assembly and Machine Language Programming.

CSC 337 Programming Languages. 3 sem hours
Formal definition of programming languages; structure of simple statements; global properties of algorithmic lan-

guages; 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 Computer Science II and CSC 239 Assembly and Machine Language Programming.

CSC 338 Computer Organization. 3 sem hours
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 Computer Science II and CSC 239 Assembly and Machine Language Programming.

CSC 340 Applications in Computer Science. 3 sem hours
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 334 Data Structures, CSC 336 Programming Languages for Educators, or CSC 337 Programming Languages.

CSC 346 Methods of Teaching Computer Science in the Secondary Schools. 3 sem hours
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 334 Data Structures and junior standing.

CSC 350 C Programming in a Unix Environment. 3 sem hours
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 C for Programmers and CSC 350 C Programming in a Unix Environment. Does not count toward the Computer Science major or minor.

Prereq: CSC 239 Assembly and Machine Language Programming.

CSC 365 Foundations of Automata and Languages. 3 sem hours

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 Discrete Mathematical Structures and CSC 334 Data Structures.

CSC 377,378,379 Special Topics in Computer Science. 1, 2, 3 sem hours

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 Topics in Computer Science, CSC 239 Assembly and Machine Language Programming, and department permission.

CSC 388 Cooperative Education in Computer Science. 3 sem hours

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 sem hours

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 365 Foundations of Automata and Languages and CSC 337 Programming Languages.

CSC 431 Systems Programming. 3 sem hours

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 Data Structures, CSC 337 Programming Languages, and CSC 338 Computer Organization.

CSC 432 Switching Theory. 3 sem hours

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 Discrete Mathematical Structures and CSC 338 Computer Organization.

CSC 433 Computer Operating Systems. 3 sem hours

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 Data Structures and CSC 338 Computer Organization.

CSC 435 Introduction to Microprocessors. 3 sem hours

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 first-hand knowledge of this field.

Prereq: CSC 338 Computer Organization or department permission.

CSC 437 Microcomputer Graphics. 3 sem hours

A course in computer graphics using micro computers. 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. Credit will not be given for more than one of CSC 438 Computer Graphics and CSC 437 Microcomputer Graphics.

Prereq: CSC 334 Data Structures and MTH 122 Elementary Linear Algebra.

CSC 438 Computer Graphics. 3 sem hours

Display technologies, display terminals, generation of points, vectors, and text; 2-D transformations, homogeneous coordinates. Clipping algorithms, design of a graphics package, interactive graphics. Raster graphics, scan conversion algorithms. Display files; 3-D graphics including parallel and perspective projections, transformations, and hidden line removal. Credit will not be given for more than one of CSC 437 Microcomputer Graphics and CSC 438 Computer Graphics.

Prereq: CSC 334 Data Structures, proficiency in FORTRAN and MTH 122 Linear Algebra.

CSC 441 Computing Network Principles. 3 sem hours

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 Data Structures and CSC 338 Computer Organization. CSC 330 Discrete Mathematical Structures recommended.

CSC 442 Database Principles. 3 sem hours

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 330 Discrete Mathematical Structures, CSC 334 Data Structures. CSC 337 Programming Languages recommended.

CSC 443 Software Engineering Principles. 3 sem hours

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 334 Data Structures, CSC 337 Programming Languages, and CSC 338 Computer Organization.

CSC 450 UNIX for Programmers. 1 sem hour

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 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 sem hours

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 Data Structures (may be taken concurrently.)

CSC 452 Programming in Ada. 3 sem hours

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 overloading. Procedures and packages will be written and tested using an Ada compiler. Does not count as a restricted elective.

Prereq: CSC 334 Data Structures or ORI 315 Applied Data Structures.

CSC 460 Computer Science Practicum. 3 sem hours

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 sem hours

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 sem hours

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 488 Cooperative Education in Computer Science and department permission.

CSC 490 Seminar and Project Design for Educators. 3 sem hours

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 Data Structures and senior standing.

CSC 497, 498, 499 Independent Study in Computer Science. 1, 2, 3 sem hours

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, Donald W. Pearson
Associate Professors: John A. Edgren, Raouf S. Hanna, Steven C. Hayworth, Kemper Moreland, Michael G. Vogt, Bill M. Woodland
Assistant Professors: Dewan A. Abdullah, David B. Crary, Sharon Erenburg, Alfredo G. Esposto, Deborah M. Figart, James A. Thornton
Lecturer: Eija Multasuo

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 econometrics, the Moore Award for an outstanding essay in law and economics, and the Student Achievement Award for the highest grade point average in economics.

It 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, com-

parative economic systems, and theoretical and quantitative economics)

Labor Studies

Minors:

- Economics
- 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.

ACTUARIAL SCIENCE AND ECONOMICS MAJOR

See the Department of Mathematics 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
Academic major in economics	30
1. Required courses	15
ECO 201, 202 Principles of Economics I and 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 326 Consumer Economics	3
ECO 341 Money and Banking	3
ECO 361 Corporation and 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 326 Consumer Economics	3
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
ECO 422 Union Leadership	3
ECO 424 Seminar in Labor Issues	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
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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 365 Public Utility Economics	3
ECO 366 Economics of Transportation	3
ECO 455 Economic Efficiency in the Public Sector	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
ECO 472 The Soviet Economy	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 and 121 Calculus I and 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 400 Problems of Economic Theory	3
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 237) in addition to fulfilling the 24 semester hours in economics.

	Sem hours
Academic 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
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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
Academic major in labor studies	30
1. Required courses	12
ECO 310 Economic Statistics	3
ACC 240 Principles of Accounting	3
ECO 320 Labor Economics	3
ECO 424 Seminar in Labor Issues	3
2. Restricted electives	18

Choose six 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, ECO 422 Union Leadership
- CTC 352 Communication in Negotiations, CTC 353 Organizational Communication in Unions
- HST 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 MINOR

	Sem hours
Minor in economics	20
1. Required courses	6
ECO 201, 202 Principles of Economics I and II	6
2. Electives	14

Choose 14 credits from any economics courses, ECO 301 and ECO 302 are highly recommended.

LABOR STUDIES MINOR

	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 Union, 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, ECO 422 Union Leadership, ECO 424 Seminar in Labor Issues
- ACC 240 Principles of Accounting
- CTC 352 Communication in Negotiations, CTC 353 Organizational Communication in Unions
- HST 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 sem hours
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 or 202 Principles of Economics I and II.*

ECO 201 Principles of Economics I. 3 sem hours
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.
Prereq: MTH 104 Intermediate Algebra or equivalent.

ECO 202 Principles of Economics II. 3 sem hours
Second half of an introduction to basic principles of economics. Emphasizes microeconomic concepts of de-

mand, supply, and problems relating to prices and resource allocation.

Prereq: ECO 201 Principles of Economics I or equivalent, and MTH 104 Intermediate Algebra or equivalent.

ECO 300 Contemporary Economic Issues. 3 sem hours

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.

Prereq: One course in economics.

ECO 301 Intermediate Macroeconomic Analysis. 3 sem hours

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.

Prereq: ECO 201 and 202 Principles of Economics I and II or equivalent, and MTH 119 Mathematical Analysis for Social Sciences II or MTH 120 Calculus I.

ECO 302 Intermediate Microeconomic Analysis. 3 sem hours

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 202 Principles of Economics I and II or equivalent, and MTH 119 Mathematical Analysis for Social Sciences II or MTH 120 Calculus I.

ECO 310 Economic Statistics. 3 sem hours

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 Mathematical Analysis for Social Sciences II or MTH 120 Calculus I.

ECO 320 Labor Economics. 3 sem hours

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 202 Principles of Economics I and II or equivalent.

ECO 321 Minority Workers in the Labor Market. 3 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

Major problems in present-day collective bargaining including the negotiation of collective agreements, practical aspects, and economic implications.

Prereq: One course in economics.

ECO 326 Consumer Economics. 3 sem hours

Economic behavior, role, and relationship of consumers in American economy. Some contemporary economic problems of consumers.

Prereq: One course in economics.

ECO 327 Inequality and Economic Justice. 3 sem hours

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 202 Principles of Economics I and II or department permission.

ECO 328 Economics of Women. 3 sem hours

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 Introduction to Women's Studies.

ECO 329 Economics of Crime. 3 sem hours

The use of economic concepts, and tools to analyze economic causes of crime and economic policies relevant to crime.

Prereq: ECO 202 Principles of Economics II or equivalent.

ECO 332 Urban Economics. 3 sem hours

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 202 Principles of Economics I and II or equivalent.

ECO 336 Economics of Environment and Natural Resources. 3 sem hours

The application of economic concepts and analysis to problems of environment and management of natural resources.

Prereq: ECO 202 Principles of Economics II or equivalent.

ECO 337 Energy Economics and Policies. 3 sem hours

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 Principles of Economics II or equivalent.

ECO 338 Land Economics. 3 sem hours

The use of land in modern society, including a critical economic evaluation of alternative and optimal uses of land.

Prereq: ECO 201 and 202 Principles of Economics I and II or equivalent.

ECO 341 Money and Banking. 3 sem hours

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 202 Principles of Economics I and II or equivalent.

ECO 350 Government Finance. 3 sem hours

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 202 Principles of Economics I and II or equivalent.

ECO 361 Corporation Finance. 3 sem hours

The structure, financial organization, income, and policy decisions of corporations.

Prereq: One course in economics.

ECO 365 Public Utility Economics. 3 sem hours

The economic function and significance of public utilities and the role of public regulation.

Prereq: ECO 201 and 202 Principles of Economics I and II or equivalent.

ECO 366 Economics of Transportation. 3 sem hours
Survey of the economic aspects of transportation, considering the role of government and the socio-economic effects of the transportation sector on the economy.

Prereq: ECO 201 and 202 Principles of Economics I and II or equivalent.

ECO 370 Comparative Economic Systems. 3 sem hours

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 sem hours

The economic development of the United States.

Prereq: One course in economics.

ECO 385 Economic Development. 3 sem hours

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 sem hours

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 sem hours

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 400 Problems in Economic Theory. 2 sem hours

A thorough study of problems in economic theory.

Prereq: ECO 301 Intermediate Macroeconomic Analysis and ECO 302 Intermediate Microeconomic Analysis.

ECO 401 Computer Applications in Macroeconomics. 3 sem hours

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 Intermediate Macroeconomic Analysis and ECO 310 Economic Statistics, or equivalent.

ECO 402 Computer Applications in Microeconomics. 3 sem hours

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 Intermediate Microeconomic Analysis and ECO 310 Economic Statistics, or equivalent.

ECO 405 Economic Analysis for Business. 3 sem hours

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 202 Principles of Economics I and II, ECO 302 Intermediate Microeconomic Analysis highly recommended.

ECO 406 History of Economic Thought. 3 sem hours

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 202 Principles of Economics I and II.

ECO 407 Economic Analysis and Law. 3 sem hours

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 202 Principles of Economics I and II or department permission.

ECO 415 Introduction to Econometrics. 3 sem hours

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 Economic Statistics or equivalent.

ECO 420 Comparative Labor Unionism. 3 sem hours

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 202 Principles of Economics I and II or department permission.

ECO 422 Union Leadership. 3 sem hours

Field experience in union administration in cooperation with metropolitan area local and international unions. Emphasizes day-to-day operation of union institutions. Students are assigned to specific unions for an average of ten hours weekly, meeting with the instructor periodically

for analysis and discussion. *Open only to students in labor studies major or minor.*

Prereq: ECO 320 Labor Economics and senior standing.

ECO 424 Seminar in Labor Issues. 3 sem hours

A study of labor economic theory relevant to current and prospective issues of significance to unions; consideration of future trends in unionism and collective bargaining.

Prereq: ECO 320 Labor Economics and senior standing.

ECO 436 Health Economics. 3 sem hours

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 202 Principles of Economics I and II or equivalent.

ECO 445 Economic Fluctuations and Forecasting. 3 sem hours

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 202 Principles of Economics I and II or equivalent.

ECO 455 Cost-Benefit Analysis. 3 sem hours

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 202 Principles of Economics I and II.

ECO 460 Industrial Organization. 3 sem hours

Monopoly, competition, mergers, concentration and antitrust, and other public policies affecting private enterprise in the United States.

Prereq: ECO 201 and 202 Principles of Economics I and II.

ECO 471 Case Studies of Developing Economies. 3 sem hours

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 202 Principles of Economics I and II or equivalent.

ECO 472 The Soviet Economy. 3 sem hours

The Soviet economy including institutional structure, ideological background, economic growth and development, the problems of central planning, and current prospects for reform.

Prereq: ECO 201 and 202 Principles of Economics I and II or department permission.

ECO 477, 478, 479 Special**Topics.****1, 2, 3 sem hours**

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 sem hours

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 202 Principles of Economics I and II or equivalent.

ECO 487 Cooperative Education in Economics or Labor Studies. 3 sem hours

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 Cooperative Education in Economics or Labor Studies. Department permission.

ECO 491 Research Seminar in Economics. 3 sem hours

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 sem hours

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-Harrod
487-4220

Professors: James Angle, Helen Aristar-Dry, Nadean Bishop, Paul Bruss, Franklin Case, Gilbert Cross, Marcia A. Dalbey, Bernard Decker, James Devers, Jeffrey Duncan, Clayton Eshleman, David Geherin, Arthur Harris, Lucy Hayden, Alethea Helbig, Robert Holkeboer, Sheila Ingersoll, Elizabeth Ingram, Jay Jernigan, Eunice Jordan, Janet Kauffman, Martin Kombluth, Robert Kraft, Russell Laison, Donald Lawniczak, Paul McGlynn, George Perkins, James Reynolds, William Shuter, Lawrence Smith, Arie Staal, Curtis Stadtfeld, Marshall Tymn, Patrick White

Associate Professors: Phillip Arrington, Jean Dye, Harry Eiss, Brenda Flanagan, Thomas Hennings, Meredith Klaus, Bernard Miller, Martin Shichtman, Eleanor Wright

Assistant Professors: Nancy Allen, Cheryl Cassidy, Keith Denning, Catherine Fleischer, William Hauer, Alexandra Norton, James Pinson, Daniel Seely, Ian Wojcik-Andrews, Richard Wright

Instructors: Nancy Allen, Elaine Dunlap

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

Language, journalism, telecommunications, and film

Literature and drama/theatre for the young

Literature, language, communications, and theatre arts
Public relations

Minors:

Children's literature
English language
English language and literature
English linguistics
Journalism
Literature
Writing

Two of the majors, literature and English language, plus the group major in English and American language and literature, are certifiable for teaching curricula. Students seeking certification in these areas are strongly advised to discuss their options with an adviser in the English Department.

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 grade point average was 2.5 or above may choose to enroll in a basic language course in a foreign language (FRN, GER, or 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 with concentration in language and composition. The Graduate School or the English Department can provide details.

MAJOR IN ENGLISH LANGUAGE

	Sem hours
Academic major in English language	30
1. Required courses in advanced writing	9
Choose three courses from the following:	
ENG 225 Intermediate English Composition,	
ENG 226 Report and Research Writing, ENG	
325 Expository Writing, ENG 417 Writing	
about Controversies	
2. Required courses in linguistics	9
LIN 201 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	
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

MAJOR IN ENGLISH LINGUISTICS

	Sem hours
Academic major in English linguistics	30
1. Required courses	18
LIN 201 An Introduction to Language	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.	

MAJOR IN LITERATURE

	Sem hours
Academic major in literature	30
1. Required basic literature courses	9
a. Choose two courses from the following:	
LIT 100 Reading of Literature, LIT 101 Reading of Literature: Fiction, LIT 102 Reading of Literature: Poetry, LIT 103 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 of the Middle Ages, LIT 413 The Poetry of Chaucer, LIT 414 English Renaissance Prose and Poetry 1500-1600, 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 Great 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 the 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

MAJOR IN WRITTEN COMMUNICATION

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

Academic major in written communication 30

- A. Concentration in technical communications
- 1. Required courses 12
ENG 325 Expository Writing 3
ENG 424 Technical Writing 3
JRN 215 News Writing and Reporting 3
CSC 136 Computers for the Non-Specialist 3
- 2. Restricted electives 18
No more than nine semester hours of 100- and 200-level courses from the following list may count toward this major.
ENG 225 Intermediate English Composition, ENG 226 Report and Research Writing, ENG 335 Imaginative Writing, ENG 387/487 Cooperative Education, ENG 503 Rhetoric and Advanced Composition, ENG 524 Advanced Technical Writing and Research
LIN 402 Modern English Grammar
JRN 306 Feature Writing, JRN 307 Copy Editing, JRN 312 Principles of Public Relations, JRN 314 Writing for Public Relations, JRN 423 Magazine Article Writing
CTT 344 Continuity Writing for Radio, TV, and Film
FA 165 Graphic Design (Studio Experience-Non-majors)
IDT 121 Graphic Communication, IDT 204 Photographic Communication

- 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 226 Report and Research Writing, ENG 325 Expository Writing, ENG 335 Imaginative Writing, ENG 417 Writing About Controversies, ENG 422 Writer's Workshop: Fiction or Poetry, * ENG 503 Rhetoric and Advanced Composition
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.

MAJOR IN JOURNALISM

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 Print Media is a prerequisite for all courses in the major. JRN 213 does not count toward the major.

Sem hours

Academic 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 six 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 325 Expository Writing, ENG 424 Technical Writing

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, LIT 410 Modern American Literature
- HST 101 Western Civilization to 1648; HST 102 Western Civilization, 1648 to World War I; HST 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 Principles of Economics I, ECO 202 Principles of Economics 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 general 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 specialities. Choice of those minors will be subject to approval by the journalism adviser.

Suggested electives:

- SOC 105 Introductory Sociology
- CTT 141 Introduction to Radio, TV, and Film Production, CIT 331 Fundamentals of Radio Production and Direction, CTT 332 Fundamentals of Television Production and Direction, CTT 336 History and Criticism of Radio and Television

GROUP MAJOR IN ENGLISH AND AMERICAN LITERATURE AND LANGUAGE (TEACHING)

This major is designed primarily for students preparing to teach in junior and senior high schools. It is also available for students preparing to teach in elementary schools.

	Sem hours
Teaching group major in English and American literature and language	36
1. Required courses	33
<i>a. Basic literature courses</i>	9
1) 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
2) LIT 210 Introduction to Shakespeare.....	3
<i>b. Required courses in linguistics</i>	6
LIN 201 Introduction to Language and any other LIN course.	
<i>c. Advanced writing courses</i>	6
Choose two courses from the following:	
ENG 225 Intermediate English Composition, ENG 226 Report and Research Writing, ENG 324 Principles of Technical Communication, ENG 325 Expository Writing, 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 423 Magazine Article Writing	
<i>d. Advanced literature courses</i>	12
Choose one course from each of the following four groups:	
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 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	3
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	3
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.....	3
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
(Note: LIT 440 Literary Types and LIT 450 Major Authors may be selected for an appropriate period)	
2. Elective	3
Choose from any course offered by the English Department in literature, composition, or English language except the following:	
ENG 120 English Composition Laboratory, ENG 308 Teaching English in the Secondary	

Schools, LIT 207 Introduction to Children's Literature, LIT 352 Folk Literature: Ballads and Folk Tales, LIT 451 Controversy in Children's Literature.

LIT 207 may be counted as a free elective on this major by students on an elementary teaching program. LIT 207 does not fulfill basic studies requirements. No more than nine semester hours of 100- and 200-level literature courses may count toward this major in other curricula.

GROUP MAJOR IN LITERATURE, LANGUAGE, COMMUNICATION, AND THEATRE ARTS (TEACHING)

Students may elect a group major consisting of 36 semester hours designed for the elementary teacher. See page 302, Department of Teacher Education, for description of the group major.

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	36
<i>Prerequisite courses: JRN 215 News Writing and Reporting, CTS 121 or 124 Fundamentals of Speech.</i>	
1. Required fundamental courses	12
JRN 312 Principles of Public Relations, JRN 314 Writing for Public Relations, CTT 141 Introduction to Radio-TV-Film Production, CTC 224 Public Speaking or CTC 350 Persuasion	
2. Required Advanced Courses	12
JRN 306 Feature Writing, JRN 408 Case Studies in Public Relations, CTT 334 Radio-Television News or CTT 344 Continuity Writing for Radio, Television, Film, CTC 354 Organizational Communications or CTC 357 Interviewing as Communication	
3. Restricted Electives	12
Choose 12 credits from the following but do not duplicate courses already taken as a requirement.	
JRN 305 Editorial, Column, and Review Writing; JRN 307 Copy Editing; JRN 311 Editing Procedures; JRN 423 Magazine Article Writing; JRN 455 Journalism and the Law	
ENG 424 Technical Writing	

CTC 227 Interpersonal Communications or CTC 359 Small Group Communication; CTC 224 Public Speaking or CTC 350 Persuasion; CTT 334 Radio/Television News or CTT 344 Continuity Writing for Radio, Television, Film; CTC 354 Organizational Communications or CTC 357 Interviewing as Communication.

IDT 436 Electronic Publishing

*JRN 387, 487 Cooperative Education in Journalism/Public Relations, *JRN 488, 489, 490 Internship in Journalism/Public Relations Public Relations

*CTT 387, 388, 389 Cooperative Education in Radio-Television-Film, *CIT 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 (with MKT 360 Principles of Marketing and MKT 369). Advertising highly recommended and 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 (TEACHING AND NON-TEACHING)

This major may be used for the Bachelor of Science or Bachelor of Arts degrees without teacher certification, as well as on the elementary education program with certification.

	Sem hours
Interdisciplinary major in children's literature and drama/theatre for the young ...	36
1. 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

- CTS 121 or 124 Fundamentals of Speech2-3
- CTD 222 Drama and Play in Human Experience3
- CTD 323 Improvising and Role-Playing3
- CTD 324 Oral Interpretation of Children's Literature3

2. 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, LIT 451 Controversy in Children's Literature
 - CTY 168, 268, 468 Interpretation; CTO 210 Interpretive Reading; CTD 322 Theatre for the Young; CTD 327 Plays for the Young; EDM 406 Storytelling; CTD 497, 498, 499 Independent Study in Drama for the Young

MINORS OFFERED IN THE ENGLISH DEPARTMENT

Four of the minors offered by the English Department are certifiable for teaching curricula: literature, English language, and English language and literature on both elementary and secondary curricula and children's literature on the elementary curriculum. Students on both curricula may combine the English language minor with a literature major or any of the minors with a certifiable major other than English, but are advised in any case to discuss their options with an adviser in the English Department.

For a certifiable minor in grades 9-12, four hours beyond the minimum 20 hours for graduation must be completed to meet North Central Association requirements (24). English methods or additional composition (not additional journalism) can make up those additional hours. (No more than three hours of journalism will count on these minors.)

CHILDREN'S LITERATURE MINOR (TEACHING)

	Sem hours
Minor in children's literature	21
1. Required courses	6
LIT 207 Introduction to Children's Literature ...3	
ENG 450 Children's Literature: Criticism and Response	3
2. Restricted electives	15
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 251 The Bible as Literature, LIT 260 African American Literature	

- Choose three courses 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 451 Controversy in Children's Literature

ENGLISH LANGUAGE MINOR (TEACHING)

	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 Writing3	
ENG 325 Expository Writing	3
2. Required courses in linguistics	6
LIN 201 Introduction to Language and any one other LIN course	
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	
(No more than one journalism course may be counted by students seeking teacher certification)	
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	

ENGLISH LANGUAGE AND LITERATURE MINOR (TEACHING)

	Sem hours
Minor in English language and literature	21-24
1. Courses in literature	12
a) Restricted electives in basic literature	6
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 251 The Bible as Literature, LIT 260 African American Literature	
b) Required course: LIT 210 Introduction to Shakespeare	3
c) Any 300- or 400-level LIT course for which the prerequisites have been met, except LIT 351 World Mythology and LIT 352 Folk Literature: Ballads and Folk Tales	3

2. **Restricted elective in writing** 3
 ENG 225 Intermediate English Composition, ENG 226 Report and Research Writing, ENG 325 Expository Writing, ENG 335 Imaginative Writing, ENG 417 Writing About Controversies, ENG 422 Writer's Workshop: Fiction or Poetry, ENG 424 Technical Writing.
 (Note prerequisites for many advanced writing courses.)
 JRN 215 News Writing and Reporting, JRN 306 Feature Writing, JRN 307 Copy Editing, JRN 314 Writing for Public Relations, JRN 453 Advanced Reporting
 No more than one journalism course may be counted by students seeking teacher certification.
3. **Restricted elective in language or linguistics** 3
 LIN 201 An Introduction to Language, LIN 402 Modern English Grammar, LIN 421 The History of the English Language
4. **Elective** 3
 Choose from courses in literature, composition, or English language *except* the following:
 ENG 120 English Composition Laboratory, LIT 207 Introduction to Children's Literature, LIT 352 Folk Literature: Ballads and Folk Tales, LIT 451 Controversy in Children's Literature.
Note: To fulfill additional credit hour requirements for teacher certification, students may add to the above 21 hours as follows: students on the secondary education curriculum may, in addition, take ENG 308 Teaching English in the Secondary Schools; students on an elementary education curriculum may, in addition, take LIT 207 Introduction to Children's Literature. LIT 207 does not fulfill basic studies requirements. No more than nine semester hours of 100- and 200-level literature courses may count toward this minor in other curricula.

**LITERATURE MINOR
(TEACHING)**

- | | 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.
 LIT 207 may be counted on this minor as a free elective by students on an elementary curriculum. No more than nine semester hours of 100- and 200-level literature courses may count toward this minor in other curricula.

JOURNALISM MINOR

- | | 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 to nine credits from the following: | |
| ENG 325 Expository Writing, ENG 424 Technical Writing, ENG 524 Advanced Technical Writing and Research | |
| 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 | |
| CTT 141 Introduction to Radio, TV, and Film; CTT 334 Radio-Television News; CIT 344 Continuity Writing for Radio-Television-Film | |
| FA 165 Graphic Design (Non-majors) | |
| IDT 121 Graphic Communication, IDT 204 Photographic Communication | |

ENGLISH LINGUISTICS MINOR

	Sem hours
Minor in English linguistics	21
1. Required courses	6
LIN 201 Introduction to Language and LIN 401 Introduction to Linguistic Science.	
2. Restricted electives	15
Any LIN course not taken in 1. above, LIT 412 Medieval Literature, LIT 413 The Poetry of Chaucer	

WRITING MINOR

	Sem hours
Minor in writing	21
1. Required courses	12
ENG 121 English Composition	3
ENG 325 Expository Writing	3
ENG 335 Imaginative Writing	3
ENG 422 Writer's Workshop: Fiction or Poetry	3
2. Restricted electives	9
Choose nine to 12 credits from the following:	
ENG 225 Intermediate English Composition, ENG 226 Report and 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	
CIT 344 Continuity Writing for Radio- Television-Film, CTR 360 Dramatic Composition, CIR 361 Dramatic Writing	
(One of the following may be counted toward this minor as a restricted elective: LIN 201 An Introduction to Language, LIN 402 Modern English Grammar, LIN 421 The History of the English Language, LIN 425 Introduction to Syntax)	

COMPOSITION COURSES

ENG 120 Basic English Composition. 3 sem hours
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 English Composition. *ENG 120 does not apply on the basic studies requirements.*

ENG 121 English Composition. 3 sem hours
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 sem hours
A course for students, freshmen through seniors, who wish to study further the fundamentals of effective writing. Emphasis on writing in the student's field of study.
Prereq: ENG 121 English Composition.

**ENG 226 Report and Research
Writing.** 3 sem hours
A course for students, freshmen through seniors, who wish to study the essentials of report and research writing.
Prereq: ENG 121 English Composition.

**ENG 277, 278, 279 Special Topics in
English.** 1, 2, 3 sem hours
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 English Composition.

**ENG 308 Teaching English in the Secondary
Schools.** 3 sem hours
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 sem hours
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 English Composition and junior standing.

ENG 325 Expository Writing. 3 sem hours
An advanced writing course for students who have mastered fundamental writing skills and who wish to explore stylistic options in prose. Students will analyze and write a variety of essays with emphasis on improvement of style. Some effort will be made to acquaint students with the requirements of writing for publication.
Prereq: ENG 121 English Composition and one advanced writing course, or department permission.

ENG 335 Imaginative Writing. 3 sem hours
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.
Prereq: One advanced literature course (200 level or above), or department or instructor's permission.

ENG 387 Cooperative Education in English. 3 sem hours
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 sem hours
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 sem hours
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 English Composition and two writing courses at the 200-level or above, or department permission.

ENG 422 Writer's Workshop: Fiction or Poetry. 3 sem hours
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.
Prereq: ENG 335 Imaginative Writing and two literature courses at the 200 level or above, or department permission.

ENG 424 Technical Writing. 3 sem hours
An advanced workshop that prepares students to communicate, particularly to write, on the job.
Prereq: ENG 324 Principles of Technical Communication or department permission.

ENG 427 Technical Editing. 3 sem hours
Editing of technical material for publication. Principles of style, format, graphics layout, and publication management.
Prereq: ENG 424 Technical Writing, or instructor permission.

ENG 450 Children's Literature: Criticism and Response. 3 sem hours
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 Introduction to Children's Literature.

ENG 477, 478, 479 Special Topics in English. 1, 2, 3 sem hours
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 English Composition and one advanced writing course or department permission.

ENG 487 Cooperative Education in English. 3 sem hours
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 497, 498, 499 Independent Study in English. 1, 2, 3 sem hours
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 Language. 3 sem hours
An introduction to phonology, morphology, syntax, the lexicon, semantics, sociolinguistics, psycholinguistics, and other concerns.
Prereq: Sophomore standing.

LIN 205 English Words. 3 sem hours
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 sem hours
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 An Introduction to Language or LNG 223 Introduction to Language or AAS 101 Introduction to African American Studies.

LIN 322 Languages of the World. 3 sem hours
A study of the relation of language to social behavior and modes of thought in unilingual and multilingual communities.

Prereq: ANT 135 Introduction to Cultural Anthropology or LIN 201 An Introduction to Language and Sophomore standing.

LIN 340 Language and Culture. 3 sem hours
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.

LIN 401 Introduction to Linguistic Science. 3 sem hours
An introduction to linguistic theory and analytical procedures. Students will apply theoretical principles to problems of phonological and syntactic analysis.

Prereq: LIN 201 An Introduction to Language or LNG 223 Introduction to Language.

LIN 402 Modern English Grammar. 3 sem hours
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 sem hours
An introduction to the basic principles of modern phonology, beginning with a review of phonetics.

Prereq: LIN 401 Introduction to Linguistic Science.

LIN 421 The History of the English Language. 3 sem hours
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 Introduction to Language or LIN 401 Introduction to Linguistic Science.

LIN 425 Introduction to Syntax. 3 sem hours
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 Introduction to Linguistic Science.

LIN 426 Topics in Linguistics. 3 sem hours
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 Introduction to Linguistic Science.

LIN 497, 498, 499 Independent Study. 1, 2, 3 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
Writing of interpretive articles, editorials, reviews, and columns. Aimed at developing the students' 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 News Writing and Reporting

JRN 306 Feature Writing. 3 sem hours
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 News Writing and Reporting.

JRN 307 Copy Editing. 3 sem hours
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 News Writing and Reporting and JRN 306 Feature Writing.

JRN 311 Editing Procedures. 3 sem hours
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 News Writing and Reporting.

JRN 312 Principles of Public Relations. 3 sem hours
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 News Writing and Reporting, CTS 121 or CTS 124 Fundamentals of Speech.

JRN 313 History of American Journalism. 3 sem hours

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 sem hours
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 PR campaigns.

Prereq: JRN 306 Feature Writing and JRN 312 Principles of Public Relations.

JRN 387 Cooperative Education in Journalism/ Public Relations. 3 sem hours

Employment for pay in the print media, public relations, or publishing fields to provide practical experience for skills learned in the classroom. Work experiences are generally 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 408 Case Studies in Public Relations. 3 sem hours

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 Principles of Public Relations and JRN 314 Writing for Public Relations.

JRN 423 Magazine Article Writing. 3 sem hours
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 325 Expository Writing or JRN 306 Feature Writing or department permission.

JRN 453 Advanced Reporting. 3 sem hours
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 News Writing and Reporting.

JRN 454 Contemporary Problems in Journalism. 3 sem hours

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 sem hours

A senior professional course exploring issues of libel, privacy, free press-fair trial, and the First Amendment.

Prereq: JRN 454 Contemporary Problems in Journalism.

JRN 477, 478, 479 Special Topics in Journalism. 1, 2, 3 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours
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 sem hours
A 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 sem hours
A 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 sem hours
A reading and critical analysis of drama intended to deepen the student's understanding and enjoyment of drama.

LIT 106 Rome and America. 6 sem hours
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 36.

LIT/HST 107 Society in Crisis: 1848 and 1968. 6 sem hours
A comparison and contrast of the social crisis 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 36.

LIT 122 American Studies: Success and the Pursuit of Happiness in 19th Century America. 3 sem hours
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 De-

partments. *This course satisfies one philosophy or one literature requirement.* Note: See Honors Humanities Courses, page 36.

LIT 124 The Age of Wagner. 3 sem hours
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 36.

LIT 126 The Age of Shakespeare. 3 sem hours
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 36.

LIT 128 Russia in the Age of Tolstoy and Dostoevsky. 3 sem hours
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 36.

LIT 150 Humanity and Technology. 3 sem hours
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 36.

LIT 152 From the Gay Nineties to the Crash. 3 sem hours
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 36.

LIT 155 Narrative in Literature and Film. 3 sem hours
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 *Narrative in Literature and Film*. Note: See Honors Humanities Courses, page 36.

LIT 179 Special Topics. 3 sem hours
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 36.

LIT 181 The Legacy of Greece. 3 sem hours
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 36.

LIT 201 Introduction to Science Fiction. 3 sem hours
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 sem hours
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 sem hours
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 sem hours
An introduction to at least five plays by the greatest English dramatist with emphasis upon the tragedies. Prereq: One literature course or department permission.

LIT 245 Introduction to Film. 3 sem hours
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 CTT 145 Introduction to Film Appreciation and LIT 245 Introduction to Film. Prereq: One course in literature or department permission, CTS 121 or CTS 124 *Fundamentals of Speech*.

LIT 251 The Bible as Literature. 3 sem hours
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 sem hours
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 sem hours
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 sem hours
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 *Narrative in Literature and Film*. Prereq: Two courses in literature.

LIT 305 Shakespeare: The Major Comedies and Histories. 3 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

A study of the mythological traditions that have most significantly informed Western civilization. The myths are discussed as literature and as peoples' attempts to understand themselves, their society, and their physical environment.

Prereq: Two courses in literature.

LIT 352 Folk Literature: Ballads and Folk Tales. 3 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

A study of women and their experiences as described in literature.

Prereq: Two courses in literature.

LIT 450 Major Authors. 3 sem hours

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 451 Controversy in Children's Literature. 3 sem hours

This course will introduce students to important areas of disagreement in children's literature, and place them in a historical and contemporary context and framework for evaluating various sides of the issues. Applies toward the minor in children's literature only, but may be taken as a free elective.

Prereq: LIT 207 Introduction to Children's Literature or department permission.

LIT 460 Recent Trends in British and American Literature. 3 sem hours

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 sem hours

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 sem hours

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 Music Building
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

Associate Professors: Lizabeth England, Shohei Koike, Ana Maria McCoy, Anne G. Nerenz, Sharon Robertson, Reynaldo Ruiz

Assistant Professors: Pedro Gómez, Elisabeth Morgan, William Perry, Thomas Vosteen

Instructor: Anne-Marie Bevington

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 language and literature
French for business
German language and literature
German for business
Japanese language and culture teaching
Spanish
Spanish for business
Language and international trade

Minors:

Bilingual bicultural teacher education
English as a second language for non-native speakers of English
French language and literature
French language
French literature
French for business

German language and literature
German language
German literature
German for business
Spanish language
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 student 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.

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.

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.

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):
William Cline, Pedro Gómez

English as a second language: E. Catherine Day

French: Benjamin W. Palmer

German: Sharon Robertson

Japanese language and culture teaching: Shohei Koike

TESOL: Jo Ann Aebersold

Language and international trade: See the list of language area coordinators in the department office.

Spanish: Ana McCoy

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 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. (See page 238 for details.)

FRENCH MAJORS**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
Academic 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
(TEACHING)**

	Sem hours
Teaching major in French	33
1. Required courses	21
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
FLA 411 Theory and Methods of Modern Language Teaching	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
Academic 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 and II	6
2. Restricted electives	6
Choose six credits in French at any level	

GERMAN MAJORS

GERMAN LANGUAGE AND LITERATURE

	Sem hours
Academic 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 LANGUAGE AND LITERATURE

	Sem hours
Teaching major in German language and literature	33
1. Required courses	21
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
FLA 411 Theory and Methods of Modern Language Teaching	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
Academic 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
(TEACHING)**

	Sem hours
Teaching major in Japanese language and culture teaching	43
1. Required courses	34
LNG 223 Introduction to Language	3
JPN 211, 212 Intermediate Japanese	10
JPN 344 Japanese Conversation	3
JPN 361 Japanese for International Trade	3
JPN 444 Advanced Japanese Conversation	3
HST/GEO 326 History and Geography of Modern Asia	6
JPN 494 Seminar in Japanese Studies	3
ANT 245 Culture of Japan	3
2. Restricted electives	9
Choose one course from each of the following groups:	
1. ANT 340 Language and Culture	3

- 1. CTC 374 Intercultural Communication 3
- 2. ECO 370 Comparative Economic Systems 3
- 1. ECO 480 International Economics 3
- 3. PLS 374 Asian Political Systems 3
- 1. PLS 412 Comparative Legal Systems 3
- 3. Professional certification 9
 - The following is a sample of the courses required for professional certification; in this case, for teaching at the secondary level:
 - Education (Secondary)
 - EDT 300 Introduction to Computer Applications 1
 - SGN 300 The Exceptional Child in the Regular Classroom 1
 - CUR 305 Curriculum and Methods-Secondary 3
 - RDG 311 Teaching Reading in the Secondary School 3
 - EDP 322 Human Development and Learning ... 4
 - SFD 328 Social Aspects of Teaching 3
 - EDP 340 Introduction to Measurement and Evaluation 2
 - EDM 345 Media for the Classroom Teacher ... 1
 - FLA 411 Theory and Methods of Modern Language Teaching 3

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
a. Business and economics courses	30
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 Business 3
- ECO 370 Comparative Economic Systems or ECO 480 International Economics 3
- b. Language and area studies courses 27
- 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 and 447 Business French/German/Japanese/Spanish
- 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/HST 316 History and Geography of Modern Europe, GEO/HST 317 History and Geography of Spanish America, or GEO/HST 326 Modern Asia
- These credit hours may be used as electives in history and geography; prerequisite is GEO 110 World Regions and either HST 101, 102 Western Civilization, or HST 103 Twentieth Century Civilization.
- Political science courses 3
- Choose one course from the following:
- PLS 211 Introduction to Comparative Government, PLS 212 Introduction to International Relations, PLS 341 International Law, PLS 342 International Organization, 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
Language component	20
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 Conversation3
 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
- Journalism component*18-21
1. **Required courses** 12
 JRN 215 News Writing and Reporting3
 JRN 306 Feature Writing3
 JRN 307 Copy Editing3
 JRN 453 Advanced Reporting3
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

- Telecommunications and film component*20-21
1. **Required courses** 15
 CTT 130 Introduction to Telecommunication and Film 3
 CTT 334 Radio-Television News3
 CTT 336 Studies in Telecommunications3
 CTC 374 Intercultural Communication3
 CTC 479 Special Topics: Seminar in International Telecommunications Issues .3
2. **Restricted electives** 5-6
 Choose five to six credits from the following:
 CTT 145 Introduction to Film Appreciation, CTY 165 Television Laboratory, CTY 169 Radio Station WQBR, CTC 227 Interpersonal Communication, CTT 236 History and Criticism of Radio and Television, CTT 241 Radio-Television-Film Announcing, CTT 331 Fundamentals of Radio Production and Direction, CTT 332 Fundamentals of Television Production and Direction, CTT 335 Studies in Film, CTT 344 Continuity Writing for Radio-Television-Film, CTC 354 Organizational Communication, CTC 359 Small Group Communication

SPANISH MAJORS

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**
- Academic major in Spanish** 30
1. **Required courses** 12
 SPN 343 Spanish Grammar and Composition ...3
 SPN 344 Spanish Conversation and Composition3
 SPN 443 Advanced Spanish Grammar and Composition3
 SPN 444 Advanced Spanish Conversation and Composition3
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 (TEACHING)

- Sem hours**
- Teaching major in Spanish** 33
1. **Required courses** 15
 SPN 343 Spanish Grammar and Composition ...3
 SPN 344 Spanish Conversation and Composition3
 SPN 443 Advanced Spanish Grammar and Composition3
 SPN 444 Advanced Spanish Conversation and Composition3
 FLA 411 Theory and Methods of Modern Language Teaching3
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**
- Academic major in business Spanish** 30
1. **Required courses** 24
 SPN 301 The Cultures of Spain3
 SPN 302 The Cultures of Spanish America3
 SPN 342 Survey of Spanish Literature3
 SPN 352 Survey of Spanish American Literature3
 SPN 361 Spanish for International Trade3
 SPN 443 Advanced Spanish Grammar and Composition or SPN 456 Scientific and Technical Spanish I3
 SPN 446, 447 Business Spanish6
2. **Restricted electives** 6
 Choose six credits in Spanish at any level in consultation with the advising coordinator

MINORS OFFERED IN THE DEPARTMENT OF FOREIGN LANGUAGES AND BILINGUAL STUDIES

**BILINGUAL-BICULTURAL EDUCATION
SPANISH-ENGLISH
(TEACHING)**

Language proficiency in both Spanish and English is required; proficiency will be determined by examination.

All students are required to fulfill four semester hours of student teaching with English-speaking pupils and an additional four semester hours of student teaching in bilingual education. Students must pass the required language proficiency examinations before student teaching.

	Sem hours
Group minor in bilingual bicultural education (Spanish-English)	24
1. Required courses	15
FLA 421 History and Theory of Bilingual Education	3
FLA 422 Teaching Hispanic Culture and Language	3
TSL410 TESOL Methods	3
SPN 471 Culture and Literature of the Hispanic Groups in the U.S.	3
SPN 482 Language of the Hispanic Groups in the U.S.	3
2. Restricted electives	9
Choose nine credits from the following:	
ANT 233 Peoples and Cultures of Mexico	
FLA 215 The Culture of the Latino Groups in the United States, LNG 223 Introduction to Language	
LIN 201 An Introduction to Linguistics, LIN 401 Introduction to Linguistic Science, LIN 402 Modern English Grammar	
GEO 321 Geography of Latin America	
HST 457 History of Mexico	
PSY 340 Psychological Perspectives on Prejudice and Discrimination	
SOC 214 Racial and Cultural Minorities	
SPN 443 Advanced Spanish Grammar and Composition, SPN 444 Advanced Spanish Conversation and Composition	

**GROUP MINOR IN TEACHING ENGLISH AS A SECOND LANGUAGE
(TEACHING)**

	Sem hours
Group Minor in Teaching English as a Second Language	24
1. Required courses	15
LNG 223 Introduction to Language	3
CTC 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:	
Group 1	
LIN 402 Modern English Grammar	3
LIN 401 Introduction to Linguistic Science	3
Group 2	
ENG 325 Expository Writing	3
CTC 226 Non-verbal Communication	3
SLI 337 Language Acquisition	3
Group 3	
SOC 214 Racial and Cultural Minorities	3
ANT 340 Language and Culture	3
<i>Prereq. or Coreq.: One year of university foreign language 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 with test scores in the ranges indicated below. 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.

	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, 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 226 Report and Research Writing	3
2. Restricted elective	3
Choose one course from the following:	
LIN 201 Introduction to Linguistics, LIN 402 Modern English Grammar, or other English language or linguistics course (written permission required)	
CTC 224 Public Speaking, CTC 350 Persuasion, CTC 356 Argumentation and Debate, CTC 359 Small Group Communication, or other speech communication course (written permission required)	
Other advanced (speech) courses not including theatre arts courses, with written permission	

MINORS OFFERED IN FRENCH**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	
Students with a minor in French and on an elementary curriculum, see page 303.	

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	
Students on a teaching curriculum should include FRN 343 French Composition and FRN 344 French Conversation	

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 and II	6
2. Restricted electives	2
Choose two credits in French at any level	

MINORS OFFERED IN GERMAN**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 or GER 342 Survey of German Literature	3
GER 361 German for International Trade	3
GER 443 German Syntax and Advanced Composition	3
GER 446 or GER 447 Business German	3
2. Restricted electives	8
Choose eight credits in German at any level	

MINORS OFFERED IN SPANISH**LANGUAGE**

	Sem hours
Minor in Spanish language	20
1. Required courses	12
SPN 343 Spanish Grammar and Composition ...	3
SPN 344 Spanish Conversation and Composition	3
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	6
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
Choose two courses from the following:	
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)	
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 additional courses 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)	
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 sem hours
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 sem hours
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.
Prereq: FRN 121 Beginning French or equivalent. Placement exam required.

FRN 221 Intermediate French (Reading). 3 sem hours
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 Intermediate French (Grammar, Composition, and Conversation). Satisfies basic studies intermediate or advanced foreign language literature requirement, Area IV.
Prereq: FRN 122 Beginning French or equivalent. Placement exam required.

FRN 222 Intermediate French (Reading). 3 sem hours
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 Intermediate French (Grammar, Composition, and Conversation). Satisfies basic studies intermediate or advanced foreign language literature requirement, Area IV.
Prereq: FRN 221 Intermediate French or equivalent. Placement exam required.

FRN 233 Intermediate French (Grammar, Composition, Conversation). 3 sem hours
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 Intermediate French (Reading). Does not satisfy basic studies literature re-

quirement. Satisfies basic studies foreign language composition requirement, Area I.

Prereq: FRN 122 Beginning French or equivalent. Placement exam required.

FRN 234 Intermediate French (Grammar, Composition, Conversation). 3 sem hours

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 Intermediate French (Reading). Does not satisfy basic studies literature requirement. Satisfies basic studies foreign language composition requirement, Area I.

Prereq: FRN 233 Intermediate French (Grammar, Composition, Conversation) or equivalent. Placement exam required.

FRN 277, 278, 279 Special Topics. 1, 2, 3 sem hours

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 341, 342 Survey of French Literature. 3 sem hours 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.

Prereq: FRN 222 Intermediate French (Reading) or department permission.

FRN 343 French Composition. 3 sem hours

Review and drill of intermediate and advanced linguistic patterns in French. Written compositions.

Prereq: FRN 234 Intermediate French (Grammar, Composition, Conversation) or department permission.

FRN 344 French Conversation. 3 sem hours

Additional classwork in conversation: improving pronunciation and acquiring a larger active vocabulary for daily life.

Prereq: FRN 234 Intermediate French (Grammar, Composition, Conversation) or department permission.

FRN 361 French for International Trade. 3 sem hours

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 French Composition or department permission.

FRN 377, 378, 379 Special Topics. 1, 2, 3 sem hours

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 sem hour

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 sem hours

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 Survey of French Literature or department permission.

FRN 432 Studies in French Poetry. 3 sem hours

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 Survey of French Literature or department permission.

FRN 433 Studies in French Prose. 3 sem hours

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 Survey of French Literature or department permission.

FRN 443 Advanced French Grammar and Composition. 3 sem hours

Review and practice of advanced syntactical patterns. Practice in composition. Taught in French.

Prereq: FRN 343 French Composition.

FRN 444 Advanced French Conversation. 3 sem hours

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 French Composition and FRN 344 French Conversation, or department permission.

FRN 446 Business French I. 3 sem hours

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 French for International Trade or department permission.

FRN 447 Business French II. 3 sem hours

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 Business French I or department permission.*

FRN 451,452 Readings in French. 1, 2 sem hours
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 Survey of French Literature or department permission.

FRN 456 Scientific and Technical

French. 3 sem hours
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 sem hours
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 sem hours

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 French Composition and FRN 344 French Conversation.

FRN 477, 478, 479 Special Topics. 1, 2, 3 sem hours
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 sem hours
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 sem hours
An intensive spring/summer course offered in a French-speaking environment. Instruction at many different lev-

els. May be counted for equivalent hours on 100-200 levels. *May be repeated for credit.*

FRN 497, 498, 499 Independent Study. 1, 2, 3 sem hours
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 sem hours
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 sem hours
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.

Prereq: GER 121 Beginning German or equivalent. Placement examination required.

GER 221 Intermediate German Reading. 3 sem hours
This course consists of readings in German literature and civilization. Students who plan to continue in German should take GER 233, 234 Intermediate German Conversation, Composition, and Grammar concurrently with GER 221, 222. Satisfies Area IV of basic studies requirements.

Prereq: GER 122 Beginning German or equivalent. Placement examination required.

GER 222 Intermediate German Reading. 3 sem hours
This course consists of readings in German literature and civilization. Students who plan to continue in German should take GER 233, 234 Intermediate German Conversation, Composition, and Grammar concurrently with GER 221, 222. Satisfies Area IV of basic studies requirements.

Prereq: GER 122 Beginning German or equivalent. Placement examination required.

GER 233 Intermediate German Conversation, Composition, and Grammar. 3 sem hours
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 Beginning German or equivalent.*

GER 234 Intermediate German Conversation, Composition, and Grammar. 3 sem hours

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 Intermediate German Conversation, Composition, and Grammar or equivalent.

GER 277, 278, 279 Special Topics. 1, 2, 3 sem hours

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 sem hours

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 Intermediate German Reading or department permission.

GER 342 Survey of German Literature. 3 sem hours

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 Intermediate German Reading and GER 341 Survey of German Literature, or department permission.

GER 343 German Composition. 3 sem hours

Writing for a variety of purposes and a systematic grammar review. Frequent written assignments. Taught in German.

Prereq: GER 234 Intermediate German Conversation, Composition, and Grammar or department permission.

GER 344 German Conversation. 3 sem hours

Builds on the foundation in speaking skills acquired in GER 233 and 234 Intermediate German Conversation, Composition, and Grammar. 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 Intermediate German Conversation, Composition, and Grammar or department permission.

GER 361 German for International Trade. 3 sem hours

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 German Composition or department permission.

GER 377, 378, 379 Special Topics. 1, 2, 3 sem hours

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 sem hour

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 sem hours

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 Survey of German Literature or department permission.

GER 426 German Literature from 1750-1850. 3 sem hours

The literature of Germany from the pre-classical period through Romanticism 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 Survey of German Literature or department permission.

GER 427 German Literature from 1850-1945. 3 sem hours

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 Survey of German Literature or department permission.

GER 428 German Literature from 1945 to the Present. 3 sem hours

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 Survey of German Literature or department permission.

GER 443 German Syntax and Advanced Composition. 3 sem hours

Builds on the foundation in written expression acquired in GER 343 German Composition. Intensive vocabulary and idiom writing; treatment of the more complex structural features of German and stylistics. Frequent assign-

ments increase the student's ability to write for a variety of purposes.

Prereq: GER 343 German Composition and GER 344 German Conversation, or department permission.

GER 444 Advanced German Conversation. 3 sem hours

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 German Composition and GER 344 German Conversation, or department permission.

GER 446 Business German I. 3 sem hours

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 sem hours

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 sem hours
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 sem hours

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 German Composition or department permission.

GER 457 Technical German II. 3 sem hours

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 Technical German I or department permission.

GER 466 German for International Affairs. 3 sem hours

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 German Composition and GER 344 German Conversation.

GER 477, 478, 479 Special Topics. 1, 2, 3 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

Instruction includes practice in elementary conversation with special attention to reading and writing the two Japanese syllabaries and basic ideographs. Laboratory attendance is required.

JPN 211 Intermediate Japanese. 5 sem hours

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 121, 122 Beginning Japanese or equivalent.

JPN 212 Intermediate Japanese. 3 sem hours
 Instruction includes practice in intermediate Japanese conversation, with heavy emphasis on reading and writing common ideographs in non-technical text. Laboratory attendance is required.
Prereq: JPN 121, 122 Beginning Japanese and JPN 211 Intermediate Japanese, or equivalent.

JPN 344 Japanese Conversation. 3 sem hours
 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 Intermediate Japanese or department permission.

JPN 345 Japanese Composition. 3 sem hours
 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 Japanese Conversation or department permission.

JPN 361 Japanese for International Trade. 3 sem hours.
 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 Japanese Composition or department permission.

JPN 444 Advanced Japanese Conversation. 3 sem hours
 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 Japanese Composition or department permission.

JPN 446 Business Japanese I. 3 sem hours
 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 Japanese for International Trade and JPN 444 Advanced Japanese Conversation, or department permission.

JPN 447 Business Japanese II. 3 sem hours
 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 Business Japanese I or department permission.

JPN 494 Seminar in Japanese Studies. 3 sem hours
 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 Japanese for International Trade or department permission.

SPANISH COURSES

SPN 121 Beginning Spanish. 5 sem hours
 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 sem hours
 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 Beginning Spanish or equivalent. Placement exam required.

SPN 134 Spanish for the Bilingual. 5 sem hours
 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. Satisfies the basic studies foreign language composition requirement, Area I.
Prereq: Native command of oral Spanish and department permission.

SPN 201 Intermediate Spanish Conversation and Composition. 3 sem hours
 A review of Spanish grammar, frequent simple written compositions each semester, 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 Beginning Spanish or equivalent. Placement exam required.

SPN 202 Intermediate Spanish Conversation and Composition. 3 sem hours
 A review of Spanish grammar, frequent simple written compositions each semester, 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 Intermediate Spanish Conversation and Composition or equivalent.

SPN 221 Intermediate Spanish Reading. 3 sem hours
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 Intermediate Spanish Conversation and Composition or department permission.

SPN 222 Intermediate Spanish Reading. 3 sem hours
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 Intermediate Spanish Reading or department permission. Placement exam required.

SPN 277, 278, 279 Special Topics. 1, 2, 3 sem hours
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 sem hours
A panoramic view of the peoples of Spain, their cultures, environment, and way of life. In Spanish.

Prereq: SPN 202 Intermediate Spanish Conversation and Composition and SPN 222 Intermediate Spanish Reading, or department permission.

SPN 302 The Cultures of Spanish America. 3 sem hours

A panoramic view of the cultures, the peoples, and the environment of Spanish America. In Spanish.

Prereq: SPN 202 Intermediate Spanish Conversation and Composition and SPN 222 Intermediate Spanish Reading, or department permission.

SPN 341 Survey of Spanish Literature. 3 sem hours

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 Intermediate Spanish Reading or department permission.

SPN 342 Survey of Spanish Literature. 3 sem hours

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 Intermediate Spanish Reading or department permission.

SPN 343 Spanish Grammar and Composition. 3 sem hours

A systematic review of Spanish grammar and practice in composition. Frequent written assignments.

Prereq: SPN 202 Intermediate Spanish Conversation and Composition and SPN 222 Intermediate Spanish Reading, or department permission.

SPN 344 Spanish Conversation and Composition. 3 sem hours

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 Intermediate Spanish Conversation and Composition and SPN 222 Intermediate Spanish Reading, or department permission.

SPN 351 Survey of Spanish American Literature. 3 sem hours

This course deals with the major writers of Spanish America from the colonial period through modernism. In Spanish.

Prereq: SPN 222 Intermediate Spanish Reading or department permission.

SPN 352 Survey of Spanish American Literature. 3 sem hours

This course deals with the major writers of Spanish America from postmodernism to the present. In Spanish.

Prereq: SPN 222 Intermediate Spanish Reading or department permission.

SPN 361 Spanish for International Trade. 3 sem hours

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 Spanish Grammar and Composition or department permission.

SPN 377, 378, 379 Special Topics. 1, 2, 3 sem hours

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 sem hour

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 sem hours

A review of selected points of Spanish grammar and extensive practice in writing Spanish.

Prereq: SPN 343 Spanish Grammar and Composition and SPN 344 Spanish Conversation and Composition, or department permission.

SPN 444 Advanced Spanish Conversation and Composition. 3 sem hours

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 Spanish Grammar and Composition and SPN 344 Spanish Conversation and Composition, or department permission.

SPN 445 Spanish-American Prose. 3 sem hours

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 Survey of Spanish American Literature or department permission.

SPN 446, 447 Business Spanish. 3 sem hours 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 Spanish for International Trade or department permission.

SPN 448 Modern Drama. 3 sem hours

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 Survey of Spanish Literature or department permission.

SPN 449 Romanticism. 3 sem hours

A study of the major works of Hispanic Romanticism. In Spanish.

Prereq: SPN 342 Survey of Spanish Literature or department permission.

SPN 451, 452, 453 Readings in Spanish. 1, 2, 3 sem hours

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 sem hours

A survey of the literary movement known as "modernismo" in the literature of Spanish America. In Spanish.

Prereq: SPN 352 Survey of Spanish American Literature or department permission.

SPN 455 The Generation of 1898. 3 sem hours

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 Survey of Spanish Literature or department permission.

SPN 456 Scientific and Technical Spanish I. 3 sem hours

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 Spanish Grammar and Composition or department permission.

SPN 457 Scientific and Technical Spanish II. 3 sem hours

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 Scientific and Technical Spanish I or department permission.

SPN 463 Don Quixote. 3 sem hours

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 Survey of Spanish Literature or department permission.

SPN 464 Drama of the Golden Age. 3 sem hours

The drama of the 16th and 17th centuries. Works of the major authors will be read and discussed. In Spanish.

Prereq: SPN 341 Survey of Spanish Literature or department permission.

SPN 465 Modern Novel. 3 sem hours

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 Survey of Spanish Literature or department permission.

SPN 466 Spanish for International Affairs. 3 sem hours

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 Spanish Grammar and Composition, SPN 344 Spanish Conversation and Composition, SPN 301 Cultures of Spain, SPN 302 Cultures of Spanish America, or department permission.

SPN 471 Culture and Literature of the Hispanic Groups in the U.S. 3 sem hours

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 sem hours

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 U.S. 3 sem hours

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 sem hours

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 sem hours

An intensive summer course offered in Mexico. Instruction in 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 sem hours

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 sem hours

A study of contemporary life of the principal Latino groups in the United States. Since their language and literature reflects 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 sem hours

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 sem hours

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, 487 Cooperative Education in Foreign Languages. 3 sem hours each

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 alternated with full-time attendance at the University. Credit/no credit. *Prereq: For FLA 387, junior standing; admission to the program by application only. For FLA 487, FLA 387; admission to the program by application only.*

FLA 388 Internship. 1 sem hour

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 sem hours

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 343 French Composition; SPN 343 Spanish Grammar and Composition; GER 343 German Composition; or department permission.

FLA 421 History and Theory of Bilingual Education. 3 sem hours

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 sem hours

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 sem hours

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 so-

cialization 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 sem hours
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 488, 489 Internship. 2, 3 sem hours
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 sem hours
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 sem hours
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. 5 sem hours
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 sem hours
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 Beginning Ancient Greek.

LAT 121 Beginning Latin. 5 sem hours
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 sem hours
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 Beginning Latin.

COURSES IN ENGLISH FOR FOREIGN STUDENTS

ESL 118 Beginning ESL Laboratory. 1 sem hour
Individual and/or group lab sessions.
Prereq: Department permission or placement.

ESL 210 Intermediate ESL Grammar. 3 sem hours
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 sem hours
Expanding paragraph constructions while developing unity, cohesion, and transition.
Prereq: Department permission or placement.

ESL 214 Intermediate ESL Reading. 3 sem hours
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 sem hours
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 sem hours
Individual and/or group lab sessions.
Prereq: Department permission or placement.

ESL 310 Advanced ESL Grammar. 3 sem hours
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 Intermediate ESL Grammar, department permission, or placement.

ESL 312 Advanced ESL Writing. 3 sem hours
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 Intermediate ESL Writing, department permission, or placement.

ESL 314 Advanced ESL Reading. 3 sem hours
Practice in comprehending and analyzing unsimplified texts of greater length and linguistic complexity in a variety of fields.
Prereq: ESL 214 Intermediate ESL Reading, department permission, or placement.

ESL 316 Advanced ESL Speaking and Listening. 3 sem hours
Continued development of conversational, speaking, and listening skills. Production and comprehension of short discourses on personal and non-personal topics.
Prereq: ESL 216 Intermediate ESL Speaking and Listening, department permission, or placement.

ESL 318 Advanced ESL Laboratory. 1 sem hour
Individual and/or group lab sessions.
Prereq: Department permission or placement.

ESL 412 Academic ESL Writing. 3 sem hours
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., a course in written composition, of the basic studies requirements.
Prereq: ESL 312 Advanced ESL Writing, department permission, or placement.

ESL 414 Academic ESL Reading. 3 sem hours
Reading in specialized fields at professional levels. Practice in outlining, summarizing, and synthesizing ideas from different sources.
Prereq: ESL 314 Advanced ESL Reading, department permission, or placement.

ESL 416 Academic ESL Speaking and Listening. 3 sem hours
Strategies for and practice in comprehending lectures, taking notes, and effectively participating in informal and formal classroom speaking activities.
Prereq: ESL 316 Advanced ESL Speaking and Listening, department permission, or placement.

ESL 420 Review of English as a Second Language. 3 sem hours
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 sem hours
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 Advanced English as a Second Language, Grammar, Writing, Reading, Speaking, and Listening, or department permission.

ESL 477, 478, 479 Special Topics. 1, 2, 3 sem hours
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 sem hours
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 36.*

CLA 106 Rome and America. 6 sem hours
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 36.*

CLA 179 Special Topics in Humanities. 3 sem hours
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 36.*

CLA 181 The Legacy of Greece. 3 sem hours
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 36.*

CLA 301 Mythology. 3 sem hours
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 sem hours
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 sem hours
The basic principles of linguistic structure as they apply to the Western European languages taught in the department.

LNG 425 Second Language Acquisition. 3 sem hours
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 Introduction to Language.

TESOL COURSES

TSL 410 TESOL Methods. 3 sem hours
 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 sem hours
 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 TESOL Methods or concurrent enrollment, or department permission.

GEOGRAPHY AND GEOLOGY

Elwood J.C. Kureth
 Department Head
 203 Strong Hall
 487-0218

Professors: Eugene Jaworski, Elwood J.C. Kureth, 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: Danita S. Brandt, Gabriel Cherem, Theodore Ligibel

Assistant Professors: Allen Cichanski, Michael Kasenow, Norman Tyler

Cooperative programs with other departments have resulted from the diversified courses developed by the Department of Geography and Geology. It participates in the majors and minors in area studies administered by the Department of History and Philosophy and has developed an urban and regional planning concentration in conjunction with the public administration program of the Department of Political Science.

The department offers field camp experiences, including an annual camp in Colorado, to meet the geology major requirements. It has a computer lab in Strong Hall.

Degrees:

Bachelor of Science and Bachelor of Arts

Programs of Study

Majors:

Earth science
 Geography
 Geology
 Land use planning
 Travel and tourism

Minors:

Cartography and remote sensing
 Coastal environments
 Earth science
 Geography
 Geology
 Land use planning
 Historic preservation

Advising assignments are made by the department head.

Advising coordinators:

Coastal environments: C. Nicholas Raphael
 Earth science: Michael Kasenow, Horace MacMahan, Carl Ojala
 Geography: James R. McDonald
 Geology: Allen Cichanski
 Historic preservation: Marshall McLennan
 Land use planning: Robert Ward
 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 are described in the Graduate Catalog.

MAJOR IN EARTH SCIENCE

	Sem hours
Academic major in earth science	30
1. Required courses	25-27
GES 108 Earth Science	4
GES 200 The Oceans	3
GES 309 Plate Tectonics	3
GES 324 Weather	3
GLG 161 Historical Geology	4
GLG 228 Mineralogy or	
GLG 229 Rocks of Michigan	2-3
GLG 325 Geomorphology or	
GLG 331 Paleontology	3-4
2. Restricted electives	3-5
Choose three to five credits from the following:	
GES 114 National Parks and Monuments,	
GES 208 Natural Environmental Hazards,	
GES 227 Topographic Maps, GES 250	
Introduction to Coastal Processes, GES	
327 Soil Science, GES 424 Climatology	
GLG 370 Glacial Geology	
AST 204 Astronomical Investigation	

MAJOR IN GEOGRAPHY

	Sem hours
Academic major in geography	30-32
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	
Cartography, GES 303 Field Geography, GES	
305 Aerial Photograph Interpretation, GES	
470 Quantitative Methods in Geography and	
Geology	2-3
<i>Physical courses</i>	2-3
Choose one course from the following:	
GES 200 The Oceans, GES 324 Weather, GLG	
325 Geomorphology, 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 Geography, GEO 360 Cultural	
Geography, GEO 361 Geography of	
Population, GEO 431 Historical	
Geography of the U.S., GEO 438	
Industrial Location and Development	
<i>Regional courses</i>	3
Choose one course from the following:	

GEO 314 Geography of the U.S.S.R., GEO 318 Geography of Asia, GEO 319 Geography of Europe, GEO 320 Geography of the U.S. and Canada, GEO 321 Geography of Latin America, GEO 322 Geography of Africa, GEO 323 Geography of Australia and Pacific Islands, GEO 328 Geography of Canada

2. Restricted electives

2-3
Choose elective credits in consultation with advising coordinator (Students on the later elementary curriculum who elect this major should choose at least five semester hours from the following:

GEO 313 Geography of Michigan, GEO 314 Geography of the U.S.S.R., 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)

MAJOR IN GEOLOGY

Geology majors who intend to enter the geological profession or enroll in graduate school also should take general chemistry and mathematics through calculus.

	Sem hours
Academic 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.	

MAJOR IN LAND USE PLANNING

This interdisciplinary major emphasizes current land use problems including the deterioration of urban cores, lack of coordination 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 development 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 stud-

ies requirements include BIO 105 Biology and the Human Species, MTH 105 College Algebra, SOC 105 Introductory Sociology, GES 108 Earth Science, ECO 201 and 202 Principles of Economics I and II, PLS 202 State and Local Government, and ENG 225 Intermediate English Composition.

	Sem hours
Academic major in land use planning	36
1. Required courses	16
GES 108 Earth Science	4
GES 215 Land Use Planning	3
GES 495 Environmental Assessment and Planning	3
RES 210 Real Estate Principles and Practices ...	3
GEO 423 Principles of City and Regional Planning	3
2. Techniques courses	9
Choose three courses from the following:	
GEO 300 Location and Site Analysis, GES 303 Field Geography, GES 305 Aerial Photograph Interpretation, GES 401 Cartography;	
Choose one course from: GES 475 Computer Mapping, CSC 137 Introduction to FORTRAN Programming, ORI 215 End-User Computing, IT 231 Industrial Computer Graphics; or one of these applied statistics courses: ECO 310 Economic Statistics, ORI 265 Basic Statistics I, GES 470 Quantitative Methods in Geography and Geology	
3. Restricted electives	11
Choose 11 credits from the following in consultation with the advising coordinator:	
GES 208 Natural Environmental Hazards, GES 327 Soil Science, GEO 332 Urban Geography, GEO 344 Recreation Geography, GEO 361 Geography of Population, GEO 438 Industrial Location and Development, GEO 441 Transportation Geography and Planning, GLG 448 Hydrogeology, GHP 335 Historic Preservation	
ACC 246 Accounting for Public Administrators	
BIO 207 Elements of Ecology, BIO 410 Limnology, BIO 420 General Ecology	
CHM 415 Environmental Chemistry	
ECO 332 Urban Economics, ECO 350 Government Finance, ECO 455 Cost-Benefit Analysis	
HST 362 United States Urban History	
IT 400 Site Planning and Development	
ORI 367 Computer Augmented Statistics	
PLS 270 Public Administration	
PLS 330 Urban Politics	
SOC 306 The Urban Community	

MAJOR IN TRAVEL AND TOURISM

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 credit hours (21 each) required 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. The travel and tourism curriculum totals 75-76 credit hours of course work.

	Sem hours
Academic 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 U.S. and Canada	3
GEO 441 Transportation Geography	3
GEO 445 Cultural Tourism Resources	3
ACC 240 Principles of Accounting	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, ANT 234 Peoples and Cultures of Latin America or 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 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
Environment, 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

CTC 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:

CTC 224 Public Speaking, CTC 227 Interpersonal
Communication, CTR 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/HST 316 History and Geography of
Modern Europe or GEO/HST 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 DEPARTMENT
OF GEOGRAPHY AND GEOLOGY**

CARTOGRAPHY AND REMOTE SENSING

Cartography or map-making begins with early maps,
which were attempts to depict graphically the earth and
objects thereon in order to visualize them better. In the
modern world, the map performs a number of significant
functions, among which are its use as a necessary tool in
understanding spatial phenomena, an efficient device for
storage of information, and a fundamental research tool
permitting an understanding of distributions and relation-
ships not otherwise known or imperfectly understood.

The goal of the minor is to provide a track for
undergraduates that leads directly to entry level positions
as cartographers and remote sensors. An objective of the
minor is to provide balanced training between traditional
cartographic work and machine processed maps. Empha-
sis 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

Academic 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 Science; GES 488, 489,
490 Internship

MTH 105 College Algebra, MTH 107 Plane
Trigonometry

FA 165 Graphic Design

IDT 121 Graphic Communication

IT 206 Surveying, IT 231 Industrial Computer
Graphics, IT 400 Site Planning and
Development

ORI 215 Computers in Business or CSC 137

Introduction to FORTRAN Programming,
ORI 417 Development of Management
Information Systems

GEOGRAPHY

Sem hours

Academic 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 coordinator. (Students on the later
elementary curriculum who elect this minor
should choose at least five semester hours
from the following: GEO 313 Geography of
Michigan, GEO 314 Geography of the
U.S.S.R., 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 328
Geography of Canada)

GEOLOGY

	Sem hours
Academic 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 coordinator.	

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
*HST 123 The United States to 1877	3
*HST 124 The United States, 1877 to the Present	3
FA 429 History of American Architecture	3
*American history majors will substitute electives for HST 123, HST 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	
GES 215 Land Use Planning, GES 401 Cartography, GEO 235 Economic Geography, GEO 300 Location and Site Analysis, GEO 313 Geography of Michigan, GEO 344 Recreation Geography, GEO 345 Geography of Resorts, GEO 360 Cultural Geography, GEO 423 Principles of City and Regional Planning	
IDE 350 History of Interiors: Ancient-1800, IDE 351 History of Interiors Lab: Ancient-1800	
HST 305 Indians of the United States, HST 313 Michigan History, HST 362 United States Urban History	
IE 105 History of Industrial Technology	
IT 201 Construction Technology, IT 228 Construction Drawing, IT 400 Site Planning and Development	
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.)	

LAND USE PLANNING

	Sem hours
Minor in land use planning	24
1. Required courses	6
GES 215 Land Use Planning	3
GES 495 Environmental Assessment and Planning	3
2. Techniques courses	6
Choose two courses from the following:	
GEO 300 Location and Site Analysis, GES 303 Field Geography, GES 305 Aerial Photograph Interpretation, GES 401 Cartography	
3. Restricted electives	12
Choose four courses from the following in consultation with the advising coordinator:	
GES 208 Natural Environmental Hazards, GES 327 Soil Science, GHP 335 Historic Preservation, GEO 344 Recreation Geography, GEO 361 Geography of Population, GEO 438 Industrial Location and Development	
BIO 224 Principles of Conservation	
ECO 332 Urban Economics, ECO 338 Land Economics, ECO 455 Cost-Benefit Analysis	
IT 400 Site Planning and Development	
PLS 330 Urban Politics	
RES 210 Real Estate Principles and Practices	
SOC 306 The Urban Community	

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 Shorelands Management Analysis	3
2. Restricted electives	6
Choose six credits from the following:	
GES 208 Natural Environmental Hazards, GES 215 Land Use Planning, GES 305 Aerial Photograph Interpretation, GLG 325 Geomorphology, 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 sem hours
 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 sem hours
 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 man on the ecology of these areas resulting from population pressures of camping, trail use, fire, tourist services, and recreational facilities; N.P.S. conservation policies that govern preservation of our heritage. Illustrated lectures and demonstrations.

GES 200 The Oceans. 3 sem hours
 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 Earth Science or GLG 160 Physical Geology or GES 202 Science for Elementary Teachers or department permission.

GES 202 Science for Elementary Teachers. 3 sem hours
 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 Earth Science. Lecture: two hours per week. Laboratory: one two-hour period per week.

GES 208 Natural Environmental Hazards. 3 sem hours
 Analysis of devastating earthquakes, volcanic eruptions, floods, violent storms, freezes, and other earth science catastrophes, emphasizing their causes and human adjustments to these events.

GES 215 Land Use Planning. 3 sem hours
 An analysis of planning concepts and techniques to include population forecasts, use standards, and comprehensive planning. Emphasis on developing zoning ordinances, reviewing site plans and grant applications, and preparing general development plans. Enabling legislation and regional planning discussed. Not open to freshmen.

GES 227 Topographic Maps. 2 sem hours
 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 Earth Science.

GES 250 Introduction to Coastal Processes. 3 sem hours
 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 Earth Science or BIO 105 Biology and the Human Species or department permission.

GES 277, 278, 279 Special Topics in Earth Science. 1, 2, 3 sem hours
 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 sem hours
 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 sem hours
 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 Earth Science and algebra/trigonometry, or department permission.

GES 309 Plate Tectonics. 3 sem hours
 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 Earth Science or GLG 160 Physical Geology or GES 202 Science for Elementary Teachers or department permission.

GES 324 Weather. 3 sem hours
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 Earth Science or department permission.

GES 325 Severe and Unusual Weather. 3 sem hours
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 Weather.

GES 327 Soil Science. 3 sem hours
The mineralogical, physical, chemical, and engineering properties of soils as related to soil formation, ground-water movement, soil erosion, plant-soil relationships, and land development capability. Field trips and exercises required. Fall semester only.

Prereq: GES 108 Earth Science or GLG 160 Physical Geology or department permission.

GES 347 Teaching Earth Science and Physical Geography. 3 sem hours

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 Earth Science or equivalent and junior standing or department permission.

GES 350 Biogeography. 3 sem hours
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 Earth Science or BIO 224 Principles of Conservation; GES 250 Introduction to Coastal Processes recommended.

GES 378 Special Topics in Earth Science. 2 sem hours

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, Land Use Analysis. 3 sem hours

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 land use planning major. Admittance by applications only.

GES 401 Cartography. 3 sem hours
A lecture-laboratory course in the techniques of map making and visual representation of geographic materials. 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 sem hours
A continuation of GES 401 Cartography. Emphasizes the student's production of thematic maps; the use of press-on materials, tapes and acetate overlays; scribing, computer mapping; reproduction techniques. One hour lecture, four hours laboratory per week.

Prereq: GES 401 Cartography or department permission.

GES 424 Climatology. 3 sem hours
An analysis of the world's climate types, including characteristics, classification, controls, and their effects on world soils and natural vegetation.

Prereq: GES 324 Weather.

GES 450 Lake and Coastal Management 3 sem hours

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 Introduction to Coastal Processes or GES 350 Biogeography or department permission.

GES 470 Quantitative Methods in Geography and Geology. 3 sem hours

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 sem hours
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 477, 478 479 Special Topics in Earth Science. 1, 2, 3 sem hours

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 sem hours

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 Aerial Photograph Interpretation or department permission.

GES 487 Cooperative Education in Earth Science or Land Use Analysis.

3 sem hours

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 land use planning major. Admittance by applications only.

GES 488, 489, 490 Internship in Earth Science or Land Use Planning.

4, 5, 6 sem hours

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 sem hours

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: GES 215 Land Use Planning or BIO 224 Principles of Conservation.

GES 497, 498, 499 Individual Problems.

1, 2, 3 sem hours

Advanced study on individual basis in which the department does not offer a formal course. Normally such works is 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 sem hours

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 sem hours

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 sem hours

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 Physical Geology or department permission.

GLG 200 Introduction to Hydrology.

3 sem hours

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 Earth Science or GLG 160 Physical Geology or GES 202 Science for Elementary Teachers or department permission.

GLG 228 Mineralogy.

3 sem hours

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 General Chemistry I.

GLG 229 Rocks of Michigan.

2 sem hours

The identification and classification of rocks with special emphasis on characteristics used in the field.

Prereq: GES 108 Earth Science or GLG 160 Physical Geology.

GLG 255 Field Geology I.

2 sem hours

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 Earth Science or GLG 160 Physical Geology or department permission.

GLG 278 Special Topics in Geology.

1 sem hour

Treats subjects not provided for in the regular department offerings.

Prereq: Department permission.

GLG 325 Geomorphology.

3 sem hours

A detailed study of surface features and the degradational, aggradational, and structural process by which they are formed. World-wide examples are used extensively.

Prereq: GES 108 Earth Science or GLG 160 Physical Geology and GLG 161 Historical Geology or department permission.

GLG 326 Structural Geology.

3 sem hours

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 Earth Science or GLG 160 Physical Geology.

GLG 329 Petrology. 3 sem hours

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 Rocks of Michigan. Winter term only.

Prereq: GLG 228 Mineralogy.

GLG 330 Sedimentation and Stratigraphy. 4 sem hours

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 Earth Science or GLG 160 Physical Geology, GLG 228 Mineralogy; competency in trigonometry or instructor permission.

GLG 331 Paleontology. 4 sem hours

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. Winter semester only. Lecture: three hours per week; laboratory: one two-hour period per week.

Prereq: GLG 161 Historical Geology or BIO 105 Biology and the Human Species or department permission.

GLG 334 Geology of Construction. 3 sem hours

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 Earth Science or GLG 160 Physical Geology or department permission.

GLG 355 Geologic Field Methods. 1 sem hour

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 Field Geology II.

Prereq: GLG 228 Mineralogy, GLG 326 Structural Geology, GLG 329 Petrology prerequisite or corequisite, or department permission.

GLG 356 Field Geology II. 3 sem hours

Instruction and practice in pace-traverse mapping, measurement of stratigraphic sections, and a mapping of areal geology and geologic structure in Rocky Mountain

west. With GLG 255 Field Geology I, satisfies field requirement for geology major.

Prereq: GLG 255 Field Geology I, GLG 326 Structural Geology, GLG 329 Petrology, and GLG 330 Sedimentation and Stratigraphy or department permission.

GLG 370 Glacial Geology. 3 sem hours

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 Earth Science or GLG 160 Physical Geology, GLG 161 Historical Geology, GLG 330 Sedimentation and Stratigraphy or department permission.

GLG 378 Special Topics in Geology. 2 sem hours

Treats subjects not provided for in the regular department offerings.

Prereq: Department permission.

GLG 387 Cooperative Education in Geology. 3 sem hours

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 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 sem hours

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 Mineralogy and PHY 224 Electricity and Light.

GLG 430 Petroleum Geology. 3 sem hours

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 coreing 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. Fall semester only.

Prereq: GLG 161 Historical Geology, GLG 326 Structural Geology, GLG 330 Sedimentation and Stratigraphy or department permission.

GLG 439 Economic Geology. 3 sem hours

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 nonmetallic deposits.

Prereq: GLG 228 Mineralogy.

GLG 448 Hydrogeology. 3 sem hours
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. Fall semester only.

Prereq: GES 108 Earth Science or GLG 160 Physical Geology, algebraic ability, and junior standing.

GLG 459 Groundwater Modeling. 3 sem hours
Study of groundwater flow and contaminant transport rates using analytical, numerical, and statistical models.

Prereq: GES 475 Computer Mapping and GLG 448 Hydrogeology.

GLG 460 Contaminant Hydrology. 3 sem hours
Study of hydrochemistry, pollution pathways, and transport of contaminants.

Prereq: BOT 221 General Botany, CHM 121/122 General Chemistry I, and GLG 448 Hydrogeology.

GLG 470 Quantitative Methods in Geography and Geology. 3 sem hours

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 sem hours

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 sem hours

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 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 488, 489, 490 Internship in Geology. 4, 5, 6 sem hours

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 sem hours

Advanced study on individual basis in which the department does not offer a formal course. Normally such work

is 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 sem hours
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 sem hours
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 sem hours
Geographic evaluation of man's 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 sem hours
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 World Regions.

GEO 112 Introduction to Travel and Tourism. 3 sem hours

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 sem hours
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 Introduction to Travel and Tourism or department permission.

GEO 115 Observing the Human Landscape. 2 sem hours

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 sem hours

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 World Regions or GEO 112 Introduction to Travel and Tourism or department permission. (May be taken concurrently.)

GEO 235 Economic Geography. 3 sem hours
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 sem hours
A course designed to help internationalize the curriculum and to involve students of any program in the study of the geographic nature of critical development issues. This course explores world interdependence and the creation of a global economy. Students will assess both positive and negative consequences.
Prereq: GEO 110 World Regions or department permission.

GEO 277, 278, 279 Special Topics in Geography. 1, 2, 3 sem hours
Treats subjects not provided for in the regular department offerings.
Prereq: Department permission.

GEO 300 Location and Site Analysis. 3 sem hours
Practical and theoretical application of models that explain the location of man's activities on earth.
Prereq: GEO 235 Economic Geography recommended.

GEO 310 Energy Awareness. 3 sem hours
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 World Regions or GES 108 Earth Science recommended.

GEO 312 Travel Business Applications. 3 sem hours
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 World Regions and GEO 112 Introduction to Travel and Tourism.

GEO 313 Geography of Michigan. 2 sem hours
Detailed analysis of the natural setting, population and settlement characteristics, industry, recreation, and agriculture in the state.
Prereq: GEO 110 World Regions or GES 108 Earth Science.

GEO 314 Geography of the U.S.S.R. 3 sem hours
A systematic and regional study of physical, cultural, and economic factors in the Soviet Union; environmental resources, economic activities, population, transportation, and communications.
Prereq: GEO 110 World Regions or GES 108 Earth Science.

GEO 315 Travel and Tourism: The European Scene. 3 sem hours
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 Introduction to Travel and Tourism and GEO 212 Geography of Travel and Tourism.

GEO 316 History and Geography of Modern Europe. 6 sem hours
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 stressing major political, social, and cultural developments. Must be taken concurrently with HST 316 History and Geography of Modern Europe.
Prereq: GEO 110 World Regions and one of HST 101, 102 Western Civilization, or HST 103 Twentieth Century Civilization.

GEO 317 History and Geography of Spanish America. 6 sem hours
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 HST 317 History and Geography of Spanish America.
Prereq: GEO 110 World Regions and one of HST 101, 102 Western Civilization, or HST 103 Twentieth Century Civilization.

GEO 318 Geography of Asia. 3 sem hours
Natural setting, culture traits, ecological circumstances, economic systems, population-resource bases, and regional development problems of the major Asian realms.
Prereq: GEO 110 World Regions or GES 108 Earth Science.

GEO 319 Geography of Europe. 3 sem hours
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 World Regions or GES 108 Earth Science.

GEO 320 Geography of the United States and Canada. 3 sem hours
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 World Regions or GES 108 Earth Science.

GEO 321 Geography of Latin America. 3 sem hours
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 World Regions or GES 108 Earth Science.

GEO 322 Geography of Africa. 3 sem hours
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 World Regions or GES 108 Earth Science.

GEO 323 Geography of Australia and Pacific Islands. 3 sem hours
The natural setting, distribution of the people, important occupations, and the problems of future development in each of several regions.
Prereq: GEO 110 World Regions or GES 108 Earth Science.

GEO 326 History and Geography of Modern Asia. 3 sem hours
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 HST 326 History and Geography of Modern Asia.
Prereq: GEO 110 World Regions and either HST 103 Twentieth Century Civilization or HST 106 Asian and African Civilizations.

GEO 328 Geography of Canada. 2 sem hours
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 World Regions or GES 108 Earth Science.

GEO 332 Urban Geography. 3 sem hours
A study of geographic principles related to distribution, function, structure, and regional setting of urban centers.
Prereq: GEO 110 World Regions.

GEO 333 Settlement Geography. 3 sem hours
Cultural, functional, and ecological factors underlying human settlement patterns.
Prereq: GEO 110 World Regions or GES 108 Earth Science or GEO 115 Observing the Human Landscape.

GEO 340 Medical Geography. 3 sem hours
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 World Regions or department permission.

GEO 343 Geography of Sport. 3 sem hours
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 sem hours
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 National Parks and Monuments or GES 215 Land Use Planning or GEO 115 Observing the Human Landscape or GEO 360 Cultural Geography or BIO 224 Principles of Conservation.

GEO 345 Geography of Resorts. 2 sem hours
Historical and systematic study of resorting and the resort as a functionally specialized settlement type; major resort areas of the world.
Prereq: GEO 110 World Regions and GEO 212 Geography of Travel and Tourism or department permission.

GEO 348 Teaching Social Studies in Elementary Schools. 3 sem hours
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 sem hours
Human landscape patterns; emphasis upon the processes concerned with their origins, locations, and persistence.
Prereq: GEO 110 World Regions or department permission.

GEO 361 Geography of Population. 3 sem hours
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 World Regions or department permission.

GEO 378 Special Topics in Geography. 2 sem hours
Treats subjects not provided for in the regular department offerings.
Prereq: Department permission.

GEO 387 Cooperative Education in Geography. 3 sem hours
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 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. Admittance by application only.

GEO 423 Principles of City and Regional Planning. 3 sem hours
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 Urban Geography or department permission.

GEO 431 Historical Geography of the United States. 3 sem hours

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 Geography of the United States and Canada or department permission.

GEO 432 Political Geography. 3 sem hours

A study of the theory and concepts of political geography, using contemporary examples. Size, location, resources, boundaries, population, and level of technology within and without the political framework.

Prereq: GEO 110 World Regions or department permission.

GEO 433 Political Geography of the United States. 3 sem hours

A study of the variety and diversity of geographic forms of political behavior, organization, and structure in the United States.

Prereq: GEO 110 World Regions or department permission.

GEO 434 The Geopolitical World. 3 sem hours

Views of political space by world and regional states; strategies and capabilities for employing national power to carry out geopolitical goals.

Prereq: GEO 110 World Regions or department permission.

GEO 435 Urban Form and Function. 3 sem hours

Analysis of urban cultural tradition. Evolving forms and functions of the Western city and principles of townscape analysis as applied to European and North American cities.

Prereq: GEO 115 Observing the Human Landscape or GEO 332 Urban Geography or HST 101 or 102 Western Civilization; or senior standing.

GEO 436 Tourism and Socio-Economic Development. 3 sem hours

For students majoring in travel and tourism. Socio-economic impacts of tourism, national, and international development strategies.

Prereq: GEO 110 World Regions and GEO 112 Introduction to Travel and Tourism.

GEO 438 Industrial Location and Development. 3 sem hours

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 Location and Site Analysis or department permission.

GEO 440 World Food Systems. 3 sem hours

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 Economic Geography or department permission.

GEO 441 Transportation Geography and Planning. 3 sem hours

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 Economic Geography or department permission.

GEO 444 Census Applications to Spatial Analysis. 3 sem hours

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 sem hours

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 Observing the Human Landscape or 212 Geography of Travel and Tourism or GEO 360 Cultural Geography or GHP 335 Historic Preservation.

GEO 446 Heritage Interpretation and Tourism. 3 sem hours

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 Cultural Tourism Resources or department permission.

GEO 478, 479 Special Topics in Geography. 2, 3 sem hours

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 sem hours

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 alternated with full-time attendance at the University. A written report is required at the end of each employment period. Use on geography major subject to department approval. Graded on a credit/no credit basis.

Prereq: GEO 387 Cooperative Education in Geography. Admittance by application only.

GEO 488, 489, 490 Internship in Geography. 4, 5, 6 sem hours
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 sem hours
Advanced study on individual basis in which the department does not offer a formal course. Normally such work is 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 sem hours
Treats subjects not provided for in the regular program offerings.
Prereq: Department permission.

GHP 335 Historic Preservation. 3 sem hours
Introduction of the 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 Observing the Human Landscape recommended.

GHP 377, 378 Special Topics in Historic Preservation. 1, 2 sem hours
Treats subjects not provided for in the regular department offerings.
Prereq: Department permission.

GHP 387 Cooperative Education in Cultural Resource Management. 3 sem hours
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 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 sem hours
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 sem hours
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 sem hours
Treats subjects not provided for in the regular program offerings.
Prereq: Department permission.

GHP 487 Cooperative Education in Historic Preservation. 3 sem hours
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 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 sem hours
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 sem hours
Advanced study on individual basis in area in which the department does not offer a formal course. Normally such work is restricted to proficient students in the senior year under the general conditions prescribed for honors courses.
Prereq: Department permission.

HISTORY AND PHILOSOPHY

Ira M. Wheatley
 Department Head
 701 Pray-Harrold
 487-1018

Professors: Richard H. Abbott, Lee R. Boyer, W. Donald Briggs, Michael T. Carlsen-Jones, George H. Cassar, Della M. Flusche, Thomas H. Franks, Sidney Gendin, Louis B. Gimelli, Richard D. Goff, Daryl M. Haft, 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, Ira M. Wheatley

Associate Professors: Robert M. Citino, Margaret Crouch

Assistant Professors: Roger D. Long, Kate Mehuron, Michael Reed, Francille Wilson

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
 Philosophy
 Social science

Minors:

Area studies (Africa, Asia-Far East, Latin America, Middle East and North Africa, Soviet Union)

History
 Philosophy
 Religious studies

Graduate programs under the auspices of the department are the Master of Arts in history, the M.A. program in social science and the M.A. program in

liberal studies with a concentration in social science and American culture. See the Graduate Catalog for program descriptions.

MAJORS IN AREA STUDIES

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	30-32
1. Required basic courses	9
ECO 201, 202 Principles of Economics	
I and 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
HST 347 Sub-Saharan Africa to 1885	3
PLS 372 Government and Politics of	
Sub-Saharan Africa	3
3. Area electives	7-9
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	
HST 342 North Africa, 1798 to Present, HST 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 and II	6
GEO 110 World Regions	3
2. Required area courses	14
ECO 385 Economic Development	3
GEO 318 Geography of Asia	3
*HST 441 The Far East to 1800 or	
*HST 442 Modern China	3
HST 555 Studies in Far Eastern History	2
PLS 374 Asian Political Systems	3
3. Area electives	6
Choose six 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/HST 326 History and Geography of Modern	
Asia	
HST 301 The Religions of South and East Asia,	
*HST 441 The Far East to 1800, or *HST 442	
Modern China	
*One of these courses must be taken to fulfill area	
requirements. The other may be taken as an	
area elective.	

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 and II	6
GEO 110 World Regions	3
2. Required area courses	15
*ANT 233 Peoples and Cultures of Mexico,	
*ANT 234 Peoples and Cultures of	
Latin America	3
ECO 385 Economic Development	3
GEO 321 Geography of Latin America	3
*HST 355 Latin America: Colonial Period,	
*HST 356 Latin America: National	
Period, or *HST 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 234 Peoples and Cultures of Latin	
America, 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/HST 317 History	
and Geography of Spanish America, GEO	
512 Middle America and the Caribbean	
World, GEO 513 South American Lands	
*HST 355 Latin America: Colonial Period, *HST	
356 Latin America: National Period, *HST	
457 History of Mexico, HST 560 Studies in	
Latin American History	
SPN 302 The Cultures of Spanish America, SPN	
351 or SPN 352 Survey of Latin 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 and II	6
GEO 110 World Regions	3
2. Required area courses	9
ECO 385 Economic Development	3
*HST 341 Middle Eastern History 1798	
to Present or	
*HST 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	
HST 302 Near Eastern and Western Religions,	
*HST 341 Middle Eastern History, 1798 to	
Present, *HST 342 North Africa, 1798 to	
Present, HST 543 Nationalism and Modern-	
ization in the Middle East and North Africa	
LIT 351 World Mythology	
MUS 536 World Music I	
*One of these courses must be taken to fulfill area	
requirements. The other may be taken as an	
area elective.	

SOVIET UNION

	Sem hours
Area studies major: Soviet Union	30
1. Required basic courses	9
ECO 201, 202 Principles of Economics I and II	6
GEO 110 World Regions	3
2. Required area courses	15
ECO 472 The Soviet Economy	3

GEO 314 Geography of the U.S.S.R.	3
HST 344 Russia Since 1855	3
HST 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 six credits from the following:	
ECO 370 Comparative Economic Systems	
GEO/HST 316 History and Geography of Modern Europe	
GEO 516 Problems in Soviet Geography	
HST 332 Modern Europe 1815-1919, HST 333 Europe Since 1919, HST 343 Russia to 1855, HST 550 Twentieth Century Russia	
PLS 462 Foreign Relations of the Soviet Union	

MAJOR IN HISTORY

	Sem hours
History major	30
1. Required courses	9
HST 101 Western Civilization to 1648, or HST 102 Western Civilization, 1648 to World War I, or HST 103 Twentieth Century Civilization	3
HST 123 The United States to 1877, or HST 124 The United States, 1877 to the Present	3
HST 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.

Students pursuing certification in secondary education should include at least eight hours of United States history in the major.

HST 100 Comparative Study of Religions and HST 481 Teaching of Social Studies may not be counted towards the major.

MAJOR IN PHILOSOPHY

This 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. It is a non-teaching major.

	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	

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 Introduction to Critical Reasoning

MAJOR IN SOCIAL SCIENCE

(FOR SECONDARY EDUCATION OR NON-TEACHING CURRICULUM)

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
HST 101 Western Civilization to 1648	3
HST 102 Western Civilization, 1648 to World War I	3
HST 103 Twentieth Century Civilization	3
HST 106 Asian and African Civilizations	3
c. One world history course at the 300-level or above	2-3
2. United States history	8-9
a. HST 123 The United States to 1877	3
b. HST 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 course2-3
- 5. Economics 8-9
 - a. ECO 201 Principles of Economics I3
 - b. ECO 202 Principles of Economics II 3
 - c. An economics course at the 300-level or above2-3
- 6. Geography 8-9
 - a. GEO 110 World Regions3
 - b. An Area III geography course at the 300-level or above3
 - c. Any other area III geography course2-3
- 7. Political science 8-9
 - a. Choose one of the following:3
 - PLS 112 American Government3
 - PLS 113 American Government Honors3
 - b. A political science course at the 300-level or above3
 - c. Any other political science course2-3

Information for prospective teachers:

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

MINORS OFFERED IN THE DEPARTMENT OF HISTORY AND PHILOSOPHY

MINORS IN 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)	15
2. Area electives (as listed for the major)	5

MINOR IN HISTORY

	Sem hours
Minor in history	20-21
1. Required courses	6
HST 101 Western Civilization to 1648 or HST 102 Western Civilization, 1648 to World War I, or HST 103 Twentieth Century Civilization	3
HST 123 The United States to 1877 or HST 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

Note: No more than three 100-level courses may be counted toward the minor.

HST 100 Comparative Study of Religions and HST 481 Teaching of Social Studies may not be counted toward the minor.

Students pursuing certification in secondary education should include at least eight hours of United States history in the major.

MINOR IN PHILOSOPHY

The philosophy minor is both a teaching and non-teaching program.

	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 count toward the minor:	
A. PHI 100 Introduction to Philosophy of PHI 110 Philosophies of Life	
B. PHI 120 Introduction to Logic or PHI 132 Critical Reasoning	

MINOR IN RELIGIOUS STUDIES

	Sem hours
Minor in religious studies	20-21
1. Required course	3
HST 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	
HST 301 The Religions of South and East Asia,	
HST 302 Near Eastern and Western Reli-	
gions, HST 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	
HST 327 Europe in the Making, HST 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.	

**GROUP MINOR IN SOCIAL SCIENCE
(FOR SECONDARY EDUCATION OR NON-TEACHING CURRICULUM)**

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
HST 101 Western Civilization to 1648	3

HST 102 Western Civilization, 1648 to	
World War I.....	3
HST 103 Twentieth Century Civilization.....	3
HST 106 Asian and African Civilizations	3
c. One world history course at the 300-level	
or above	2-3
2. United States history	8-9
a. HST 123 The United States to 1877	3
b. HST 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 Principles of Economics I	3
b. ECO 202 Principles of Economics II	3
c. 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	3
PLS 113 American Government Honors	3
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.

Information for prospective teachers:

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

Students seeking social studies certification for secondary education are urged to consult a history adviser before pursuing this minor.

**HISTORY COURSES
BASIC COURSES**

HST 100 The Comparative Study of	
Religion.	3 sem hours
An introduction to the systematic study of religious	
experience and expression; organized around represen-	

tative 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.)

HST 101 Western Civilization to 1648. 3 sem hours
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.

HST 102 Western Civilization, 1648 to World War I. 3 sem hours
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.

HST 103 Twentieth Century Civilization. 3 sem hours
An examination of the international developments of the 20th century, with particular emphasis on the interactions between the West and other world cultures.

HST 106 Asian and African Civilizations. 3 sem hours
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.

HST 300 Historical Research and Writing. 3 sem hours
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

HST/LIT 107 Society in Crisis: 1848 and 1968. 6 sem hours
A comparison and contrast of the social crisis 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 36.

HST 123 The United States to 1877. 3 sem hours
A study of United States history through the Reconstruction following the Civil War.

HST 124 The United States, 1877 to the Present. 3 sem hours
A study of United States history from the end of Reconstruction to the present.

HST 152 From the Gay Nineties to the Crash. 3 sem hours
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 36.

HST 303 History of American Religion. 3 sem hours
A survey of religious institutions and ideas in relation to American culture from colonial times to the present. *Prereq: One course in American history.*

HST 305 Indians of the United States. 3 sem hours
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.*

HST 313 Michigan History. 3 sem hours
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.

HST 315 History of Black Americans. 3 sem hours
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.*

HST 325 The Family in History. 3 sem hours
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. May be taken only once for credit.

HST 336 History of Women in the United States and Great Britain, 1800 to the Present. 3 sem hours
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.*

HST 350 History of Canada. 3 sem hours
A survey of the development of Canada from prehistoric times to the present with an emphasis on social and economic topics.

HST 362 United States Urban History. 3 sem hours
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 HST 123 The United States to 1877 or HST 124 The United States, 1877 to the Present.

HST 364 United States Military

History. 3 sem hours

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.

HST 365 The Old South. 3 sem hours

The South from the colonial foundations to the formation of the Confederacy in 1861.

Prereq: HST 123 The United States to 1877 and junior standing.

HST 380 American Colonies to Independence. 3 sem hours

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: HST 123 The United States to 1877 or equivalent.

HST 383 The Age of Jackson. 3 sem hours

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.

HST 385 Civil War and Reconstruction. 3 sem hours

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.

HST 414 The Automobile Industry and Modern America. 3 sem hours

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 19th-century America.

HST 424 The United States from 1917 to 1941. 3 sem hours

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: HST 124 The United States, 1877 to Present.

HST 425 The United States from 1941 to 1963. 3 sem hours

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 post-war social and cultural trends receive special attention.

Prereq: HST 124 The United States, 1877 to Present.

HST 426 The United States from 1963 to the Present. 3 sem hours

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: HST 124 The United States, 1877 to Present.

HST 461 Foreign Relations of the United States. 3 sem hours

A survey of the foreign relations of the United States emphasizing the diplomacy of the period after the Civil War.

HST 463 United States Labor History. 3 sem hours

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.

HST 464 The Old West, 1540-1890. 3 sem hours

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.

HST 465 United States Constitutional History. 3 sem hours

A history of the development of the American Constitution from English and American colonial origins to the present.

Prereq: HST 123 The United States to 1877 or HST 124 The United States, 1877 to the Present or department permission.

HST 468 The American Mind to the Civil War. 3 sem hours
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: HST 123 The United States to 1877 and junior standing.*

HST 469 The American Mind Since the Civil War. 3 sem hours
Ideas and cultures 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.*

HST 482 The Age of Washington and Jefferson. 3 sem hours
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 post-war diplomacy. *Prereq: HST 123 The United States to 1877 or equivalent.*

HST 486 The United States as an Emerging World Power. 3 sem hours
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: HST 123 The United States to 1877 or HST 124 The United States, 1877 to the Present or equivalent.*

EUROPEAN HISTORY

HST 104 Quest for Power: Famous Figures in History. 3 sem hours
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 36.*

HST 127 The Splendid Centuries of Austria. 3 sem hours
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 36.*

HST 128 Russia in the Age of Tolstoy and Dostoevsky. 3 sem hours
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 36.*

HST 151 Reason and Revolution. 3 sem hours
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 36.*

HST 290 Introduction to the History of Technology. 3 sem hours
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.

HST 309 France to 1789. 3 sem hours
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.

HST 310 France Since 1789. 3 sem hours
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.

HST 316 History and Geography of Modern Europe. 3 sem hours
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 history stressing major political, social, and cultural developments. A requirement for majors in language and international trade. Must be taken concurrently with GEO 316 History and Geography of Modern Europe. *Prereq: GEO 110 World Regions and either HST 101 Western Civilization to 1648, HST 102 Western Civilization, 1648 to World War I, or HST 103 Twentieth Century Civilization.*

HST 323 Greek History. 3 sem hours
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.*

HST 324 Roman History. 3 sem hours
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.

HST 327 Europe in the Making, 500-1300. 3 sem hours
Examines the combination of classical, Christian, and barbarian elements to form a dynamic civilization in a previously underdeveloped 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.

HST 330 Europe in the Renaissance and Reformation. 3 sem hours
A survey of the political, cultural, religious, and economic history of Europe from the Italian Renaissance to the Peace of Westphalia.

HST 332 Modern Europe 1815-1919. 3 sem hours
A study of the development and conflicts of the national states of Europe from the Congress of Vienna to the Treaty of Versailles.

HST 333 Europe Since 1919. 3 sem hours
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.

HST 335 History of Women in Europe. 3 sem hours
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.

HST 338 German History Since 1815. 3 sem hours
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.

HST 343 Russia to 1855. 3 sem hours
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.

HST 344 Russia Since 1855. 3 sem hours
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.

HST 411 England to 1689. 3 sem hours
The general history of England to the Revolution of 1688, with emphasis on its cultural and constitutional contributions to the modern world.

HST 412 England 1689 to Present. 3 sem hours
England in the period of imperial expansion, its industrial and social revolutions and its transition into a modern socially-minded nation. A continuation of HST 411 England to 1689.

HST 427 Europe from Absolutism to Revolution, 1648-1815. 3 sem hours
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.

HST 435 Italy Since 1815. 3 sem hours
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.

HST 456 Europe Since 1945. 3 sem hours
Study of the political, economic, social, and diplomatic history of Europe since the end of WWII, 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.

HST 471 Social and Intellectual History of Nineteenth Century Europe. 3 sem hours
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

HST 301 The Religions of South and East Asia. 3 sem hours
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: HST 100 The Comparative Study of Religion or HST 106 Asian and African Civilizations.

HST 302 Near Eastern and Western Religions. 3 sem hours
A survey of the historical evolution of the several religions originating in Western Asia, concentrating espe-

cially on the development and interaction of Judaism, Christianity, and Islam.

Prereq: HST 100 The Comparative Study of Religion or HST 101 Western Civilization to 1648.

HST 317 History and Geography of Spanish America. 3 sem hours

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 History and Geography of Spanish America.

Prereq: GEO 110 World Regions and either HST 101 Western Civilization to 1648, HST 102 Western Civilization, 1648 to World War I, or HST 103 Twentieth Century Civilization.

HST 326 History and Geography of Modern Asia. 3 sem hours

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 History and Geography of Modern Asia.

Prereq: GEO 110 World Regions and either HST 103 Twentieth Century Civilization or HST 106 Asian and African Civilizations.

HST 341 Middle Eastern History, 1798 to Present. 3 sem hours

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.*

HST 342 North Africa, 1798 to Present. 3 sem hours
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.*

HST 347 Sub-Saharan Africa to 1885. 3 sem hours
The historical evolution of sub-Saharan African civilizations including their origins, interrelations, and responses to European colonialism. *Prereq: Junior standing or department permission.*

HST 348 Twentieth Century Africa. 3 sem hours
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.

HST 355 Latin America: Colonial Period. 3 sem hours

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.*

HST 356 Latin America: National Period. 3 sem hours

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.*

HST 375 Modern India. 3 sem hours

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.

HST 441 The Far East to 1800. 3 sem hours

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: Junior standing or department permission.

HST 442 Modern China. 3 sem hours

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: Junior standing or department permission.

HST 443 Modern Japan. 3 sem hours

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, post-war changes. Political, economic and cultural developments are considered.

Prereq: Junior standing or department permission.

HST 457 History of Mexico. 3 sem hours

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

HST 387, 487 Cooperative Education in History. 3 sem hours 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.

INDEPENDENT STUDY

HST 497, 498, 499 Independent Study in History. 1, 2, 3 sem hours
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

HST 179 Special Topics in Humanities. 3 sem hours
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 36.*

HST 277, 278, 279 Special Topics in History. 1, 2, 3 sem hours
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.

HST 377, 378, 379 Special Topics in History. 1, 2, 3 sem hours
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.

HST 477, 478, 479 Special Topics in History. 1, 2, 3 sem hours
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 sem hours
(See Geography and Geology Department)

HST 481 The Teaching of Social Studies. 3 sem hours
For 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 sem hours
An introduction to philosophy by the study of important philosophical thinkers, problems, and methodologies.

PHI 110 Philosophies of Life. 3 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
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 36.

PHI 124 The Age of Wagner. 3 sem hours
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 36.

PHI 150 Humanity and Technology. 3 sem hours
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 36.

PHI 151 Reason and Revolution. 3 sem hours
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 36.

PHI 155 Narrative in Literature and Film. 3 sem hours
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 Narrative in Literature and Film.* Note: See Honors Humanities Courses, page 36.

PHI 179 Special Topics in Humanities. 3 sem hours
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 36.

PHI 230 History of Philosophy: Ancient. 3 sem hours
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 Introduction to Logic or PHI 132 Introduction to Critical Reasoning.*

PHI 231 History of Philosophy: Modern. 3 sem hours
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 Introduction to Logic or PHI 132 Introduction to Critical Reasoning.*

PHI 232 Nineteenth Century Philosophy. 3 sem hours
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 Introduction to Logic or PHI 132 Introduction to Critical Reasoning. Recommended: PHI 230 History of Philosophy: Ancient or PHI 231 History of Philosophy: Modern.*

PHI 240 American Philosophy. 3 sem hours
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 Introduction to Logic or PHI 132 Introduction to Critical Reasoning.

PHI 260 Existentialism. 3 sem hours
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 Introduction to Logic or PHI 132 Introduction to Critical Reasoning. Recommended: PHI 231 History of Philosophy: Modern.

PHI 277, 278, 279 Special Topics in Philosophy. 1, 2, 3 sem hours

An exploration of philosophical subject matter not provided in other department offerings.

Prereq: Department permission.

PHI 281 Symbolic Logic. 3 sem hours
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 sem hours
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 Introduction to Logic or PHI 132 Introduction to Critical Reasoning. Recommended: PHI 231 History of Philosophy: Modern or PHI 260 Existentialism.

PHI 310 Aesthetics. 3 sem hours
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 Introduction to Logic or PHI 132 Introduction to Critical Reasoning.

PHI 325 Theory of Knowledge. 3 sem hours
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 Introduction to Logic or PHI 132 Introduction to Critical Reasoning.

cal Reasoning. Recommended: PHI 230 History of Philosophy: Ancient or PHI 231 History of Philosophy: Modern.

PHI 355 Philosophy of Law. 3 sem hours
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 Introduction to Logic or PHI 132 Introduction to Critical Reasoning, or department permission.

PHI 370 Philosophical Issues in Literature. 3 sem hours

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 Introduction to Logic or PHI 132 Introduction to Critical Reasoning. Recommended: PHI 232 Nineteenth Century Philosophy, PHI 260 Existentialism or PHI 290 Phenomenology.

PHI 375 Metaphysics. 3 sem hours
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 Introduction to Logic or PHI 132 Introduction to Critical Reasoning.

PHI 377, 378, 379 Special Topics in Philosophy. 1, 2, 3 sem hours

An exploration of philosophical subject matter not provided in other department offerings.

Prereq: Department permission.

PHI 380 Philosophy of Science. 3 sem hours
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 Introduction to Logic or PHI 132 Introduction to Critical Reasoning. Recommended: PHI 325 Theory of Knowledge.

PHI 442 Philosophy of Mind. 3 sem hours
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 *Introduction to Logic* or PHI 132 *Introduction to Critical Reasoning*.

PHI 460 Philosophy of Language. 3 sem hours
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 sem hours
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 *Introduction to Logic* or PHI 132 *Introduction to Critical Reasoning*. *Recommended:* PHI 232 *Nineteenth Century Philosophy*, PHI 260 *Existentialism* or PHI 290 *Phenomenology*.

PHI 471 Contemporary British and American Philosophy. 3 sem hours
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 *Introduction to Logic* or PHI 132 *Introduction to Critical Reasoning*. *Recommended:* PHI 231 *History of Philosophy: Modern*.

PHI 477, 478, 479 Special Topics in Philosophy. 1, 2, 3 sem hours
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 sem hours
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-Harrold
487-1444

Professors: Larry L. Badii, Robert G. Bartle, Donald A. Buckeye, 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, Timothy Carroll, 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: Mahmoud 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 and Minors:
Mathematics (teaching and non-teaching)
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.

No student outside the elementary teaching major or minor may receive credit in courses MTH 104, 105, 107, 108, 112, or 119 after credit for MTH 120 has been earned.

Students majoring in mathematics must complete at least nine semester hours; minors must complete at least six semester hours from courses numbered 300 or above.

Majors preparing to teach mathematics in high school must complete a course in the teaching of mathematics in addition to the requirements for a major.

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-lob 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 DEPARTMENT OF MATHEMATICS

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.

MAJOR IN MATHEMATICS

	Sem hours
Academic major in mathematics	34
1. Required courses	19
MTH 120, 121 Calculus I and II	8
MTH 122 Elementary Linear Algebra	3
MTH 223 Multivariable Calculus	4
MTH 370 Probability and Statistics I	4
2. Restricted electives	15
Choose 15 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, 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 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. Non-Teaching Majors

In addition to the 34 semester hour requirement, non-teaching majors must choose 6 credits from the following:

- MTH 211 Discrete Mathematics or CSC 220 Discrete Mathematical Structures and CSC 137 Introduction to FORTRAN Programming or CSC 138 Computer Science I or an equivalent course as determined by the mathematics advising coordinator.

4. 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 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 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 Numerical Analysis
- Psychology:** MTH 418 Applied Linear Algebra, MTH 471 Probability and Statistics II

MAJOR IN MATHEMATICS (TEACHING)

	Sem hours
Teaching major in mathematics	34
1. Required courses	24-25
MTH 120, 121 Calculus I and II	8
MTH 122 Elementary Linear Algebra	3
MTH 211 Discrete Mathematics	3
MTH 223 Multivariable Calculus	4
MTH 341 College Geometry or MTH 342 Elementary Space-Time Geometry	2-3
MTH 370 Probability and Statistics I*	4
(MTH 360 Statistical Methods may be substituted for MTH 370 Probability and Statistics with department permission.)	
2. Restricted electives	9-10
Choose nine or ten 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, MTH 400 History and Development of Mathematics, MTH 411 Modern Algebra with Applications, MTH 416 Linear Algebra, MTH 420 Introduction to Analysis, MTH 424 Introduction to Complex Variables, MTH 425 Mathematics for Scientists, MTH 471 Probability and Statistics II

3. Teaching Majors

In addition to the 34 semester hour requirement, teaching majors must choose 6 credits from the following:

- MTH 304 Middle School Mathematics Methods and Content or MTH 306 Teaching of High School Mathematics and
- 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.

MAJOR IN MATHEMATICS WITH CONCENTRATION IN STATISTICS

	Sem hours
Academic major in mathematics with concentration in statistics	37
1. Required Courses	28
MTH 120 Calculus I	4
MTH 121 Calculus II	4
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	

MAJOR IN MATHEMATICS FOR THE ELEMENTARY TEACHING CERTIFICATE

	Sem hours
Academic major in mathematics for the Elementary Teaching Certificate	30
1. Required courses	19
MTH 108, 109 Functional Mathematics I and 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
2. Restricted electives	11
Choose 11 credits from the following:	
MTH 105 College Algebra, MTH 107 Plane Trigonometry, MTH 118 Mathematical Analysis for Social Sciences I, MTH 119 Mathematical Analysis for Social Sciences II, MTH 121 Calculus II, MTH 122 Elementary Linear Algebra, MTH 210 Algebra for Elementary Teachers, MTH 223 Multivariable Calculus, MTH 319 Mathematical Modeling, MTH 370 Probability and Statistics I	
CSC 136 Computers for the Non-Specialist, CSC 137 Introduction to FORTRAN Programming, CSC 237 Computer Programming and Numeric Analysis; or other mathematics or computer science courses approved by the advising coordinator	
3. Additional Requirement	3
Math 381 The Teaching of Mathematics K-6	

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>	
CSC 137 Introduction to FORTRAN Programming or CSC 237 Computer Programming and Numeric Methods	3
ECO 201, 202 Principles of Economics I and II	6
<i>b. Mathematics</i>	
MTH 120, 121 Calculus I and 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 Numerical Analysis	3
MTH 372, 472 Problems in Actuarial Studies I and II	4
<i>c. Economics</i>	15
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 DEPARTMENT OF MATHEMATICS

MINOR IN MATHEMATICS

	Sem hours
Academic minor in mathematics	20
Students minoring in mathematics must complete CSC 137 Introduction to FORTRAN Programming, CSC 138 Computer Science I, or CSC 237 Computer Programming and Numeric Methods as part of their basic studies requirements.	
1. Required courses	14-15
MTH 120, 121 Calculus I and II	8
MTH 122 Elementary Linear Algebra	3
MTH 211 Discrete Mathematics or MTH 270 Elementary Statistics 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 370 Probability and Statistics I, MTH 400 History and Development of Mathematics, 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 436 Numerical Analysis, MTH 471 Probability and Statistics II, MTH 475 Applied Combinatorics	

*Students minoring in mathematics must complete at least six hours at EMU from courses numbered 300 or above.

MINOR IN MATHEMATICS (TEACHING)

	Sem hours
Teaching minor in mathematics	21-25
1. Required courses	16-18
MTH 120, 121 Calculus I and II	8
MTH 122 Elementary Linear Algebra	3
MTH 211 Discrete Mathematics or MTH 270 Elementary Statistics or MTH 370 Probability and Statistics I	3-4
MTH 341 College Geometry or MTH 342 Elementary Space-Time Geometry	2-3
2. Restricted electives	5-7
Choose five to seven 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 if MTH 370 Probability and Statistics I was not taken, MTH 370 Probability and Statistics I if MTH 360 Statistical Methods was not taken, MTH 400 History and Development of Mathematics, MTH 411 Modern Algebra with Applications, MTH 416 Linear Algebra, MTH 420 Introduction to Analysis, MTH 424 Introduction to Complex Variables	
3. Additional requirement	3
MTH 304 Middle School Mathematics Methods and Content or MTH 306 Teaching of High School Mathematics CSC 137 Introduction to FORTRAN Programming, CSC 138 Computer Science I, or CSC 237 Computer Programming and Numeric Methods must be completed as part of the basic studies requirements. At least six hours at EMU from courses numbered 300 or above	

MINOR IN MATHEMATICS WITH CONCENTRATION IN STATISTICS

	Sem hours
Minor in mathematics with concentration in statistics	23
1. Required courses	14
MTH 120, 121 Calculus I and 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	
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
Mathematics electives:
 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

MINOR FOR THE ELEMENTARY TEACHING CERTIFICATE

- | | Sem hours |
|--|-----------|
| Minor in Mathematics for the Elementary
Teaching Certificate | 20 |
| 1. Required courses | 12 |
| MTH 108, 109 Functional Mathematics
I and II | 6 |
| MTH 240 Geometry for Elementary
Teachers | 3 |
| MTH 301 Advanced Topics in Elementary
Mathematics | 3 |
| 2. Restricted electives | 8 |
| Choose one of the following options: | |
| MTH 206 College Algebra and Trigonometry for
Elementary Teachers and MTH 120 Calculus
I or MTH 210 Algebra for Elementary
Teachers and electives chosen in consultation
with the advising coordinator for elementary
mathematics education. | |
| 3. Additional Requirement | 3 |
| MTH 381 The Teaching of Mathematics K-6
CSC 137 Introduction to FORTRAN
Programming, CSC 138 Computer Science I
or CSC 237 Computer Programming and
Numeric Methods must be completed as part
of the basic studies requirement. | |

MATHEMATICS COURSES

MTH 097 Pre-College Mathematics:

Arithmetic. 5 sem hours
 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 Pre-College Mathematics: Beginning Algebra will cover the same material as MTH 099 Pre-College Mathematics. *Credit for this course will not count toward any degree program.*
Prereq: Program placement.

MTH 098 Pre-College Mathematics: Beginning Algebra.

5 sem hours
 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 Pre-College Mathematics: Arithmetic will cover the same material as

MTH 099 Pre-College Mathematics. *Credit for this course will not count toward any degree program.*
Prereq: Program placement.

MTH 099 Pre-College Mathematics. 5 sem hours
 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 sem hours
 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 sem hours
 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 Intermediate Algebra.

MTH 107 Plane Trigonometry. 2 sem hours
 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 Intermediate Algebra, and one year of plane geometry.

MTH 108 Functional Mathematics I. 3 sem hours
 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 sem hours
 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 Functional Mathematics I.

MTH 112 Topics in Precalculus Mathematics.

4 sem hours
 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 College Algebra, and a high school course in trigonometry or MTH 107 Plane Trigonometry; or department permission.

MTH 118 Mathematical Analysis for Social Sciences I. 3 sem hours

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 Intermediate Algebra or equivalent. Students who feel weak in algebra are encouraged to elect MTH 104 Intermediate Algebra or MTH 105 College Algebra first.

MTH 119 Mathematical Analysis for Social Sciences II. 3 sem hours

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 Intermediate Algebra or equivalent. Students who feel weak in algebra are encouraged to elect MTH 104 Intermediate Algebra or MTH 105 College Algebra first.

MTH 120 Calculus I. 4 sem hours

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 College Algebra with a "B" or better; those weak in trigonometry should complete MTH 107 Plane Trigonometry with a "B" or better. Others should enroll in MTH 112 Topics in Precalculus Mathematics (provided they satisfy its prerequisites).

MTH 121 Calculus II. 4 sem hours

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 Calculus I or equivalent.

MTH 122 Elementary Linear Algebra. 3 sem hours

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 College Algebra first (and in MTH 107 Plane Trigonometry if not taken in high school).

MTH 150 Mathematical Reasoning. 3 sem hours

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 Intermediate Algebra or equivalent.

MTH 177, 178, 179 Special Topics in Mathematics. 1, 2, 3 sem hours

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 sem hours

Basic algebraic and trigonometric concepts. Real and complex number systems, solutions of equations and inequalities, graphs of functions, determinants, sequences and series, permutations, combinations, and probability. Open only to prospective elementary teachers.

Prereq: One year high school algebra, plane geometry and MTH 109 Functional Mathematics I or MTH 210 Algebra for Elementary Teachers or MTH 301 Advanced Topics in Elementary Mathematics.

MTH 210 Algebra for Elementary Teachers. 3 sem hours

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 Functional Mathematics I.

MTH 211 Discrete Mathematics. 3 sem hours

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 Calculus II and MTH 122 Elementary Linear Algebra.

MTH 223 Multivariable Calculus. 4 sem hours

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 Calculus II and MTH 122 Elementary Linear Algebra or equivalent.

MTH 240 Geometry for Elementary Teachers. 3 sem hours

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 Functional Mathematics I.

MTH 270 Elementary Statistics. 3 sem hours

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 College Algebra or two years of high school algebra.

MTH 301 Advanced Topics in Elementary Mathematics. 3 sem hours

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 Functional Mathematics I or MTH 210 Algebra for Elementary Teachers or MTH 240 Geometry for Elementary Teachers.

MTH 304 Middle School Mathematics Methods and Content. 3 sem hours

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 Geometry for Elementary Teachers or MTH 120 Calculus I.

MTH 306 Teaching of High School Mathematics. 3 sem hours

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 Calculus I.

MTH 307 Elementary Number Theory. 3 sem hours

Primes, Euclidean algorithm and prime factorization, congruences, multiplicative functions, quadratic residues and reciprocity, continued fractions, Diophantine equations, possible applications to cryptology, and/or primality testing.

Prereq: MTH 211 Discrete Mathematics.

MTH 319 Mathematical Modeling. 3 sem hours

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 Calculus I and MTH 122 Elementary Linear Algebra.

MTH 325 Differential Equations. 3 sem hours

First and second order differential equations with applications, linear differential equations, power series solutions, Laplace transforms.

Prereq: MTH 121 Calculus II and MTH 122 Elementary Linear Algebra.

MTH 341 College Geometry. 3 sem hours

An introduction to several geometries such as affine, projective, space-time, and non-Euclidean.

Prereq: MTH 120 Calculus I and MTH 122 Elementary Linear Algebra.

MTH 342 Elementary Space-Time Geometry. 2 sem hours

In-depth study of a geometry other than Euclidean. Both synthetic and analytic treatment of Special Relativity.

Prereq: MTH 121 Calculus II.

MTH 360 Statistical Methods. 3 sem hours

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 Calculus II.

MTH 370 Probability and Statistics I. 4 sem hours

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 Multivariable Calculus.

MTH 372 Problems in Actuarial Studies I. 2 sem hours

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 Multivariable Calculus; a minimum GPA in mathematics of 3.4 is strongly recommended.

MTH 381 The Teaching of Mathematics K-6. 3 sem hours

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 Functional Mathematics I and junior standing.

MTH 382 Calculators and Microcomputers in Elementary Mathematics Education. 3 sem hours

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 Algebra for Elementary Teachers.

MTH 387 Cooperative Education in Mathematics. 3 sem hours

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 Multivariable Calculus, admittance to program by application only, department permission.

MTH 400 History and Development of Mathematics. 3 sem hours

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 Calculus II and MTH 122 Elementary Linear Algebra.

MTH 403 Current Research in Elementary School Mathematics. 3 sem hours

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 Advanced Topics in Elementary Mathematics and MTH 381 The Teaching of Mathematics K-6.

MTH 406 Introduction to Computability. 3 sem hours

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 Multivariable Calculus or CSC 330 Discrete Mathematical Structures.

MTH 411 Modern Algebra with Applications. 3 sem hours

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 Calculus II, MTH 122 Elementary Linear Algebra and MTH 211 Discrete Mathematics; or departmental permission.

MTH 416 Linear Algebra. 3 sem hours
Vector spaces, linear transformations, eigen values, innerproduct spaces, principal axis theorem, applications.
Prereq: MTH 121 Calculus II, MTH 122 Elementary Linear Algebra and MTH 211 Discrete Mathematics; or departmental permission.

MTH 418 Applied Linear Algebra. 3 sem hours
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 Calculus I, MTH 122 Elementary Linear Algebra, CSC 137 Introduction to FORTRAN Programming or department permission.

MTH 419 Advanced Mathematical Modeling. 3 sem hours

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 Mathematical Modeling and MTH 370 Probability and Statistics I.

MTH 420 Introduction to Analysis. 3 sem hours
Real numbers, elementary topology of the real line, sequences and series, continuity, uniform continuity, differentiation, integration, sequences and series of functions.
Prereq: MTH 121 Calculus II and MTH 211 Discrete Mathematics; or departmental permission.

MTH 424 Introduction to Complex Variables. 3 sem hours

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 Multivariable Calculus.

MTH 425 Mathematics for Scientists. 3 sem hours
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 Multivariable Calculus.

MTH 426 Differential Equations II. 3 sem hours
Systems of linear differential equations, transforms, qualitative theory of systems, existence and uniqueness theorems.

Prereq: MTH 325 Differential Equations.

MTH 436 Numerical Analysis. 3 sem hours
Introduces the theory and application of numeric methods using the digital computer as a tool; finite differ-

ences, polynomial approximation, numeric integration, solution of equations and non-linear systems, numeric solution of differential equations, error analysis.

Prereq: MTH 223 Multivariable Calculus and CSC 137 Introduction to FORTRAN Programming or department permission.

MTH 460 Applied Survey Sampling. 3 sem hours
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 Statistical Methods or MTH 370 Probability and Statistics I.

MTH 461 Linear Regression Analysis. 3 sem hours
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 Elementary Linear Algebra and MTH 360 Statistical Methods or MTH 370 Probability and Statistics I.

MTH 462 Design and Analysis of Experiments. 3 sem hours

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 Statistical Methods or MTH 370 Probability and Statistics I or equivalent.

MTH 471 Probability and Statistics II. 3 sem hours

Nature of statistics; distributions, measure of central value and dispersion; sampling; statistical inference estimation and tests of hypothesis. Methods of computation applications and data analysis will be stressed. Non-parametric statistics: sequential tests, analysis of variance.

Prereq: MTH 223 Multivariable Calculus, MTH 370 Probability and Statistics I and CSC 137 Introduction to FORTRAN Programming or department permission.

MTH 472 Problems in Actuarial Studies II. 2 sem hours

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 Probability and Statistics II (may be taken concurrently); a minimum GPA in mathematics of 3.4 is strongly recommended.

MTH 474 Applied Statistics. 3 sem hours

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 Statistical Methods or MTH 370 Probability and Statistics I.

MTH 475 Applied Combinatorics. 3 sem hours

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 Multivariable Calculus and a computer science course.

MTH 477, 478, 479 Special Topics in Mathematics. 1, 2, 3 sem hours

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 sem hours

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 sem hours

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 Cooperative Education in Mathematics, department permission.

MTH 497, 498, 499 Independent Study in Mathematics. 1, 2, 3 sem hours

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. Whimey 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, Willard Zirk

Assistant Professors: Bradley Almquist, Daniel Foster, Donald C. Hartmann, Kevin Miller, Garik Pedersen, David Pierce, John R. Smith, Diane Winder, 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 who have interest in businesses related to music.

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)
- Music performance
- Music therapy

Major:

- Music

Minors:

- General music
- Elementary music 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 majors: 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.

Auditions and examinations will be held on the following dates during the 1992-93 academic year:

Fall semester

November 6, 1992

Winter semester

January 15, 1993

February 12, 1993

March 12, 1993

April 2, 1993

Spring session

June 4, 1993

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.

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, where the special qualifications are met, in public recitals.

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.

CURRICULUM FOR TEACHERS OF INSTRUMENTAL MUSIC

This curriculum leads to a Bachelor of Music Education degree and the Secondary Provisional Certificate. Candidates for an Elementary Education Provisional Certificate must consult the director of Academic Records and Certification regarding special requirements.

Students must complete all courses specified below under education and fine arts. One approved course in cross-cultural and international studies must be completed in the process of meeting the basic studies requirements. (Complete pattern sheet is available from the department.)

Area	Sem hours
Symbolics and communication	14-18
Requirements 1, 2, 3, 4, and 5 (page 32)	
Science and technology	9-14
Requirement 1, 2, and 3 (page 33)	
Social sciences	12
Requirements 1, 2, 3, and 4 (page 34)	
Art and humanities	9
Requirements 1, 2, and 3 (page 35)	
One course in art, music, or theatre arts (automatically met by fine arts courses below)	
Education	29
EDP 322 Human Development and Learning	4
RDG 311 Teaching Secondary Reading	3
SFD 328 Social Aspects of Teaching	3
SGN 300 Exceptional Child in the Classroom ...	1
MUS 332 Instrumental Music in the	
Public Schools	3
MUS 333 Orchestral Methods or MUS 334	
Band Methods	3
EDU 495 Student Teaching	6
EDU 496 Student Teaching	6
Fine arts	61
1. Required basic courses	23
MUS 101, 102 Music Theory I and II	6
MUS 201, 202 Music Theory III and IV	6
MUS 232 Voice Class	1
MUS 301, 302 History of Music	6
MUS 413 Orchestration	2
MUS 414 Band Arranging	2
2. Instrumental courses	6
MUS 211 Basic Brass Class (trumpet,	
trombone)	1
MUS 241 Percussion	1
MUS 261 Basic String Class: Violin	1
MUS 281 Basic Woodwind Class	1
Choose 2 credits from the following:	
MUS 212 Brass Class, MUS 262 String	
Class: Viola, MUS 263 String Class:	
Cello and Double Bass, MUS 282 Woodwind	
Class, or MUS 283 Woodwind Class	

3. Performance courses	32
<i>Applied music</i>	20
MUS 251, MUS 252, MUS 253, MUS	
254 Functional Piano	4
AMU 100-300 Applied Music (principal	
instrument)	16
<i>Conducting</i>	4
MUS 326 Conducting	2
MUS 327 Instrumental Conducting	2
<i>Ensembles*</i>	8
4. Electives	5
Physical education and health	2
Physical education activity courses	2
(Any two courses in Military Science may be	
applied)	
Total	141-150
*Three semesters of Marching Band required (Two semesters of Marching Band substitute for two hours of physical education). Select others from large ensembles listed on page 202.	

CURRICULUM FOR TEACHERS OF VOCAL MUSIC

Students selecting this curriculum, leading to a Bachelor of Music Education degree, must elect either organ, piano, or voice as the principal instrument. Candidates for an Elementary Education Provisional Certificate must consult the director of Academic Records and Certification regarding special requirements.

All courses specified below in education and fine arts must be completed. One approved course in cross-cultural or international studies must be completed in the process of meeting the basic studies requirements. (Complete pattern sheet is available from the department.)

Area	Sem hours
Symbolics and communication	14-18
Requirements 1, 2, 3, 4, and 5 (page 32)	
Science and technology	9-14
Requirement 1, 2, and 3 (page 33)	
Social science	12
Requirements 1, 2, 3, and 4 (page 34)	
Arts and humanities	9
Requirements 1, 2, and 3 (page 35)	
One course in art, music, or theatre arts (automatically met by fine arts courses below)	
Education	29
EDP 322 Human Development and	
Learning	4
SFD 328 Social Aspects of Teaching	3
RDG 311 Teaching Secondary Reading	3
SGN 300 Exceptional Child in the Classroom ...	1
MUS 330 Music Education in the	
Elementary School	3
MUS 331 Music Education in the	
Secondary School	3
EDU 495 Student Teaching	6
EDU 496 Student Teaching	6

Fine arts	58
1. Required basic courses	22
MUS 101, 102 Music Theory I and II	8
MUS 201, 202 Music Theory III and IV	8
MUS 301, 302 History of Music	6
MUS 413 Orchestration	2
2. Instrumental courses	4
MUS 274 Functional Guitar	2
Choose two courses from the following	2
MUS 212 Brass Class, MUS 241 Percussion, MUS 261 Basic String Class: Violin, MUS 281 Basic Woodwind Class	
3. Performance courses	34
<i>Applied music</i>	22
AMU 100-300 Applied Music (principal instrument)	16
AMU 251-4, B11-12 Applied Music (if keyboard is secondary instrument) or A01-A12 Applied Music in Voice (if secondary instrument)	6
<i>Conducting</i>	4
MUS 326 Conducting	2
MUS 328 Choral Conducting	2
<i>Ensembles</i>	8
Physical education and health	2
Physical education activity courses	2
(Any two courses in Military Science may be applied)	
Total	133-142

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 32)	
Science and technology	9-14
Requirements 1, 2, and 3 (page 33)	
Social science	12
Requirements 1, 2, 3, and 4 (page 34)	
Arts and humanities	9
Requirements 1, 2, and 3 (page 35)	
One course in art, music, or theatre arts (automatically met by fine arts courses below)	
Fine arts	80-84
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	36-38
Theory literature	22

MUS 101 Music Theory I, MUS 102 Music Theory II, MUS 201 Music Theory III, MUS 202 Music Theory IV, MUS 301 History of Music, MUS 302 History of Music, MUS 401 Music Theory-Literature V, MUS 402 Music Theory-Literature VI	
Secondary instrument	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	126-139

CURRICULUM FOR MUSIC THERAPY

The Bachelor of Music Therapy degree is awarded on completion of this curriculum either without teacher certification or with teacher certification in music education if additional requirements are fulfilled. The degree program is approved by the National Association for Music Therapy.

All students must take the courses specified in education and fine arts.

WITHOUT TEACHER CERTIFICATION

Area	Sem hours
Symbolics and communication	14-15
Requirements 1 and 2 (page 32)	5-6
Choose one course from the following:	
CTC 225 Listening Behavior, CTC 226 Non-Verbal Communication, CTC 227 Interpersonal Communication, CTC 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 or PSY 102 General Psychology ...	3-4
PSY 360 Abnormal Psychology	3
Choose one psychology elective	3
Social science	12
Requirements 1 and 2 (page 34)	6
SOC 105 Introductory Sociology	3
SOC 202 Social Problems	3
Arts and humanities	6
Requirements 1, 2, and 3 (page 35)	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	76
1. Music theory and history courses	20
Music theory and history courses	24
MUS 101, 102 Music Theory I and II	6
MUS 201, 202 Music Theory III and IV	6
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
<i>Minimal performance skills as recommended by the National Association for Music Therapy</i>	14
Most students should be able to meet some of these upon entrance or they can be achieved through the courses listed below:	
Voice: Voice Class 232 and 101-A01-1	2
Piano: Functional Piano 251-254 and 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 Pre-clinical Training Practicum I	1
MUS 223 Pre-clinical Training Practicum II	1
MUS 303 Music Therapy Principles I	4
MUS 304 Music Therapy Principles II	4
MUS 404 Psychology of Music I	2
MUS 405 Psychology of Music II	2
MUS 424 Pre-clinical Training Practicum III	1
MUS 425 Pre-clinical Training Practicum IV	1
MUS 488 Clinical Training	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	129-131

WITH CERTIFICATION IN MUSIC EDUCATION

Students must complete the following specific courses in the groups indicated:

Area	Sem hours
Science and technology	4
A course in physical science	
Education	30
EDP 322 Human Development and Learning	4

SFD 328 Social Aspects of Teaching	3
RDG 311 Teaching Secondary Reading	3
SGN 300 Exceptional Child in the Classroom ...	1
MUS 330 Music Education in the Elementary School and MUS 331 Music Education in the Secondary School, or MUS 332 Instrumental Music in the Public Schools and MUS 333 Orchestral Methods or MUS 334 Band Methods	6
MUS 477 Special Topics: Computers in Music Education	1
EDU 495 Student Teaching	6
EDU 496 Student Teaching	6

Fine arts	14-16
Applied music courses (principal instrument) ...	2
MUS 327 Instrumental Conducting or MUS 328 Choral Conducting	2
Additional ensembles	4
Vocal music education	
Applied music (secondary instrument)	2-4
Instrumental music education	
MUS 414 Band Arranging	2
Additional secondary instrument classes	2

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. In completing either of these, the student does not earn a teaching certificate.

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
Academic major in music	41
1. Required courses	36
MUS 101, 102 Music Theory I and II	6
MUS 201, 202 Music Theory III and IV	6
MUS 301, 302 History of Music	6
MUS 401, 402 Music Theory-Literature V and VI	4
AMU 100-300 Applied Music (principal instrument)	12
MUS 251, 252 Functional Piano Ensembles	2
2. Electives in music	5

MINORS OFFERED IN THE DEPARTMENT OF MUSIC

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.

GENERAL MUSIC MINOR

(MAY NOT BE USED ON ANY TEACHING MAJOR)

Minor in general music 20 sem hours

ELEMENTARY MUSIC EDUCATION MINOR

(MAY NOT BE USED ON SECONDARY CERTIFICATION)

Students must include in their course of study 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. This minor does not apply on a secondary curriculum.

Minor in elementary music education ... 24 sem hours

MUSIC COURSES**THEORY-LITERATURE AND HISTORY****MUS 100 Introduction to Music Theory.****3 sem hours**

Designed for the non-music major. A preparatory course for MUS 101 Music Theory I 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 sem hours**

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 Music Literature I and MUS 119 Aural Skills I.

Prereq: Department permission. Music majors/minors or placement examination.

MUS 102 Music Theory II.**3 sem hours**

Continuation of MUS 101 Music Theory I. For music majors and minors. Generally taken concurrently with MUS 128 Music Literature II and MUS 129 Aural Skills II.

Prereq: MUS 101 Music Theory I, MUS 118 Music Literature I, MUS 119 Aural Skills I, or examination, MUS 251 Functional Piano or equivalents.

MUS 106 Introduction to the Performing Arts.**3 sem hours**

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 118 Music Literature I.**1 sem hour**

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 Music Theory I and MUS 119 Aural Skills I.

Prereq: Department permission. Music majors/minors.

MUS 119 Aural Skills I.**1 sem hour**

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 Music Theory I and MUS 118 Music Literature I.

Prereq: Department permission. Music majors/minors or placement examination.

MUS 107 Music Appreciation.**2 sem hours**

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 127 The Splendid Centuries of**Austria.****3 sem hours**

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 36.*

MUS 128 Music Literature II.**1 sem hour**

A continuation of MUS 118 Music Literature I. 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 Music Theory II and MUS 129 Aural Skills II.

Prereq: MUS 119 Aural Skills I or placement examination. Music majors/minors.

MUS 129 Aural Skills II.**1 sem hour**

A continuation of MUS 119 Aural Skills I. 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 Music Theory II and MUS 128 Music Literature II.

Prereq: Music majors/minors. MUS 101 Music Theory I, MUS 118 Music Literature I, MUS 119 Aural Skills I, or placement examination.

MUS 179 Special Topics in Humanities. 3 sem hours
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 36.

MUS 201 Music Theory III. 3 sem hours
Continuation of MUS 102 Music Theory II with more emphasis on harmonic, melodic, compositional, and structural techniques of 19th and 20th centuries. Generally taken concurrently with MUS 218 Music Literature III and MUS 219 Aural Skills III.
Prereq: MUS 102 Music Theory II, MUS 128 Music Literature II, MUS 129 Aural Skills II, or placement examination, MUS 252 Functional Piano or equivalent.

MUS 202 Music Theory IV. 3 sem hours
Continuation of MUS 201 Music Theory III. For music majors/minors. Generally taken concurrently with MUS 218 Music Literature II and MUS 219 Aural Skills II.
Prereq: MUS 201 Music Theory III, MUS 218 Music Literature III, MUS 219 Aural Skills III, or placement examination, MUS 253 Functional Piano or equivalent.

MUS 203 Jazz Styles, History, and Analysis. 2 sem hours
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 Music Theory II, or department permission.

MUS 218 Music Literature III. 1 sem hour
A continuation of MUS 128 Music Literature II. 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 Music Theory III and MUS 219 Aural Skills III.
Prereq: MUS 102 Music Theory II, MUS 128 Music Literature II, MUS 129 Aural Skills II, or placement examination. Music majors/minors.

MUS 219 Aural Skills III. 1 sem hour
A continuation of MUS 129 Aural Skills II. 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 Music Theory III and MUS 218 Music Literature III.
Prereq: Music majors/minors. MUS 102 Music Theory II, MUS 128 Music Literature II, MUS 129 Aural Skills II, or placement examination.

MUS 301 History of Music. 3 sem hours
A chronological study of Western music in its historical and cultural setting. Recognition of idioms, changing sounds, styles, and forms of music in medieval, Renais-

sance, and Baroque periods, approximately through 1750. Each student surveys the history of his instrument.
Prereq: MUS 202 Music Theory IV.

MUS 302 History of Music. 3 sem hours
A continued chronological study of Western music in its historical and cultural setting, beginning about 1750. Emphasis similar to MUS 301 History of Music but with a strong concentration in contemporary music. Covers classical, Romantic, and present periods.
Prereq: MUS 301 History of Music.

MUS 317 Music Composition. 2 sem hours
Original writing and analysis of music, beginning with the smaller forms. May be repeated for credit.
Prereq: MUS 202 Music Theory IV and department permission.

MUS 341 Contrapuntal Techniques. 2 sem hours
Writing in polyphonic forms with concomitant analysis.
Prereq: MUS 202 Music Theory IV.

MUS 401 Music Theory-Literature V. 2 sem hours
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 Music Theory IV.

MUS 402 Music Theory-Literature VI. 2 sem hours
Continuation of MUS 401 Music Theory-Literature V.
Prereq: MUS 401 Music Theory-Literature V.

MUS 413 Orchestration. 2 sem hours
Practical work in setting compositions for full orchestra and various other instrumental ensembles.
Prereq: MUS 202 Music Theory IV.

MUS 414 Band Arranging. 2 sem hours
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 sem hours
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.

MUS 151 Class Piano. 2 sem hours
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 sem hours
Continuation of MUS 151 Class Piano 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 Class Piano.

MUS 211 Basic Brass Class. 1 sem hour
The teaching and playing of trumpet and trombone. Majors and minors only.

MUS 212 Brass Class. 1 sem hour
The teaching and playing of French horn, euphonium, and tuba. Majors and minors only.

MUS 224 Recreational Music. 2 sem hours
For recreation majors. Specific activities, techniques, and resources for directing recreational music programs.

MUS 232 Voice Class. 1 sem hour
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 def appropriate to student's voice classification.

MUS 235 Diction in Singing. 2 sem hours
The physiological descriptions and laboratory practice of diction as used in singing.
Prereq: Department permission.

MUS 241 Percussion. 1 sem hour
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 sem hour
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 sem hour
Continuation of MUS 261 Basic String Class; teaching and playing of viola. Majors and minors only.
Prereq: MUS 261 Basic String Class: Violin.

MUS 263 String Class: Cello and Double Bass. 1 sem hour
The teaching and playing of cello and double bass. Majors and minors only.

MUS 271 Beginning Classical Guitar. 2 sem hours
Group instruction in classical guitar through the study of standard beginning methods and repertoire.
Prereq: Department permission.

MUS 272 Intermediate Classical Guitar. 2 sem hours
Group instruction in classical guitar through the study of standard intermediate methods and repertoire.
Prereq: MUS 271 Beginning Classical Guitar.

MUS 274 Functional Guitar. 2 sem hours
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 sem hour
The teaching and playing of clarinet. Majors and minors only.

MUS 282 Woodwind Class. 1 sem hour
The teaching and playing of flute and saxophone. Majors and minors only.

MUS 283 Woodwind Class. 1 sem hour
The teaching and playing of oboe and bassoon. Majors and minors only.

MUS 320 Elementary Music Education. 2 sem hours
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 Elements of Music and junior standing.

MUS 330 Music Education in the Elementary School. 3 sem hours
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 Functional Piano/A22 Voice or A04 Voice/B22 Piano; MUS 202 Music Theory-Literature IV; satisfactory academic record and department permission. Coreq: MUS 326 Conducting.

MUS 331 Music Education in the Secondary School. 3 sem hours
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 Music Education in the Elementary School. Proficiency in piano and voice; satisfactory academic record and department permission. Coreq: MUS 328 Choral Conducting.

MUS 332 Instrumental Music in the Public Schools. 3 sem hours
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 sem hours
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 Instrumental Music in the Public Schools and junior standing.

MUS 334 Band Methods. 3 sem hours
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 to instrumental music education majors. No students on academic probation.
Prereq: MUS 332 Instrumental Music in the Public Schools.

MUS 361 Methods and Materials for Teaching Piano. 3 sem hours
Study of methods and materials suitable for use with beginning- and intermediate-level students.
Prereq: Junior standing and department permission.

EDU 495, 496 Student Teaching. 6 sem hours each
Admission to student teaching requires satisfactory completion of specified curriculums as well as faculty approval through a screening exam. Details are contained in "Statement of Policy Concerning Standards for Admission to Student Teaching in Music" available from the music supervisor of student teaching.

MUSIC THERAPY

MUS 103 Introduction to Music Therapy. 2 sem hours
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 sem hours
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 Music Theory II, MUS 103 Introduction to Music Therapy.

MUS 222 Pre-clinical Training Practicum in Music Therapy I. 1 sem hour
Introductory field work experience in music therapy. Observation and documentation of music therapy sessions in clinical or educational settings.
Prereq: MUS 102 Music Theory II, MUS 103 Introduction to Music Therapy.

MUS 223 Pre-clinical Training Practicum in Music Therapy II. 1 sem hour
Continuation of MUS 222. Leadership or co-leadership of music therapy sessions.
Prereq: MUS 222 Pre-clinical Training Practicum in Music Therapy I.

MUS 303 Music Therapy Principles I. 4 sem hours
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 or 102 General Psychology, MUS 221 Methods and Materials in Music Therapy, MUS 222 and 223 Pre-clinical Training Practicum I and II.

MUS 304 Music Therapy Principles II. 4 sem hours
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 Music Therapy Principles I.

MUS 404 Psychology of Music I. 2 sem hours
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 Music Therapy Principles II or department permission.

MUS 405 Psychology of Music II. 2 sem hours
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 Psychology of Music I.

MUS 424 Pre-clinical Training Practicum in Music Therapy III. 1 sem hour
Field work experience in clinical or educational setting under supervision of a registered music therapist. Taken concurrently with MUS 404 Psychology of Music I.
Prereq: Senior standing in music therapy program; MUS 304 Music Therapy Principles II.

MUS 425 Pre-clinical Training Practicum in Music Therapy IV. 1 sem hour

Field work experience continued. Taken concurrently with MUS 405 Psychology of Music II.

Prereq: MUS 424 Pre-clinical Training Practicum in Music Therapy III.

MUS 488 Clinical Training in Music Therapy. 2 sem hours

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 sem hours

A cooperative work experience in the field of music.

Prereq: Department permission.

MUSIC HONORS

MUS 490 Honors Course in Music. 2 sem hours

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 36).

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
Harpichord	Organ	Percussion
Comet	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 hours per semester

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 hours per semester

Lower level work for music majors and minors only. May be repeated for credit.

AMU 100 01-22. 1 hour per semester

For music minors. May be repeated for credit.

AMU 300 31-62. 1 to 4 hours per semester

Upper level work for music majors and minors. May be repeated for credit.

SECONDARY INSTRUMENTS

MUS 251 Functional Piano. 1 sem hour

Required for all music majors and minors with no previous piano experience. Teaches keyboard skills necessary both for accompaniment of simple music and for developing musical understanding basic to all coursework in music. Majors or minors only.

MUS 252 Functional Piano. 1 sem hour

Continuation of MUS 251 Functional Piano. Majors or minors only.

Prereq: MUS 251 Functional Piano or equivalent.

MUS 253 Functional Piano. 1 sem hour
Continuation of MUS 252 Functional Piano. Stresses keyboard harmony, accompaniment, sight-reading, piano literature, and technique. Majors or minors only.
Prereq: MUS 252 Functional Piano.

MUS 254 Functional Piano. 1 sem hour
Continuation of MUS 253 Functional Piano. 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. Majors or minors only.
Prereq: MUS 253 Functional Piano or equivalent.

MUS 305 Keyboard Skills. 2 sem hours
Sight reading, harmonization, transposition, improvisation, and score reading. Open to keyboard majors and to others by department permission. Majors or minors only.
Prereq: MUS 102 Music Theory II, MUS 254 Functional Piano.

MUS 326 Conducting. 2 sem hours
Fundamentals of baton technique, score reading, and interpretation of instrumental and vocal music. Music majors or minors only.
Prereq: Junior standing.

MUS 327 Instrumental Conducting. 2 sem hours
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 Conducting.

MUS 328 Choral Conducting. 2 sem hours
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 Conducting.

LARGE ENSEMBLES

MUS 131 University Choir. 1 sem hour
An ensemble of advanced singers. Open to all students in the University.
Prereq: Department permission.

MUS 134 University Women's Chorus. 1 sem hour
Open to all women students.
Prereq: Department permission.

MUS 135 University Men's Chorus. 1 sem hour
Open to all men students.
Prereq: Department permission.

MUS 136 Madrigal Ensemble. 1 sem hour
Chamber music for mixed voices. Open to all students.
Prereq: Department permission.

PEG 140 Marching Band. 1 sem hour
(See Department of Health, Physical Education, Recreation, and Dance.)

MUS 149 Athletic Band. 1 sem hour
For the non-music major, 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 sem hour
Open to all students in the University.
Prereq: Department permission.

MUS 249 Band. 1 sem hour
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 physical education PEG 140 Marching Band for one credit.

MUS 350 Contemporary Chamber Ensemble. 1 sem hour
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 sem hour
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 sem hours
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 sem hours
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.

MUS 455 The Madrigal. 2 sem hours
Prereq: Member of the University Madrigal Singers.

SMALL ENSEMBLES

MUS 244 Jazz Ensemble. 1 sem hour
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 sem hour
Chamber music for brass.
Prereq: Department permission.
- MUS 246 String Ensemble.** 1 sem hour
Chamber music for strings.
Prereq: Department permission.
- MUS 247 Woodwind Ensemble.** 1 sem hour
Chamber music for woodwinds.
Prereq: Department permission.
- MUS 475 Chamber Music**
Performance. 2 sem hours
Study and performance of literature for small chamber groups. May be repeated for credit.
Prereq: Department permission.

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 and physics research. Within the major, students may wish to develop a concentration in engineering physics or physics-business. Minors are offered in astronomy, general science, and physics. The department also administers interdisciplinary offerings in applied science, general science, and physical science. Transfer students who wish to major in 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-minors:

General science

Physical science

Majors:

Geophysics

Physics research

Physics (Concentrations in engineering physics and physics-business)

Minors:

Astronomy

General science

Physics

Advising is assigned according to the indicated field of study.

Advising coordinators:

Applied science curriculum: Dan Trochet

Astronomy minor: Jon Wooley

Engineering physics concentration: Edward Gabl, Alexandria Oakes

Physics major: Diane Jacobs

General science major/minor: Jon Wooley

Geophysics: Dan Trochet

Physics-business concentration: Dan Trochet

Physics-research major: Richard Roth, Marshall Thomsen

Physical science major/minor: Jon Wooley

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, 123 General Chemistry I and II	6
CHM 122, 124 General Chemistry I and II	
Laboratory	2
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 and 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	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 Technical Drawing	3
IT 223 Descriptive Geometry	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

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. If planning to teach, the student also must take an appropriate methods course. Students who complete the program may be certified to teach general science in grades 7-12 and, in addition, would be certified to teach the minor selected in grades 9-12. In seeking continuing certification, students may elect to work toward a master's degree in either general science or the field of their minor.

	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</i>	
<i>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	
General Chemistry I; CHM 122 General	
Chemistry I 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 Light32
- 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 General Chemistry I; CHM 122 General Chemistry I 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 General Chemistry I; CHM 122 General Chemistry I Lab; GES 108 Earth Science; GES 324 Weather; PHY 221 Mechanics, Sound, and Heat; PHY 222 Electricity and Light31
- Approved electives in biology, chemistry, earth science, and physics5
- 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 General Chemistry I; CHM 122 General Chemistry I Lab; GES 108 Earth Science; GES 324 Weather; MTH 120 Calculus I; MTH 121 Calculus II31
- Approved electives in biology, chemistry, earth science, and mathematics5
- Approved electives:
- AST 204 Astronomical Investigation; BIO 205 Field Biology; BIO 207 Elements of Ecology; BOT 221 General Botany; ZOO 222 General Zoology; CHM 123 General Chemistry II; CHM 270 Organic Chemistry; CHM 271 Organic Chemistry Laboratory; 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.

GROUP MAJOR/MINOR IN PHYSICAL SCIENCE

This combined major/minor prepares students to teach physical science at the secondary level. Courses are included in five areas: astronomy, chemistry, earth science, mathematics, and physics. Prospective teachers also must take PHY 325 Methods of Teaching the Physical Sciences in addition to major requirements.

Students fulfill the minimum requirement for a 20 semester hour cognate minor in either chemistry, earth science, or mathematics and a 36 hour group major composed of courses from the other four areas. A 20 semester hour concentration in physics and astronomy is included in the 36 hour major.

	Sem hours
Group major/minor in physical science	56
1. Required courses	34
GES 108 Earth Science	4
GES 324 Weather	3
PHY 221 Mechanics, Sound, and Heat	4
PHY 222 Electricity and Light	4
(Students may elect PHY 223 Mechanics, Sound and Heat and PHY 224 Electricity and Light instead of PHY 221 and 222)	
PHY 370 Introduction to Modern Physics	3
AST 205 Principles of Astronomy	4
CHM 121, 123 General Chemistry I, II	6
CHM 122, 124 General Chemistry I and II Laboratory	2
MTH 120 Calculus I	4
2. Restricted electives	3-4
Choose three to four credits from the following mathematics or computer science courses:	
CSC 137 Introduction to FORTRAN Programming	3
MTH 121 Calculus II	4
3. Electives*	16-22
Choose five credits from physics and astronomy courses to complete 20 semester hours, including at least one laboratory course numbered 300-level or above in physics ...	5
Additional courses from chemistry, earth science, or mathematics to complete a regular minor.	11-13
Additional courses in science or mathematics to make up a total of 56 semester hours	1-4
*All electives must be selected in consultation with the advising coordinator for physical science.	

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	59-61
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 450 Electricity and Magnetism	4
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	4
PHY 485 Fluid Dynamics	3
Required mathematics courses	21
MTH 120 Calculus I	4
MTH 121 Calculus II	4
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 General Chemistry I	3
CHM 123 General Chemistry II	3
CHM 122 General Chemistry I Lab	1
CHM 124 General Chemistry II Lab	1

PHYSICS MAJORS

PHYSICS RESEARCH

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
Academic major in physics research	36
1. Required courses	22
*PHY 223 Mechanics, Sound, and Heat	5
*PHY 224 Electricity and Light	5
PHY 330 Intermediate Mechanics I	3
PHY 450 Electricity and Magnetism	4
PHY 475 Introduction to Quantum Mechanics ...	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.

- 2. Restricted electives**
- Choose three of the following laboratory courses:
PHY 332 Mechanics Laboratory, PHY 372 Modern Physics Laboratory, PHY 442 Optics Laboratory, PHY 452 Electrical Measurements, PHY 454 The Microcomputer in the Science Laboratory, PHY 456 Electronics, PHY 471 Nuclear Physics
- 3. Electives in physics to complete the 36-hour major**
- No physics courses numbered less than 300 are to be used as electives on this major. No astronomy courses can be used as electives.
- 4. Required mathematics courses**
- MTH 120, 121 Calculus I and II
- MTH 122 Elementary Linear Algebra
- MTH 223 Multivariable Calculus
- 5. Two of the following three courses**
- MTH 325 Differential Equations
- MTH 425 Mathematics for Scientists
- MTH 436 Numerical Analysis

PHYSICS

This major is provided for students who plan to teach physics in a secondary school, 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.

A maximum of six semester hours of designated astronomy courses may be included among the electives on this major.

Prospective teachers also must take PHY 325 Methods of Teaching the Physical Sciences in addition to the requirements listed below.

	Sem hours
Academic major in physics	30
1. Required physics courses	16
*PHY 223 Mechanics, Sound, and Heat	5
*PHY 224 Electricity and Light	5
PHY 330 Intermediate Mechanics I	3
PHY 370 Introduction to Modern Physics	3
*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.	
2. Restricted physics electives	3-12
Choose three of the following laboratory courses:	

- PHY 332 Mechanics Laboratory, PHY 372 Modern Physics Laboratory, PHY 442 Optics Laboratory, PHY 452 Electrical Measurements, PHY 454 The Microcomputer in the Science Laboratory, PHY 456 Electronics, PHY 471 Nuclear Physics
3. **General electives in physics and astronomy to complete the 30-hour major** 2-11
No physics courses numbered less than 300 are to be used as electives on this major.
 4. **All students earning this major in physics must also take, as a minimum, the following courses in mathematics** 14-15
 - MTH 120 Calculus I 4
 - MTH 121 Calculus II 4
 - MTII 122 Elementary Linear Algebra 3
 And one of the following:
 - MTH 223 Multivariable Calculus 4
 - CSC 237 Computer Programming and Numeric Methods 3

ENGINEERING PHYSICS CONCENTRATION

The engineering-oriented concentration leads to a Bachelor of Science degree. Students following this concentration will earn 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	94
1. Required physics courses	28
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 440 Optics	3
PHY 456 Electronics	4
PHY 460 Heat and Thermodynamics	3
PHY 471 Nuclear Physics	4
2. Physics electives	8
Choose eight credits from the following:	
PHY 332 Mechanics Laboratory	1
PHY 431 Intermediate Mechanics II	3
PHY 436 Vibration and Sound	3
PHY 442 Optics Laboratory	1
PHY 452 Electrical Measurements	4
PHY 454 The Microcomputer in the Science Laboratory	3
PHY 490 Special Problems	2
3. Required engineering mechanics courses	11
PHY 229 Strength and Elasticity of Materials ...	4
PHY 230 Engineering Dynamics	4
PHY 485 Fluid Dynamics	3
4. Required chemistry courses	8
CHM 121 General Chemistry I	3
CHM 122 General Chemistry I Lab	1
CHM 241 Materials Science	3
CHM 242 Materials Science Laboratory	1

5. Required mathematics courses	21
MTH 120 Calculus I	4
MTH 121 Calculus II	4
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
CTC 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

PHYSICS-BUSINESS CONCENTRATION

This interdisciplinary concentration integrates the scientific and technological expertise of the science student with the business discipline. It provides the student with a physics major and a minor in business. There are sufficient business courses so that the student may earn a Master of Business Administration degree in the fifth year of an academic career.

	Sem hours
Concentration in physics-business	86
1. Required mathematics courses	14
MTH 120, 121 Calculus I and II	8
MTH 122 Elementary Linear Algebra	3
MTH 223 Multivariable Calculus	4
2. Required physics courses	36
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 370 Introduction to Modern Physics	3
PHY 372 Modern Physics Laboratory	1
PHY 440 Optics	3
PHY 442 Optics Laboratory	1
PHY 450 Electricity and Magnetism	4
PHY 456 Electronics	4
PHY 460 Heat and Thermodynamics	3
3. Required business courses	36
ACC 240, 241 Principles of Accounting	6
ECO 201, 202 Principles of Economics I and II ...	6
FIN 350 Principles of Finance	3
MGT 202 Business Communications	3
MGT 386 Organizational Behavior and Theory	3
MKT 360 Principles of Marketing	3
LAW 293 Legal Environment of Business	3
ORI 215 End-User Computing	3
ORI 265 Business Statistics I	3
ORI 374 Production/Operations Management ...	3

MINORS OFFERED IN THE DEPARTMENT OF PHYSICS AND ASTRONOMY

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 Investigation	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 General Chemistry I, CHM 122 General Chemistry I 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 General Chemistry I, CHM 122 General Chemistry I Lab, MTH 105 College Algebra, PHY 221 Mechanics, Sound and Heat	20

Approved electives in biology, chemistry, mathematics, or physics

With a major in mathematics, take the following courses:

AST 205 Principles of Astronomy, BIO 105 Biology and the Human Species, CHM 121 General Chemistry I, CHM 122 General Chemistry I Lab, GES 108 Earth Science, PHY 221 Mechanics, Sound and Heat

Approved electives in biology, chemistry, earth science, or physics

With a major in physics, take the following courses:

AST 205 Principles of Astronomy, BIO 105 Biology and the Human Species, CHM 121 General Chemistry I, CHM 122 General Chemistry I Lab, GES 108 Earth Science, MTH 120 Calculus I

Approved electives in biology, chemistry, earth science, or mathematics

Approved electives: BIO 224 Principles of Conservation, CHM 123 General Chemistry II, CHM 124 General Chemistry II 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 MINOR

	Sem hours
Minor in physics	20-23
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 454 The Microcomputer in the Science Laboratory, PHY 456 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 Calculus I	4
MTH 121 Calculus II.....	4

PHYSICS COURSES

PHY 100 Science for Elementary

Teachers.

3 sem hours

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 sem hours

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 Mechanics, Sound, and Heat, PHY 222 Electricity and Light, or PHY 223 Mechanics, Sound, and Heat, PHY 224 Electricity and Light. Does not count toward a physics major or minor.

PHY 115 Physics in the Modern Home. 4 sem hours

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 sem hours

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 sem hours

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: Department permission

PHY 210 Musical Acoustics.

4 sem hours

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 sem hours
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 sem hours

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 sem hours

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 Mechanics, Sound, and Heat. 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 College Algebra, MTH 107 Plane Trigonometry, or a "B" average in high school mathematics through trigonometry.

PHY 222 Electricity and Light. 4 sem hours

A continuation of PHY 221 Mechanics, Sound, and Heat. Static and current electricity, magnetism, and light. Laboratory: two consecutive hours, one day per week.

Prereq: PHY 221 Mechanics, Sound, and Heat.

PHY 223 Mechanics, Sound, and Heat. 5 sem hours

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 and 121 Calculus I and II (MTH 121 may be taken concurrently).

PHY 224 Electricity and Light. 5 sem hours

A continuation of PHY 223 Mechanics, Sound, and Heat. Static and current electricity, magnetism, and light. Laboratory: two consecutive hours, one day per week.

Prereq: PHY 223 Mechanics, Sound, and Heat.

PHY 229 Strength and Elasticity of

Materials.

4 sem hours

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 Mechanics, Sound, and Heat.

PHY 230 Engineering Dynamics. 4 sem hours

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 Mechanics, Sound, and Heat, MTH 121 Calculus II, MTH 122 Elementary Linear Algebra.

PHY 256 Introduction to Electronics. 3 sem hours

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 College Algebra.

PHY 277, 278, 279 Special Topics in

Physics. 1, 2, 3 sem hours

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: Department permission.

PHY 296 Science in Science Fiction. 3 sem hours

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 sem hours

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 sem hours

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 sem hours

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 Electricity and Light, MTH 121 Calculus II, MTH 122 Elementary Linear Algebra.

PHY 332 Mechanics Laboratory. 1 sem hour

A laboratory course providing experimental studies in intermediate mechanics. Three hours of laboratory per week.

Prereq: PHY 330 Intermediate Mechanics I; may be taken concurrently.

PHY 370 Introduction to Modern

Physics. 3 sem hours

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 Calculus I and PHY 222 Electricity and Light or PHY 224 Electricity and Light.

PHY 372 Modern Physics Laboratory. 1 sem hour

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 Introduction to Modern Physics; may be taken concurrently.

PHY 377, 378, 379 Special Topics in

Physics. 1, 2, 3 sem hours

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: Department permission.

PHY 387 Cooperative Education in

Physics. 3 sem hours

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 sem hours 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 sem hours

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 sem hour

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 Electricity and Light.

PHY 417 Undergraduate Research

Laboratory. 2 sem hours

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 sem hours
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: PHY 224 Electricity and Light and one physics course beyond that level.

PHY 431 Intermediate Mechanics II. 3 sem hours
A continuation of PHY 330 Intermediate Mechanics I. Mechanics of a rigid body, generalized coordinates, the Lagrangian and Hamiltonian functions, relative motion.
Prereq: PHY 330 Intermediate Mechanics I, MTH 223 Multivariable Calculus.

PHY 433 Robot Motions. 3 sem hours
This course provides an introduction to the kinematics, dynamics, and trajectory control of robot manipulators.
Prereq: PHY 330 Intermediate Mechanics I.

PHY 436 Vibration and Sound. 3 sem hours
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 or 223 Mechanics, Sound, and Heat; PHY 222 or 224 Electricity and Light; MTH 223 Multivariable Calculus.

PHY 440 Optics. 3 sem hours
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 or 223 Mechanics, Sound, and Heat; PHY 222 or 224 Electricity and Light; MTH 121 Calculus II.

PHY 442 Optics Laboratory. 1 sem hour
A laboratory course providing experimental studies in geometrical, physical, and quantum optics. Three hours of laboratory per week.
Prereq: PHY 440 Optics; may be taken concurrently.

PHY 450 Electricity and Magnetism. 4 sem hours
An intermediate course in the classical theory of electricity and magnetism. The concept of electric and magnetic fields from the historical force laws of Coulomb and Ampere, formulation of Maxwell's equations. Gauss' Law, conductors, dielectrics, magnetic susceptibility, magnetic fields of currents, Faraday's Law of Induction, and electromagnetic forces.
Prereq: PHY 221 or 223 Mechanics, Sound, and Heat; PHY 222 or 224 Electricity and Light; MTH 223 Multivariable Calculus.

PHY 452 Electrical Measurements. 4 sem hours
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 or 223 Mechanics, Sound, and Heat; PHY 222 or 224 Electricity and Light.

PHY 454 The Microcomputer in the Science Laboratory. 3 sem hours
An electronics course for students of all sciences. Microcomputers as devices for control of experiments and for acquisition and processing of laboratory data. Laboratory: three consecutive hours, one day per week.
Prereq: PHY 222 or 224 Electricity and Light or department permission.

PHY 456 Electronics. 4 sem hours
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 or 224 Electricity and Light and MTH 121 Calculus II.

PHY 460 Heat and Thermodynamics. 3 sem hours
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 221 or 223 Mechanics, Sound, and Heat; PHY 222 or 224 Electricity and Light; MTH 223 Multivariable Calculus.

PHY 462 Kinetic Theory and Statistical Mechanics. 3 sem hours
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 Electricity and Light, MTH 223 Multivariable Calculus.

PHY 463 Finite Element Analysis. 3 sem hours
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 Intermediate Mechanics I, CSC 137 Introduction to FORTRAN Programming or CSC 237

Computer Programming and Numeric Methods or ORI 215 Introduction to Business Information Systems.

PHY 471 Nuclear Physics. 4 sem hours
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 Introduction to Modern Physics and MTH 121 Calculus II.

PHY 475 Introduction to Quantum Mechanics. 3 sem hours
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 Schrodinger and Heisenberg equations to elementary systems, Pauli's theory of electron spin.
Prereq: PHY 370 Introduction to Modern Physics, MTH 223 Multivariable Calculus.

PHY 477, 478, 479 Special Topics in Physics. 1, 2, 3 sem hours
This special topics course will be used to teach aspects of physics at an advanced level that would not regularly be offered.

PHY 481 Mathematical Physics. 3 sem hours
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 Differential Equations and PHY 330 Intermediate Mechanics I.

PHY 485 Fluid Dynamics. 3 sem hours
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 Engineering Dynamics or PHY 330 Intermediate Mechanics I; PHY 460 Heat and Thermodynamics.

PHY 487 Cooperative Education in Physics. 3 sem hours
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 Cooperative Education in Physics. Admittance by application only.

PHY 490, 491 Special Problems (Honors Courses). 2 sem hours each
An original experimental or theoretical problem in some area of physics investigated on an individual basis. Ar-

rangements 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 sem hour
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 sem hours
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 sem hours
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 Astronomical Investigation may be taken concurrently with this course. Cannot be applied toward a physics major or minor.

AST 204 Astronomical Investigation. 1 sem hour
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 Exploration of the Universe or AST 205 Principles of Astronomy.

AST 205 Principles of Astronomy. 4 sem hours
An astronomy course for students desiring a comprehensive introduction to astronomy. Topics discussed in AST 203 Exploration of the Universe are covered in more detail and additional topics are introduced. Especially recommended for science students. AST 204 Astronomical Investigation 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 sem hours
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 sem hours
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 Principles of Astronomy, MTH 120 Calculus I (may be taken concurrently).

AST 370 Astronomical Concepts. 3 sem hours
Topics introduced in AST 205 Principles of Astronomy are discussed in a more rigorous fashion. Celestial mechanics, binary stars, and topics in astronomy and astrophysics also are presented.

Prereq: AST 205 Principles of Astronomy; PHY 223 Mechanics, Sound, and Heat; PHY 224 Electricity and Light (may be taken concurrently). MTH 120 Calculus I; MTH 121 Calculus II (may be taken concurrently).

AST 379 Special Topics. 3 sem hours
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 sem hours
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-Harrold
487-3113

Professors: Robert C. Grady, Benjamin T. Hourani, James D. Johnson, Karen E. Lindenberg, James S. Magee, Joseph F. Otren, Barnabas A. Racz, Leonas Sabalimas, 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

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. The 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 major in 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
Public administration
Public law and government

Minors:

Political science
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 three 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: Laura Reese
 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

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
Academic 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 Relations	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 Legislative Process	3
PLS 381 Public Policy Analysis	3
PLS 385 Judicial Process and Behavior	3
PLS 470 Seminar in Political Science	3
<i>Subgroup B: Group I other electives</i>	
PLS 301 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
<i>Group II—Comparative politics and international relations</i>	
PLS 341 International Law	3
PLS 342 International Organization	3
PLS 354 Government and Politics of Canada	3
PLS 361 Government and Politics of 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
<i>Group III—Political theory and methods</i>	
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 Advanced Political Thought	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.	

MAJOR IN PUBLIC ADMINISTRATION

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 and II
SOC 105 Introductory Sociology

	Sem hours
Academic 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 325 Expository Writing, 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

MAJOR IN PUBLIC LAW AND GOVERNMENT

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
Academic major in public law and government ..	36
1. Required courses	9
PLS 301 American Legal System	3
PLS 312 American Constitutional Law I or PLS 313 American Constitutional Law 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:	
<i>Group I—American politics and administration</i>	
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 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 Relations, PLS 342 International Organization, PLS 354 Government and Politics of Canada, PLS 361 Government and Politics of the U.S.S.R., PLS 367 Contemporary Political Systems of Latin America, PLS 371 Government and Politics of the Middle East, PLS 372 Government and Politics of Sub-Saharan Africa, PLS 374 Asian Political Systems, PLS 462 Foreign Relations 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 Advanced Political Thought, 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 Independent Study in Political Science, PLS 498 Independent Study in Political Science, PLS 499 Independent Study in Political Science

4. Cognate electives 6

Choose one course from each of the following two categories:

- HST 465 United States Constitutional History, PHI 355 Philosophy of Law
- SOC 412 Law and Society, CRM 460 Criminal Law II

MINORS OFFERED IN THE DEPARTMENT OF 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.

POLITICAL SCIENCE

	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 Relations, 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 American Legal System.....	3
Choose one course from the following:	
PLS 312 American Constitutional Law I, PLS	
313 American Constitutional Law II, PLS	
341 International Law, PLS 412	
Comparative Legal Systems	3
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:	
HST 465 United States Constitutional History	
LAW 403 Employment Law, LAW 479 Special	
Topics in Business Law	
PHI 355 Philosophy of Law	
SOC 412 Law and Society, CRM 460 Criminal	
Law II	

PRE-PROFESSIONAL PROGRAM

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 sem hours
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 American Government Honors.

PLS 113 American Government Honors. 3 sem hours
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 sem hours
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 American Government or PLS 113 American Government Honors, or department permission.

PLS 210 Introduction to Political Analysis. 3 sem hours
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 American Government or PLS 113 American Government Honors.

PLS 211 Introduction to Comparative Government. 3 sem hours

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 American Government or PLS 113 American Government Honors.

PLS 212 Introduction to International Relations. 3 sem hours

The fundamentals of great power politics, the impact of efforts at international organization.

Prereq: PLS 112 American Government or PLS 113 American Government Honors.

PLS 213 Introduction to Political Thought. 3 sem hours

The nature, structure, and purposes of political theory. 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 American Government or PLS 113 American Government Honors.

PLS 216 Municipal Government. 3 sem hours

A study of forms and functions of municipal government.

Prereq: PLS 112 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 270 Public Administration. 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 277, 278, 279 Special Topics in Political Science. 1, 2, 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 280 The American Presidency. 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 297, 298, 299 Independent Study in Political Science. 1, 2, 3 sem hours

Approved studies on an individual basis in areas in which the department does not offer formal courses.

Prereq: PLS 112 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 301 The American Legal System. 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 308 Political Violence and Revolution. 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 310 Methods of Political Research. 3 sem hours

Acquaints students with philosophic and methodological problems and analytic techniques in the study of politics.

Prereq: PLS 112 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 312 American Constitutional Law I. 3 sem hours**PLS 313 American Constitutional Law II.** 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 315 Consumer Law and Politics. 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 327 American Foreign Policy**Process. 3 sem hours**

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 American Government or PLS 113 American Government Honors.

PLS 330 Urban Politics. 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 332 Intergovernmental Relations and Federalism. 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 334 Personnel Administration in Government. 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 335 Labor in American Politics. 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 341 International Law. 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 342 International Organization. 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 352 Politics of Government**Budgeting. 3 sem hours**

An analysis of the political significance and the procedures of governmental budgeting in the United States.

Prereq: PLS 112 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 354 Government and Politics of Canada. 3 sem hours

Analysis of the Canadian political system in terms of historical background; political environment; constitutional structure; legislative, executive, and judicial processes; political parties and pressure groups; public opinion and voting behavior; political problems and trends.

Prereq: PLS 112 American Government or PLS 113 American Government Honors.

PLS 358 Parties, Elections, and Interest Groups. 3 sem hours

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 American Government or PLS 113 American Government Honors.

PLS 359 Public Opinion and Propaganda. 3 sem hours

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 American Government or PLS 113 American Government Honors.

PLS 361 Government and Politics of the U.S.S.R. 3 sem hours

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 364 The Legislative Process. 3 sem hours

A study of the agencies, procedures, and influences in the formation of public policy by Congress, state legislatures, and administrative agencies.

Prereq: PLS 112 American Government or PLS 113 American Government Honors.

PLS 365 Women and Politics. 3 sem hours
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 American Government or PLS 113 American Government Honors.

PLS 367 Contemporary Political Systems of Latin America. 3 sem hours
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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 371 Government and Politics of the Middle East. 3 sem hours
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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 372 Government and Politics of Sub-Saharan Africa. 3 sem hours
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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 374 Asian Political Systems. 3 sem hours
A study of the politics and government of China, Japan, the Mainland Southeast Asian states, Indonesia, and India.

Prereq: PLS 112 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 377, 378, 379 Special Topics in Political Science. 1, 2, 3 sem hours
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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 381 Public Policy Analysis. 3 sem hours
An advanced course in public administration dealing with modern administrative techniques, budget analysis, the politics of resource allocation, and regulatory problems.

Prereq: PLS 270 Public Administration.

PLS 382 Politics and the 21st Century. 3 sem hours
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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 385 Judicial Process and Behavior. 3 sem hours
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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 387 Cooperative Education in Political Science. 3 sem hours
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 sem hours
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 sem hours
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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 418 20th Century Political Theory.**3 sem hours**

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 American Government or PLS 113 American Government Honors.

PLS 420 Advanced Political Thought.**3 sem hours**

A study of the values emphasized in Western political thought and the role of the state in attaining or curtailing them. Examination of values such as justice, equality, rights, self-interest, community, and citizenship and their relationship to the state, authority, coercion, class, conflict, distribution of wealth, and the public interest.

Prereq: PLS 112 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 422 American Political Theory.**3 sem hours**

A concise survey of American political thought. The origins, growth, and present state of American political ideologies will be examined.

Prereq: PLS 112 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 431 Theories of Public Organization.**3 sem hours**

An introduction to theories of organization as related to public bureaucracies in a democratic political context.

Prereq: PLS 270 Public Administration or department permission.

PLS 456 Criminal Law I.**3 sem hours**

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 American Government or PLS 113 American Government Honors.

PLS 462 Foreign Relations of the Soviet Union.**3 sem hours**

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 American Government or PLS 202 State and Local Government.

PLS 470 Seminar in Political Science.**3 sem hours**

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 477, 478, 479 Special Topics in Political Science.**1, 2, 3 sem hours**

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 American Government or PLS 113 American Government Honors or PLS 202 State and Local Government.

PLS 480 Field Seminar in Political Science/Public Administration.**3 sem hours**

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 sem hours**

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 sem hours**

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 Cooperative Education in Political Science. Departmental recommendation required.

PLS 497, 498, 499 Independent Study in Political Science.**1, 2, 3 sem hours**

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
Acting 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, Murray Meisels, Jerry O'Dell, James Roff, Alida S. Westman, Zakhour I. Youssef

Associate Professors: Marilyn K. Bonem, Barbara E. Brackney, John L. McManus, Kenneth W. Rusiniak

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

Minor:

Psychology

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.

MAJOR IN PSYCHOLOGY

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
Academic major in psychology	30
1. Required courses	13-14
PSY 101 or PSY 102 General Psychology ...	3-4
PSY 205 Quantitative Methods in Psychology	3
PSY 301 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.	

MINOR OFFERED IN THE DEPARTMENT OF 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.

PSYCHOLOGY MINOR

	Sem hours
Minor in psychology	20
1. Required courses	3-4
PSY 101 or PSY 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 sem hours
Principles, theories, and methods evolving from the scientific analysis of behavior. This or PSY 102 General Psychology is a prerequisite to all other courses. Not open to those who have earned credit in PSY 102.

PSY 102 General Psychology. 4 sem hours
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 General Psychology.

PSY 203 Self-analysis and Control. 3 sem hours
Behavioral principles and techniques that can be applied to behavioral self-analysis and self-management. Student-initiated self-improvement projects encouraged.
Prereq: PSY 101 General Psychology or PSY 102 General Psychology.

PSY 205 Quantitative Methods in Psychology. 3 sem hours
Basic concepts and methods used in the analysis of psychological data. Methods of describing and drawing inferences from sets of data.
Prereq: PSY 101 General Psychology or PSY 102 General Psychology, and MTH 104 Intermediate Algebra or equivalent.

PSY 207 Psychology of Adjustment. 3 sem hours
Systematic presentation of issues, concepts, principles, and theories of human adjustment.
Prereq: PSY 101 General Psychology or PSY 102 General Psychology.

PSY 225 Psychology of Religion. 3 sem hours
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 101 General Psychology or PSY 102 General Psychology.

PSY 240 Psychology of Sex. 3 sem hours
Survey of the psychological research concerned with human sexuality from a psychological point of view with an emphasis on research findings.
Prereq: PSY 101 General Psychology or PSY 102 General Psychology.

PSY 242 Psychology of Women. 3 sem hours
Theories and empirical research concerning personality development in females. Examination of the origins of the behavior of women.
Prereq: PSY 101 General Psychology or PSY 102 General Psychology.

PSY 301 Introductory Experimental Psychology. 4 sem hours
Design, control, and measurement techniques employed in the scientific investigation of behavior; e.g., motivation, emotion, perception, and learning.
Prereq: PSY 205 Quantitative Methods in Psychology.

PSY 304 Learning. 3 sem hours
Includes learning theories and empirical research as developed by Thorndike, Guthrie, Tolman, Hull, Skinner, Mowrer, and others, plus selected contemporary topics.
Prereq: PSY 301 Introductory Experimental Psychology.

PSY 309 Social Psychology. 3 sem hours
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 in-

dividual behavior. Not open to those with credit in SOC 308 Social Psychology.
Prereq: SOC 105 Introductory Sociology, and PSY 101 General Psychology or PSY 102 General Psychology.

PSY 321 Child Psychology. 3 sem hours
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. Developmental trends. Not open to students in early elementary education curriculum.
Prereq: PSY 101 General Psychology or PSY 102 General Psychology.

PSY 322 Psychology of Adolescence. 3 sem hours
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 101 General Psychology or PSY 102 General Psychology.

PSY 323 Psychology of Human Aging. 3 sem hours
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 101 General Psychology or PSY 102 General Psychology.

PSY 330 The Psychology of Contemporary Issues. 3 sem hours
The application of psychological principles and methodology to selected contemporary world problems such as arms control, disarmament, and cybernetics.
Prereq: PSY 101 General Psychology or PSY 102 General Psychology.

PSY 340 Psychological Perspectives on Prejudice and Discrimination. 3 sem hours
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 101 General Psychology or PSY 102 General Psychology, and sophomore standing.

PSY 350 Environmental Psychology. 3 sem hours
The psychological effects of various environmental settings and configurations on human behavior. Selected qualities of architectural spaces, urban environments, and natural settings.
Prereq: PSY 101 General Psychology or PSY 102 General Psychology.

PSY 351 Industrial Psychology. 3 sem hours
Applications of psychological methods and principles to industrial problems.
Prereq: PSY 101 General Psychology or PSY 102 General Psychology, and junior or senior standing.

PSY 352 Psychological Testing and Evaluation.**3 sem hours**

Principles and theory of psychological testing. Introduction to evaluation, administration, and interpretation of group and individual tests used in diagnosis and prognosis.

Prereq: PSY 101 General Psychology or PSY 102 General Psychology, and junior or senior standing.

PSY 356 Motivation.**3 sem hours**

Review and analysis of research and theory on the determinants of the direction, persistence, and vigor of behavior.

Prereq: PSY 301 Introductory Experimental Psychology.

PSY 357 Sensation and Perception.**3 sem hours**

Analysis of the psychological literature relating to sensory and perceptual experience.

Prereq: PSY 301 Introductory Experimental Psychology.

PSY 358 Cognitive Processes.**3 sem hours**

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 Quantitative Methods in Psychology or equivalent.

PSY 360 Abnormal Psychology.**3 sem hours**

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 101 General Psychology or PSY 102 General Psychology, and junior or senior standing.

PSY 361 Psychotherapy.**3 sem hours**

Survey of therapeutic systems and research on psychotherapy.

Prereq: PSY 360 Abnormal Psychology.

PSY 362 The Psychology of Stress and Relaxation.**3 sem hours**

An introduction to the theoretical aspects of stress, stress reactions, stress assessment, stress management, and prevention.

Prereq: PSY 101 General Psychology or PSY 102 General Psychology.

PSY 365 Behavior Modification.**3 sem hours**

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 General Psychology or PSY 102 General Psychology.

PSY 366 Health Psychology/Behavioral Medicine.**3 sem hours**

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 General Psychology or PSY 102 General Psychology.

PSY 387 Cooperative Education in Psychology.**3 sem hours**

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 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 sem hours**

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 General Psychology or PSY 102 General Psychology, concurrent enrollment in a three-hour psychology class, and/or department permission.

PSY 397, 398, 399 Individual Reading in Psychology.**1, 2, 3 sem hours**

Supervised reading on psychological problems.

Prereq: PSY 101 General Psychology or PSY 102 General Psychology, and prior department approval of a planned reading program.

PSY 401 Honors Seminar: Contemporary Issues and Methods in Psychology.**3 sem hours**

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 Introductory Experimental Psychology.

PSY 445 Consumer Psychology.**2 sem hours**

A survey of psychological principles, theories, and methodology relating to consumer behavior.

Prereq: PSY 101 General Psychology or PSY 102 General Psychology.

PSY 448 Seminar in Psychology.**2 sem hours**

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 sem hours**

Analysis of research on variability between individuals and groups regarding intelligence, aptitudes, achievement, motivation, perception, and attitudes.

Prereq: PSY 101 General Psychology or PSY 102 General Psychology.

PSY 451 Dynamics of Personality. 3 sem hours
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 sem hours

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 sem hours

Analysis of the relationships among brain functions, physiological processes, and behavior. Open to junior and senior science majors with department permission.

Prereq: PSY 301 *Introductory Experimental Psychology*. *Recommended:* BIO 105 *Biology and the Human Species* or ZOO 222 *General Zoology*.

PSY 458 Comparative Animal Behavior. 3 sem hours

Modern solutions to the innate versus learned behavior controversy; species differences with respect to behavior and behavioral capacities.

Prereq: PSY 301 *Introductory Experimental Psychology*.

PSY 460 Psychology of Film. 3 sem hours

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 sem hours

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 *General Psychology* or PSY 102 *General Psychology*, and department permission.

PSY 487 Cooperative Education in Psychology. 3 sem hours

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 487) alternated with full-time attendance at the University.

Prereq: PSY 387 *Cooperative Education in Psychology* and department permission.

PSY 497, 498, 499 Individual Research in Psychology. 1, 2, 3 sem hours

Supervised investigation of psychological problems.

Prereq: PSY 205 *Quantitative Methods in Psychology* and department permission.

SOCIOLOGY, ANTHROPOLOGY, AND CRIMINOLOGY

Gregg Barak
Department Head
712 Pray-Harroid
487-0012

Professors: Gregg Barak, Patrick Easto, Allen S. Ehrlich, Werner J. Einstadter, 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, Stuart Henry, Mansoor Moaddel

Assistant Professors: Anthony Adams, 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

Minors:

Anthropology

Criminology and criminal justice

Sociology

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: Stuart Henry

Graduate criminology and criminal justice: Gregg Barak

Graduate sociology: Patricia Ryan

Graduate study leads to the master's degree in sociology or criminology and criminal justice. The M.A. and M.S. degrees are 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 curriculum 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 pages 32-36 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* or 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 412 Law and Society	3
CRM 447 Advanced Criminology	3
Research methods	6
SOC 250* Elementary Social Statistics [Area I. 4.]	3
SOC 304 Methods of Sociological Research	3

(Note: SOC 341 and 342 Quantitative Methods of Social Research I and II may be substituted for SOC 250 and SOC 304)

Sociology/Anthropology	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>	
*PHI 130 Introduction to Logic, PHI 355 Philosophy of Law, PLS 456 Criminal Law	9
<i>Choose one of the following courses:</i>	
PLS 364 The Legislative Process, PLS 385 Judicial Process and Behavior	3
<i>Choose three of the following courses:</i>	
CRM 460 Criminal Law II, CRM 488 Field Internship in Criminology and Criminal Justice	9
ANT 330 Anthropology of Law and Politics	
LAW 293 Legal Environment of Business, LAW 313 Legal Research	
BE 211 Introduction to Legal Assisting and Legal Terminology, BE 304 Legal Writing, Research, and Analysis I, BE 412 Court Documents and Michigan Rules of Courts	
CTC 357 Interviewing as Communication	
PLS 315 Consumer Law and Politics	
IT 213 Occupational Safety and Health	
Concentration (2): Law Enforcement	
<i>Take all of the following courses:</i>	
CRM 431 Police in Modern Society	15
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	
<i>Choose two of the following courses:</i>	
SOC 306 The Urban Community, SOC 448 Collective Behavior	6
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	
<i>Take all of the following courses:</i>	
CRM 430 Sociology of Corrections	15
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
 CTC 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
 CTC 357 Interviewing as Communication

MAJOR IN ANTHROPOLOGY

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

Academic 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 of the chair of the anthropology program:

LIN 401 Introduction to Linguistic Science
 Sociology courses at the 300-level or above

MAJOR IN SOCIOLOGY

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

Academic 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
 DEPARTMENT**

ANTHROPOLOGY MINOR

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 the chair of the anthropology program, sociology or criminology courses at the 300-level or above may be chosen.

CRIMINOLOGY/CRIMINAL JUSTICE MINOR

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 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 MINOR

	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 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 Introduction to 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 Introduction to 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 sem hours
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 sem hours
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 Introductory Sociology.

SOC 204 Marriage and Family. 3 sem hours
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 Introductory Sociology.

SOC 205 Minority Women in the United States. 3 sem hours
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 sem hours
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 Introductory Sociology or ANT 135 Introduction to Cultural Anthropology.

SOC 250 Social Statistics I. 3 sem hours
Introduction to the evaluation of empirical data and the organization of bivariate and univariate data using descriptive and inferential statistical techniques.

Prereq: SOC 105 Introductory Sociology and 1 1/2 years high school algebra or MTH 104 Intermediate Algebra.

**SOC 277, 278, 279 Current Topics in Sociology/
Sociology of Crime.** 1, 2, 3 sem hours

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 Introductory Sociology.

**SOC 303 Sociology of Childhood and
Youth.** 3 sem hours

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 Introductory Sociology.

**SOC 304 Methods in Sociological
Research.** 3 sem hours

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 sem hours

Ecological and social organization of urban life. The metropolitan trend in the United States and the social problems created by it.

Prereq: SOC 105 Introductory Sociology.

SOC 307 Industrial Sociology. 3 sem hours

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 Introductory Sociology.

SOC 308 Social Psychology. 3 sem hours

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 Social Psychology.

Prereq: SOC 105 Introductory Sociology and PSY 101 General Psychology.

SOC 309 Culture and Personality. 3 sem hours
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 Culture and Personality.

Prereq: SOC 105 Introductory Sociology or ANT 135 Introduction to Cultural Anthropology and PSY 101 General Psychology.

**SOC 310 Contemporary American Class
Structure.** 3 sem hours

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, government, religion, and recreation both with reference to the total system and to various racial and regional subsystems.

Prereq: SOC 105 Introductory Sociology.

SOC 311 Social Gerontology. 3 sem hours

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 Introductory Sociology.

SOC 312 Medical Sociology. 3 sem hours

Social behavior and social organization as factors in disease distribution. The sociological analysis of medical care, organization, and practitioners.

Prereq: SOC 105 Introductory Sociology and sophomore standing.

SOC 320 Sociology of Religion. 3 sem hours

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 Introductory Sociology or ANT 135 Introduction to Cultural Anthropology.

SOC 334 Population. 3 sem hours

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 Introductory Sociology or department permission.

**SOC 335 The Study of Non-Primitive
Societies.** 3 sem hours

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 Introduction to Cultural Anthropology or equivalent and sophomore standing.

SOC 336 Social and Cultural Change. 3 sem hours
Survey of the theories and problems of change in developing and advanced societies. Not open to those with credit in ANT 336 Social and Cultural Change.
Prereq: ANT 135 Introduction to Cultural Anthropology or equivalent and sophomore standing.

SOC 341 Quantitative Methods of Social Research I. 3 sem hours
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 Quantitative Methods of Social Research II.
Prereq: SOC 105 Introductory Sociology, high school algebra or equivalent.

SOC 342 Quantitative Methods of Social Research II. 3 sem hours
Further review and applications of research methods and introduction to statistical inference. Not open to those with credit in SOC 250 Social Statistics I or SOC 304 Methods in Sociological Research.
Prereq: SOC 341 Quantitative Methods of Social Research I.

SOC 344 Sociology of Sex Roles. 3 sem hours
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 Introductory Sociology.

SOC 345 Field Methods in Community Studies. 3 sem hours
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 sem hours
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 sem hours
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 Introductory Sociology.

SOC/CRM 387 Cooperative Education I. 3 sem hours
Practical experience in industrial, business, or government settings to provide job skills. Credit/no credit.
Prereq: Twelve hours of sociology, six of which must be at the 300 level or above.

SOC 402 Group Dynamics. 3 sem hours
Structure and interaction processes of small groups. Cohesiveness, group standards, conformity and deviance, leadership, group emotion, communication, group roles, and sociometrics.
Prereq: SOC 105 Introductory Sociology or PSY 101 General Psychology.

SOC 403 Modern Sociological Theory. 3 sem hours
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. Normally offered during winter term only.
Prereq: Three courses in sociology and junior standing.

SOC 405 Honors Seminar. 3 sem hours
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 sem hours
Law as a social and cultural product; the interrelationships between law and social institutions.
Prereq: SOC 105 Introductory Sociology.

SOC 440 Sociology of Technology. 3 sem hours
A study of social factors involved in the creation, innovation, distribution, evaluation, and social effects of technology.
Prereq: SOC 105 Introductory Sociology.

SOC 448 Collective Behavior. 3 sem hours
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 Introductory Sociology.

SOC 450 The Family. 3 sem hours
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 Introductory Sociology or ANT 135 Introduction to Cultural Anthropology.

SOC 451 Sociology of Work and Occupations. 3 sem hours
Social aspects of work. Recruitment, career patterns, professionalization, sociology of the workplace and labor force.
Prereq: SOC 105 Introductory Sociology.

SOC 462 Complex Organizations. 3 sem hours
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 Introductory Sociology.

SOC 477, 478, 479 Current Topics in Sociology. 1, 2, 3 sem hours
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 Introductory Sociology.

SOC/CRM 487 Cooperative Education II. 3 sem hours
Practical experience in industrial, business, or government settings to provide job skills. Credit/no credit.
Prereq: SOC/CRM 387 Cooperative Education I.

ANTHROPOLOGY COURSES

ANT 135 Introduction to Cultural Anthropology. 3 sem hours
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 sem hours
A survey of the evolution of human societies using materials from primate studies, early man, and archeological findings.
Prereq: ANT 135 Introduction to Cultural Anthropology.

ANT 150 Introductory Archeology. 3 sem hours
A general survey of the field of archeology; the methodologies and analyses employed in the study of prehistoric cultures.
Prereq: ANT 135 Introduction to Cultural Anthropology.

ANT 205 Minority Women in the United States. 3 sem hours
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 sem hours
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 Introductory Sociology or ANT 135 Introduction to Cultural Anthropology.

ANT 233 Peoples and Cultures of Mexico. 3 sem hours
A regional, historical, and topical survey of Mexican cultures.
Prereq: ANT 135 Introduction to Cultural Anthropology.

ANT 234 Peoples and Cultures of Latin America. 3 sem hours
Regional, historical, and topical survey of Latin American cultures.
Prereq: ANT 135 Introduction to Cultural Anthropology.

ANT 236 Peoples and Cultures of Africa. 3 sem hours
Regional, historical, and topical survey of African cultures.
Prereq: ANT 135 Introduction to Cultural Anthropology.

ANT 237 Indians of North America. 3 sem hours
Regional, historical, and topical survey of aboriginal North American cultures.
Prereq: ANT 135 Introduction to Cultural Anthropology or department permission.

ANT 245 Culture of Japan. 3 sem hours
A historical and topical survey of Japanese culture.
Prereq: ANT 135 Introduction to Cultural Anthropology or department permission.

ANT 248 Peoples and Cultures of the Pacific. 3 sem hours
A regional, historical, and topical survey of aboriginal Pacific cultures.
Prereq: ANT 135 Introduction to Cultural Anthropology.

ANT 277, 278, 279 Current Topics in Anthropology. 1, 2, 3 sem hours
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 Introduction to Cultural Anthropology.

ANT 309 Culture and Personality. 3 sem hours
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 Culture and Personality.
Prereq: SOC 105 Introductory Sociology or ANT 135 Introduction to Cultural Anthropology and PSY 101 General Psychology.

ANT 329 Medical Anthropology. 3 sem hours
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 Introduction to Cultural Anthropology or department permission.

ANT 330 Anthropology of Law and Politics.**3 sem hours**

Comparative study of political systems in primitive and peasant societies, local-level politics, government, and law; examined from an anthropological perspective.

Prereq: ANT 135 Introduction to Cultural Anthropology and sophomore standing.

ANT 335 The Study of Non-Primitive Societies.**3 sem hours**

An analysis 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 Introduction to Cultural Anthropology or equivalent and sophomore standing.

ANT 336 Social and Cultural Change.**3 sem hours**

A survey of the theories and problems of change in developing and advanced societies. Not open to those with credit in SOC 336 Social and Cultural Change.

Prereq: ANT 135 Introduction to Cultural Anthropology or equivalent and sophomore standing.

ANT 338 Anthropology of Religion.**3 sem hours**

The anthropological study of religious belief and ritual in primitive and peasant societies.

Prereq: ANT 135 Introduction to Cultural Anthropology and sophomore standing.

ANT 339 Economic Anthropology.**3 sem hours**

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 Introduction to Cultural Anthropology and sophomore standing.

ANT 340 Language and Culture.**3 sem hours**

A study of the relation of language to social behavior and modes of thought in unilingual and multilingual speech communities.

Prereq: ANT 135 Introduction to Cultural Anthropology or LYN 201 An Introduction to Linguistics and sophomore standing.

ANT 345 Field Methods in Community Studies.**3 sem hours**

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 sem hours**

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 Introduction to Cultural Anthropology.

ANT 360 Cultural Ecology.**3 sem hours**

The comparative study of patterns and processes of societal adaptation to the physical environment and to contacts with other societies at various levels of sociopolitical organization.

Prereq: ANT 135 Introduction to Cultural Anthropology.

ANT 377, 378, 379 Current Topics in**Anthropology.****1, 2, 3 sem hours**

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 Introduction to Cultural Anthropology.

ANT 387 Cooperative Education I.**3 sem hours**

Practical experience in industrial, business, or government settings that provides job skills.

Prereq: Twelve hours of anthropology, six of which must be at the 300 level or above.

ANT 437 Kinship and Social**Structure.****3 sem hours**

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 sem hours**

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 Introduction to Cultural Anthropology and ANT 140 Introduction to Prehistoric Anthropology.

ANT 441 Seminar in Anthropology.**3 sem hours**

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 sem hours**

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 Introduction to Cultural Anthropology.

ANT 487 Cooperative Education II.**3 sem hours**

Practical experience in industrial, business, or government settings that provides job skills.

Prereq: ANT 387 Cooperative Education I.

ANT 497, 498, 499 Individual Reading and Research in Anthropology. 1, 2, 3 sem hours
Directed reading and research on problems within the field of anthropology.

Prereq: ANT 135 Introduction to Cultural Anthropology and department permission.

CRIMINOLOGY COURSES *

CRM 354 Juvenile Delinquency. 3 sem hours
The nature, incidence, and measurement of juvenile delinquency; theories and causation; juvenile justice philosophies and treatment methods.

Prereq: SOC 105 Introductory Sociology. Not open to freshmen.

CRM 370 Corporate and White Collar Crime. 3 sem hours

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 Introductory Sociology.

CRM 371 Criminology. 3 sem hours
The nature, incidence, and prevalence of crime. Theory of crime and delinquency causation.

Prereq: SOC 105 Introductory Sociology or junior standing.

CRM 372 Criminal Justice in Contemporary Society. 3 sem hours

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 Introductory Sociology or junior standing.

CRM 377, 378, 379 Current Topics in Criminology. 1, 2, 3 sem hours

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 Introductory Sociology.

CRM/SOC 387 Cooperative Education I. 3 sem hours

Practical experience in industrial, business, or government settings to provide job skills. Offered on a graded 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 sem hours
Law as a social and cultural product; the interrelationships between law and social institutions.

Prereq: SOC 105 Introductory Sociology.

CRM 430 Sociology of Corrections. 3 sem hours
An examination of corrections/punishment in contemporary society, its historical development, structural de-

pendency, relationship to the system of justice, and problems of effectiveness.

Prereq: CRM 372 Criminal Justice in Contemporary Society.

CRM 431 Police in Modern Society. 3 sem hours

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 Criminal Justice in Contemporary Society.

CRM 447 Advanced Criminology. 3 sem hours

An intensive analysis of selected problems in criminology; the application of criminology to policies and programs of crime prevention and control.

Prereq: CRM 371 Criminology or CRM 506 Criminology and CRM 372 Criminal Justice in Contemporary Society or CRM 507 Criminal Justice in Contemporary Society; or department permission.

CRM 460 Criminal Law II. 3 sem hours

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 sem hours

Practical experience in industrial, business, or government settings to provide job skills. Offered on a graded credit/no credit basis.

Prereq: CRM/SOC 387 Cooperative Education I.

CRM 488, 489 Field Internship in Criminology and Criminal Justice. 3 sem hours 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 Criminology, CRM 372 Criminal Justice in Contemporary Society 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 sem hours

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

Margaret Crouch
Director
720 Pray-Harrold
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

Assistant Professors: Betty Barber, Deborah Figart, Kate Mehuron, Alexandra Norton, Francille Wilson

Instructors: Barbara Bilg , Elisabeth Dauemer, Christina Jose Kampfner, 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:

Margaret Crouch

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:	
HST 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, HST 336 History of Women in the United States and Great Britain, ANT 355 Anthropology of Women, PLS 365 Women	

and Politics, SFD 402 Sexism and Education, PED 405 Women in Sport, IDT 420 Women in Technology, FA 436 Women in Art

WOMEN'S STUDIES COURSES

WMS 200 Introduction to Women's Studies. 3 sem hours
 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. 3 sem hours
 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. 2, 3 sem hours
 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, 487 Cooperative Education I and II. 3 sem hours each
 These courses provide students with an opportunity to deal directly with issues affecting women by working with agencies and local organizations.
Prereq for WMS 387: 12 hours of previous coursework in women's studies. Prereq for WMS 487: WMS 387

WMS 478, 479 Special Topics. 2, 3 sem hours
 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 497, 498, 499 Independent Study in Women's Studies. 1, 2, 3 sem hours
 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

Programs of Study and Course Descriptions

Dean: Stewart L. Tubbs
Associate Dean: Elton A. Devine
Dean's Office: 473 Gary M. Owen Building
487-4140/487-4141

DEPARTMENTS AND PROGRAMS

Accounting
Finance
Management
Marketing
Operations Research and Information Systems

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 10 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
10. Real Estate

**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 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 University's Undergraduate Admissions Office or by contacting 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. CTS 121 or 124 Fundamentals of Speech
3. A language or communication elective
4. MTH 118 and 119 Mathematical Analysis for Social Sciences I and II or MTH 120 Calculus I and MTH 122 Elementary Linear Algebra
5. ECO 201 and 202 Principles of Economics I and II
6. PLS 112 or 113 American Government or PLS 202 State and Local Government
7. Philosophy or religion (logic or ethics strongly recommended)
8. PSY 101 or 102 General Psychology
9. ACC 240 and 241 Principles of Accounting
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	
<i>Mathematics*</i>	
<i>Option I**</i>	
MTH 118 Mathematical Analysis for Social Science I	3
MTH 119 Mathematical Analysis for Social Science II	3
or	
<i>Option II***</i>	
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 and ECO 202 Principles of Economics I and 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	6
MGT 202 Business Communication	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 465 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 I 18 Mathematical Analysis for Social Sciences I or MTH I 22 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

HST 103 Twentieth Century Civilization or HST 101 or 102 Western Civilization.

ECO 201 and 202 Principles of Economics I and 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 10.

2. Specialized studies in language and the social sciences language component (FRN, GER, JPN, or SPN) 18*

FRN, GER, JPN, or SPN 343 Composition

FRN, GER, JPN, or SPN 361 for International Trade Business FRN, GER, JPN, or SPN 446/447

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/HST 316 History and Geography of Modern Europe or GEO/HST 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 Relations, PLS 341 International Law, PLS 342 International Organization, 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 Communication 3

ORI 215 End-User Computing 3
(satisfies computer literacy requirement)

ORI 265 Business Statistics I 3

ACC 240 and 241 Principles of Accounting 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

*b. Choose two restricted electives from world business courses*** 3-6

MKT 375 International Transportation Operations 3

MGT 492 Managing World Business Communications..... 3

MGT 495 International Management 3

FIN 370 International 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

*Some 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 sem hours
Team-taught current topics related to career preparation for business and industry.

AAD 179 Academics, Affiliation, and Achievement 3 sem hours
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 Cianciolo, E. A. Devine, Chandu P. Pathak, Mohsen Sharifi

Associate Professors: George S. Clark, John W. Keros, D. Robert Okopny, Andrew Snyir

Assistant Professors: Amelia A. Baldwin Morgan, Linda J. Burilovich, Susan C. Kattelus, Zafar Khan, Geraldine M. Kruse, Gary B. McCombs, Sue Ravenscroft, 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.

MAJOR IN ACCOUNTING

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 238)	
Academic major in accounting	24
ACC 340 Intermediate Accounting	3
ACC 341 Intermediate Accounting	3
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	
<i>Note:</i> Students planning on sitting for the CPA examination in Michigan should elect ACC 346 Governmental Accounting or ACC 440 Advanced Accounting.	

MAJOR IN ACCOUNTING INFORMATION SYSTEMS

Accounting information systems is a four-year program designed to provide a bachelor's degree with a concentration in accounting and computer-based infor-

mation 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	36
information systems	36
ACC 340 Intermediate Accounting I	3
ACC 341 Intermediate Accounting II	3
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	0
Students may elect courses in other areas of interest	
<i>Note:</i> Students planning on sitting for the CPA examination in Michigan should elect ACC 346 Governmental Accounting or ACC 440 Advanced Accounting.	

ACCOUNTING MINOR

	Sem hours
Minor in accounting (for non-business majors)	21
1. Required courses	12
ACC 240, 241 Principles of Accounting	6
ACC 340, 341 Intermediate Accounting	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, 475 International Accounting

ACCOUNTING COURSES

ACC 130 Accounting for Non-Business

Majors. 3 sem hours
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. 3 sem hours
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. 3 sem hours
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 Principles of Accounting.

ACC 244 Personal Tax Accounting. 2 sem hours
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 Tax Accounting. (Business education majors may substitute this course for ACC 344 with permission of their department head.)
Prereq: ACC 240 Principles of Accounting or junior standing.

ACC 246 Accounting for Public Administrators. 3 sem hours
Surveys the use of accounting to manage a public organization. Basic accounting principles, program budgeting, and the construction of internal control systems.

ACC 287, 288 Cooperative Education in Accounting. 3 sem hours
One term of full-time employment at a business or public organization in an accounting position 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. For ACC 288, completion of ACC 287.

ACC 340 Intermediate Accounting. Three sem hours
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 Principles of Accounting.

ACC 341 Intermediate Accounting. 3 sem hours
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 Intermediate Accounting.

ACC 342 Managerial Cost Accounting. 3 sem hours
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 Principles of Accounting.

ACC 344 Tax Accounting. 3 sem hours
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 Principles of Accounting.

ACC 346 Governmental Accounting. 3 sem hours
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 Principles of Accounting.

ACC 356 Accounting Information Systems. 3 sem hours
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 End-User Computing and ACC 342 Managerial Cost Accounting or department permission.

ACC 440 Advanced Accounting. 3 sem hours
Consolidation accounting; partnership organization, change, and liquidation; fiduciary accounting; introduction to governmental accounting.
Prereq: ACC 341 Intermediate Accounting.

ACC 442 Advanced Cost Accounting. 3 sem hours
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 Managerial Cost Accounting.

ACC 444 Advanced Tax Accounting. 3 sem hours
Tax law applicable to partnerships and corporations;
operation distributions, reorganization, and liquidation.
Prereq: ACC 344 Tax Accounting.

ACC 445 Auditing. 3 sem hours
Audit standards, professional responsibility, ethics, in-
ternal control evaluation, statistical sampling, and audit
of EDP systems.
*Prereq: 18 semester hours of accounting, including ACC
341 Intermediate Accounting and ACC 356 Accounting
Information Systems.*

**ACC 447 Contemporary CPA
Problems.** 3 sem hours
Analysis of current accounting problems faced by the
CPA profession. Audit, legal liability, ethics, theory,
and practice.
Prereq: ACC 440 Advanced Accounting.

ACC 448 EDP Auditing and Controls. 3 sem hours
A comprehensive coverage of electronic data process-
ing (EDP) auditing from both a theoretical and prag-
matic point of view with special emphasis on control
features of a system and its purpose.
*Prereq: ACC 356 Accounting Information Systems and
ACC 445 Auditing.*

ACC 450 Internal Auditing. 3 sem hours
Introduction to the profession of internal auditing. In-
cludes professional standards, techniques, scientific meth-
ods, reporting, operational auditing, and internal audit
management.
*Prereq: ACC 341 Intermediate Accounting or permis-
sion of instructor.*

ACC 451 Advanced Internal Auditing. 3 sem hours
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 Internal Auditing.

**ACC 456 Accounting Information Systems
Implementation and Projects.** 3 sem hours
A capstone course for the accounting information sys-
tems major designed to develop expertise in the imple-
mentation of an accounting information system.
*Prereq: ACC 356 Accounting Information Systems and
ORI 380 Database Concepts, or department permission.*

ACC 475 International Accounting. 3 sem hours
Introduction to accounting in an international environ-
ment. Includes the study of environmental factors, per-
formance evaluation, financial reporting, and specific
accounting and auditing problems.
*Prereq: ACC 341 Intermediate Accounting II and ACC
342 Managerial Cost Accounting or departmental per-
mission.*

ACC 479 Special Topics in Accounting. 3 sem hours
Specialized accounting topics in relation to changes in
the practice of accounting and its regulation by govern-
ment agencies.
Prereq: ACC 341 Intermediate Accounting.

ACC 489 Business Internship. 3 sem hours
Directed full-time work experience in the accounting
phase of business organization. This course may be
repeated once for additional credit. Graded credit/no
credit.
*Prereq: Department permission. To be used as an elec-
tive only; does not apply on a major or minor.*

ACC 491 Accounting Honors Thesis. 1 sem hour
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 upon completion of the thesis.
*Prereq: Final semester in undergraduate accounting
Honors Program. Not to be used as a required or re-
stricted accounting elective.*

ACC 499 Directed Studies. 3 sem hours
Directed study of a problem or group of problems in
accounting not otherwise treated in departmental courses.
Prereq: Department permission.

FINANCE

Asrat Tessema
 Department Head
 404 Gary M. Owen Building
 487-1232

Professors: Ramesh C. Garg, Asrat Tessema
Associate Professors: Alahassane Diallo, Ronald E. Hutchins, Susan Moeller, C. Wayne Weeks
Assistant Professors: Robert Kiss, Mahmud Rahman

The Department of Finance prepares students for professional careers related to the fields of finance and real estate. Within each of these major areas, 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 Advanced Business Statistics.

Programs of Study

Majors:

Finance
 Real estate

Minors:

Finance
 Real estate

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.

MAJOR IN FINANCE

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	56-60
Requirements (business administration core, page 238)	
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 341 Intermediate Accounting II	
ECO 445 Economics Fluctuations and Forecasting	
ORI 465 Business Statistics II	

MAJOR IN REAL ESTATE

Real Estate is a four-year program designed to provide a bachelor's degree in business administration with a concentration in real estate. A wide variety of professional opportunities exist in governmental, corporate, or entrepreneurial enterprises with many opportunities for further professionalization and/or advancement. The program is designed for students interested in a wide variety of opportunities in the sale, finance, investment, appraisal, development, management, syndication, etc. of residential, commercial, or industrial real estate.

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	56-60
Requirements (business administration core, page 238)	
Academic major in real estate	24
1. Required courses	12
RES 210 Real Estate Principles and Practices ...	3
RES 310 Real Estate Finance	3
RES 320 Real Estate Appraisal	3
RES 340 Real Estate Investments	3
2. Restricted electives	6
Choose two courses from the following:	
RES 420 Real Estate Brokerage, RES 430 Real Estate Property Management, RES 450 Property Development and Management, RES 479 Special Topics, FIN 479 Special Topics	
3. Restricted cognate electives	6
Choose two courses from the following:	
ACC 342 Managerial Cost Accounting, ACC 344 Tax Accounting	
GES 215 Land Use Planning	
LAW 455 Real Estate Law	
MGT 481 Small Business Management	
MKT 261 Contemporary Selling	
Any finance course beyond FIN 350	

MINORS OFFERED IN FINANCE

FINANCE MINOR

	Sem hours
Minor in finance (for non-business majors)	21
1. Required courses	12
ACC 240, 241 Principles of Accounting	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	

REAL ESTATE MINOR

	Sem hours
Minor in real estate (for non-business majors)	21
1. Required courses	12
ACC 240 Principles of Accounting	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 Brokerage, RES 430 Real Estate Property Management, RES 450 Property Development and Management	

FINANCE COURSES

FIN 287 Cooperative Education in Finance. 3 sem hours
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 Principles of Accounting and department permission.

FIN 350 Principles of Finance. 3 sem hours
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 Principles of Accounting and ORI 265 Business Statistics I.

FIN 352 Financial Management for Entrepreneurs. 3 sem hours
A continuation of FIN 350 Principles of Finance, 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 Principles of Finance.

FIN 354 Investments. 3 sem hours
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 Principles of Finance.

FIN 357 Financial Markets. 3 sem hours
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 Principles of Finance.

FIN 358 Analysis of Financial Statements. 3 sem hours
Analysis and interpretation of the financial statements and reports of various types of business and industries. Effect of price-level changes.
Prereq: FIN 350 Principles of Finance.

FIN 359 Intermediate Financial Theory. 3 sem hours
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 Principles of Finance.

FIN 370 International Business Finance. 3 sem hours
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 Principles of Finance.

FIN 387 Cooperative Education in Finance. 3 sem hours
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 Cooperative Education in Finance.

FIN 450 Problems in Financial Management. 3 sem hours
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 Intermediate Financial Theory.

FIN 451 Portfolio Management. 3 sem hours
An advanced course for professional investment managers covering economic policy and forecasting, security

valuation, technical analysis, and portfolio methods and procedures.

Prereq: FIN 354 Investments or equivalent.

FIN 453 Commercial Banking. 3 sem hours
Practices, policies, and problems of commercial bank management and operation, capital adequacy, loan and investment policy, liquidity and profit maximization.

Prereq: FIN 350 Principles of Finance.

FIN 479 Special Topics. 3 sem hours
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 sem hours
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 sem hours
Directed study of a problem or group of problems in finance.

Prereq: Department permission.

INSURANCE COURSES

INS 258 Personal Insurance Planning. 3 sem hours
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 sem hours
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 Principles of Accounting.

INS 457 Property and Liability Insurance. 3 sem hours
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 Introduction to Risk and Insurance.

INS 458 Life and Health Insurance. 3 sem hours
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 Introduction to Risk and Insurance.

INS 479 Special Topics. 3 sem hours
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 Property and Liability Insurance and INS 458 Life and Health Insurance.

REAL ESTATE COURSES

RES 210 Real Estate Principles and Practices. 3 sem hours
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 sem hours
Specialized real estate topics in relation to changes in regulations by government agencies.

Prereq: RES 210 Real Estate Principles and Practices.

RES 310 Real Estate Finance. 3 sem hours
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 Real Estate Principles and Practices and FIN 350 Principles of Finance or department permission.

RES 320 Real Estate Appraisal. 3 sem hours
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 Principles of Finance or department permission.

RES 340 Real Estate Investments. 3 sem hours
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 Principles of Finance or department permission.

RES 379 Special Topics. 3 sem hours
Case analysis of issues in real estate.

Prereq: RES 210 Real Estate Principles and Practices.

RES 387 Cooperative Education in Real Estate. 3 sem hours
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 Brokerage. 3 sem hours
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 Real Estate Principles and Practices or department permission.

RES 430 Real Estate Property Management. 3 sem hours
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 Real Estate Principles and Practices or department permission.

RES 450 Property Development and Management. 3 sem hours
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 Real Estate Finance or department permission.

RES 479 Special Topics. 3 sem hours
Emerging topics in the field of real estate.

Prereq: RES 210 Real Estate Principles and Practices

RES 487 Cooperative Education in Real Estate. 3 sem hours
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 Cooperative Education in Real Estate.

RES 499 Directed Studies in Real Estate. 3 sem hours
Directed study of a problem or group of problems in real estate.

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, Raymond E. Hill, Denise Hoyer, Gregory Huszczo, Jean McEnery, Floyd A. Patrick, Stewart L. Tubbs, John Waltman, Mary E. Vielhaber-Hermon

Associate Professors: Fraya Andrews, Pradeep Chowdhry, Robert P. Crouner, Jagdish Danak, David Victor

Assistant Professors: Nicholas Beltsos, Jean Bush-Bacelis, Deborah Ettington, Jack Nightingale

The Management Department seeks to prepare students for leadership roles in business and non-business organizations.

Its objectives are:

- To increase understanding and application of the behavioral sciences as related to planning and communication, organizational design and development, implementation, and performance measurement to maximize human output and self-fulfillment;
- To provide understanding of the roles and responsibilities of managers for assuming social and environmental obligations.

Programs of Study

Majors:

General business
 Management

General Business Concentrations:

Supervisory management
 Entrepreneurship

Management Concentrations:

Human resource management
 Management strategy and control

Minors:

General Business
 Management

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: Raymond E. Hill

Graduate study leads to the Master of Science degree in human resource management/organization development (HRM/OD). The HRM/OD degree program and courses are described in the Graduate Catalog.

MAJOR IN GENERAL BUSINESS

The general requirements for the Bachelor of Business Administration degree include a minimum of 124 semester hours for graduation as stipulated in the catalog.

Options are also available in supervisory management and in entrepreneurship. The supervisory management program provides the student with a functional background appropriate to first-level supervision. The entrepreneurship program develops an integrated set of skills that will provide a foundation upon which a new business venture can be started, managed, and developed.

Students who do not wish to specialize in one functional area of business may elect the general business major, programs for which may be tailored for general management and for executive development of the person currently employed.

	Sem hours
Practical arts	59
Requirements (business administration core, see College of Business section).	
A. Supervisory management option	24
1. <i>Required business courses</i>	<i>12</i>
MGT 360 Supervisory Theory and Practice	3
MGT 384 Human Resource Management	3
MGT 402 Business Report Writing or MGT 403 Managerial Communication	3
MGT 480 Management Responsibility and Ethics	3
2. <i>Restricted electives</i>	<i>12</i>
Choose 12 credits from the following:	
MGT 390 Introduction to Strategic Management, MGT 482 Compensation Administration, MGT 483 Staffing Organizations, MGT 484 Management-Union Relations, MGT 485 Human Resource Development, MGT 486 Organizational Development	
(In addition to the restricted electives noted above, up to six semester hours of other business courses as suggested below may be used to meet special occupational needs of the student in the supervisory management option. Department head approval is necessary for course substitutions not listed as part of this program. Only one 200-level course will be accepted as satisfying restricted electives in supervisory management)	
<i>Accounting and finance—Government and non-profit sectors:</i>	
ACC 246 Accounting for Public Administrators, ACC 346 Governmental Accounting	
LAW 479 Special Topics in Business	
<i>Accounting and finance—Banking:</i>	
FIN 358 Analysis of Financial Statements, FIN 453 Commercial Banking	
RES 210 Real Estate Principles or RES 310 Real Estate Finance or RES 340 Real Estate Investments	

Marketing and law:
MKT 261 Contemporary Selling, MKT 363 Retailing
LAW 403 Employment Law
Business education:
BE 395 Office Administration, BE 396 Records Administration
Operations research and information systems:
ORI 219 File Processing and COBOL Programming, ORI 390 Management Systems

B. Entrepreneurship option 24

1. Required courses 15

MGT 388 Introduction to Entrepreneurship 3
ACC 342 Managerial Cost Accounting 3
FIN 352 Financial Management for Entrepreneurs 3
MKT 473 Marketing and Product Innovation 3
ORI 474 Design of the Production/Operations System 3

2. Restricted electives 9

Students will choose nine hours of electives with assistance from a member of the Faculty Advisory Board of the entrepreneurship program. Up to three hours may be taken outside the College of Business if it clearly pertains to the student's goals. Students are strongly encouraged to take LAW 393 Law of Business Enterprises as one of their restricted electives. Those considering real estate are encouraged to investigate real estate courses.

C. Academic major in general business 24

1. Required business courses 9

ACC 342 Managerial Cost Accounting 3
MKT 368 Marketing Strategy 3
MGT 384 Human Resource Management 3

2. Restricted electives 15

Choose five courses, approved by the advising coordinator, from the following areas (a minimum of six hours must be at the 400 level from at least three of the following departments):
Accounting and Finance
Management
Marketing
Operations Research and Information Systems

MAJOR IN MANAGEMENT

The general requirements for the Bachelor of Business Administration degree include a minimum of 124 semester hours for graduation as stipulated in the catalog. Students majoring in management are provided career concentration choices in management strategy and control, and human resource management. Management strategy and control stresses goal formulation and implementation in the context of strategic planning and control. Human resource management focuses on utilizing human resources in business organizations with consideration of goals compatible with both individuals and organizations. Students are equipped for line supervisory and staff personnel assignments.

Sem hours

Practical arts 57
Requirements (business administration core, see College of Business section)

A. Management strategy and control option 24

1. Required business courses 12

MGT 390 Introduction to Strategic Management 3
MGT 384 Human Resource Management 3
MGT 480 Management Responsibility and Ethics 3
MGT 495 International Management 3

2. Restricted electives 12

Choose four courses from the following:
MGT 402 Report Writing or MGT 403 Managerial Communication, MGT 481 Small Business Management, MGT 486 Organizational Development
ORI 390 Management Systems
ACC 342 Managerial Cost Accounting
MKT 368 Marketing Strategy
FIN 354 Investments
LAW 403 Employment Law
RES 210 Real Estate Principles or RES 310 Real Estate Finance or RES 340 Real Estate Investments

B. Human resource management option 24

1. Required business courses 12

MGT 384 Human Resource Management 3
MGT 480 Management Responsibility and Ethics 3
MGT 486 Organizational Development 3
MGT 496 Human Resource Management 3

2. Restricted electives 12

Choose four courses from the following:
MGT 360 Supervisory Theory and Practice, MGT 402 Business Report Writing or MGT 403 Managerial Communication, MGT 482 Compensation Administration, MGT 483 Staffing Organizations, MGT 484 Management-Union Relations or LAW 403 Employment Law, MGT 485 Human Resource Development

MINORS OFFERED IN THE DEPARTMENT OF MANAGEMENT

GENERAL BUSINESS MINOR

Sem hours

General business minor (for non-business majors) 21

1. Required courses 9

ACC 240, 241 Principles of Accounting 6
LAW 293 Legal Environment of Business 3

2. Restricted electives 12

Choose four courses from the following:
FIN 350 Principles of Finance, FIN 352 Investments
LAW 393 Law of Business Enterprises
MGT 202 Business Communications, MGT 386 Organizational Behavior and Theory, MGT 402 Business Report Writing, MGT 403 Manage-

- rial 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 MINOR

	Sem hours
Management minor (for non-business majors)	21
1. Required courses	9
ACC 240 Principles of Accounting	3
MKT 360 Principles of Marketing	3
MGT 386 Organizational Behavior and Theory	3
2. Restricted electives	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 sem hours
 Study of principles, elements, and practices underlying administrative communication. The thinking and creative processes involved in problemsolving. The psychology, planning, and transmittal of business information.
Prereq: CTS 121 or 124 Fundamentals of Speech and ENG 121 English Composition.

MGT 278 Special Topics. 2 sem hours
 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 sem hours
 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 Human Resource Management. Does not apply toward management major or minor.
Prereq: Junior standing.

MGT 384 Human Resource Management. 3 sem hours
 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 sem hours
 The study of behavioral problems in administration. Individual, group, intergroup, and organizational behavior under dynamic environment conditions.

MGT 387 Cooperative Education in Management. 3 sem hours
 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 sem hours
 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 sem hours
 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 Organizational Behavior and Theory and FIN 350 Principles of Finance (FIN 350 may be taken concurrently).

MGT 402 Business Report Writing. 3 sem hours
 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 Business Communications.

MGT 403 Managerial Communication: Theory and Application. 3 sem hours
 A theoretical framework of key managerial communication concepts; skills used to diagnose communication problems and to communicate corporate policies.
Prereq: MGT 202 Business Communications. MGT 386 Organizational Behavior and Theory or department permission.

MGT 460 Supervision: Theory and Practice. 3 sem hours

A study of critical supervisory behaviors, such as performance appraisal, counseling and disciplining subordinates, communication, problem-solving, organizing, developing subordinates and others.

Prereq: MGT 386 Organizational Behavior and Theory and MGT 384 Human Resource Management.

MGT 479 Special Topics. 3 sem hours

Selected topics from the field of management.

Prereq: MGT 386 Organizational Behavior and Theory or department permission.

MGT 480 Management Responsibility and Ethics. 3 sem hours

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 sem hours

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 sem hours

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 Human Resource Management and MGT 386 Organizational Behavior and Theory or department permission.

MGT 483 Staffing Organizations. 3 sem hours

The staffing of organizations; skills needed in human resource planning, recruitment, job analysis, selection techniques, and evaluation.

Prereq: MGT 384 Human Resource Management.

MGT 484 Management-Union Relations. 3 sem hours

Management strategy and techniques for conducting effective management-union relationships and negotiations; contract administration for both industrial and non-industrial organizations.

Prereq: MGT 384 Human Resource Management and MGT 386 Organizational Behavior and Theory or department permission.

MGT 485 Human Resource Development. 3 sem hours

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 Human Resource Management or department permission.

MGT 486 Organizational Development. 3 sem hours

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 Organizational Behavior and Theory or department permission.

MGT 487 Cooperative Education in Management. 3 sem hours

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 Cooperative Education in Management.

MGT 488 Small Business Management Field Study. 3 sem hours

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 sem hours

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 sem hours

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 sem hours

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 Business Communication or department permission.

MGT 495 International Management. 3 sem hours
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 Organizational Behavior and Theory and senior standing or department permission.

MGT 496 Human Resource Management.

3 sem hours

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 Human Resource Management or permission of the department head.

MGT 497, 498, 499 Independent Study.

1, 2, 3 sem hours

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
Associate Professors: Albert W. Belskus, Thomas E. Buzas, Sam D. Fullerton, G. Russell Merz, Matthew H. Sauber, Gary M. Victor

Assistant Professors: Daryl L. Barton, Sandra J. Defebaugh, 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

Minor:

Marketing

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.

MAJOR IN MARKETING

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.

Practical arts 56-60
 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 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 Transportation Operations 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 Computer Augmented Statistics or ORI 465 Business Statistics II 3
- ECO 445 Economic Fluctuation and Trends 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 retailing concentration prepares students for careers as retail buyers, merchandising manag-

ers, 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.

MARKETING MINOR

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 3
 - MKT 360 Principles of Marketing 3
 - MGT 386 Organizational Behavior and Theory 3
2. **Restricted electives** 12
 Choose 12 credits from marketing courses.

MARKETING COURSES

MKT 261 Contemporary Selling. 3 sem hours
 The basic principles of personal selling applicable to any product and/or service; professional attitudes and performance.

MKT 287 Cooperative Education in Marketing. 3 sem hours
 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 sem hours
 Marketplace exchanges; the relationship between marketing activities of the organization and the consumer.

MKT 363 Retailing. 3 sem hours
 The practices of retail store management. Store location, layout, organization, buying systems, sales promotion activities, customer services, and store operating expenses. Prereq: *MKT 360 Principles of Marketing.*

MKT 364 Logistics and Materials Management. 3 sem hours
 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 Principles of Marketing.

MKT 365 Buyer Behavior. 3 sem hours

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 Principles of Marketing and PSY 101 General Psychology.

MKT 368 Marketing Strategy. 3 sem hours

Advanced policies and practices in marketing. Case analysis of marketing problems pertinent to product, price, promotion, and channels of distribution policies.

Prereq: MKT 360 Principles of Marketing and ACC 240 Principles of Accounting.

MKT 369 Advertising. 3 sem hours

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 Principles of Marketing.

MKT 374 Business to Business Marketing. 3 sem hours

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 Principles of Marketing.

MKT 375 International Business Transactions. 3 sem hours

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 sem hours

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 sem hours

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 Principles of Marketing.

MKT 461 Sales Management. 3 sem hours
Planning, organizing, directing, and controlling the sales force. Recruiting, selecting, training, evaluating, compensating, and supervising.

Prereq: MKT 261 Contemporary Selling and MKT 360 Principles of Marketing.

MKT 464 Purchasing Management. 3 sem hours

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 Principles of Marketing and FIN 350 Principles of Finance.

MKT 470 Marketing Research. 3 sem hours

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 Principles of Marketing and ORI 265 Business Statistics I.

MKT 473 Marketing and Product Innovation. 3 sem hours

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 Principles of Marketing.

MKT 474 Promotional Strategy. 3 sem hours

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 Advertising.

MKT 475 Marketing Planning and Management. 3 sem hours

Integration of concepts from previous marketing courses and planning the marketing program.

Prereq: MKT 368 Marketing Strategy and marketing major with senior standing or department permission.

MKT 478, 479 Special Topics in Marketing. 2, 3 sem hours

Selected marketing topics.

Prereq: Department permission.

MKT 487 Cooperative Education in Marketing. 3 sem hours

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 Cooperative Education in Marketing.

MKT 489 Internship Program. 3 sem hours
Approved marketing projects with business or non-profit organizations.

Prereq: Marketing major and department permission.

MKT 499 Independent Study. 3 sem hours
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 sem hours
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 sem hours
The performance of research on several actual legal problems.

Prereq: One law course.

LAW 393 Law of Business Enterprises. 3 sem hours
The law of forms of business enterprise and negotiable instruments. Agency, partnerships, corporations, and negotiable instruments.

Prereq: LAW 293 Legal Environment of Business or department permission.

LAW 403 Employment Law. 3 sem hours
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 Legal Environment of Business.

LAW 435 Law and Marketing. 3 sem hours
The influence of law on decision-making in marketing; antitrust and consumer protection issues.

Prereq: MKT 360 Principles of Marketing and LAW 293 Legal Environment of Business.

LAW 455 Real Estate Law. 3 sem hours
Legal principles involved in real estate. Evidence of title, deeds, financing, legal position of brokers, leases, zoning, real estate taxes.

Prereq: LAW 293 Legal Environment of Business or RES 210 Real Estate Principles and Practices.

LAW 479 Special Topics in Business Law. 3 sem hours
Selected business law issues and topics.

Prereq: LAW 293 Legal Environment of Business.

LAW 499 Independent Study. 3 sem hours
Directed study of a problem in business law not otherwise treated in department courses.

Prereq: Senior standing and department permission.

OPERATIONS RESEARCH AND INFORMATION SYSTEMS

V.M. Rao Tummala
 Department Head
 412 Gary M. Owen Building
 487-2454

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, Wayne C. Ellis, Roger Gledhill, Morrey Kramer, Hassan Mirshah, Stevan Mrdalj, Linda Woodland, Kenneth C. Young
Assistant Professors: Juan C. Esteva, Wafa Khorshid

ORIS prepares students for careers in business information systems, and production and operations management.

Programs of Study

Majors:

Business computer systems
 Production/operations management

Minors:

Business computer systems
 Production/operations management

The ORIS and Accounting Departments jointly offer a program in accounting information systems. See Accounting Department section for the Bachelor of Business Administration program and course descriptions in accounting information systems.

Advising is provided by the faculty and is available in the department office from 9 a.m. to 3 p.m. Monday through Friday while school is in session or by appointment.

Advising Coordinator: V.M. Rao Tummala

Graduate study leads to the Master of Science degree in Information Systems (M.S.I.S.). The M.S.I.S. degree program and courses are described in the Graduate Catalog.

MAJOR IN BUSINESS COMPUTER SYSTEMS

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	56-60
Requirements (business administration core, see College of Business section).	
Academic major in business computer systems	30
1. Required courses	27
ORI219 File Processing and COBOL Programming	3
ORI247 Software Design and Programming in Business	3
ORI315 Applied Data Structures	3
ORI380 Database Concepts	3
ORI417 Systems Analysis and Design	3
ORI420 Business Data Communications and Computer Networks	3
ORI425 Software Engineering Management	3
ORI442 Information Resource Management	3
ORI449 Information Systems Development and Implementation Projects	3
2. Restricted electives	3
Choose one course from the following:	
ORI317 System Simulation, ORI413 Evaluation and Application of Computer Hardware, ORI416 Computer Operating Systems, ORI426 Advanced Structured COBOL Programming	
CSC239 Assembly and the Machine Language Programming	
IT431 Interactive Industrial Computer Graphics	

MAJOR IN PRODUCTION/OPERATIONS MANAGEMENT

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	56-60
Requirements (business administration core, page 238)	
Academic major in production/operations management	24
1. Required courses	15
ACC342 Managerial Cost Accounting	3
ORI473 Production Planning and Scheduling	3
ORI474 Design of the Production/Operations System	3
ORI475 Materials Management and Inventory Control	3

- 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 Introduction to Computer-Aided
 Design, IT 433 Advanced Topics in
 Computer-Aided Design, ORI 465 Applied
 Linear Statistical Models, MGT 484
 Management-Union Relations

**MINORS OFFERED IN THE DEPARTMENT
 OF OPERATIONS RESEARCH AND
 INFORMATION SYSTEMS**

BUSINESS COMPUTER SYSTEMS MINOR

	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 Programming	3
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	

**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

INFORMATION SYSTEMS COURSES

ORI 215 End-User Computing. 3 sem hours
 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 Mathematical Analysis for Social Sciences I.

ORI 219 File Processing and COBOL Programming. 3 sem hours
 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 End-User Computing.

ORI 247 Software Design and Programming in Business. 3 sem hours
 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 End-User Computing.

ORI 265 Business Statistics I. 3 sem hours
 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, regression and correlation analysis.
Prereq: MTH 118 Mathematical Analysis for Social Sciences I, MTH 119 Mathematical Analysis for Social Sciences II, ORI 215 End-User Computing.

ORI 280 Introduction to Expert Systems in Business. 3 sem hours
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 sem hours
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 Intermediate Algebra or equivalent.

ORI 315 Applied Data Structures. 3 sem hours
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 Software Design and Programming in Business.

ORI 317 System Simulation. 3 sem hours
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 End-User Computing and ORI 265 Business Statistics I.

ORI 367 Business Statistics II. 3 sem hours
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, simple and multiple regressions.
Prereq: ORI 265 Business Statistics I.

ORI 374 Production/Operations Management. 3 sem hours
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 Business Statistics I.

ORI 375 Object-Oriented Programming and Database. 3 sem hours
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 Applied Data Structures.

ORI 380 Database Concepts. 3 sem hours
Database concepts for large-scale information systems. Logical and physical designs for data element usage; database management systems.
Prereq: ORI 315 Applied Data Structures.

ORI 387 Cooperative Education in Operations Research. 3 sem hours
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 sem hours
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 Organizational Behavior and Theory.

ORI 410 Knowledge-Based Systems. 3 sem hours
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 application to several knowledge-based systems. Each student will design and implement several computer programs.
Prereq: ORI 315 Applied Data Structures.

ORI 413 Evaluation and Application of Computer Hardware. 3 sem hours
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 File Processing and COBOL Programming.

ORI 416 Computer Operating Systems. 3 sem hours
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 Applied Data Structures.

ORI 417 Systems Analysis and Design. 3 sem hours
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 File Processing and COBOL Programming and ORI 265 Business Statistics I.

ORI 420 Business Data Communications and Computer Networks. 3 sem hours
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 End-User Computing.

ORI 421 Pictorial Information Systems. 3 sem hours
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 Applied Data Structures.

ORI 425 Software Engineering Management. 3 sem hours
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 Systems Analysis and Design.

ORI 426 Advanced Structured COBOL Programming. 3 sem hours
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 File Processing and COBOL Programming.

ORI 428 Linear Programming. 3 sem hours
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 End-User Computing.

ORI 441 FORTRAN Programming Language. 1 sem hour
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 sem hours
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 Systems Analysis and Design.

ORI 447 Basic Assembly Language. 2 sem hours
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 End-User Computing or equivalent.

ORI 449 Information Systems Development and Implementation Projects. 3 sem hours
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 Systems Analysis and Design, ORI 420 Business Data Communications and Computer Networks, and ORI 380 Database Concepts.

ORI 465 Applied Linear Statistical Models. 3 sem hours

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 Business Statistics I.

ORI 473 Production Planning and Scheduling. 3 sem hours

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 End-User Computing, ORI 265 Business Statistics I, and ORI 374 Production/Operations Management.

ORI 474 Design of the Production/Operations System. 3 sem hours

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 End-User Computing, ORI 265 Business Statistics I, and ORI 374 Production/Operations Management.

ORI 475 Materials Management and Inventory Control. 3 sem hours

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 Production/Operations Management.

ORI 476 Statistical Quality Control. 3 sem hours

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 orga-

nizational frameworks needed for high quality production will be discussed.

Prereq: ORI 265 Business Statistics I.

ORI 479 Special Topics. 3 sem hours
Specialized studies in production/operations management and statistics.

Prereq: Department permission.

ORI 480 Production/Operations Management—A World Business View. 3 sem hours

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 sem hours

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 Cooperative Education in Operations Research.

ORI 489 Internship Program. 3 sem hours

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 sem hours

Directed study of a problem or group of problems in production systems or management science.

Prereq: Department permission.

COLLEGE OF EDUCATION

Programs of Study and Course Descriptions

Dean: Jerry H. Robbins
Acting Associate Dean: Donna M. Schmitt
Dean's Office: 117 Boone Hall
487-1414/487-1415

DEPARTMENTS AND PROGRAMS

Health, Physical Education, Recreation and Dance

Leadership and Counseling

Special Education

Teacher Education

COLLEGE OF EDUCATION

The College of Education includes the departments of Health, Physical Education, Recreation, and Dance; Leadership and Counseling; Special Education; and Teacher Education; the offices of Pre-Student Teaching and Student Teaching; and other organizational units.

The College's responsibilities with respect to undergraduate instruction include:

1. Selection, admission, advisement, and retention of students who are preparing for teaching certification;
2. Providing instruction in professional coursework for students preparing for teaching certification;
3. Placing and supervising pre-student teachers;
4. Placing and supervising student teachers;
5. Providing service courses for other colleges and departments of the University;
6. Providing specialized course work for students in curricula other than teacher education.

TEACHING FIELDS AVAILABLE

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.

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, home economics, industrial arts, industrial-vocational, mathematics, physics, political science, psychology, social science, sociology, Spanish, and speech.

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.

Special Education

In general, students 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.

ENDORSEMENTS

Students 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. The learning disabilities program is a graduate-level program only.

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 teaching curricula.

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).
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 EXPERIENCE

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. *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 Curriculum and Methods—Elementary, CUR 305 Curriculum and Methods Secondary, EDP 322 Human Development and Learning, SFD 328 Social Aspects of Teaching, or RDG 314 Teaching Reading in the Elementary School.

Majors in special education should consult their advisers or the pre-student teaching director concerning overlapping pre-clinical 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).
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. Register in the appropriate student teaching course (see course description).
6. Be a first-semester senior with the majority of major courses completed.
7. 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.
8. 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.

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 a 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.

STUDENT TEACHING 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 Human Development and Learning or EDP 325 Life Span Human

Growth and Development, RDG 314 Teaching Reading in the Elementary School, CUR 304 Curriculum and Methods Elementary, SFD 328 Social Aspects of Teaching, and MTH 381 Teaching of Mathematics K-6 (or appropriate substitutions).

Secondary--Completion of EDP 322 Human Development and Learning, CUR 305 Curriculum and Methods Secondary, SFD 328 Social Aspects of Teaching and completion of the special methods course in the major or minor (or appropriate substitutions).

EDU 492 Student Teaching 12 sem hours

EDU 493 Student Teaching 2 sem hours

For experienced, certified teachers.

Prerequisite: Permission from student teaching office.

EDU 494 Student Teaching 3 sem hours

For experienced, certified teachers.

Prerequisite: Permission from student teaching office.

EDU 495 Student Teaching 4 sem hours

Prerequisite: Permission from student teaching office.

EDU 496 Student Teaching 6 sem hours

Prerequisite: Permission from student teaching office.

EDU 497 Student Teaching 6 sem hours

Prerequisite: Credit toward certification in either EDU 496 or EDU 499 Student Teaching.

EDU 498 Student Teaching 5 sem hours

Prerequisite: Credit toward certification in either EDU 496 or EDU 499 Student Teaching.

EDU 499 Student Teaching 6 sem hours

Prerequisite: Permission from student teaching office.

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 Hemmelgarn, 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 Associations 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

Curricula:

Dance
Physical education
Recreation and park management
Sports medicine
Therapeutic recreation

Minors:

Athletic coaching
Dance
Health Education
Physical education for special education
Recreation and park management
Secondary physical education

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:

Curricula:

Teachers of 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 Classical Ballet Technique III	3
DAN 209 Classical Ballet Technique IV	3
DAN 245 Elements of Dance Composition	4
DAN 255 Dance Production	3
DAN 350 History of Dance	3
DAN 354 Methods and Materials in the	
Teaching of Dance	4
DAN 450 Advanced Dance Composition	4
DAN 455 Seminar in Dance	2
PEP 132 Modern Dance Technique III	3
PEP 150 Modern Dance Technique IV	3
PEP 320, 422, 423 Dance Workshop	4
Track requirements	
<i>Track one</i>	
EDP 325 Life Span Human Growth and	
Development	4
PED 200 Anatomy and Physiology	5
PED 204 Kinesiology	2
PED 209 Bio-Fitness	3
PSY 101 or PSY 102 General Psychology ...	3, 4
PSY 109 Social Psychology	3
PSY 360 Abnormal Psychology	3

PSY 361 Psychotherapy	3
REC 250 Fieldwork	1
PEP 231 Service Teaching	1
Choose one:	3
PSY 321 Child Psychology, PSY 322	
Psychology of Adolescence, PSY 325	
Psychology of Human Aging	
Choose one:	3
PSY 340 Psychology of Stress and	
Relaxation, PSY 365 Behavior	
Modification	

Electives	12-17
PED 334 Adapted Physical Education, REC	
200 Introduction to Recreational	
Therapy, MUS 103 Introduction to Music	
Therapy, CIR 326 Drama for the	
Handicapped	
Basic Studies	50
Dance Core	34-35
Track Requirements	34-35
Total	131-135

Track two

CTR 150 Introduction to Theatre	3
CTR 450 History of Theatre I	3
CTR 451 History of Theatre II	3
FA 101 Introduction to Art	3
FA 107 Art History Survey I	3
FA 108 Art History Survey II	3
PED 200 Anatomy and Physiology	5
PED 204 Kinesiology	2
PHI 310 Aesthetics	3
Electives	22-28
Basic Studies	50
Dance Core	34-35
Track Requirements	17-22
Total	124-130

Track three

CTO 102 Voice Development	1
CTR 158 Fundamentals of Acting	3
CTR 254 Stage Makeup	1
CTR 457 Tryouts and Auditions	1
CTR 461 Musical Theatre Acting	2
MUS 232 Voice Class	1
PED 200 Anatomy and Physiology	5
PED 204 Kinesiology	2
PEG 155 Jazz I	1
PEG 159 Tap Dancing	1
PEG 255 Jazz II	1
PEP 320 Dance Workshop	1
PEP 321 Dance Workshop	1
Electives	18-24
Basic Studies	50
Dance Core	35
Track Requirements	21
Total	124-130

Track four

DAN 478 Creative Dance for Children	2
PED 200 Anatomy and Physiology	5

PED 204 Kinesiology	2
PEG 102 Aerobic Dance	1
PEG 103 Couple, Square, and Ballroom Dancing	1
PEG 159 Tap Dancing	1
PEG 477 Intermediate Aerobics	1
PEP 331, 333 Service Teaching	2
Electives	9-14
Basic Studies	50
Dance Core	34-35
Track Requirements	15
Business or management minor	21
Total	124-130

Track five

DAN 478 Creative Dance for Children	2
HEC 202 Human Nutrition	2
HED 210 Standard American Red Cross First Aid	2
PED 200 Anatomy and Physiology	5
PED 204 Kinesiology	2
PED 209 Bio-fitness	2
PED 281 Motor Development	3
PED 310 Physiology of Human Performance	2
Electives	22-27
Basic Studies	50
Dance Core	34-35
Track Requirements	23
Total	130-135

**CURRICULUM FOR TEACHERS OF
PHYSICAL EDUCATION**

The physical education curriculum leads to the Bachelor of Science degree and a Secondary Provisional Certificate in teaching, with a K-12 endorsement. Students seeking certification must meet all requirements for entry into the College of Education before completing Group IV courses. The course of study requires completion of basic studies requirements, a minor in a secondary subject area of 20-24 hours, the physical education major of 47 hours, and Group IV professional education courses.

The course of study is uniquely designed to provide students with theoretical and practical knowledge of how to deliver physical education programming to students from kindergarten through grade 12. The Michigan Exemplary Physical Education Programs Project (MEPEPP) is used as a model, to enable students to develop exemplary physical education programs upon graduation. Students are provided with many pre-student teaching experiences with children of all ages and abilities. The methods of teaching courses provide information on the sequencing and presenting of a wide variety of activities found within public schools.

**PHYSICAL EDUCATION MAJOR
(TEACHING)**

	Sem hours
Symbolics and communication	14-15
Requirements 1, 2, 3, 4, and 5	
Science and technology	11-12
1. Recommend Physics or Chemistry	
2. Recommend BIO 105 Biology and the Human Species	
3. Require PSY 101 General Psychology	
Social science	12
Requirements 1, 2, 3, and 4	
Arts and humanities	12
Requirements 1, 2, 3, and 4	
Group IV Professional education	23
EDP 322 Human Development and Learning	4
RDG 311 Teaching of Reading	3
SFD 328 Social Aspects of Teaching	3
PED 367 Methods and Materials in Physical Education	3
PED 440 Tests and Measurement in Physical Education	2
EDU 495 Student Teaching (Elementary)	4
EDU 496 Student Teaching (Secondary)	4
Group VII Physical education academic core	19
HED 210 Red Cross First Aid	2
PED 200 Anatomy and Physiology	5
PED 204 Kinesiology	2
PED 240 History and Philosophy of Physical Education	2
PED 281 Motor Development	3
PED 300 Physiology of Exercise	3
PED 334 Adapted Physical Education	2
Academic electives	11
Select courses in consultation with academic adviser	
Methods of teaching activities	17
Students must complete the following courses designed to prepare the physical education major with the skills necessary to implement a quality physical education program. Completion of these courses does not fulfill the University activity requirement.	
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

Physical education activity courses	2
(Any two military science courses may be applied)	
Secondary teaching minor requirements	20
Total	141

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 226 Report and Research Writing	3
CTS 121 Fundamentals of Speech <i>or</i>	2
CTS 124 Fundamentals of Speech	3
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 Psychology or PSY 102 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
CTD 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

1. Required courses	43
REC 100 Introduction to Recreation/Leisure Service (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	43
REC 250, 251, 252, 253 Fieldwork	1
REC 210 Camping for Special Populations	2
REC 280 Camping	2
REC 330 Therapeutic Recreation: Substance Abusers (W, even years)	3
REC 477, 478, 479 Special Topics	1-3
REC/PED 481 Adapted Aquatics	2
MUS 224 Recreation Music	2
IE 152 Arts and Crafts	3
PED 421 Legal Aspects of Sports, 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
CTC 352 Communication in Negotiation	3
CTC 372 Assertive Communications	3
3. Activity courses	4
<i>Required:</i>	
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

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 226 Report and Research Writing	3
CTS 121 Fundamentals of Speech or	2
CTS 124 Fundamentals of Speech	3
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 or PSY 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
CTD 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 Leisure Studies (F, W)	3
REC 180 Activity Analysis and Adaptation (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 TR 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 TR (W-even years, 30 hours fieldwork)	3
REC 360 Recreation Program Planning (W)....	3
REC 365 Professional Preparation (W)	1
REC 400 TR Processes and Services (F)	3
REC 449 TR 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 Lifespan 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 TR for Substance Abuser (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	2
PED 334 Adapted Physical Education	2
PED 384 PE for the Visually and Hearing Impaired	1
PED 385 Special Olympics	3
PED 386 PE for the Mentally Impaired	1
PED 421 Legal Aspects of Sports, PE and Recreation	3
SGN 251 Education of Exceptional Children	2
CTC 226 Non-verbal Communication	3
CTD 326 Developmental Drama/Theater for Handicapped	2
MUS 103 Music Therapy	2
MUS 224 Recreation 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 146 Archery	1
PEG 148 Tennis	1
PEG 149 Badminton	1
PEG 150 Golf	1
PEG 151 Bowling	1
PEG 158 Folk Dance	1
Basic studies	50-52
Therapeutic recreation major	58
Therapeutic recreation electives	6
Therapeutic recreation activities	4
Electives	4-6
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 32)	
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, Heat and Sound	4
Social science	9
Requirements 1, 2, and 3 (box, page 34)	
Arts and humanities	15
Requirements 1, 2, 3, and 4 (box, page 35)	
Sports medicine—Athletic training option	57
ATH 119 Orientation to Sports Medicine	1
ATH 219 Orientation to Sports Medicine	3
ATH 220 Remedial Exercises and Therapeutic Modalities	3
ATH 225 Practicum I	2
ATH 315 Psychology of Sports Competition ...	2
ATH 320 Recognition and Assessment of Athletic Injuries	3
ATH 325 Practicum II	2
ATH 390 Pre-Internship	2
ATH 419 Medical Aspects of Athletic Training ...	2
ATH 490 Internship	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	2
PED 209 Bio-Fitness	2
PED 300 Physiology of Exercise	3
PED 310 Physiology of Human Performance ...	2
PED 421 Legal Aspects of Sports	2

ZOO 318 Laboratory in Human Anatomy	2
Physical education activity courses	2
Sports medicine—Exercise science option	54
ATH 315 Psychology of Sports Competition	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	2
PED 209 Bio-Fitness	2
PED 300 Physiology of Exercise	3
PED 310 Physiology of Human Performance	2
PED 410 Techniques of Human Performance Analysis	3
PED 421 Legal Aspects of Sports	2
PED 425 Practicum	2
PED 430 Basic EKG	2
PED 490 Internship	8
ZOO 318 Anatomy Lab for Sports Medicine Students	2
Physical education activity courses	4
(swimming, jogging, conditioning activities, aerobic dance, cycling, weight training)	
Free electives	18-20
Total	124

**MINORS OFFERED IN THE DEPARTMENT
OF HEALTH, PHYSICAL EDUCATION,
RECREATION, AND DANCE**

COACHING MINOR

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 education majors.

Minor in coaching	20
1. Required courses	11
PED 200 Anatomy and Physiology	5
PED 204 Kinesiology	2
PED 312 Athletic Training and Physiotherapy	2
PED 316 Foundations of Coaching	2
2. Restricted electives	9
Group A	2-3
PED 300 Physiology of Exercise or PED 310 Physiology of Human Performance	
Group B	2
ATH 315 Psychology of Coaching or PED 305 Practical Concepts of Conditioning	
Group C	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, PE and Recreation	2

DANCE MINOR

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.

	Sem hours
Minor in dance	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 Dance History	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
2. Electives	5
To be chosen from other dance studio courses	

HEALTH MINOR

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 a good minor to combine with all majors in education and is excellent background for graduate programs in the school health and community health disciplines.

	Sem hours
Minor in health	25
1. Required courses	22
HED 210 Red Cross First Aid	2
HED 279 AIDS	1
HED 302 Communicable Diseases	1
HED 303 Elements of Nutrition Fitness	1
HED 306 Consumer Health	1
HED 320 Health in the Schools	2
HED 350 Scientific Foundations of Health	3
HED 360 Concepts of Sex Education	2

- HED 380 Psychosocial Concepts of Health2
 HED 390 Drug Use and Abuse3
 HED 399 Teaching About AIDS1
 HED 400 Health Education Curriculums3
 2. Restricted electives 3
 Choose three credits in consultation with advising coordinator

PHYSICAL EDUCATION MINOR

This program is intended for students interested in a teaching minor for the Secondary Provisional Certificate only. Students interested in an Elementary Physical Education Minor should consult the physical education adviser.

- | | Sem hours |
|---|-----------|
| Minor in physical education | 24 |
| 1. Required courses | 16-17 |
| HED 210 Red Cross First Aid | 2 |
| PED 200 Anatomy and Physiology | 5 |
| PED 204 Kinesiology | 2 |
| PED 281 Motor Development or PED 300
Physiology of Exercise or PED 310
Physiology of Human Performance | 2-3 |
| PED 334 Adapted Physical Education | 2 |
| PED 367 Methods and Materials in Physical
Education and Recreation | 3 |
| 2. Restricted electives | 7-8 |
| Select a minimum of 7-8 credits from the following list of Methods of Teaching Physical Education activity courses. | |
| 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 |

PHYSICAL EDUCATION MINOR FOR SPECIAL EDUCATION MAJORS

The minor in adapted physical education is designed for special education undergraduates who wish to complete requirements for the Michigan Approval for Teachers of Physical Education of Handicapped Individuals.

- | | Sem hours |
|--|-----------|
| Minor in physical education for special education majors | 24 |
| 1. Required courses | 18 |
| PED 204 Kinesiology | 2 |
| PED 281 Motor Development | 3 |
| PED 282 Perceptual Motor Training | 1 |
| 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 Sports and Activity for the Disabled .1
 *PED 200 Anatomy and Physiology5
 **PED 490 Fieldwork in Adapted Physical
 Education

Education4
**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 adviser.*

***This course is not required 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.*

- | | |
|---|---|
| 2. Restricted electives | 6 |
| Select a minimum of 6 credits from the following list of Methods of Teaching Physical Education activity courses: | |
| 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 |

RECREATION AND PARK MANAGEMENT MINOR

- | | 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 Recreation and Park Administration | 3 |
| 2. Electives | 5 |
| REC 280 Camping, REC 250, 251, 252, 253 Field
Work, REC 300 Recreation for Special
Populations, REC 310 Leisure and the Older
Adult, REC 390 Outdoor Recreation, REC
400 T.R. Process and Services, REC 477,
478, 479 Special Topics, REC 481 Adapted
Aquatics | 5 |
| IE 152 Arts and Crafts | |
| BIO 224 Principles of Conservation | |
| GES 114 National Parks and Monuments, GES
215 Land Use Management | |
| PLS 431 Theory of Public Administration | |
| ACC 246 Accounting for Public Administration | |
| CTC 352 Communication Negotiations, CTC 372
Assertive Communication | |

ACTIVITY COURSES FOR GENERAL STUDENTS

The physical education activity requirement is explained on page 38 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.

	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 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 209 Intermediate Jishukan Jujitsu	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 ARC 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 Lifesaving	2
PEG 453 Water Safety Instructor—ARC	2
PEG 477 Special Topics	1

ATHLETIC COURSES

ATH 119 Orientation to Sports**Medicine. 1 sem hour**

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 sem hours**

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 Orientation to Sports Medicine.

ATH 220 Remedial Exercises and Therapeutic**Modalities. 3 sem hours**

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 Introduction to Athletic Training.

ATH 225 Practicum I.**2 sem hours**

A supervised educational experience in athletic training under the supervision of a certified athletic trainer.

Prereq: ATH 219 Introduction to Athletic Training and department permission.

ATH 250 Techniques of Officiating**Volleyball. 1 sem hour**

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 sem hour**

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 sem hour**

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 sem hours

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 sem hours

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 sem hours

Lecture course covering the basic fundamentals and styles of offensive and defensive football.

ATH 265 Theory of Baseball. 2 sem hours

The fundamental skills and strategy of baseball for the prospective teacher and coach.

ATH 267 Theory of Basketball. 2 sem hours

Lecture course covering the basic fundamentals and styles of offensive and defensive basketball.

ATH 269 Theory of Track and Field. 2 sem hours

The fundamental techniques for coaching and administering programs of track and field for the prospective teacher and coach.

ATH 315 Psychology of Coaching. 2 sem hours

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 sem hours

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 sem hours**

Coordinates, correlates and supplements skills and coaching techniques introduced in activity courses. Field sports, volleyball and basketball.

Prereq: PEP 235 Softball, PEP 152 Track and Field for Women.

ATH 320 Recognition and Evaluation of Athletic Injury. 3 sem hours

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 Practicum I and PED 300 Physiology of Exercise.

ATH 390 Pre-Internship. 2 sem hours
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 sem hours
To expose a candidate student to the various medical specialities 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 Recognition and Assessment of Athletic Injuries.

ATH 477, 478, 479 Special Topics. 1, 2, 3 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
Theory and technique of beginning classical ballet.
Prereq: Dance major/minor, DAN (trouble) 108 Classical Ballet Technique I or equivalent, and/or permission.

DAN 109 Classical Ballet Technique II. 2 sem hours
A continuation of the theory and technique of beginning classical ballet.
Prereq: Dance major/minor, DAN 108 Classical Ballet Technique I or equivalent, and/or permission.

DAN 208 Classical Ballet Technique III. 3 sem hours
Theory and technique of intermediate classical ballet.
Prereq: Dance major/minor, DAN 109 Classical Ballet Technique II or equivalent, and/or permission.

DAN 209 Classical Ballet Technique IV. 3 sem hours
A continuation of the theory and technique of advanced and intermediate classical ballet.
Prereq: Dance major/minor, DAN 208 Classical Ballet Technique III or equivalent, and/or permission.

DAN 245 Elements of Dance Composition. 3 sem hours
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: PEP 116 Modern Dance Technique I.

DAN 255 Dance Production. 3 sem hours
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 sem hours
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 sem hours
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 sem hours
An extension of the principles explored in DAN 245 Elements of Dance Composition 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 Rhythmic Analysis and Dance Accompaniment and PEP 150 Modern Dance IV.

DAN 455 Seminar in Dance. 2 sem hours
Current literature and dance research, trends in dance education and developments in contemporary concert dance. Lecture-discussion.
Prereq: DAN 350 History of Dance, DAN 450 Advanced Dance Composition or department permission.

DAN 456 Creative Dance for Children. 2 sem hours
Goals, concepts, materials and experiences to teach children's creative dance.

DAN 477, 478, 479 Special Topics. 1, 2, 3 sem hours
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 sem hours
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 sem hours
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 sem hours
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 279 Special Topics. 3 sem hours
Offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

HED 301 Drinking, Drunkenness, and Alcoholism. 1 sem hour
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 sem hour
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 sem hours
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 emer-

gency 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 Red Cross First Aid or current Red Cross certification in First Aid.

HED 320 Health Education in the Elementary Grades. 2 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
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 Scientific Foundations in Health.

HED 390 Drug Use and Abuse. 3 sem hours
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 sem hour
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 sem hours
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 sem hours
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 sem hours
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 sem hours
Community health programs and resources as they apply to the school health program.

Prereq: HED 320 Health Education in the Elementary Grades.

HED 477, 478, 479 Special Topics. 1, 2, 3 sem hours
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 sem hour
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 sem hours
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 sem hours
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 sem hour
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 sem hour
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 sem hours
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 sem hours
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 Anatomy and Physiology.

PED 209 Bio-Fitness. 2 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours**

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 sem hours

Offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

PED 281 Motor Development. 3 sem hours

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 sem hour

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 sem hours

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 Anatomy and Physiology.

PED 304 Microcomputer Applications in HPER&D. 2 sem hours

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 sem hours**

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 sem hours**

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 sem hours**

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 Anatomy and Physiology.

PED 316 Foundations of Coaching. 2 sem hours

Practical and scientific information necessary for the implementation of a successful coaching program.

PED 334 Adapted Physical Education. 2 sem hours

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 sem hour**

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 sem hour**

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 Motor Development.

PED 352 Methods of Teaching Elementary Physical Education. 2 sem hours

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 Methods of Teaching Fundamental Movement and Movement Education.

PED 367 Methods and Materials in Physical Education. 3 sem hours

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 sem hour

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 Motor Development or PED 334 Adapted Physical Education.

PED 385 Special Olympics. 3 sem hours
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 Physical Education for the Mentally Impaired and either PED 281 Motor Development or PED 334 Adapted Physical Education.

PED 386 Physical Education for the Mentally Impaired. 1 sem hour

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 Motor Development or PED 334 Adapted Physical Education.

PED 388 Assessment in Adapted Physical Education. 1 sem hour

A study of the process of assessing gross motor functioning of students who exhibit a variety of disabilities. Investigation of the legislative mandates requiring assessment and application of the latest assessment instruments for students with disabilities. Fieldwork required.

Prereq: PED 334 Adapted Physical Education.

PED 389 Sport and Activity for the Disabled. 1 sem hour

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 sem hours
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 sem hours

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 Physiology of Exercise and PED 310 Physiology of Human Performance.

PED 421 Legal Aspects of Sport, Physical Education and Recreation. 2 sem hours

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 sem hours

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 Bio-Fitness, PED 300 Physiology of Exercise, PED 310 Physiology of Human Performance, PED 410 Laboratory Techniques in Human Performance Analysis, sports medicine candidate.

PED 430 Basic Principles of Electrocardiography. 2 sem hours

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 Anatomy and Physiology and ZOO 318 Laboratory in Human Anatomy.

PED 440 Tests and Measurements in Physical Education. 2 sem hours

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 sem hours

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 sem hours
Offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

PED 480 Internship—Exercise Science. 8 sem hours
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 sem hours

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 sem hours

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 sem hours

A synthesis of educational theories presented in the undergraduate physical education program and the student teaching experience.

PED 496 Youth Sports Program. 2 sem hours

Development of professional leadership skills for the expanding non-school community sports programs.

PED 497, 498, 499 Directed Study. 1, 2, 3 sem hours

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.

RECREATION AND PARK MANAGEMENT AND THERAPEUTIC RECREATION COURSES

REC 100 Introduction to Recreation and Leisure. 3 sem hours

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 sem hours

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 sem hours

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 sem hours

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 sem hours

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 Introduction to Therapeutic Recreation or SGN 251 Education of the Exceptional Child.

REC 250, 251, 252, 253 Field Work in Recreation/Therapeutic Recreation. 1 sem hour 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 sem hours

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 sem hours

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 Introduction to Recreation/Leisure Services or department permission.

REC 280 Camping. 2 sem hours

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 sem hours

Leadership, assessment, adaption, and programming techniques to meet the leisure needs of special populations in today's society. Task analysis, facilitation tech-

niques, leisure counseling, programming, and adaptation of specific activities. Lecture, experiential participation, and 30 hours of community field work.

Prereq: REC 200 Introduction to Therapeutic Recreation/REC 260 Recreation Leadership.

REC 310 Leisure and the Older Adult. 3 sem hours
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 sem hours
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 sem hours
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 Introduction to Therapeutic Recreation.

REC 340 Techniques in Therapeutic Recreation. 3 sem hours
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 Introduction to Therapeutic Recreation.

REC 360 Recreation Program Planning. 3 sem hours
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 Recreation Leadership.

REC 365 Professional Preparation. 1 sem hour
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 sem hours
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 sem hours
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 Introduction to Therapeutic Recreation, REC 300 Therapeutic Recreation for Special Populations, REC 340 Techniques in Therapeutic Recreation or department permission.

REC 449 Therapeutic Recreation Practicum. 8 sem hours
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 Introduction to Recreation/Leisure Services, REC 200 Introduction to Therapeutic Recreation, REC 250 Field Work in Recreation/Therapeutic Recreation, REC 260 Recreation Leadership, REC 300 Therapeutic Recreation for Special Populations, REC 340 Techniques in Therapeutic Recreation, REC 360 Recreation Program Planning, REC 400 Therapeutic Recreation Processes and Services, REC 460 Park and Recreation Administration, and REC 465 Park and Recreation Management; 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 sem hours
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 Introduction to Recreation/Leisure Services.

REC 451 Park Maintenance and Management.**2 sem hours**

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 sem hours**

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 Introduction to Recreation/Leisure Services, REC 260 Recreation Leadership, REC 360 Recreation Program Planning, or permission.

REC 465 Park and Recreation**Management.****3 sem hours**

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 Introduction to Recreation/Leisure Services, REC 260 Recreation Leadership, REC 360 Recreation Program Planning, or permission.

REC 477, 478, 479 Special Topics. 1, 2, 3 sem hours

Offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

REC/PED 481 Adapted Aquatics. 2 sem hours

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 sem hours

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 Introduction to Recreation/Leisure Services, REC 200 Introduction to Therapeutic Recreation, REC 250 Fieldwork in Recreation/Therapeutic Recreation, REC 260 Recreation Leadership, REC 360 Recreation Program Planning, REC 460 Park and Recreation Administration, and REC 465 Park and Recreation Management; 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 sem hours

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. Ametano, Jack D. Minzey, John G. Pappas, Donna M. Schmitt, Martha W. Tack, Louis C. Thayer, Benjamin W. VanRiper, John W. Waidley
Associate Professors: Helen R. Ditzhazy; William M. Hetrick; Charles Mitchell, Jr.; William Price
Assistant Professors: James E. Berry, Jane S. Goodman, Sue A. Stickel

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 selected 500-level graduate courses for undergraduate or graduate credit. 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: Jack D. Minzey
Guidance and counseling: Benjamin W. VanRiper

EDUCATIONAL LEADERSHIP COURSES

EDL 402 Organization of American Education. 3 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
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.

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 home economics, 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

Curricula 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 Aspects of Teaching Physically Impaired Children.
 - 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 262.) 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 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.

Examples of programs affiliated with the Department of Special Education that provide opportunities for visits, observations, and study are:

Ann Arbor Public Schools
 Detroit Public Schools
 Durant/Turri Mott School, Flint
 Hawthorne Center, Northville
 Michigan School for the Blind at Lansing
 Monroe County Program for the Hearing Impaired, Ida
 Mott Children's Hospital School, Ann Arbor
 Northville Residential Treatment Center
 Northwest Skills Center
 Redford Union Day Treatment Program
 Redford Union Program for Hearing Impaired
 Royal Oak Public Schools
 Wayne-Westland Schools
 Ypsilanti Public Schools

CURRICULUM FOR TEACHERS OF SPECIAL EDUCATION

Special education students must complete a major of at least 36 hours. A major consists of those courses listed under the heading of Special Education Core and Major Concentration in one of the department's six programs. Grade point averages for a student's major will be computed using all of these courses. The

department's six program areas are: emotionally impaired, hearing impaired, mentally impaired, physically and otherwise health impaired, speech and language impaired, and visually impaired. An endorsement program in Learning Disabilities is available only at the graduate level. An endorsement in one area of special education is required for full admission to the program area of Learning Disabilities. See Graduate Catalog.)

Students must complete all courses specified in their major in addition to meeting the basic studies requirements.

Students must select either elementary or secondary certification and an elementary or secondary special education endorsement.

BASIC STUDIES

Basic studies requirements are outlined on page 32 in this catalogue. The following courses, within the basic studies requirements, must be selected by special education majors.

BIO 105 Biology and the Human Species
 CTS 121 or CTS 124 Fundamentals of Speech (2 or 3 sem hours)
 PLS 112 American Government
 ENG 226 Report and Research Writing
 MTH 108/109 Functional Mathematics I and II
 Majors in the emotionally-impaired program must also select SOC 105 Introductory Sociology in addition to the above.

It is recommended that students complete the multicultural requirement through the social sciences or literature area in Basic Studies. Students should see their adviser for course selection.

PROFESSIONAL EDUCATION COURSES FOR TEACHER CERTIFICATION

The following courses are required for special education majors pursuing Elementary Teacher Certification:

EDT 300 Introduction to Computer Application in Education
 EDP 325 Life Span Human Growth & Development (in place of EDP 322)
 CUR 304 Curriculum and Methods - Elementary School
 RDG 314 Teaching Reading in the Elementary School
 SFD 328 Social Aspects of Teaching
 SGN 390 Measurement & Diagnosis in Special Education (in place of EDP 340)
 EDM 345 Media for the Classroom Teacher
 MTH 381 The Teaching of Mathematics K-6
 Six hours of student teaching (See professional education courses page 260 for additional information.)

The following courses are required of special education majors pursuing Secondary Teacher Certification.

EDT 300 Introduction to Computer Application in Education
 EDP 325 Life Span Human Growth and Development (in place of EDP 322)
 CUR 305 Curriculum & Methods Secondary
 RDG 311 Teaching Reading in the Secondary School
 SFD 328 Social Aspects of Teaching
 SGN 390 Measurement & Diagnosis (in place of EDP 340)
 EDM 345 Media for Classroom Teacher
 Methods course in minor subject field
 Six hours of student teaching (See Professional education courses page 300 for additional information.)

Special education majors pursuing endorsement in Pre-primary Impaired (PPI) are required to have an Early Childhood Minor. "Curriculum for Elementary Education with Early Childhood Endorsement" meets requirements for provisional elementary certification and ZA endorsement in early childhood education. See your adviser for additional information

PLANNED PROGRAM

While either a subject area or group minor is preferred, in some circumstances a Planned Program or "Elementary Certification Core and the Planned Program" is approved by the department. For special education majors seeking elementary certification, the following courses are required on the Planned Program (30 semester hours):

EDT Introduction to Computer Applications in Education
 ESC 302 Elementary School Science
 CUR 304 Curriculum and Methods - Elementary School
 RDG 314 Teaching of Reading in Elementary School
 EDP 325 Life Span Human Growth & Development (in place of EDP 322)
 SFD 328 Social Aspects of Teaching
 EDM 345 Media for Classroom Teacher
 GEO 348 Teaching Social Studies in Elementary Schools
 MTH 381 The Teaching of Mathematics K-6
 One elective course: LIT 207 Introduction to Children's Literature, PED 210 Lifetime Wellness and Fitness, HED 320, IE 253 Technology Education for Children, FA 300 Art Integration for the Elementary Teacher, FA 101 Introduction to Art, CTD 222 Drama and Play in Human Experience, MUS 104 Elements of Music, MUS 224 Recreational Music, or MUS 103 Introduction to Music Therapy

SPECIAL EDUCATION CORE (MUST BE TAKEN BY ALL SPECIAL EDUCATION MAJORS EXCEPT SPEECH- LANGUAGE IMPAIRED)

	Sem hours
Special Education Core Courses	
PSY 101 Introduction to Psychology	3
SGN 251 Education of Exceptional Child	3
IE 252 Prevocational and Vocational Special Needs Programs	4
PED 257 Physical Education for the Special Education/Classroom Teacher	2
SGN 271 Language Development and Speech Disorders in Special Populations (except Hearing Impaired)	2
*SGN 390 Measurement and Diagnosis in Special Education	3
*SGN 395 Special Needs Persons: School, Family, and Community Interaction	3
*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

**Courses open only to students admitted to the College of Education.*

ACADEMIC MAJORS

HEARING IMPAIRED

Prospective majors should be aware that the basic philosophy of the program is oral communication; however, students are exposed to manual communication during their course of study.

All students are considered provisional majors until such time as they successfully complete SHI 391 Language for the Hearing Impaired and pass a language proficiency examination.

Courses Required for Initial Endorsement

Students must complete required courses and either the elementary or secondary sequence.

	Sem hours
Hearing impaired courses	
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 Communications Practicum with Hearing Impaired	1
*SHI 387 Introductory Practicum with Deaf	1
*SHI 391 Language for the Hearing Impaired	3

*SHI 392 Introduction to Audiology	2
*SHI 394 Auditory Training and Speechreading	3
*SHI 436 Speech for the Hearing Impaired	3
*SHI 437 Adapted Curriculum for the Hearing Impaired	3
*SHI 487 Speech Practicum With Hearing Impaired	2

Elementary

*EDU 492 Student Teaching - Hearing Impaired Elementary	10
The above must be completed in addition to the elementary professional education courses.	

Secondary

*SGN 485 Curriculum and Methods for Adolescents and Young Adults with Special Needs	2
*SGN 486 Recitation and Field Experience with Adolescents and Young Adults	2
*EDU 492 Student Teaching - Hearing Impaired Secondary	10
The above must be completed in addition to the secondary professional education courses.	

MENTALLY IMPAIRED**Courses Required for Initial Endorsement**

Students must complete required courses and either
the elementary or secondary sequence.

Sem hours**Mentally impaired courses**

SMI 240 Preclinical Experience: Mentally Impaired	3
SMI 350 Introduction to Mental Retardation	3
*SMI 429 Curriculum Design and Educational Programs for Students with Mild Retardation	3
*SLD 486 The Learning Disabled Child	2
*SMI 483 Education of Students with Moderate and Severe Retardation	4

Elementary

*SMI 427 Educating the Elementary Student with Mild Retardation	2
*EDU 492 Student Teaching - Mentally Impaired Elementary	10
The above must be completed in addition to the elementary professional education courses.	

Secondary

*SGN 485 Methods and Curriculum for Adolescents and Young Adults with Special Needs	2
*SGN 486 Recitation and Field Experience with Adolescents and Young Adults: Mentally, Physically, Visually, or Hearing Impaired	2

*EDU 492 Student Teaching - Mentally Impaired Secondary	10
The above must be completed in addition to the secondary professional education courses.	

**PHYSICALLY OR OTHERWISE HEALTH
IMPAIRED****Courses Required for Initial Endorsement**

Students must complete required courses and either
the elementary or secondary sequence.

Sem hours**Physically impaired courses**

SPI 240 Preclinical Experience - POHI	3
SPI 310 Developmental Sciences for Teachers of the Physically Impaired	4
*SMI 350 Introduction to Mental Retardation	3
*SPI 360 Pathology of Physical and Health Impairments	3
*SPI 412 Ancillary Services and Health Procedures for Teachers of the Physically Impaired	2
*SLD 486 The Learning Disabled Child	2

Elementary

*SPI 414 Educational Strategies for Teachers of the Physically Impaired	4
*EDU 492 Student Teaching Elementary Physically or Otherwise Health Impaired	10
The above must be completed in addition to the elementary professional education courses.	

Secondary

*SGN 485 Curriculum and Methods for Adolescents and Young Adults with Disabilities	2
*SGN 486 Recitation and Field Experiences with Adolescents and Young Adults: Mentally Impaired, Physically Impaired, Hearing Impaired, or Visually Impaired	2
*EDU 492 Student Teaching Secondary Physically or Otherwise Health Impaired	10
The above must be completed in addition to the secondary professional education courses.	

VISUALLY IMPAIRED**Courses Required for Initial Endorsement**

Students must complete required courses and either
elementary or secondary sequence.

Sem hours**Visually impaired courses**

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 Visually Impaired 3
- *SVI 464 Methods of Teaching Blind 3
- *SVI 465 Braille II, Nemeth Code 3
- *SVI 467 Education of Children with Impaired Vision 2
- *SVI 469 Electronic Communication - Visually Impaired 3

Elementary

- *EDU 492 Student Teaching - Elementary Visually Impaired 10
- The above must be completed in addition to the elementary professional education courses.

Secondary

- *SGN 485 Methods and Curriculum for Adolescents and Young Adults with Special Needs 2
 - *SGN 486 Recitation and Field Experience with Adolescents and Young Adults 2
 - *EDU 492 Student Teaching - Elementary Visually Impaired 10
- The above must be completed in addition to the secondary professional education courses.

EMOTIONALLY IMPAIRED

Courses Required for Initial Endorsement

Students must complete required courses and either the elementary or secondary sequence.

	Sem hours
Emotionally impaired	
SEI 240 Introductory Clinical Experiences in Emotional Impairment	3
SEI 301 Emotionally Impaired Children and Adolescents	4
PSY 360 Abnormal Psychology	3
SOC 202 Social Problems or SOC 402 Group Dynamics	3
*SEI 449 Current Topics in Emotionally Impaired	2
Elementary	
*SEI 401 Programming, Methods, and Curriculum for the Elementary Emotionally Impaired Child	4
*SLD 486 The Learning Disabled Child	2
*EDU 492 Student Teaching - Elementary Emotionally Impaired	10
The above must be completed in addition to the elementary professional education courses.	
Secondary	
PSY 322 Psychology of Adolescence	3
CRM 354 Juvenile Delinquency	3
*SGN 485 Methods and Curriculum, Adolescents and Youth Adults with Special Needs	2

- *SEI 488 Programming, Methods, and Curriculum for the Secondary Emotionally Impaired Child 4
 - *EDU 492 Student Teaching - Secondary Emotionally Impaired 10
- The above must be completed in addition to the secondary professional education courses.

SPEECH-LANGUAGE IMPAIRED

The program in speech and language impaired is a five and one-half year 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.

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 issued upon completion of the master's degree.

Students may elect elementary or secondary certification. The SLI endorsement is K-12 regardless of the certification level selected. See your adviser for the appropriate certification sequence.

Core Courses

- PSY 101 Introduction to Psychology 3
- SGN 251 Education of Exceptional Children 3
- *SGN 390 Measurement and Diagnosis in Special Education 3

Sem hours

- Speech-language impaired courses**
- SLI 316 Applied Speech Science 5
 - SLI 334 Applied Phonetics 3
 - SLI 335 Communication Disorders 3
 - SLI 337 Language Acquisition 3
 - SLI 340 Management of Phonological Disorders 3
 - SLI 341 Directed Observation 1
 - SLI 342 Management of Language Disorders 3
 - SLI 343 Clinical Practice in Speech Pathology I 2
 - SLI 344 Clinical Practice in Speech Pathology II 2
 - SLI 452 Voice Disorders 3
 - SLI 454 Stuttering 3
 - SHI 392 Introduction to Audiology 2
 - SHI 394 Auditory Training and Speech Reading 3

MASTER OF ARTS SEQUENCE

The following courses are offered to students for completion of the 36-hour master's degree program in speech and language impaired. Students who transfer from other universities should consult their academic adviser concerning equivalencies.

	Sem hours
1. Required courses in speech/language pathology	
SLI 508 Multicultural/Multilingual Communication Development and Disorders	3
SLI 555 Neuroanatomy and Physiology for Speech Pathologists	2
SLI 578 Audiometric Testing 3	
SLI 607 Colloquium in Speech Pathology	2
SLI 612 Motor Speech Disorders	2
SLI 614 Aphasia	3
SLI 620 Family Management in Speech Pathology	3
SLI 622 Augmentative Communication	2
SLI 624 Neurogenic Communication Disorders	2
SLI 694 Seminar in Speech/Language Pathology	2
(Taken concurrently with SLI 689 Public School Internship)	
SGN 630 Integrated Curriculum and Educational Programming	3
(only for teacher training track)	
2. Required clinical practica	
SLI 568 Diagnostic Methods in Speech Pathology	3
(must have completed clinical requirements to enroll)	
SLI 687 Clinical Internship	2
SLI 689 Public School Internship	4
3. Elective courses in speech/language pathology	
SLI 652 Voice Disorders II	2
SLI 654 Stuttering II	2
SLI 697, 698, 699 Independent Study	1, 2, 3
SLI 618 Language and Learning Theories	2
4. Cognate courses	
Free Elective	2
Students not electing teacher certification must complete two (2) hospital internships (SLI 687) in lieu of a public school internship (SLI 689).	

GENERAL SPECIAL EDUCATION COURSES

SGN 251 Education of Exceptional Children. 3 sem hours
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 sem hours
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 sem hour
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 sem hours
Students 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. Cultural reactions, test bias, and limitations are discussed.
Prereq: SGN 251 Education of Exceptional Children; admission to College of Education.

SGN 395 Special Needs Persons: School, Family, and Community Interaction. 3 sem hours
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 Education of Exceptional Children; admission to College of Education.

SGN 461 Classroom Management and Intervention Strategies for Handicapped Students. 3 sem hours.

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 Education of Exceptional Children; admission to College of Education.

SGN 477, 478, 479 Special Topics. 1, 2, 3 sem hours
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 sem hours
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 Education of Exceptional Children; a computer course; admission to College of Education.

SGN 485 Methods and Curriculum:

Adolescents and Young Adults with Special Needs. 2 sem hours

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 College of Education.

SGN 486 Recitation and Field Experience With Adolescents and Young Adults: Mentally Impaired, Physically Impaired, or Visually Impaired. 2 sem hours

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 College of Education.

SGN 491 Seminar for Teachers of Special Education. 2 sem hours

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 College of Education.

HEARING IMPAIRED

SHI 228 Education of the Hearing Impaired. 3 sem hours

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 Education of Exceptional Children

SHI 375 Fundamentals of Sign Communication. 2 sem hours

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 sem hour

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 Fundamentals of Sign Communication and SLI 337 Language Acquisition.

SHI 387 Introductory Practicum With the Deaf I. 1 sem hour

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 Education of the Hearing Impaired; Admission to College of Education.

SHI 391 Language for the Hearing Impaired. 3 sem hours

Language development of prelinguistically deaf children. Survey of various methods of teaching language, including natural and structured approaches.

Prereq: SHI 228 Education of the Hearing Impaired; Admission to College of Education.

SHI 392 Introduction to Audiology. 2 sem hours

Medical and surgical treatment of pathologies of the ear. Hearing screening tests, basic audiometric testing procedures, and audiometric interpretation.

Prereq: Admission to College of Education.

SHI 394 Auditory Training and Speechreading. 3 sem hours

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 Introduction to Audiology and SLI 337 Language Acquisition; Admission to College of Education.

SHI 436 Speech for the Hearing Impaired. 3 sem hours

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 Auditory Training and Speechreading and SLI 337 Language Acquisition; Admission to College of Education.

SHI 437 Adapted Curriculum for the Hearing Impaired. 3 sem hours

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 Language for the Hearing Impaired and SHI 387 Introductory Practicum With the Deaf I; Admission to College of Education.

SHI 487 Speech Practicum With the Hearing Impaired. 2 sem hours

Sixty (60) clock hours of supervised observation and speech work with hearing-impaired persons.

Prereq: SHI 436 Speech for the Hearing Impaired; Admission to College of Education.

MENTALLY IMPAIRED**SMI 240 Pre-Clinical: Mentally Impaired. 3 sem hours**

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 sem hours

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 Education of Exceptional Children, PSY 101 General Psychology.

SMI 427 Educating the Elementary Student With Mild Retardation. 2 sem hours

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 Introduction to Mental Retardation; admission to College of Education.

SMI 429 Curriculum Design and Education Programs for Students with Mild Retardation. 3 sem hours

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 Introduction to Mental Retardation; admission to College of Education.

SMI 483 Education of Students With Moderate or Severe Retardation. 4 sem hours

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 Classroom Management and Intervention Strategies for Handicapped Students; SGN 481 Adaptive Technology in Special Education; admission to College of Education.

PHYSICALLY OR OTHERWISE HEALTH IMPAIRED

SPI 240 Preclinical Experiences - POHI. 3 sem hours
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 sem hours

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 Education of Exceptional Children; SPI 240 Preclinical Experiences - POHI.

SPI 360 Pathology of Physical and Health Impairments. 3 sem hours

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 College of Education.

SPI 412 Ancillary Services and Health Procedures for Teachers of Physically Impaired. 2 sem hours

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 College of Education.

SPI 414 Education Strategies for Teachers of the Physically Impaired. 4 sem hours

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 Ancillary Services and Health Procedures for Teachers of Physically Impaired; RDG 314 Teaching Reading in the Elementary School; SLD 486 Education of Children With Learning Disabilities; admission to College of Education.

VISUALLY IMPAIRED

SVI 365 Braille. 3 sem hours

Developing proficiency in reading and writing error-free braille and the reading of music braille.

Pre or coreq: SGN 251 Education of Exceptional Children.

SVI 366 The Eye and Vision—Anatomy and Physiology. 2 sem hours

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 sem hours

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 sem hours

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 Education of Exceptional Children.

SVI 464 Methods of Teaching the Blind. 3 sem hours

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 Education of Exceptional Children; admission to College of Education.

SVI 465 Braille II: Nemeth Code. 3 sem hours

Transcription skills with Nemeth Code.

Prereq: SVI 365 Braille; admission to College of Education.

SVI 467 Education of Children With Impaired Vision. 2 sem hours

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 Education of Exceptional Children; admission to College of Education.

SVI 469 Electronic Communication for the Visually Impaired. 3 sem hours

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 College of Education.

EMOTIONALLY IMPAIRED

SEI 240 Introductory Clinical Experiences in Emotional Impairment. 3 sem hours

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 sem hours

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 Abnormal Psychology; SEI 240 Introductory Clinical Experiences in Emotional Impairment;

SGN 251 Education of Exceptional Children is advised. Not open to students on academic probation.

SEI 401 Programming, Methods, and Curriculum for the Elementary Emotionally Impaired Child. 4 sem hours

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 Emotionally Impaired Children and Adolescents and SGN 461 Classroom Management and Intervention Strategies for Teachers of Special Education; admission to College of Education.

SEI 449 Seminar: Current Topics in Emotional Impairment. 2 sem hours

An examination and discussion of issues and topics of current concern and pertinent to working with emotionally impaired children and adolescents.

Prereq: SEI 401 Programming, Methods, and Curriculum for the Elementary Emotionally Impaired Child or SEI 488 Programming, Methods, and Curriculum for Secondary Emotionally Impaired Youth; admission to College of Education.

SEI 488 Programming, Methods, and Curriculum for Secondary Emotionally Impaired Youth. 4 sem hours

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 Emotionally Impaired Children and Adolescents and SGN 461 Classroom Management and Intervention Strategies for Teachers of Special Education; admission to College of Education.

SPEECH AND LANGUAGE IMPAIRED

SLI 316 Speech Science. 5 sem hours

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 Language Acquisition and SLI 341 Directed Observation.

SLI 334 Applied Phonetics. 3 sem hours

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 Communication Disorders.

SLI 335 Communication Disorders. 3 sem hours

A study of the major communication disorders as deviations from normal physical and social behavior. Etiology and symptomatology.

Coreq: SLI 334 Applied Phonetics.

SLI 337 Language Acquisition. 3 sem hours

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 Speech Science and SLI 341 Directed Observations.

SLI 340 Management of Phonological Disorders. 3 sem hours

Diagnosis and treatment of functional articulation problems, including the articulation deficits associated with the cleft palate, cerebral palsy, and hearing impairments.

Prereq: SLI 335 Communication Disorders and SLI 334 Applied Phonetics. Coreq: SLI 342 Management of Language Disorders.

SLI 341 Directed Observation in Speech Pathology. 1 sem hours

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 Language Acquisition and SLI 316 Speech Science.

SLI 342 Management of Language Disorders. 3 sem hours

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 Applied Phonetics, SLI 337 Language Acquisition, SLI 316 Speech Science, and SLI 335 Communication Disorders.

SLI 343 Clinical Practice in Speech Pathology I. 2 sem hours

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 Management of Phonological Disorders, SLI 342 Management of Language Disorders, department permission.

SLI 344 Clinical Practice in Speech Pathology II. 2 sem hours

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 Clinical Practice in Speech Pathology I and department permission.

SLI 345 Clinical Practice in Speech Pathology III.**2 sem hours**

A minimum of 60 clock hours of supervised clinical experience with a variety of speech and hearing disorders.
Prereq: SLI 343 and SLI 344 Clinical Practice in Speech Pathology I and II, and department permission.

SLI 452 Voice.**3 sem hours**

A study of the etiology, diagnosis, and treatment of functional and organic voice disorders, including defects of loudness, pitch, and quality.

Prereq: SLI 343 Clinical Practice in Speech Pathology I.

SLI 454 Stuttering.**3 sem hours**

Causation, symptomatology, and remedial procedures of stuttering; specific therapy procedures in the clinic, the school, and the home.

Prereq: SLI 343 Clinical Practice in Speech Pathology I.

LEARNING DISABLED**SLD 486 Education of Children With Learning Disabilities.****2 sem hours**

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 Education of Exceptional Children; admission to College of Education; senior standing.

TEACHER EDUCATION

Jeanne Pietig
Department Head
234 Boone Hall
487-3260

Professors: Leah D. Adams, Irene A. Allen, Ranjit S. Bajwa, Mary G. Bigler, John Blair, Bert I. Greene, Thomas M. Gwaltney, Louise F. Jernigan, Wallace D. LaBenne, Judith McKee, Calvin B. Michael, Marvin Pasch, Jeanne Pietig, Quirico S. Samonte, Kishor N. Wahi, Jerome A. Weiser, Warren S. Williams

Associate Professors: Anne K. Bednar, J. Thomas Bushey, Williams A. Carter, Barbara Diamond, Trevor Gardner, Sarah Huyvaert, Martha Kinney, Edward Ledernan, Michael Martin, Sarah Martin, Leon Neeb, Karen Paciorek, Valerie Polakow, Robert S. Robinson, Georgea Sparks-Langer, Alane Starko

Assistant Professors: Kathleen Jeakle Beauvais, William Brozo, Jan Collins-Eaglin, Alison Harmon, Christina Jose Kampfner, Rebecca Martusewicz, Maureen McConnack, Maragaret Moore, Olga G. Nelson, Patricia Pokay

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. For special requirements relating to each program of study, see the description at the beginning of each section.

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, and secondary and K-12 teachers.

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). Graduate student status in a teacher education master's degree program does not automatically result in certification. For descriptions of graduate courses and programs, consult the Graduate Catalog.

Elementary Education**Advising**

Advising Coordinator for Elementary Certification: Thomas Bushey

Advising is required for all students so that each can pursue both personal and professional goals in a timely and satisfying manner.

Elementary education students, pursuant to their declaration of intention, before the end of the first semester should:

1. Inform the Department of Teacher Education secretary that an adviser is needed;
2. Ask to be assigned to a particular faculty member or accept an assigned faculty member;
3. Seek an appointment to:
 - a. develop a schedule of classes;
 - b. examine career objectives;
 - c. gain assistance for other University/professional concerns.

CURRICULUM FOR ELEMENTARY CERTIFICATION

The curriculum for the elementary education program consists 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 also the College of Education section of this catalog 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.

Basic Studies

Ordinarily, students are required to take five courses from Area I, Symbolics and Communication; three courses from Area II, Science and Technology; four courses from Area III, Social Science; four courses from Area IV Arts and Humanities; and two semester hours of physical education activity credit. In addition, at least one approved course in cross-cultural or international studies must be completed in the process of meeting the requirements of Areas I-IV.

However, the courses to be taken to satisfy Areas I-IV sometimes are structured to complement the curriculum in certain ways. See the portion of the catalog that describes the desired major for any structure that has been imposed on the basic studies in connection with that major or curriculum. In cases where there is a specification concerning basic studies associated with a particular major or curriculum, that pattern must be followed. Where no additional structure is imposed, the requirements for the basic studies are as given below. Students planning to become a teacher of special education should see the Department of Special

Education section of the catalog for additional structure for the basic studies.

Area	Sem hours
Symbolics and communication	17-20
ENG 121 English Composition	3
CTS 121 or CTS 124 Fundamentals of Speech	2-3
One course from one of the following options a, b, or c:	3-5
a. ENG 225 Intermediate English Composition; ENG 226 Report and Research Writing; ENG 324 Principles of Technical Communication	
b. CTC 224 Public Speaking; CTC 225 Listening Behavior; CTC 226 Nonverbal Communication; CTC 227 Interpersonal Communication; *CTC 374 Intercultural Communication	
c. LAT 121/122 Beginning Latin; GRK 123/ 124 Beginning Ancient Greek; FRN 121/ 122 Beginning French; FRN 233/234 Intermediate French; GER 121/122 Beginning German; GER 233/234 Intermediate German; JPN 121/122 Beginning Japanese; JPN 211/212 Intermediate Japanese; SPN 121/122 Beginning Spanish; SPN 201/202 Intermediate Spanish	
MTH 108 Functional Mathematics I	3
MTH 109 Functional Mathematics II	3
One of the following courses:	3
BE 201 Microcomputers for Business Applications; CSC 136 Computers for the Non-Specialist; CSC 137 Introduction to 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	
Science and technology	15-16
PSY 101 or PSY 102 General Psychology ...	3-4
PHY 100 Science for Elementary Teachers (Physics)	3
CHM 101 Science for Elementary Teachers (Chemistry)	3
GES 202 Science for Elementary Teachers (Earth Science)	3
ESC 303 Science for Elementary Teachers (Biology)	3
Social science	12
PLS 112 American Government or PLS 113 American Government Honors	3
One of the following history courses:	3
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

GEO 110 World Regions3

Complete a course from one of the following options a, b, or c:3

a. A second course in a two-course history sequence by completing one of the following courses:

HIS 102 Western Civilization, 1648 to World War I (follows HIS 101 Western Civilization to 1648); HIS 103 Twentieth Century Civilization (follows HIS 102 Western Civilization, 1648 to World War I); HIS 124 The United States, 1877 to the Present (follows HIS 123 The United States to 1877); or

b. a second course in a two-course geography sequence GEO 111 Regions and Resources (follows GEO 110 World Regions); or

c. A course in cross-cultural or international studies by completing one of the following courses:

*AAS 101 African American Studies: An Introduction; *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 People and 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 in 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 Sub-Saharan Africa in the Twentieth Century; *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

Arts and humanities 12

One of the following courses:3

LIT 100 The Reading of Literature; LIT 101 The Reading Fiction; LIT 102 The Reading of Literature: Poetry; LIT 103 The Reading of Literature: Drama; LIT 207 Introduction to Children's Literature; FRN 221/222 Intermediate French (Reading); FRN 341/342 Survey of French Literature; GER 221/222 Intermediate German; 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

Complete a course from one of the following options a, b, c, or d:3

a. A second course in literature from: LIT 101 The Reading of Fiction; LIT 102 The Reading of Literature: Poetry; LIT 103 Reading of Literature: Drama or

b. A second course in intermediate or advanced foreign language literature from the above list of foreign language literature courses or

c. CTO 210 Interpretive Reading or

d. A course in cross-cultural or international studies from: *FLA 215 Culture of the Latino Groups in the United States; *LIT 204 Native American Literature; *LIT 260 African American Literature

A course in philosophy or religion from:3

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 225 Political Philosophy; *PHI 226 Philosophy of Women; HIS 100 The Comparative Study of Religions or PSY 225 Psychology of Religion

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

Note: This basic studies requirement is automatically satisfied by the following fine and practical arts courses which are required on the elementary certificate program.

Fine and practical arts area 11

FA 300 Art Integration for the Elementary Teacher4

MUS 104 Elements of Music2

MUS 320 Elements of Music Education2

IE 253 Technology Education for Children3

Physical education and health area 6

PED 257 Physical Education for the Classroom Teacher2

HED 320 Health Education in Elementary Grades2

Physical education activity courses (2 hours) or military science (2 courses)2

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 requirements of basic studies. Approved courses are designated with an asterisk (*).

MAJOR AND MINOR(S)

As part of the degree and certification requirements, the student must, in addition to the above listed courses, complete a major and a minor (except where noted below) (or, instead of a major and a minor, three minors) in areas deemed appropriate for elementary certification.

A major must be selected from the following list:
English Language; Literature; English and American Literature and Language. See Department of English section for requirements. These lead to certification code BA, "English."

Comprehensive Major in Communication and Theatre Arts. See Department of Communication and Theatre Arts section for requirements. This leads to certification code BD, "speech."

Literature, Language, Communication and Theatre Arts. See below for requirements. **Children's Literature and Drama/Theatre for the Young.** See Department of Communication and Theatre Arts section for requirements. These lead to certification code BX, "language arts."

Geography. See Department of Geography and Geology section for requirements. This leads to certification code CB, "geography."

History. See Department of History and Philosophy section for requirements. This leads to certification code CC, "history."

Political Science. See Department of Political Science section for requirements. This leads to certification code CD, "political science."

Social Science. See Department of History and Philosophy section for requirements. **Social Science Group Major for Elementary Education.** See below for requirements. These lead to certification code CX, "social science."

General Biology. See Department of Biology section for requirements. This leads to certification code DA, "biology."

Geology; Earth Science. See Department of Geography and Geology section for requirements. Note that the major in Earth Science is coupled with a structured general science minor. These lead to certification code DH, "earth science/geology."

General Science. See Department of Physics and Astronomy section for requirements. **Elementary Science Group Major.** See below for requirements. These lead to certification code DX, "science."

Mathematics; Mathematics for the Elementary Teaching Certificate. See Department of Mathematics section for requirements. These lead to certification code EX, "mathematics."

French; German; Spanish; Japanese Language and Culture. See Department of Foreign Languages and Bilingual Studies section for requirements. These lead to certification codes FA, FB, FF and FL ("French," "German," "Spanish," "Japanese Language and Culture"), respectively. The FL certification permits the individual to teach Japanese at all grade levels.

Industrial Education/Industrial Arts. See Department of Business and Industrial Education section for requirements. No minor is required. This leads to certification code IX, "industrial arts."

Instrumental Music; Vocal Music. See Department of Music section for requirements. No minor is required. These lead to certification code JX, "music education." The JX certification permits the individual to teach music at all grade levels.

Consumer Home Economics. See Department of Human, Environmental, and Consumer Resources section for requirements. This leads to certification code KH, "home economics."

Art Education. See Department of Art section for requirements. No minor is required. This leads to certification code LX, "art." The LX certification permits the individual to teach art at all grade levels.

Physical Education. See Department of Health, Physical Education, Recreation and Dance section for requirements. This leads to certification code MB, "physical education."

Arts Group Major. See below for requirements. This leads to certification code OX "fine arts."

Industrial Education/Industrial-Vocational. See Department of Business and Industrial Education section for requirements. No minor is required. This leads to certification code VT, "vocational trades."

The minor (s) must be selected from this list:
Content and Methods. See below for requirements.

English Language; English Language and Literature; Literature; Children's Literature. See Department of English section for requirements. These lead to certification code BA, "English."

Communication; Communication Minor for Elementary and Special Education Students; Comprehensive Minor in Communication and Theatre Arts; Drama/Theatre for the Young. See Department of Communication and Theatre Arts section for requirements. These lead to certification code BD, "speech."

Geography. See Department of Geography and Geology section for requirements. This leads to certification code CB, "geography."

History. See Department of History and Philosophy section for requirements. This leads to certification code CC, "history."

Political Science. See Department of Political Science section for requirements. This leads to certification code CD, "political science."

Social Science. See Department of History and Philosophy section for requirements. **Social Science Group Major**

for Elementary Education. See below for requirements. These lead to certification code CX, "social science."
 Biology. See Department of Biology section for requirements. This leads to certification code DA, "biology."

Geology; Earth Science. See Department of Geography and Geology section for requirements. These lead to certification code DH, "earth science/geology."

Astronomy. See Department of Physics and Astronomy section for requirements. This leads to certification code DO, "astronomy."

General Science; Elementary Science Group Minor. See below for requirements. These lead to certification code DX, "science."

Mathematics; Mathematics Minor for the Elementary Teaching Certificate. See Department of Mathematics section for requirements. These lead to certification code EX, "mathematics."

French; German; Spanish. See below for requirements. These lead to certification codes FA, FB, and FF ("French," "German," "Spanish"), respectively.

Industrial Education. See Department of Business and Industrial Education section for requirements. This leads to certification code IX, "industrial arts."

Elementary Music Education Minor. See Department of Music section for requirements.

Family Life. See Department of Human, Environmental, and Consumer Resources section for requirements. This leads to certification code KH, "home economics."

Art. See Department of Art section for requirements.

Health. See Department of Health, Physical Education, Recreation and Dance section for requirements. This leads to certification code MA, "health."

Physical Education Minor for Special Education Majors. See Department of Health, Physical Education, Recreation and Dance section for requirements. This leads to certification code MB, "physical education."

Conservation and Resource Use. See Department of Biology section for requirements. This leads to certification code NJ, "conservation."

Arts Group. See below for requirements. This leads to certification code OX, "fine arts."

Bilingual-Bicultural Education Spanish-English. See Department of Foreign Languages and Bilingual Studies section for requirements. This leads to certification code YF, "bilingual Spanish."

PROFESSIONAL EDUCATION COURSES

Students must achieve a "C" or better in the following professional education courses.

- EDT 300 Introduction to Computer Application in Education
- SGN 300 The Exceptional Child in the Regular Classroom
- EDP 322 Human Development and Learning
 (Those planning to become a special education teacher should take instead EDP 325 Life Span Human Growth and Development)
- CUR 304 Curriculum and Methods-Elementary
- RDG 314 Teaching Reading in the Elementary School
- SFD 328 Social Aspects of Teaching
- EDP 340 Introduction to Measurement and Evaluation
 (Those planning to become a special education teacher should take instead SGN 390 Measurement and Diagnosis in Special Education)
- EDM 345 Media for the Classroom Teacher
- MTH 381 The Teaching of Mathematics K-6
- EDU 492 Student Teaching

Note: EDT 300, SGN 300 and EDP 322 may be taken prior to admission to the teacher education program. Other professional education courses may be taken only after the student has been admitted to the teacher education program.

CURRICULUM FOR ELEMENTARY CERTIFICATION WITH EARLY CHILDHOOD ENDORSEMENT

The curriculum for the elementary education program with early childhood endorsement consists of the following list of courses, including the required early childhood education minor, plus an appropriate major or two appropriate additional minors (exclusive of the content and methods minor). See also the College of Education section of this catalog 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 and ZA endorsement in early childhood education. The student must complete a minimum of 124-128 appropriate semester hours to satisfy graduation requirements.

Advising Coordinator for Elementary Certification with Early Childhood Education Endorsement: Leah Adams

Area	Sem hours
Symbolics and communication	17-20
Requirements in symbolics and communication are the same as they are on the regular elementary curriculum.	
Science and technology	7-10
Requirements in science and technology are the same as they are on the regular elementary curriculum.	

Social science 12
 Requirements in social science are the same as they are on the regular elementary curriculum

Arts and humanities 8-12
 The requirements in arts and humanities are the same as they are on the regular elementary curriculum with the exception of the course requirement in art, dance, music, or theatre arts. The basic studies requirement in this area is automatically satisfied by the following fine arts courses which are required on the elementary certificate with early childhood endorsement curriculum.

Fine arts area 6
 FA 300 Art Integration for the Elementary Teacher 4
 MUS 104 Elements of Music 2

Physical education area 4
 PED 257 Physical Education for the Classroom Teacher 2
 Physical education activity courses (2 hours) or military science (2 courses) 2

The following minor is required when a student is seeking elementary certification with early childhood education endorsement:

Sem hours

Early childhood education minor 24-26

1. Required courses:

FCS 214 The Developing Child 3
 FCS 215 Child Development Lab: Preschool Child 1
Note: FCS 215 must be taken concurrently with FCS 214

CUR 302 Methods of Integrating Curriculum and Resources in Early Childhood 3
 FCS 373 Child Development Lab III: Methods and Resources 1
Note: FCS 373 must be taken concurrently with CUR 302

SGN 251 Education of Exceptional Children .. 3
 PED 257 Physical Education for the Classroom Teacher 2
 EDP 341 Measurement and Assessment of Young Children 2
 EDM 345 Media for the Classroom Teacher ... 1
 EDU 496 Student Teaching Preschool 6
 CUR 401 Issues and Practices in Early Childhood Education 2
Note: CUR 401 must be taken concurrently with EDU 496

2. Elective courses:

FCS 314 The Developing Infant 3
 FCS 315 Child Development Lab: Infancy 1
Note: FCS 315 must be taken concurrently with FCS 314

EDP 318 Uses of Play in the Helping Professions 3
 PED 281 Motor Development 3
Note: EDT 300 Introduction to Computer Applications in Education, SGN 251 Education of Exceptional Children, EDP 200

Human Development and Learning-Early Childhood, FCS 214 The Developing Child, FCS 215 Child Development Lab: Preschool Child may be taken prior to admission to the teacher education program. Other professional education courses may be taken only after the student has been admitted to the teacher education program.

Professional Education courses 31-34
 Students must achieve a "C" or better in the following professional education courses.

EDT 300 Introduction to Computer Applications in Education 1
 SGN 251 Education of Exceptional Children ... 3
 EDP 200 Human Development and Learning- Early Childhood 5
 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 Measurement and Assessment of Young Children 2
 EDM 345 Media for the Classroom Teacher ... 1
 MTH 381 The Teaching of Mathematics K-6 ... 3
 EDU 495 Student Teaching Elementary 1-3 ... 6

SOME GROUP MAJORS AND MINORS FOR ELEMENTARY EDUCATION

Sem hours

Arts group major 36

1. Required courses 19
 FA 101 Introduction to Art 3
 MUS 104 Elements of Music 2
 CTD 222 Drama and Play in Human Experience 3
 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

2. Electives 17
 Choose 17 credits from fine arts, industrial education, music, drama/theatre for the young, or theatre arts courses.

Sem hours

Arts group minor 24

1. Required courses 16
 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

2. Restricted electives 8
 Choose eight credits from fine arts, industrial education, music, or theatre arts courses below. These electives for the arts group major and minor may be drawn from, but are not limited to the following recommended courses:

Fine Arts: FA 100 Art Appreciation; FA 107 and 108 Art History Survey I and II, or FA 421 History of Art; FA 122 Two-Dimensional Design; FA 123 and 124 Drawing I and II; *FA 222 African and African American Art; FA 231 Three-Dimensional Design; FA 302 Graphic Design; FA 436 Women in Art.

Industrial Education: IE 102 Woodwork; IE 105 History of Industrial Technology; IE 118 Energy Technology; IE 152 Arts and Crafts; IE 255 Art Metalwork; IDT 121 Graphic Communication.

Music: MUS 106 Introduction to the Performing Arts; MUS 107 Music Appreciation; MUS 151 and 152 Class Piano; MUS 232 Voice Class; MUS 131 University Choir; MUS 134 University Women's Chorus; MUS 135 University Men's Chorus; MUS 222 Classroom Instruments; MUS 249 University Band; MUS 248 University Orchestra; MUS 274 Functional Guitar; MUS 224 Recreational Music; and AMU 101-300 Applied Music Lessons.

Theatre Arts, Drama/Theatre for the Young, Oral Interpretation: CIR 106 Introduction to the Performing Arts; CIR 150 Introduction to Theatre; CIR 151 Black Theatre: An Introduction; CIR 153 Introduction to Theatre Crafts; CTO 168, 268, 368, 468 Oral Interpretation; CTO 210 Interpretative Reading; CID 222 Drama and Play in Human Experience; CTR 251 Black Theatre: Creative Problems; CID 322 Theatre for the Young; CID 323 Improvisation; CTD 324 Oral Interpretation of Children's Literature; and CID 497, 498, 499 Independent Study.

Sem hours

Bilingual bicultural education (Spanish-English) group minor 24
See Department of Foreign Languages and Bilingual Studies.

Sem hours

Elementary science group major 36

1. Required courses 15-16

PHY 100 Science for Elementary Teachers
(Physics) 3

CHM 101 Science for Elementary Teachers
(Chemistry) 3

GES 202 Science for Elementary Teachers
(Earth Science) 3

ESC 303 Science for the Elementary Teacher
(Biology ESC) 3

PSY 101 or 102 General Psychology 3-4

2. Restricted electives 20-21

Choose 20-21 credits from the biology, chemistry, geography and geology, and physics and astronomy courses below.

Sem hours

Elementary science group minor 24

1. Required courses 15-16

PHY 100 Science for Elementary Teachers
(Physics) 3

CHM 101 Science for Elementary Teachers
(Chemistry) 3

GES 202 Science for Elementary Teachers

(Earth Science) 3

ESC 303 Science for the Elementary Teacher

(Biology ESC) 3

PSY 101 or 102 General Psychology 3-4

2. Restricted electives 8-9

Choose eight or nine credits from biology, chemistry, geography and geology, and physics and astronomy courses below:

Biology: BIO 105 Biology and the Human Species; BIO 205 Field Biology; BIO 207 Elements of Ecology; BIO 224 Principles of Conservation; BIO 232 Nature Interpretation; BIO 413 Animal and Plant Preservation Techniques; BIO 415 Basic Histological Techniques; BOT 209 Ornamental Plants; BOT 215 Economic Botany; BOT 354 Trees and Shrubs.

Chemistry: CHM 105 Survey of Chemistry; CHM 115, 116 Chemistry and Society (includes laboratory); or CHM 119 Fundamentals of Chemistry; CHM 120 Fundamentals of Organic and Biochemistry; CHM 121 General Chemistry I.

Geography and geology: GES 114 National Parks and Monuments; GES 200 The Oceans; GES 227 Topographic Maps; GES 303 Field Geography; GES 309 Plate Tectonics; GES 324 Weather; GES 401 Cartography; GLG 161 Historical Geology; GLG 229 Rocks of Michigan; GLG 325 Geomorphology.

Physics and astronomy: PHY 110 Physical Science; PHY 210 Musical Acoustics; PHY 211 Elementary Physical Science; PHY 221 Mechanics, Sound, and Heat; PHY 222 Electricity and Light; AST 203 Exploration of the Universe.

Sem hours

Literature, language, communication, and theatre arts group major 36

Literature*

1. Required courses 6

LIT 210 Introduction to Shakespeare 3

LIT 207 Introduction to Children's Literature ... 3

*The courses under literature, and ENG 121 English Composition, may be applied to the English language and literature major by a student in elementary and special education. (See the English Department listings.)

2. Electives 6

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 204 Native American Literature, LIT 251 The Bible as Literature, LIT 260 African American Literature.

Language

1. Required courses 6

ENG 121 English Composition 3

ENG 225 Intermediate Composition, ENG 325 Expository Writing, or ENG 335

Imaginative Writing 3

2. Electives 6

Choose two courses from the following:

- LIN 201 An Introduction to Language; LIN 401 Introduction to Linguistic Science; LIN 402 Modern English Grammar; LIN 421 The History of Language.

Communication and theatre arts

1. Required courses 8-9

- CTS 121 or 124 Fundamentals of Speech 2-3
- CTO 210 Interpretative Reading 3
- CTD 222 Drama and Play in Human Experience 3

2. Electives..... 3-4

Choose three or four credits in communication and theatre arts courses.

See also the minor in drama/theatre for the young and a special speech minor for students in elementary or special education offered by the Communication and Theatre Arts Department.

For the interdisciplinary major of 36 semester hours in literature and drama/theatre for the young, see the Department of Communication and Theatre Arts.

Sem hours

Social science group major for elementary education 36

Choose at least 12 credits, but no more than 18 credits, from one of the following five areas: economics, geography (social science*), history, political science, sociology.

**Geography and geology applicable in the science and technology group and philosophy courses do not count on this major or minor.*

Choose three credits in each of the remaining four social science areas.

Sem hours

Social science group minor for elementary education 24

Elementary and special education students may elect this minor.

1. Required courses 15-18

- SOC 105 Introductory Sociology 3
- HIS 123 Trends in United States History or HIS 124 History of the U.S., 1877 to Present or two history courses 3-6
- GEO 110 World Regions 3
- ECO 200 American Economy or ECO 201 Principles of Economics I 3
- PLS 112 American Government 3

2. Electives..... 6-9

Choose six to nine credits from social science courses.

MINORS

Sem hours

Content and methods minor 20

As long as they are not used on another minor, the courses appropriate to elementary education may be drawn from, but are not limited to, the following:

- CHM 101 Science for Elementary Teachers (Chemistry)
- EDM 345 Media for the Classroom Teacher
- EDT 300 Introduction to Computer Applications in Education
- EDP 340 Introduction to Measurement and Evaluation
- SGN 300 Exceptional Children in the Regular Classroom
- ESC 303 Science for the Elementary Teacher (Biology ESC)
- FA 101 Introduction to Art, FA 300 Art Integration for the Elementary Teacher
- GES 202 Science for Elementary Teachers (Earth Science)
- HED 320 Health Education in the Elementary Grades
- IE 253 Technology Education for Children, IE 354 Experiences in Technology for Children
- LIT 207 Introduction to Children's Literature
- MTH 108 Functional Mathematics I
- PHY 100 Science for Elementary Teachers (Physics)

Elementary minor in industrial education 20
(See industrial education minor in the Department of Business and Industrial Education.)

Foreign language minor 20

French

1. Required courses 6

- FRN 343, 344 French Composition and French Conversation 6

2. Electives 14

Choose 14 credits from any level French courses.

German

1. Required courses 6

- GER 343, 344 German Composition and German Conversation 6

2. Electives 14

Choose 14 credits from any level German courses.

Spanish

1. Required courses 6

- SPN 343, 344 Spanish Composition and Spanish Conversation 6

2. Electives 14

Choose 14 credits from any level Spanish courses.

**CURRICULUM FOR SECONDARY
(JUNIOR-SENIOR HIGH SCHOOL)
AND K-12 TEACHERS**

The curriculum for the secondary/K-12 teacher education program consists 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 also the College of Education section of this catalog 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.

Basic Studies

Ordinarily, students are required to take five courses from Area I, Symbolics and Communication; three courses from Area II, Science and Technology; four courses from Area III, Social Science; four courses from Area IV Arts and Humanities; and two semester hours of physical education activity credit. In addition, at least one approved course in crosscultural or international studies must be completed in the process of meeting the requirements of Areas I-IV.

However, the courses to be taken to satisfy Areas I-IV sometimes are structured to complement the major in certain ways. See the portion of the catalog that describes the major for any structure that has been imposed on the basic studies in connection with that major. In cases where there is a specification concerning basic studies associated with a particular major, that pattern must be followed. Where no additional structure is imposed, the requirements for the basic studies are as given below. Students planning to go into special education should see that section of the catalog for additional structure for the basic studies.

Area	Sem hours
Symbolics and communication	14-17
ENG 121 English Composition	3
CTS 121 or CTS 124 Fundamentals of Speech	2-3
One course from the following options a, b, or c:	3-5
a. ENG 225 Intermediate English Composition, ENG 226 Report and Research Writing, ENG 324 Principles of Technical Communication, or	
b. CTC 224 Public Speaking, CTC 225 Listening Behavior, CTC 226 Nonverbal Communication, CTC 227 Interpersonal	

- Communication, *CTC 374 Intercultural Communication, or
- c. LAT 121/122 Beginning Latin, GRK 123/124 Beginning Ancient Greek; FRN 121/122 Beginning French, FRN 233/234 Intermediate French; GER 121/122 Beginning German, GER 233/234 Intermediate German; JPN 121/122 Beginning Japanese, JPN 211/212 Intermediate Japanese; SPN 121/122 Beginning Spanish, SPN 201/202 Intermediate Spanish

A course in mathematical reasoning from: ...3-4
 MTH 109 Functional Mathematics I, MTH 118/119 Mathematical Analysis for Social Sciences I and II, MTH 120/121 Calculus I and II, MTH 122 Elementary Linear Algebra, MTH 150 Mathematical Reasoning, MTH 270 Elementary Statistics, MTH 341 College Geometry, or SOC 250 Social Statistics I

A course in computer literacy from: 3
 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

Science and technology 9-12
 At least one of the three courses in science and technology must have a laboratory component.

A course in physical science from options
 a or b:3-4

- a. open to students who meet course requirements:
 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 or
- b. additional option 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.

Students must complete one of the courses in the above 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

A course in life science from:3-4

BIO 105 Biology and the Human Species; BOT 221 General Botany; ESC 303 Science for Elementary Teachers; ZOO 222 General Zoology; PSY 101 General Psychology (no laboratory); PSY 102 General Psychology

A course in science or technology from options a or b:3-4

- a. A course listed under physical or life science so long as you have chosen your three courses in this area from three different departments or
- b. A course from: CHM 101 Science for Elementary Teachers; IDT 150 Understanding Technology (no laboratory); IT 240 Science, Technology, and People (no laboratory)

Social science 12

PLS 112 American Government or PLS 113 American Government Honors3

A course in history from:3

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

A course in anthropology, economics, geography, or sociology from:3

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

A course from one of the following options a, b, or c:3

- a. A second course in a two-course history sequence from: HIS 102 Western Civilization, 1648- World War I (follows HIS 101 Western Civilization to 1648); HIS 103 Twentieth Century Civilization (follows HIS 102 Western Civilization, 1648 to World War I); HIS 124 The United States, 1877 to the Present (follows HIS 123, The United States to 1877) or
- b. A second course in a two-course sequence in anthropology, economics, geography, or sociology from: ANT 140 Introduction to Prehistoric Anthropology (follows ANT 135 Introduction to Cultural

Anthropology); GEO 111 Regions and Resources (follows GEO 110 World Regions); SOC 202 Social Problems (follows SOC 105 Introductory Sociology) or

- c. A course in cross-cultural or international studies from: *AAS 101 African American Studies: An Introduction; *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 Peoples and Cultures 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 in 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 Sub-Saharan Africa in the Twentieth Century; *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

Arts and humanities 12

A course from one of the following options

a or b:3

- a. A course in literature from: LIT 100 The Reading of Literature; LIT 101 The Reading of Fiction; LIT 102 The Reading of Literature: Poetry; LIT 103 The Reading of Literature: Drama or
- b. A course in intermediate or advanced foreign language literature from: FRN 221/222 Intermediate French (Reading); FRN 341/342 Survey of French Literature; GER 221/222 Intermediate German; 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

A course from one of the following options

a, b, c, or d:3

- a. A second course in literature from: LIT 101 The Reading of Fiction; LIT 102 The Reading of Literature: Poetry, LIT 103 The Reading of Literature: Drama or
- b. A second course in intermediate or advanced foreign language literature from the list above or

- c. CTO 210 Interpretative Reading or
 - d. A course in cross-cultural or international studies from: *FLA 215 The Culture of the Latino Groups in the United States; *LIT 204 Native American Literature; *LIT 260 African American Literature
- A course in philosophy or religion from: 3
- 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 or HIS 100 Comparative Study of Religions or PSY 225 Psychology of Religion
- A course in art, dance, music, or theatre arts from the following options a, b, c, or d: 3
- a. a course in art from: FA 100 Art Appreciation; FA 101 Introduction to Art; FA 107/108 Art History Survey I and II; FA 122 2-D 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 or
 - b. A course in dance: DAN 106 Introduction to the Performing Arts
 - c. A course in music from: MUS 100 Introduction to Music Theory; MUS 106 Introduction to the Performing Arts; MUS 107 Music Appreciation or
 - d. A course in theatre arts from: CTR 106 Introduction to the Performing Arts; CTR 150 Introduction to the Theatre; *CTR 151 Introduction to Black Theatre; CTR 158 Fundamentals of Acting; CTD 222 Drama and Play in Human Experience

Physical education 2
 Physical Education activity courses (2 hours) or military science (2 courses) 2

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 of basic studies. Approved courses are designated with an asterisk (*).

MAJOR AND MINOR

All students are required to complete a major teaching subject of at least 30 semester hours or a group major of 36 semester hours and, in addition, except where noted below, a minor of 20 semester hours or a group minor of 24 semester hours in a subject appropriate for teaching in secondary schools. Students should consult department advisers for more specific information and for suggestions on appropriate major/minor combinations. Student teaching placements and job opportunities are scarce in some fields. In addition, opportunities in some teaching

fields are greater in other states than they are in Michigan. Check with the Career Services Center for more up-to-date information on career placement.

A major must be selected from the following list:
English Language; Literature; English and American Literature and Language. See Department of English section for requirements. These lead to certification code BA, "English."

Communication and Theatre Arts Secondary Education Program. See Department of Communication and Theatre Arts section for requirements. This leads to certification code BD, "speech."

Economics. See Department of Economics section for requirements. This leads to certification code CA, "economics."

Geography. See Department of Geography and Geology section for requirements. This leads to certification code CB, "geography."

History. See Department of History and Philosophy section for requirements. This leads to certification code CC, "history."

Political Science. See Department of Political Science section for requirements. This leads to certification code CD, "political science."

Psychology. See Department of Psychology section for requirements. This leads to certification code CE, "psychology."

Sociology. See Department of Sociology, Anthropology, and Criminology section for requirements. This leads to certification code CF, "sociology."

Social Science. See Department of History and Philosophy section for requirements. This leads to certification code CX, "social science."

General Biology. See Department of Biology section for requirements. This leads to certification code DA, "biology."

Chemistry. See Department of Chemistry section for requirements. Note requirements for prospective teachers of chemistry that exceed the requirements for chemistry majors. This leads to certification code DC, "chemistry."

Physics. See Department of Physics and Astronomy section for requirements. This leads to certification code DE, "physics."

Earth Science. See Department of Geography and Geology section for requirements. Note that the major in Earth Science is coupled with a structured general science minor. This leads to certification code DH, "earth science/geology."

General Science. See Department of Physics and Astronomy section for requirements. This leads to certification code DX, "science."

Mathematics. See Department of Mathematics section for requirements. This leads to certification code EX, "mathematics."

French; German; Spanish; Japanese Language and Culture. See Department of Foreign Languages and Bilingual Studies section for requirements. These lead to certification codes FA, FB, FF, and FL ("French," "German," "Spanish," "Japanese Language and Culture"), respectively. The FL certification permits the individual to teach Japanese at all grade levels.

Business Education. See Department of Business and Industrial Education section for requirements. No minor is required. This leads to certification code GX, "business education" or certification code VB, "vocational business education."

Industrial Education/Industrial Arts. See Department of Business and Industrial Education section for requirements. No minor is required. This leads to certification code IX, "industrial arts."

Instrumental Music; Vocal Music. See Department of Music section for requirements. No minor is required. These lead to certification code JX, "music education." The JX certification permits the individual to teach music at all grade levels.

Consumer Home Economics. See Department of Human, Environmental, and Consumer Resources section for requirements. This leads to certification code KH, "home economics" or certification code VH, "vocational home economics."

Art Education. See Department of Art section for requirements. No minor is required. This leads to certification code LX, "art." The LX certification permits the individual to teach art at all grade levels.

Physical Education. See Department of Health, Physical Education, Recreation and Dance section for requirements. This leads to certification code MB, "physical education." The MB certification permits the individual to teach physical education at all grade levels.

Computer Science. See Department of Computer Science section for requirements. This leads to certification code NR, "computer science."

Industrial Education/Industrial-Vocational. See Department of Business and Industrial Education section for requirements. No minor is required. This leads to certification code VT, "vocational trades."

The minor must be selected from this list:

English Language; English Language and Literature; Literature. See Department of English section for requirements. These lead to certification code BA, "English."

Communication; Comprehensive Minor in Communication and Theatre Arts; Drama/Theatre for the Young. See Department of Communication and Theatre Arts section for requirements. These lead to certification code BD, "speech."

Economics. See Department of Economics section for requirements. This leads to certification code CA, "economics."

Geography. See Department of Geography and Geology section for requirements. This leads to certification code CB, "geography."

History. See Department of History and Philosophy section for requirements. This leads to certification code CC, "history."

Political Science. See Department of Political Science section for requirements. This leads to certification code CD, "political science."

Psychology. See Department of Psychology section for requirements. This leads to certification code CE, "psychology."

Sociology. See Department of Sociology, Anthropology, and Criminology section for requirements. This leads to certification code CF, "sociology."

Social Science. See Department of History and Philosophy section for requirements. This leads to certification code CX, "social science."

Biology. See Department of Biology section for requirements. This leads to certification code DA, "biology."

Chemistry. See Department of Chemistry section for requirements. This leads to certification code DC, "chemistry."

Physics. See Department of Physics and Astronomy section for requirements. This leads to certification code DE, "physics."

Geology; Earth Science. See Department of Geography and Geology section for requirements. These lead to certification code DH, "earth science/geology."

Astronomy. See Department of Physics and Astronomy section for requirements. This leads to certification code DO, "astronomy."

General Science. See Department of Physics and Astronomy for requirements. This leads to certification code DX, "science."

Mathematics. See Department of Mathematics section for requirements. This leads to certification code EX, "mathematics."

French Language and Literature, French Language, French Literature. See Department of Foreign Lan-

guage and Bilingual Studies section for requirements. These lead to certification code FA, "French."

German Language and Literature, German Language, German Literature. See Department of Foreign Language and Bilingual Studies section for requirements. These lead to certification code FB, "German."

Spanish Culture. See Department of Foreign Language and Bilingual Studies section for requirements. This leads to certification code FF, "Spanish."

Industrial Education. See Department of Business and Industrial Education section for requirements. This leads to certification code IX, "industrial arts."

Family Life; Occupational Foods. See Department of Human, Environmental, and Consumer Resources section for requirements. These lead to certification code KH, "home economics."

Art. See Department of Art section for requirements.

Health. See Department of Health, Physical Education, Recreation, and Dance section for requirements. This leads to certification code MA, "health."

Conservation and Resource Use. See Department of Biology section for requirements. This leads to certification code NJ, "conservation."

Computer Science. See Department of Computer Science section for requirements. This leads to certification code NR, "computer science."

Bilingual-Bicultural Education Spanish-English. See Department of Foreign Languages and Bilingual Studies section for requirements. This leads to certification code YF, "bilingual Spanish."

PROFESSIONAL EDUCATION COURSES

Students must achieve a "C" or better in the following professional education courses.

1. *Foundations*

SFD 328 Social Foundations of Teaching (3)

2. *Technology*

Not applicable to majors in business education, industrial education/industrial arts, industrial education/industrial-vocational; physical education; music majors take MUS 336 Computers in Music Education (1). All others take EDT 300 Introduction to Computer Application in Education (1) and EDM 345 Media for the Classroom Teacher (1).

3. *Human Development*

EDP 322 Human Development and Learning (4). However, those planning to become special education teachers should take instead EDP 325 Life Span Human Growth and Development (4).

4. *Exceptionalities*

Not applicable to majors in physical education. Majors in Industrial Education/Industrial Arts and Industrial Education/Vocational-Technical take SGN 251 Education of the Exceptional Child (3). All others take SGN 300 The Exceptional Child in the Regular Classroom (1).

5. *Curriculum*

Not applicable to majors in business education, home economics, industrial education/industrial arts, industrial education/vocational-technical, music, physical education. All others take CUR 305 Curriculum and Methods-Secondary (3).

6. *Reading*

RDG 311 Teaching Reading in The Secondary School (3)

7. *Evaluation*

Those planning to become special education teachers take SGN 390 Measurement and Diagnosis in Special Education (3). Majors in physical education take PED 440 Tests and Measurements in Physical Education (2). All others take EDP 340 Introduction to Measurement and Evaluation (2).

8. *Methods*

Majors in English Language, Literature, or English and American Literature and Language take ENG 308 High School English (3).

Majors in the Communication and Theatre Arts Secondary Education Program take CTA 307 The Teaching of Speech (3).

Majors in Economics, History, Political Science, Psychology, Sociology, and Social Science take HIS 481 The Teaching of Social Studies (3).

Majors in Earth Science and Geography take GEO 347 Teaching Earth Science and Physical Geography (3).

Majors in General Biology take BIO 403 Methods and Materials for Teaching Biology (3).

Majors in Chemistry, Physics, and General Science take PHY 325 Methods of Teaching the Physical Sciences (3).

Majors in Mathematics take MTH 306 Teaching of High School Mathematics (3).

Majors in French, German, Japanese Language and Culture, and Spanish take FLA 411 Theory and Methods of Modern Language Teaching (3).

Majors in Business Education take BE 200 Principles of Marketing and Office Education (3), BE 364 Methods of Teaching General Business Subjects (2), and either BE 365 Methods of Teaching Office Education (2) or BE 366 Methods of Teaching Marketing Education (2).

Majors in Industrial Education/Industrial Arts and Industrial Education/Industrial-Vocational take IE 460 Practicum in Industrial Education (2) and IE 461 The Teaching of Industrial Education (2).

Majors in Instrumental Music take MUS 332 Instrumental Music in Public Schools (3) and either MUS 333 Orchestral Methods (3) or

MUS 334 Band Methods (3). Majors in Vocal Music take MUS 330 Music Education in the Elementary School (3) and MUS 331 Music Education in the Secondary School (3).

Majors in Consumer Home Economics take HEC 370 Methods and Materials in Teaching Consumer Home Economics Education (3) and HEC 371 (Resources in Teaching Consumer Home Economics Education (3).

Majors in Art take FA 317 Teaching of Art (2) and FA 416 Art Methods and Materials (2).

Majors in Physical Education take PED 352 Methods of Teaching Elementary Physical Education (2) and PED 367 Methods and Materials in Physical Education (3), in addition to a variety of methods courses in types of activities.

Majors in Computer Science take CSC 346 Methods of Teaching Computer Science in the Secondary Schools (3).

9. Student Teaching

Those in secondary take EDU 492 Student Teaching (12); those in K-12 fields take EDU 495 (6) and EDU 496 (6).

CURRICULUM COURSES

CUR 178 Special Topics in Curriculum. 2 sem hours
Courses that can be offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

CUR 302 Methods of Integrating Curriculum and Resources in Early Childhood. 3 sem hours
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 Human Development and Learning—Early Childhood, MTH 108 Functional Mathematics I, FCS 214-215 The Developing Child, and Child Development Lab I. Taken concurrently with FCS 373 Child Development Lab III. Admission to the College of Education.

CUR 304 Curriculum and Methods
Elementary. 3 sem hours

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 College of Education prior to registration.

CUR 305 Curriculum and Methods
Secondary. 3 sem hours

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 College of Education prior to registration.

CUR 401 Issues and Practice in Early Childhood
Education. 2 sem hours

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 Early Childhood Student Teaching).

CUR 478, 479 Special Topics in
Curriculum. 2, 3 sem hours

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 sem hours

CUR 487 Cooperative Education in Teacher
Education. 3 sem hours

CUR 490, 491 Special Work (Honors
Courses). 1, 2 sem hours

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 sem hours

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 sem hours
Practical instruction in the use of the library's tools and materials. Given on demand.

EDM 345 Media for the Classroom
Teacher. 1 sem hour

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 College of Education.

EDM 402 General Reference. 3 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
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 or 102 General Psychology.

EDP 206 Mental Hygiene. 2 sem hours
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 or 102 General Psychology.

EDP 318 Uses of Play in the Helping Professions. 3 sem hours
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 sem hours
The psychological study of childhood from birth through adolescence with a focus on intellectual and psychosocial behavior and the role of parents and teachers in fostering learning and development.
Prereq: PSY 101 or 102 General Psychology.

EDP 325 Life Span Human Growth and Development. 4 sem hours
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 or 102 General Psychology.

EDP 340 Introduction to Measurement and Evaluation. 2 sem hours
General introduction to basic principles and problems in measurement and evaluation. Students learn how to construct teacher-made tests. Other topics include measurement of cognitive abilities, interests, attitudes, and personal and social adjustment.
Prereq: Admission to College of Education.

EDP 341 Measurement and Assessment of Young Children. 2 sem hours
Introduction to measurement and evaluation concepts and to measuring tools and techniques used to assess the intellectual, social, emotional and physical behavior of young children.
Prereq: PSY 101 or 102 General Psychology, EDP 200 Human Development and Learning—Early Childhood, and admission to College of Education.

EDP 402 Learning in the Later Years. 3 sem hours
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 General Psychology or equivalent.

EDP 477, 478, 479 Special Topics. 1, 2, 3 sem hours
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 sem hours
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 sem hour
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. Instruc-

tional 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 sem hours

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 College of Education.

RDG 314 Teaching Reading in the Elementary School. 6 sem hours

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 College of Education.

SOCIAL FOUNDATIONS COURSES

SFD 328 Social Aspects of Teaching. 3 sem hours

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 College of Education.

SFD 403 Endangered Children. 3 sem hours

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 runaways; 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 sem hours

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 sem hours

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 sem hours

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 sem hours

Advanced study on an individual basis in areas in which the department does not offer a formal course.

Prereq: Department permission.

TEACHING METHODS COURSES

***BE 364 Methods of Teaching General Business Subjects. 2 sem hours**

(For description, see Department of Business and Industrial Education.)

***BE 365 Methods of Teaching Office Education. 2 sem hours**

(For description, see Department of Business and Industrial Education.)

***BE 366 Methods and Materials in Teaching Distributive Education. 2 sem hours**

(For description, see Department of Business and Industrial Education.)

***BIO 403 Methods and Materials for Teaching Biology. 2 sem hours**

(For description, see Department of Biology.)

***CTC 307 The Teaching of Speech. 3 sem hours**

(For description, see Department of Communication and Theatre Arts.)

Prereq: Admission to College of Education.

***DAN 354 Methods and Materials in the Teaching of Dance. 3 sem hours**

(For description, see the Department of Health, Physical Education, Recreation, and Dance.)

***ENG 308 Teaching English in the Secondary Schools. 3 sem hours**

(For description, see Department of English Language and Literature.)

Prereq: Admission to College of Education.

***FA 317 Teaching of Art. 2 sem hours**

(For description, see Department of Art.)

***FA 416 Art Methods and Materials. 2 sem hours**

(For description, see Department of Art.)

*FLA 411 Theory and Methods of Teaching
Modern Languages. 2 sem hours
(For description, see Department of Foreign Languages
and Bilingual Studies.)

*FLA 423 Bilingual Multicultural Methods
K-12. 3 sem hours
(For description, see Department of Foreign Languages
and Bilingual Studies.)

*GES 347 Teaching Earth Science. 3 sem hours
(For description, see Department of Geography and Ge-
ology.)

*FCS 370 Methods and Materials in Consumer
Home Economics. 2 sem hours
(For description, see Department of Human, Environ-
mental, and Consumer Resources.)
*All above methods courses require admission to College
of Education.*

*FCS 371 Resources in Teaching Consumer Home
Economics Education. 2 sem hours
(For description, see Department of Human, Environ-
mental, and Consumer Resources.)

FCS 373 Child Development Lab III: Methods and
Resources. 1 sem hour
(Must be taken concurrently with CUR 302 Methods of
Integrating Curriculum and Resources in Early Child-
hood.)

*FCS 375 Resources in Teaching Family Life
Education. 2 sem hours
(For description, see Department of Human, Environ-
mental, and Consumer Resources.)

*HST 481 The Teaching of Social
Studies. 3 sem hours
(For description, see Department of History and Phi-
losophy.)

*IE 461 The Teaching of Technology and
Industrial-Vocational Education. 2 sem hours
(For description, see Department of Business and Indus-
trial Education.)

*MTH 306 Teaching of High School
Mathematics. 3 sem hours
(For description, see Department of Mathematics.)
Prereq: Admission to College of Education.

*MTH 381 The Teaching of Mathematics
K-6. 3 sem hours
(For description, see Department of Mathematics.)

*MUS 330 Music Education in the Elementary
School. 3 sem hours
(For description see Department of Music.)

*MUS 331 Music Education in the Secondary
School. 3 sem hours
(For description see Department of Music.)

*MUS 332 Instrumental Music in the Public
Schools. 4 sem hours
(For description see Department of Music.)

*MUS 333 Orchestral Methods. 2 sem hours
(For description see Department of Music.)

*MUS 334 Band Methods. 2 sem hours
(For description see Department of Music.)

*PED 367 Methods and Materials in Physical
Education. 3 sem hours
(For description, see Department of Health, Physical
Education, Recreation, and Dance.)

*PED 440 Tests and Measurements in Physical
Education. 2 sem hours
(For description, see Department of Health, Physical
Education, Recreation, and Dance.)

*PHY 325 Methods of Teaching the Physical
Sciences. 3 sem hours
(For description see Physics and Astronomy Depart-
ment.)

OTHER COURSES

AAD 179 Academics, Affiliation, and
Achievement 3 sem hours
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 environ-
ment. In addition, the classes are small and allow stu-
dents 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.

*LIT 207 Introduction to Children's
Literature. 3 sem hours
(For description, see Department of English Language
and Literature.)

*MTH 403 Current Research in Elementary School
Mathematics. 3 sem hours
(For description, see Department of Mathematics.)

COLLEGE OF HEALTH AND HUMAN SERVICES

Programs of Study and Course Descriptions

Dean: Elizabeth C. King
Assistant to the Dean: Kathy Randles
212 King Hall
487-0077/487-0078

DEPARTMENTS AND PROGRAMS

Associated Health Professions
Gerontology
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, child development, clothing and textiles, early childhood education, family life, 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 Hospital, Detroit
Henry Ford Hospital, Fairlane
Flint Osteopathic Hospital, Flint
Garden City Hospital, Garden City
Glacier Hills Nursing Center, Ann Arbor
Gonnan'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
J.C. 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
 WayneWestland 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 sem hours
 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 sem hours
 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 sem hours

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 sem hours

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. In addition, the department offers several interdisciplinary courses relating to the health services and the health care specialties.

AHP 196 Introduction to Health Careers. 2 sem hours

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 sem hour

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.

AHP 208 Ethical Dimensions in Health Care Delivery. 2 sem hours

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 sem hours

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 sem hours

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 in medical technology, cytotechnology/histotechnology track, phlebotomy certification)

The clinical laboratory sciences program offers three tracks, the clinical certification track, the professional track in medical technology, and cytotechnology/histotechnology track, each leading to the Bachelor of Science degree. A fourth track, a phlebotomy (blood drawing) training program also is 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 can be used as preparation for careers in medicine, dentistry, and veterinary science and for students considering graduate school or advanced studies in the clinical sciences.

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 FOR MEDICAL TECHNOLOGY)

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. This option could fulfill requirements for pre-professional programs in medicine and dentistry. 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.

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 first must 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 statewide computer matching process. The selection process is completed in February each year, with internships usually beginning during the month of July. A Bachelor of Science in clinical laboratory sciences will qualify the student to apply to hospitals within Michigan and throughout the United States.

Hospital-based schools of medical technology (internship programs) affiliated with the University are:

Damon Clinical Laboratories, Detroit
 Garden City Osteopathic, Garden City
 Providence Hospital, Southfield
 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 do 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	21-25
BIO 105 Biology and the Human Species (or waiver)	4
ZOO 201, ZOO 202 Human Anatomy and Physiology	6
MIC 329 General Microbiology	5
BIO 301 Genetics	3
BOT 446 Medical Mycology (professional track only)	4
Chemistry courses	21-25
CHM 119 Fundamentals of Chemistry (if no high school chemistry)	4
CHM 121, 122 and CHM 123, 124 General Chemistry	9
CHM 270 Organic Chemistry	4
CHM 271 Organic Chemistry Lab	1
CHM 281 Quantitative Analysis	4
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/Body Fluids	2
CLS 335 Clinical Immunology	4
CLS 401 Laboratory Management Education/Quality Assurance	4
CLS 402 Application 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

Social science: (four courses) 8-12

Arts and humanities: (four courses) 8-12

Physical education and health 2

 Physical education activity courses

 (Any two courses in Military Science may be applied.)

 *Required for clinical track only.

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 also must 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	18-22
BIO 105 Biology and Human Species (or waiver)	4
ZOO 201, ZOO 202 Human Anatomy and Physiology	6
MIC 329 General Microbiology	5
BIO 301 Genetics	3
BIO 415 Histology Techniques	1
ZOO 404 Mammalian Histology	3
Chemistry courses	19-23
CHM 119 Fundamentals of Chemistry (if no high school chemistry)	4
CHM 121, 122, and CHM 123, 124 General Chemistry	9
CHM 270 Organic Chemistry	4
CHM 271 Organic Chemistry Lab	1
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, 417, 418, 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 also are eligible to take a certification examination given by the Ameri-

can Society of Phlebotomy Technicians, or the National Certification Agency Examination for the Clinical Laboratory Phlebotomist.

CLINICAL LABORATORY SCIENCES COURSES

CLS 101 Introduction to Clinical Laboratory Sciences. 1 sem hour

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 sem hours

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 sem hours

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 sem hours

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.*

CLS 307 Introduction to Hematology. 3 sem hours

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 Introduction to Hematology.

Prereq: CLS 200 Clinical Laboratory Techniques or permission of instructor.

CLS 310 Urinalysis and Body Fluids. 2 sem hours

Lecture and laboratory covering urine and body fluid analysis. Specimen collection and handling, physical examination, chemical testing, and microscopic evaluation.

Prereq: CLS 307 Introduction to Hematology or permission of instructor.

CLS 335 Clinical Immunology. 4 sem hours
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 Clinical Laboratory Techniques, MIC 329 General Microbiology or permission of instructor.

CLS 387 Cooperative Education in Clinical Laboratory Services. 3 sem hours

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 General Microbiology, CHM 270 Organic Chemistry, CHM 271 Organic Chemistry Laboratory, permission of program director.

CLS 401 Laboratory Management/Education/Quality Assurance. 4 sem hours

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 Elementary Statistics or equivalent.

CLS 402 Applications of Clinical Chemistry to Pathophysiology. 3 sem hours

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 Introductory Biochemistry or permission of instructor.

CLS 405 Cytotechnology Clinical Internship. 14 sem hours

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 sem hours

Continuation of CLS 405.

Prereq: program approval.

CLS 407 Advanced Hematology. 3 sem hours

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 Advanced Hematology.

Prereq: CLS 307 Introduction to Hematology.

CLS 416 Basic Histotechnique and Histochemical Staining Methods. 2 sem hours

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 sem hours
Didactic and practicum experience in basic biological electron microscopy. Electron microscopic histochemistry and special techniques are also covered. Emphasis is on the electron microscope as a medical diagnostic tool.

Prereq: Program approval.

CLS 418 Immunohisto- Cytochemistry. 4 sem hours
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 sem hours

An intensive course in human cyogenetics. Human chromosome methodology, chromosome identification, and chromosomal abnormalities and their application in clinical medicine.

Prereq: Program approval.

CLS 432 Clinical Microbiology. 4 sem hours

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 Clinical Microbiology.

Prereq: MIC 329 General Microbiology or permission of the instructor.

CLS 434 Advanced Immunohematology. 3 sem hours

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 Advanced Immunohematology.

Prereq: CLS 307 Introduction to Hematology and CLS 335 Clinical Immunology.

CLS 450 Hematology/Coagulation Practicum. 5 sem hours

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 sem hours

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 sem hours
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 sem hours
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 Applications of Clinical Chemistry to Pathophysiology.

CLS 456 Clinical Microbiology Practicum. 5 sem hours
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 sem hour
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 sem hour
This is an intensive introductory lecture and laboratory course highlighting medically important fungi, disease states, and laboratory methods of isolation and identification.
Prereq: Acceptance into clinical track or permission of instructor.

CLS 477, 478, 479 Special Topics in Clinical Laboratory Sciences. 1, 2, 3 sem hours
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 sem hours
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 Cooperative Education in Clinical Laboratory Services, permission of program director.

CLS 497, 498, 499 Independent Study. 1, 2, 3 sem hours
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

Following is a representative list of agencies with which the health administration program is affiliated:

- Alzheimer's Disease and Related Disorders Association, Southfield
- Beyer Memorial Hospital, Ypsilanti
- Center for Health Promotion, Michigan Department of Public Health, Lansing
- Chelsea Community Hospital, Chelsea
- Citizens for Better Care, Traverse City
- City of Detroit, Bureau of Substance Abuse Services, Detroit
- Detroit Osteopathic Hospital Corporation, Detroit
- ElderCare, Inc., Ypsilanti
- Garden City Osteopathic Hospital, Garden City
- Huron Oaks Center, Catherine McAuley Health Center, Ann Arbor
- Institute of Women's Medicine, Hutzel Hospital, Detroit
- M-Care, Ann Arbor
- Michigan Department of Corrections, Bureau of Health Care, Lansing
- Michigan Department of Mental Health, Lansing
- Michigan Insurance Bureau, Lansing
- Mid-Staffordshire Health Authority, Staffordshire General Infirmary, Stafford, England
- New Horizon Care Corporation, Sun Valley, California
- 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
- Washtenaw County Department of Human Services
- Wayne County Medical Examiner's Office, Detroit

HEALTH ADMINISTRATION CURRICULUM

The program in health administration is one of only 25 undergraduate programs in the United States with full membership in the Association of University Programs in Health Administration (AUPHA). In addition, the program is closely affiliated with the American Academy of Medical Administrators (AAMA).

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.

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. An active Honors Program in Health Administration is available that encourages independent study, research, and scholarship in the field.

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	14-17
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 and ECO 202 Principles of Economics I and 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 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 Care 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 or 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 and Research Methods in 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 American Legal System)	3

Required courses in business administration and liberal arts*

MTH 119 Mathematical Analysis for the Social Sciences II	3
ECO 436 Health Economics	3
ACC 240, 241 Principles of Accounting	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 Psychological Statistics, ECO 310 Economic Statistics, SOC 250 Social Statistics I)	3
BE 201 Microcomputers for Business Application (or other computer-literacy course)	3

Electives 6-15

The following courses are suggested as possible electives:

HAD 479H (Honors only) Health Care for the Homeless
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 1</i>	15-16
HAD 300 Health Issues	2
or	
HAD 305 U.S. Health Care System	3
HAD 310 Administration of Health Care Organizations	3
HAD 311 Management of Health Care Organizations	3
HAD 415 Planning and Regulation of the Health Care 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	
<i>Group 2</i>	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 of Health Care	2
AHP 305 Data Analysis and Research Design in Health Care	3
NUR 380 Health and Illness Problems Throughout the Life Span	3
SWK 431 Substance Abuse	3
SWK 438 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, 387 Cooperative Education in Health Administration. 3 sem hours
 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 387) alternated with full-time attendance at the University.

Prereq: For HAD 287, sophomore standing and health administration major; for HAD 387, HAD 287.

HAD 300 Health Care Issues. 2 sem hours
 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 sem hour
 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 sem hours
 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 sem hours
 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 *The U.S. Health Care System.*

HAD 311 Management of Health Services. 3 sem hours
 A continuation of HAD 310 Administration of Health Care Organizations, 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 *Administration of Health Care Organizations.*

HAD 415 Planning and Regulation of the Health Industry. 3 sem hours
 Review of regulations affecting the health industry, particularly health planning. Ramifications for community, consumer, and provider groups. Legislation and implications.
Prereq: HAD 310 *Administration of Health Care Organizations.*

HAD 420 Financial Management of Health Institutions. 3 sem hours
 The application of generic concepts and tools to the health field.
Prereq: HAD 310 *Administration of Health Care Organizations.*

HAD 425 Decision Making for Health**Administrators. 3 sem hours**

The integration of many knowledge areas into health administration. A capstone course utilizing case studies, role playing, simulation, and games.

Prereq: HAD310 Administration of Health Care Organizations.

HAD 477, 478, 479 Special Topics in Health**Administration. 1, 2, 3 sem hours**

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 sem hours**

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 sem hours**

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 sem hours**

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

Yvonne Teske
Program Director
328 King Hall
487-0460

Associate Professors: Ruth A. Hansen, Yvonne Teske, Sherry Sayles-Folks

Assistant Professors: Ben Atchison, Normajean Bennett, Marie Immekus, Virginia Dickie

Instructors: Judy Olson, Elizabeth Francis-Connolly

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.

Special Requirements**Admission**

1. Students first must 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 or 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. An additional psychology course, a class meeting the fourth requirement in Area IV of basic studies, and a course in human growth and development.
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 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. Licensing or registration requirements vary according to the state in which the OTR practices.

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	14-17
Requirements 1-5 (page 32)	
Science and technology	31-32
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 Growth and 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 34)	6
Two courses offered in sociology/cultural anthropology	6
Arts and humanities	12
Requirements 1, 2, 3, and 4 (page 35)	12
Cross-cultural or international studies	
Education	4
EDP 325 Life Span Human Growth and Development	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 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 sem hours**

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, 387 Cooperative Education in Occupational Therapy.**3 sem hours**

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: Approval of the Cooperative Education Office and program permission. For OT 287, OT 387.

OT 300 Introduction to Occupational Therapy.**2 sem hours**

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 Human Growth and Anatomy and ZOO 326 Human Physiology.

Prereq: Admission to the program.

OT 301 Practicum in Occupational Therapy.**1 sem hour**

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.

Prereq: Admission to the program.

OT 302 Developmental Activities I.**2 sem hours**

The theory, analysis, and application of developmental activities used in occupational therapy intervention. May be taken concurrently with OT 303 Conditions I and OT 308 Programming for Early Childhood.

Prereq: IE 358 Tools and Materials. Prereq or coreq: OT 300 Introduction to Occupational Therapy.

OT 303 Conditions I.**3 sem hours**

Health and illness and selected conditions that affect occupational performance and require OT intervention.

Prereq: For OT majors, OT 300 Introduction to Occupational Therapy, ZOO 317 Human Growth and Anatomy and ZOO 326 Human Physiology. For non-OT majors, department permission.

OT 304 Developmental Activities II.**2 sem hours**

Theory, analysis, and application of developmental activities used in occupational therapy intervention with adults and aged persons. May be taken concurrently with OT 403

Conditions II, OT 418 Programming for Childhood and Adolescence.

Prereq: OT 302 Developmental Activities I, OT 303 Conditions I, OT 308 Programming for Early Childhood.

OT 308 Programming for Early Childhood.**6 sem hours**

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 Developmental Activities I, OT 303 Conditions I, ZOO 417 Neuroanatomy.

Prereq: OT 300 Introduction to Occupational Therapy.

OT 400 Seminar in Health Care Issues.**1 sem hour**

The issues covered in HAD 300 Health Care Issues as they pertain to occupational therapy. To be taken concurrently with OT 419 Programming for Adulthood and Aging.

OT 403 Conditions II.**3 sem hours**

Conditions that interrupt development and performance in later childhood and adolescence and necessitate intervention.

Prereq: For OT majors, OT 303 Conditions I, OT 308 Programming for Early Childhood. For non-OT majors, department permission.

OT 418 Programming for Childhood and Adolescence.**5 sem hours**

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 Conditions II.

Prereq: OT 303 Conditions I, OT 308 Programming for Early Childhood.

OT 419 Programming for Adulthood and Aging.**5 sem hours**

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 Programming for Childhood and Adolescence.

OT 420 Fieldwork (part-time).**2 sem hours**

An experience with children and/or adolescents in evaluating, planning, and implementing supervised occupational therapy intervention programs. May be taken concurrently with OT 403 Conditions II, OT 418 Programming for Childhood and Adolescence.

Prereq: OT 303 Conditions I, OT 308 Programming for Early Childhood.

OT 421 Fieldwork (part-time). 2 sem hours
Experience with young, middle, and/or older adults in evaluating, planning, and implementing supervised occupational therapy intervention programs.

Prereq: OT 418 *Programming for Childhood and Adolescence. To be taken concurrently with or after OT 419 Programming for Adulthood and Aging.*

OT 477, 478, 479 Special Topics in Occupational Therapy. 1, 2, 3 sem hours

Experimental courses or special topics in occupational therapy may be offered (to be announced).

Prereq: Department permission.

OT 488, 489 Fieldwork (full-time). 3 sem hours 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 sem hours
A fieldwork experience with special populations or in special settings other than those completed in the required placements.

Prereq: OT 488 and 489 *Fieldwork; department permission.*

OT 497, 498, 499 Independent Study. 1, 2, 3 sem hours

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: Deborah L. deLaski-Smith, Richard B. Leinbach, Marilyn P. Nagy, Gwendolyn M. Reichbach, Judith C. Williston

Assistant Professors: Betty L. Barber, Polly W. Buchanan, Louise Jones, Sarah E. Moore, Virginia A. North, N. Annette Peel, Deborah A. Silverman, Phyllis A. Young

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 and promoting wellness for individuals at each stage of the life cycle. 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 Research (FIDER).

Degree: Bachelor of Science

Programs of Study

Curricula:

- Consumer home economics education
- Dietetics
- Family and consumer sciences
- Fashion merchandising
- Hospitality management
- Interior design

Minors:

- Child development
- Clothing and textiles
- Early childhood education
- Family life
- Nutrition
- Occupational foods

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:

- Consumer home economics education (vocational endorsement): Mary Krieger, Ruby Meis
- Dietetics: Annette Peel, Deborah Silverman
- Family and consumer sciences: Duane Laws

Fashion merchandising: Betty Bornemeier, Sarah Moore
 Hospitality management: Polly Buchanan
 Interior design: Virginia North
 Child development: Judy Williston, Phyllis Young
 Clothing and textiles: Mary Krieger
 Early childhood education: Judy Williston
 Family life: Duane Laws, Betty L. Barber
 Nutrition: Deborah Silverman
 Occupational foods: Polly Buchanan

Field experience is an integral part of all majors offered in the department. A specialized course with supervised field experiences is offered in the student's area of specialization.

Certification and registration is provided for the particular major/minor involved.

Graduate study leads to the master's degree with concentrations in clothing and textiles, consumer affairs, family and child development, foods and nutrition, and in general home economics. For a description of the graduate program and courses, consult the Graduate Catalog.

CONSUMER HOME ECONOMICS (TEACHING)

The bachelor's degree in consumer home economics education leads to the Secondary Provisional Certificate in teaching with vocational endorsement; this qualifies the graduate to teach at the junior and senior high level and in adult education. Occupational endorsements are available in child care and guidance services and occupational foods. Selection of the early childhood education minor or occupational foods minor gives the student the background to develop the occupational area in his or her teaching situation.

In addition to meeting basic studies requirements, all students on this curriculum must complete all other courses specified. Students must also complete 200 hours of recent and relevant volunteer/work experience in three of four specified areas. Students on this curriculum must choose a minor of 20-24 semester hours. Recommended are minors in clothing and textiles, early childhood education, family life, nutrition or occupational foods.

Area	Sem hours
Symbolics and communication	
ENG 121 English Composition or equivalent	3
CTS 121 or 124 Fundamentals of Speech	2-3
An upper level course in written composition or speech communication (page 32)	3
MTH 109 Functional Mathematics II or MTH 118 Mathematical Analysis for Social Sciences I	3
HHS 226 Computers for Health and Human Services or CSC 136 Computers for the Non-Specialist	3

Science and technology

CHM 105 Survey of Chemistry5
 BIO 105 Biology and the Human Species4
 PSY 101 Introductory Psychology3

Social science

PLS 112 American Government3
 A course in history (page 34)3
 ECO 201 Principles of Economics I3
 Social science elective3
 ECO 202 Principles of Economics II or *ECO 321 Minority Workers in the Labor Market or *ECO 328 Economics of Women
 **Cross-cultural elective
 CTC 374 Intercultural Communication; or ECO 321 Minority Workers in the Labor Market or ECO 328 Economics of Women or HST 305 Indians of the United States or HST 315 History of Black Americans or HST 336 History of Women in the United States and Great Britain, 1800 to the Present or LIT 204 Native American Literature or LIT 260 African American Literature or PHI 226 Philosophy of Women

Arts and humanities

A course in literature (page 35)6
 *LIT 204 Native American Literature or *LIT 260 African American Literature
 PHI 130 Introduction to Logic or PHI 220 Ethics3
 FA 101 Introduction to Art3
 Required for CHEE majors
 *Meet cross-cultural studies
 **If cross-cultural course is selected in symbolics and communication or arts and humanities, student will take social science elective.

Education 29

EDT 300 Introduction to Computer Applications in Education1
 SGN 300 Exceptional Children in the Regular Classroom1
 RDG 311 Teaching Reading in the Secondary School3
 EDP 322 Human Development and Learning4
 SFD 328 Social Aspects of Teaching3
 EDP 340 Introduction to Measurement and Evaluation2
 EDM 345 Media for the Classroom Teacher1
 FCS 370 Methods and Materials in Teaching Consumer Home Economics Education3
 FCS 371 Resources in Teaching Consumer Home Economics Education3
 EDU 492 Student Teaching8

Practical arts 36

Consumer affairs

FCS 112 Introduction to Consumer Affairs3
 FCS 285 Resource Management: Individual and Family3
 Family and child development
 FCS 109 Interpersonal Relations in the Family3

FCS 209 Marriage and Interpersonal Competence	3
FCS 214 The Developing Child	3
FCS 215 Child Development Lab: Preschool Child	1
FCS 306 Parenting	3
FCS 361 Issues in Family and Child Development	3
<i>Nutrition and health</i>	
FCS 113 Family Health Care	2
HEC 211 Experimental Foods	4
HEC 201 Nutrition for Consumers	3
<i>Human environment</i>	
FM 235 Textiles for Consumers	3
IDE 269 Housing for Consumers	3
Physical education and health	2
Physical education activity courses	2
(Any two courses in Military Science may be applied)	
Total	131-139

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 ("C" grade or above) of the following courses at time of entrance into the program: HEC 202 Human Nutrition, DTC 301 Orientation to Dietetics, 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 foods and 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
CTS 121 or 124 Fundamentals of Speech	2-3
A second course in ENG (page 35) or CTC 225 Listening Behavior, CTC 226 Nonverbal Communication, or CTC 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, 122 General Chemistry I	4
CHM 123, 124 General Chemistry II	4
CHM 270 Organic Chemistry	4
CHM 271 Organic Chemistry Laboratory	1
CHM 351 Introductory Biochemistry	3
CHM 453 Biochemistry Laboratory	2
MIC 328 Introductory Microbiology	3
ZOO 326 Human Physiology	3
Social science	15
PLS 112 American Government	3
History course 101, 102, 103, 106, 123, or 124 ...	3
ECO 201 Principles of Economics I	3
SOC 105 Introductory Sociology	3
SOC 205 Minority Women or SOC 214 Racial and Cultural Minorities	3
Arts and humanities	12
LIT 100 The Reading of Literature	3
A course in literature or oral interpretation (page 34)	3
A philosophy course PHI 100 Introduction to Philosophy, PHI 110 Philosophies of Life, PHI 130 Introduction to Logic, PHI 132 Introduction to Critical Reasoning, PHI 220 Ethics	3
A course in art, music or theatre arts as FA 100 Art Appreciation, FA 101 Introduction to Art, FA 107 Art History Survey I, FA 108 Art History Survey II, MUS 107 Music Appreciation, CTR 106 Introduction to the Performing Arts, CTR 150 Introduction to the Theatre	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

HEC 481 Ambulatory Nutrition Care Experience	2
HEC 482 Ambulatory Nutrition Care	1
HEC 483 Clinical Nutrition II Experience	4
HEC 484 Clinical Nutrition II	1
HEC 485 Clinical Nutrition III	5
DTC 492 Food Systems Management II Experience	4
DTC 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

FAMILY AND CONSUMER SCIENCE

Family and consumer science provides students two career options. Built on a 24 hour core of related courses, students select either the Consumer Affairs or the Family and Child focus according to their career goals. Both areas prepare students for positions in business, government, or community agencies. Sample job opportunities for the Consumer Affairs focus include credit counselor, consumer affairs representative or customer service coordinator. The Family/Child focus prepares students to work for or directly with families and children in varied settings. Sample job titles include preschool owner/director/teacher; field director youth programs; cooperative extension agent teaching parents and adults; pre-school teaching; residential care home; educational program manager.

Area	Sem hours
Symbolics and communication	14-18
See basic studies requirements (page 32).	
Science and technology	7-10
A course in physical science	
A course in chemistry or physics must be completed unless appropriate evidence has been submitted to the Academic Advising Office that one unit course in high school has been completed with a grade of "C" or above.	
PSY 101 or 102 Introduction to Psychology	
A course in science or technology, chosen from a department other than the ones in which physical and life science requirements have been completed	
Social science	8-12
A course in U.S. government	
A course in history	
SOC 105 Introductory Sociology, or ECO 201 Principles of Economics I	
A second course in a two-course sequence in economics (consumer affairs focus) or a second course in sociology (family/child focus)	

Arts and humanities 8-12
 See basic studies requirements (page 35).

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 requirements of the foregoing basic studies areas. For approved courses, see page 36.

Practical arts (Family and consumer science) 44-45
Core (required) 24
 FCS 109 Interpersonal Relations in the Family 3
 FCS 112 Introduction to Consumer Affairs 3
 IDE 269 Housing for Consumers 3
 FCS 285 Resource Management: Individual and Family 3
 FCS 322 Family Financial Management 3
 FCS 361 Issues in Family and Child Development 3
 FCS 450 Adult Role Transitions 3
 HEC 487 Field Experience 3
 *Select *one* course outside major 3
 Select one career focus below
Consumer Affairs Focus 14
 FCS 419 Consumer Resource Management: Health Care or HM 430 Family Financial Advising 3
 FCS 472 Consumer Economic Issues 3
 FCS 473 Consumer Economic Problems 3
 FCS 474 Seminar in Consumer Affairs 2
 JRN 215 News Writing and Reporting 3
Family/Child Focus 15
 FCS 209 Marriage and Interpersonal Relations 3
 FCS 214 The Developing Child 3
 FCS 215 Child Development Lab: Preschool Child 1
 FCS 306 Parenting 3
 FCS 375 Professional Seminar: Family Life Education 2
 HEC 461 Family Interaction 3
Minors: Students will select one of the minors below in consultation with their department academic adviser, considering professional goals.
Physical Education 2
Electives 9-13
Total 124

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 (pages 32-36), 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 36).	
Major in fashion merchandising	45
<i>Foundation courses</i>	
HEC 300 Professional Perspectives	3
<i>Specialization courses</i>	42
HEC 105 Integrated Arts	3
FM 135 Cultural Study of Fashion	3
FM 145 Introduction to Merchandising	3
IDE 208 Basic Interior Design	3
FM 235 Textiles for Consumers	3
FM 255 Apparel Analysis	3
FM 345 Theories and Practice of Fashion Merchandise I	3
FM 355 Theories and Practice of Fashion Merchandise II	2
FM 356 Theories and Practice of Fashion Merchandise III	1
FM 380 Fashion of 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
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	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 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. A minor in management or nutrition is required.

Area	Sem hours
Symbolics and communication	14-15
ENG 121 English Composition	3
CTS 121/124 Fundamentals of Speech	2-3
A course in mathematical reasoning	3
CSC 136 Computers for Non-specialists or IHS 226 Computers for Health and Human Services	3
Elective	3-5
<i>Recommended:</i>	
ENG 225 Intermediate English Composition	
ENG 226 Report and Research Writing	
ENG 324 Principles of Technical Communication	
CTC 224 Public Speaking	
CTC 225 Listening Behavior	
CTC 226 Non Verbal Communication	
SPN, GER, FRN, JPN 121 Beginning Spanish, German, French, Japanese	
Science and technology	11
BIO 105 Biology and the Human Species	4
CHM 120 Fundamentals of Organic and Biochemistry	4
PSY 101 General Psychology or IT 240 Science, Technology and People	3
Social science	15
PLS 112 American Government	3
HST 103 Twentieth Century Civilization or HST 124 History of the U.S., 1877-Present	3
ECO 201 Principles of Economics I	3
ECO 202 Principles of Economics II	3
Any cross-cultural/international studies course ...	3
Arts and humanities	12
Two courses literature or foreign language	6
(SPN, GER, FRN 221/222 and 341/342 or JPN 211/212 and 344/345)	
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>	
HM 103 Introduction to the Hospitality Industry	2
HM 204 Sanitation in the Hospitality Industry	1
HM 376 Legal Aspects of the Hospitality Industry	3
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 211 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
DTC 492 Food Systems Management II Experience	4
DTC 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
HEC 368 Hospitality Information Systems	3
<i>Select 1 course from the list below to meet department requirement for taking one HEC course not in the major:</i>	
FCS 109 Interpersonal Relations, IDE 308 Environmental Systems for Interiors, IDE 369 Human Factors and Environmental Design	
<i>General Elective</i>	2-3
<i>Select one course from list below:</i>	
HED 210 Standard American Red Cross	
GEO 110 World Regions	
REC 100 Introduction to Recreation and Leisure	
CSC 136 Computers for Non-Specialists	
Recommended minor	21
Management, College of Business	
MGT 202 Business Communications	3
ACC 240 Principles of Accounting	3
MKT 360 Principles of Marketing	3
MGT 384 Personnel Administration	3
MGT 386 Organizational Theory and Development	3
Physical education	2
Electives	6
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 interiordesign 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 1, CSC 136 Computers for the Non-Specialist, 1 course in English composition, 1 course in Physical Science, PSY 101 or PSY 102 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 or PSY 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 35)	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
FA 231 Three-Dimensional Design	3
FM 235 Textiles for Consumers	3
IDE 310 Interior Design Studio V	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 352 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

CHILD DEVELOPMENT MINOR

This minor is appropriate for students majoring in psychology, sociology, social work or any child-related, non-teaching major. Graduates of this program are prepared to direct child development centers as well as teach in half- and full-day child care centers.

	Sem hours
Minor in child development	24-25
1. Required courses	22
FCS 214 The Developing Child	3
FCS 215 Child Development Lab: Preschool Child	1
FCS 314 The Developing Infant.....	3
FCS 315 Child Development Lab: Infancy	1
CUR 302 Integrating Curriculum and Resources in Early Childhood	3
FCS 373 Child Development Lab: Curriculum/Resources	1
FCS 407 Administration and Supervision in Child Development Centers	3
FCS 413 Experiences with Children	5
FCS 422 Seminar in Child Development	2
2. Restricted electives	2-3
EDP 318 Play and the Helping Professions	3
SLI 337 Language Acquisition	3
FCS 307 Directed Child Study	1
EDP 341 Evaluation and Assessment of Young Children	2

CLOTHING AND TEXTILES MINOR

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

Textiles application

FM 119 Early American Textiles	3
FM 404 Textile Testing	3
FM 443 Merchandising of Home Furnishings ...	3

EARLY CHILDHOOD EDUCATION MINOR

This minor is interdisciplinary in nature and provides students majoring in special education and consumer home economics education with teaching endorsements in preprimary, early childhood or occupational child care. Students in regular elementary education should choose the early childhood education pattern listed in Teacher Education for requirements (page 300). Students who complete one of the above major/minor combinations will qualify for the ZA endorsement.

	Sem hours
Minor in child development	24-25
1. Required courses	22
FCS 214 The Developing Child	3
FCS 215 Child Development Lab: Preschool Child	1
FCS 314 The Developing Infant.....	3
FCS 315 Child Development Lab: Infancy	1
CUR 302 Integrating Curriculum and Resources in Early Childhood	3
FCS 373 Child Development Lab: Curriculum/Resources	1
EDP 341 Evaluation and Assessment of Young Children	2
FCS 413 Experiences with Children	5
FCS 407 Administration and Supervision in Child Development Centers	3
2. Restricted Electives	2-3
Choose two to three credits from the following:	
EDP 318 Play and the Helping Professions, SLI 337 Language Acquisition, FCS 422 Seminar in Child Development, FCS 307 Child Development Laboratory	

FAMILY LIFE MINOR

Students on a curriculum for teaching who desire family life as a second teaching area will take FCS 370 Methods and Materials in Consumer Home Economics Education and FCS 375 Resources in Teaching Family Life Education for a total of five semester hours.

	Sem hours
Minor in family life	23-28
1. Required courses	20
FCS 109 Interpersonal Relations in the Family ...	3
FCS 209 Marriage and Interpersonal Competence	3
FCS 214 The Developing Child	3
FCS 215 Child Development Lab: Preschool Child	1
FCS 314 The Developing Infant.....	3
FCS 315 Child Development Lab: Infancy	1
FCS 361 Issues in Family and Child Development	3

HEC 461 Family Interaction	3
2. Restricted elective	3
Choose one course from the following:	
FCS 305 Family Development: Middle Childhood, FCS 306 Parenting	

MINOR IN 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 312 History of Interiors: 1800 - Present ...	2
FCS 322 Family Financial Management.....	3
IDE 364 Facility Management	3

NUTRITION MINOR

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 MINOR

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 in 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
DTC 492 Food Systems Management II Experience	4
DTC 494 Food Systems Management II	1

DIETETICS COURSES

DTC 301 Orientation to Dietetics. 2 sem hours
Orientation to dietetics profession by exploring its roles in health care system, by examining the different facets and specializations of the professions and investigating future trends. Open only to dietetics students.
Co-prereq: HEC 202 Human Nutrition.

DTC 311 Community Nutrition Experience. 2 sem hours
Supervised practice experience in various community nutrition settings, with emphasis on nutrition education techniques and community organization process.
Coreq: DTC 312 Community Nutrition.

DTC 312 Community Nutrition. 3 sem hours
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 Human Nutrition.

DTC 321 Dietetic Skills. 2 sem hours
Application of basic skills of interviewing and counseling techniques. Emphasis on the principles of nutritional assessment, use of medical terminology. Introduction to the interpretation of scientific literature appropriate to dietetic practice.
Prereq: DTC 301 Orientation to Dietetics.

DTC 383 Clinical Nutrition I Experience. 2 sem hours
Supervised practice experience in the clinical nutrition professional environment. With emphasis on nutrition assessment utilizing a review of systems approach.
Coreq: DTC 384 Clinical Nutrition I.

DTC 384 Clinical Nutrition I. 2 sem hours
Introduction to clinical nutrition with emphasis on the delivery of nutrition support in conditions of hypermetabolism, gastrointestinal, and endocrine systems disorders. Open only to dietetics students.
Prereq: DTC 301 Orientation to Dietetics and DTC 321 Dietetic Skills.

DTC 402 Nutrient Metabolism. 3 sem hours
Biochemical and metabolic functions of nutrients with emphasis on cellular reactions and their relationship to health and disease.

Prereq: HEC 201 Nutrition for Consumers or HEC 202 Human Nutrition. *Coreq:* ZOO 326 Human Physiology.

DTC 435 Seminar in Dietetics. 2 sem hours
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 492 Food Systems Management II Experience. 4 sem hours

Principles of food production procedures emphasizing financial and quality controls in institutional foodservice systems. Supervised practice experience.

Prereq: HEC 393 Food Systems Management I Experience.

Coreq: DTC 494 Food Systems Management II.

DTC 494 Food Systems Management II. 1 sem hour
Application of supervisory processes to food service systems with emphasis on cost and quality control in food production and labor management.

Prereq: HEC 394 Food Systems Management I, MGT 384 Human Resource Management, and MIC 328 Introductory Microbiology or HM 204 Sanitation in the Hospitality Industry.

DTC 495 Food Systems Management III. 5 sem hours
Managerial functions of food service or hospitality facilities, including assessing, planning, decision making, evaluating and training. Analysis of current professional topics. Supervised practice experiences.

Prereq: DTC 494/492 Food Systems Management III Experience.

FAMILY AND CONSUMER SCIENCE COURSES

FCS 109 Interpersonal Relations in the Family. 3 sem hours

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 sem hours

A study of the roles of consumers as they interact with the economic system, government, and other consumers. Address mechanisms, legislation affecting consumers, credit practices and regulations, and financial planning.

FCS 113 Family Health Care. 2 sem hours
Survey of current health problems and community resources available to families.

FCS 209 Marriage and Interpersonal Competence. 3 sem hours

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 214 The Developing Child. 3 sem hours

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 FCS 215 Child Development Lab required.

Prereq: Sophomore standing.

FCS 215 Child Development Lab: Preschool Child. 1 sem hour

Observation of child growth and development; participation with children 2 1/2 to 5 years of age. Concurrent registration in FCS 214 The Developing Child required.

FCS 285 Resource Management: Individual and Family. 3 sem hours

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 sem hours

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: FCS 214 The Developing Child/FCS 215 Child Development Lab.

FCS 306 Parenting. 3 sem hours

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 sem hour
Practicum experience with preschool children. Emphasis on the student's acquiring competence in observing and guiding young children.

Prereq: Junior standing, department permission.

FCS 314 The Developing Infant. 3 sem hours

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 FCS 315 Child Development Lab required.

Prereq: FCS 214 The Developing Child or department permission.

FCS 315 Child Development Lab:**Infancy. 1 sem hour**

Observation of infant growth and development; participation with children under 2 1/2 years. Taken concurrently with FCS 314 The Developing Infant.

FCS 322 Family Financial Management. 3 sem hours

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 sem hours**

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 Marriage and Interpersonal Competence and junior standing.

FCS 370 Methods and Materials in Consumer**Home Economics Education. 3 sem hours**

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 Human Development and Learning and junior standing.

FCS 371 Resources in Teaching Consumer Home**Economics Education. 3 sem hours**

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 Methods and Materials in Consumer Home Economics Education.

FCS 372 Methods and Resources in Child**Development Centers. 4 sem hours**

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 FCS 373 Child Development Lab required.

Prereq: FCS 214 The Developing Child and FCS 314 The Developing Infant.

FCS 373 Child Development Lab: Methods and**Resources. 1 sem hour**

Planning and carrying out learning activities with young children. To be taken concurrently with FCS 372 Methods and Resources in Child Development Centers.

FCS 375 Professional Seminar: Family Life**Education. 2 sem hours**

Developing, implementing, and assessing community Family Life Education Programs, resources, and the development of professional skills.

FCS 407 Administration and Supervision in Child Development Centers. 3 sem hours

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: FCS 214 The Developing Child and department permission.

FCS 413 Experiences with Children. 5 sem hours

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 Integrating Curriculum and Resources in Early Childhood and FCS 373 Child Development Lab; Methods and Resources.

FCS 419 Consumer Resource Management: Health Care. 3 sem hours

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 422 Seminar in Child Development. 2 sem hours

Critical analysis of selected readings and research in child development, with interpretations for implementation in child development centers.

Prereq: FCS 214 The Developing Child.

FCS 450 Adult Role Transitions. 3 sem hours

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 472 Consumer Economic Issues. 3 sem hours

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 Introduction to Consumer Affairs and ECO 201 Principles of Economics I, or department permission.

FCS 473 Consumer Economic**Problems. 3 sem hours**

A micro approach to the prevention and resolution of consumer problems including the legal, voluntary, and educational alternatives available to consumers.

Prereq: FCS 112 Introduction to Consumer Affairs and ECO 201 Principles of Economics I, or department permission.

FCS 474 Seminar in Consumer Affairs. 2 sem hours

Capstone course providing theory and practice related to structure and function of consumer affairs operations in various organizational types.

Prereq: FCS 112 Introduction to Consumer Affairs and FCS 322 Family Financial Management; FCS 472 Consumer Economic Issues and FCS 473 Consumer Economic Problems recommended.

FASHION MERCHANDISING COURSES

FM 118 Apparel Studio. 3 sem hours
Apparel construction using a commercial pattern. Emphasis is placed on fabric selection, fit, techniques.

FM 119 Early American Textiles. 3 sem hours
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 sem hours
A study of the social, psychological, and physical aspects of fashion as related to culture, society, and the individual.
Prereq: PSY 101 or 102 General Psychology or equivalent.

FM 145 Introduction to Merchandising. 3 sem hours
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 210 Display Techniques. 2 sem hours
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: HEC 105 Integrated Arts.

FM 235 Textiles for Consumers. 3 sem hours
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 sem hours
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 Cultural Study of Fashion and FM 235 Textiles for Consumers.

FM 302 Fashion Manufacturing Techniques. 3 sem hours
Experiences and analysis of fashion production. Includes selection of commercial equipment and textiles.
Prereq: FM 118 Apparel Studio.

FM 345 Theories and Practices in Fashion Merchandising I. 3 sem hours
Applications of merchandising mathematic concepts to buying functions and activities. Major focus on problem solving. Field trips required.
Prereq: FM 145 Introduction to Merchandising.

FM 355 Theories and Practices in Fashion Merchandising II. 2 sem hours
Adaptation of fashion merchandising concepts (FM 345) to computer systems. Development of processing tasks using specific merchandising information.
Prereq: FM 345 Theories and Practices in Fashion Merchandising I and CSC 136 Computers for the Non-

specialist or equivalent. Coreq: FM 356 Theories and Practices in Fashion Merchandising II Lab.

FM 356 Theories and Practices in Fashion Merchandising II Lab. 1 sem hour
Implementation and analysis of fashion merchandising functions utilizing computer. Simulation problem solving.
Coreq: FM 355 Theories and Practices in Fashion Merchandising II.

FM 380 Fashion of the Haute Couture. 3 sem hours
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 Cultural Study of Fashion and FM 145 Introduction to Merchandising.

FM 390 Visual Merchandising. 3 sem hours
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 sem hours
Principles of pattern making and special problems in clothing construction and design.
Prereq: FM 118 Clothing Principles.

FM 404 Textile Testing. 3 sem hours
Chemical and physical testing of textile products with emphasis on laboratory techniques, standards, and interpretation of data for consumer use.
Prereq: FM 235 Textiles for Consumers and one laboratory science course.

FM 437 Professional Seminar. 3 sem hours
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 Theories and Practices in Fashion Merchandising II, and FM 356 Theories and Practices in Fashion Merchandising II Lab.

FM 439 Fashion Markets. 2 sem hours
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 sem hours
Study of fashion marketing practices, buying techniques, and promotional activities as they relate to home furnishings industries. Field trips required.

FM 460 Tailoring. 3 sem hours
Fundamental construction processes and special techniques applied to the construction of tailored garments; alterations and adaptations.
Prereq: FM 118 Apparel Studio.

HOSPITALITY MANAGEMENT COURSES

HM 103 Introduction to the Hospitality Industry. 2 sem hours

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 204 Sanitation in the Hospitality Industry. 1 sem hour

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 sem hours

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 Experimental Foods and HEC 201 Nutrition for Consumers or HEC 202 Human Nutrition.

HM 368 Hospitality Information Systems. 3 sem hours

A systematic approach to front office procedures, including record keeping, the reservation processes, collection procedures, and customer relations.

Prereq: CSC 136 Computers for the Non-specialist or HHS 226 Computers for Health and Human Services.

HM 376 Legal Aspects of the Hospitality Industry. 2 sem hours

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 430 Hospitality Management Seminar. 2 sem hours

Current topics in food service and hospitality management. Participation in professional and community projects.

Prereq: Senior hospitality management major.

HM 440 Financial Management in Hospitality Management. 3 sem hours

Techniques used by hospitality managers to control food, equipment, labor, and operating costs. Purchasing, labor, and pilferage controls and fiscal management.

Prereq: DTC 494 Food Systems Management II.

HM 441 Commercial Purchasing. 3 sem hours

Study of principles and techniques applicable to purchasing with emphasis on selection and specification requirements for food, supplies, equipment, and contract services.

Coreq: DTC 494 Food Systems Management II or department permission.

HM 470 Hospitality Industry Marketing. 3 sem hours

Basic knowledge for developing, implementing, and evaluating strategic marketing plans for hospitality properties. Includes forecasting procedures, needs assessments, and presentation formats.

Prereq: DTC 494 Food Systems Management II and MKT 360 Principles of Marketing.

HUMAN, ENVIRONMENTAL, AND CONSUMER RESOURCES COURSES

HEC 105 Integrated Arts. 3 sem hours

The application of design elements and principles to human and contemporary environmental needs. Laboratory required.

HEC 107 Food for Man. 2 sem hours

An interdisciplinary study of the relationships between food habits and social, psychological, religious, and cultural factors.

HEC 201 Nutrition for Consumers. 3 sem hours

Study of nutrient needs for the development and maintenance of normal growth and health. Not open to students who take HEC 202 Human Nutrition.

HEC 202 Human Nutrition. 3 sem hours

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 Nutrition for Consumers.

Prereq: CHM 120 Fundamentals of Organic and Biochemistry or CHM 121-122 General Chemistry I.

HEC 211 Experimental Foods. 4 sem hours

Nature and reactions of food explained in terms of chemical composition, microbial flora, and manipulative practices.

Prereq: CHM 120 Fundamentals of Organic and Biochemistry or CHM 270 Organic Chemistry.

HEC 220 Seminar in Lighting. 1 sem hour

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 sem hours

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 271 Household Equipment and Technology. 3 sem hours

Selection factors, basic principles, new technology, and trends in household equipment.

HEC 277, 278, 279 Special Topics. 1, 2, 3 sem hours
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 sem hours
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 sem hours
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 310 Contract Design. 3 sem hours
An introduction to the contract interior design process, techniques, and materials. The techniques to gather, process, and analyze information for the formulation of design solutions. Laboratory time will be used to solve problems in the contract design field.

Prereq: IDE 290 Lighting for Interiors, IDE 309 Residential Design, and FA 231 Three-Dimensional Design.

HEC 374 Methods of Teaching Occupational Foods. 2 sem hours

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 Method and Materials in Consumer Home Economics Education.

HEC 387, 388, 389 Cooperative Education. 1, 2, 3 sem hours

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 sem hours

Application of basic components of an operating quantity food service facility. Supervised practice experience.

Coreq: HEC 394 Food Systems Management I.

HEC 394 Food Systems Management I. 2 sem hours
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 Experimental Foods, MGT 386 Organizational Behavior and Theory.

HEC 412 Nutrition of the Life Cycle. 3 sem hours
Emphasis on nutrient needs and influencing factors for each of the physiological stages of the life cycle.

Prereq: HEC 201 Nutrition for Consumers or HEC 202 Human Nutrition.

HEC 416 Contemporary Issues in Nutrition. 3 sem hours

Exploration of nutrition controversies, issues, and problems of local, national, and world significance.

Prereq: HEC 201 Nutrition for Consumers or HEC 202 Human Nutrition.

HEC 477, 478, 479 Special Topics. 1, 2, 3 sem hours
An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

HEC 487 Field Experience. 3 sem hours

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 sem hours
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 497, 498, 499 Directed Study. 1, 2, 3 sem hours

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 sem hours
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 sem hours

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 sem hours
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 Interior Design Studio I

IDE 121 Interior Design Materials and Components. 3 sem hours

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 175 Interior Design Visualization Techniques I. 4 sem hours

Study of two-dimensional and three-dimensional graphic techniques, presentation tools, and materials used to illustrate interior design solutions. Problems will consist of shadow and tone studies, line work, and perspectives. Laboratory included.

IDE 176 Interior Design I. 3 sem hours

Introduction to the principles and elements of design as they apply to interior design. Emphasis on color theory, concept development, design excellence, and current trends in the field.

Prereq: Interior design majors only.

IDE 207 Interior Design Computer Lab. 1 sem hour

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 sem hours

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 sem hours

Development of advanced interior design graphic presentation skills. Emphasis on delineation, axonometric and perspective drawing, and rendering techniques.

Prereq: IDE 120 Interior Design Studio II, FA 122 2-D Design, FA 123 Drawing I

IDE 211 Lighting for Interiors. 3 sem hours

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 sem hours

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 210 Interior Design Studio III, IDE 111 Human Factors & Special Needs, IDE 121 Interior Design Materials & Components, IDE 211 Lighting for Interiors, FA 231 3-D Design, IDE 308 Environmental Systems for Interiors.

Prereq or Concurrent: IT 201 Construction Systems, FM 235 Textiles for Consumers, IDE 221 Environmental Systems for Interiors

IDE 221 Environmental Systems for Interiors. 2 sem hours

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 sem hours

Consumer housing as it relates to social, psychological, legislative, and economic conditions for individuals and families in society.

Prereq: Sophomore standing.

IDE 275 Interior Design Visualization Techniques II. 3 sem hours

Development of advanced drawing skills and an introduction to interior construction materials and principles.

Prereq: IDE 175 Interior Design Visualization Techniques I.

IDE 276 Interior Design II. 3 sem hours

Intermediate level problem solving in Interior Design with an emphasis on interior programming, schematic design development, three dimensional interior design, color rendering applications, and perspective drawing techniques. Furniture design, environmental systems, human factors, and interior design business practices introduced.

Prereq: IDE 175 Interior Design Visualization Techniques I, IDE 176 Interior Design I, FA 122 Two-Dimensional Design, FA 123 Drawing I. Open only to Interior Design Majors.

IDE 290 Lighting for Interiors. 3 sem hours

Introduction to lighting design for interiors in commercial and residential buildings. Lighting fundamentals explored and used to solve interior lighting design problems. Physiological and psychological effects of light on humans in the interior environment.

Prereq: Sophomore standing or department permission.

IDE 308 Environmental Systems for Interiors. 3 sem hours

Introduction to acoustics, noise control, climate control, plumbing systems, and electrical systems in commercial and residential interiors. Synthesis of the environmental systems guidelines used to aid in solution of interior design problems.

Prereq: Junior standing or department permission.

IDE 309 Residential Design. 3 sem hours

An analysis of residential design problems. The design process involved in interior design systems, working with spatial relationships and user needs, sources, and current literature in the interior design field. Pricing structure, color, finishes, materials, lighting, and furniture construction. Laboratory included.

Prereq: FM 235 Textiles for Consumers, IDE 275 Interior Design Visualization Techniques II, IDE 276 Interior Design II.

IDE 310 Interior Design Studio V:**Residential. 4 sem hours**

Application of the design process in solving advanced residential design problems focusing on the physiological, socio-psychological, functional, and aesthetic elements and their relationship to user needs.

Prereq: Meets criteria for enrollment in 300 level interior design studio courses.

IDE 311 History of Interiors:**Ancient-1800. 2 sem hours**

The evolution of the dominant influences and characteristics of historical interiors, furniture, ornamental design, and architecture from prehistoric time to the mid-19th century.

Prereq: Junior standing or department permission.

IDE 312 Computers for Interior Design. 3 sem hours

Introduction to the use of computers in interior design. Emphasis on computer-aided design.

Prereq: CSC 136 Computers for the Non-Specialist. Meet criteria for enrollment in 300 level interior design studio courses.

IDE 313 Space Planning and Specifications. 3 sem hours

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 211 Lighting for Interiors, IDE 110 Interior Design Studio I or IT 228 Construction Drawing

IDE 320 Interior Design Studio VI:**Contract. 4 sem hours**

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 Interior Design Studio V: Residential, IDE 312 Computers for Interior Design, IDE 313 Space Planning and Specifications

IDE 321 History of Interiors:**1800-Present. 2 sem hours**

Study of the evolution of the dominant influences and characteristics of 19th- and 20th-century interiors, furniture, and architecture.

Prereq: Junior standing or department permission.

IDE 349 Space Planning and Specifications for Commercial Interiors. 3 sem hours

An introduction to space planning techniques in commercial interiors with an emphasis on the use and specification of office furniture systems. Corporate furnishing and finish standards will be examined.

Prereq: IDE 290 Lighting for Interiors, IDE 275 Interior Design Visualization Techniques II, or IT 228 Construction Drawing.

IDE 311 History of Interiors:**Ancient-1800. 2 sem hours**

The evolution of the dominant influences and characteristics of historical interiors, furniture, ornamental design, and architecture from prehistoric time to the mid-19th century.

Prereq: Junior standing or department permission.

IDE 351 History of Interiors Laboratory:**Ancient-1800. 1 sem hour**

Designing interior spaces through the integration of historic elements with selected interior design problems.

Prereq: IDE 276 Interior Design II.

IDE 353 History of Interiors Laboratory:**1800-Present. 1 sem hour**

Designing interior spaces through the integration of 19th- and 20th-century elements with selected interior design problems.

Prereq: IDE 276 Interior Design II.

IDE 364 Facility Management. 3 sem hours

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 sem hours

An interdisciplinary approach to interior design and housing; interior design and architectural research results. The methodology for incorporating these research results into the design of interior spaces.

Prereq: Junior or senior standing.

IDE 410 Interior Design Studio VII:**Contract. 4 sem hours**

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 320 Interior Design Studio VI: Contract, IDE 311 History of Interiors: Ancient-1800, IDE 352 History of Interiors: 1800-Present

IDE 420 Interior Design Studio VIII:**Contract. 4 sem hours**

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 Organizational Theory and Practice, IDE 410 Interior Design Studio VII: Contract

IDE 421 Field Experience in Interior Design. 4 sem hours
Supervised work experience in the interior design field. Emphasis on professional competency, professional ethics, and self-evaluation.
Prereq: IDE 410 Interior Design Studio VII: Contract

IDE 422 Professional Practice in Interior Design. 2 sem hours
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 Marketing Principles. MGT 386 Organizational Theory and Practice

IDE 445 Advanced Residential Design. 3 sem hours
Simulation of the professional interior designer's task of defining and satisfying a client's needs. Further analysis of user needs, spatial relationships, color, finishes, materials and lighting, and pricing structure. Laboratory included.
Prereq: IDE 290 Lighting for Interiors. IDE 308 Environmental Systems for Interiors, HEC 310 Contract Design.

IDE 447 Advanced Contract Design. 3 sem hours
An opportunity to work on actual contract design projects. Programming, group effort, client relationships, and the contract design process. The ability to utilize advanced graphic techniques required for presentations. Laboratory included.
Prereq: HEC 310 Contract Design and IDE 445 Advanced Residential Design.

IDE 448 Professional Practice in Interior Design. 3 sem hours
Study of business principles and practices as applied to the interior design field. Emphasis on marketing interior design services, managing interior design projects, and financial management of interior design firms.
Prereq: HEC 310 Contract Design and MKT 360 Principles of Marketing.

IDE 449 Facility Programming and Post Occupancy Evaluation. 3 sem hours
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 290 Lighting for Interiors, IDE 308 Environmental Systems for Interiors; or IDT 314 Utility Rates and Building Codes, HEC 310 Contract Design or IDT 314, IDE 369 Human Factors and Environmental Design.

IDE 469 Strategic Planning and Research for Facility Management. 3 sem hours
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 Facility Management.

NURSING EDUCATION

Regina Williams
Department Head
228 King Hall
487-2310

Professors: Betty Beard, Leola Hogan, Virginia Skurski, Regina Williams
Associate Professors: Marie Gates, Janice Humphreys, Glenda Lindseth, Mary Sue Marz, Lorraine Wilson
Assistant Professors: Carlee Grey, Kathleen Hillegas, Suzanne Ivey, Sharon Jackonen, Lula Lester, Charleen McPherson, Sandra Nelson, Susan Pfoutz, 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 15 semester hours of University credit including PSY 101 General Psychology, either SOC 105 Introductory Sociology or ANT 135 Introduction to Cultural Anthropology, either CHM 119 Fundamentals of Chemistry or CHM 120 Fundamentals of Organic and Biochemistry, and ENG 120 English Composition Laboratory or ENG 121 English Composition or equivalent. Thirty credit hours, including CHM 120 and ENG 121, must be completed prior to beginning the nursing program. Physical education activity courses may not be counted.

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 current 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. Eighteen credit hours from the student's junior or community college are earned as equivalent to sophomore baccalaureate nursing credits.

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 Pathiophysiology, 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.

Progression policies: Generic students enrolled in the nursing major must achieve a minimum letter grade of "C-" in all nursing courses (NUR 204 Framework for Nursing, NUR 250 Nursing Science I, NUR 251 Nursing Science I Clinical Laboratory, NUR 270 Pharmacology, NUR 304 Nursing Science II, NUR 305 Nursing Science II Clinical Laboratory, NUR 320 Pathiophysiology, NUR 350 Nursing Science III, NUR 351 Nursing Science III Clinical Laboratory, NUR 370 Health Assessment, NUR 404 Nursing Science IV, NUR 405 Nursing Science IV Clinical Laboratory, NUR 450 Nursing Science V, NUR 451 Nursing Science V Clinical Laboratory, and nursing electives). RN/BSN completion students must achieve a minimum letter grade of "C-" in nursing courses (NUR 270 Pharmacology, NUR 310 Concepts of Professional Practice, NUR 320 Pathiophysiology, NUR 340 Concepts of Professional Practice II, NUR 341 Concepts of Professional Practice II Clinical Laboratory, NUR 370 Health Assessment, NUR 390 Seminar: Theories of Nursing, NUR 410 Concepts of Nursing Practice III, NUR 411 Concepts of Nursing Practice III Clinical Laboratory, 450 Nursing Science V, NUR 451 Nursing Science V Clinical Laboratory, and nursing electives). Registered nurse students may take NUR 270 and 320 as credit by examination in order to continue progression through the nursing program and to fulfill requirements for graduation.

If a student receives a letter grade of "D" ("D+," "D," "D-") in one nursing course (NUR prefix), the student must retake that course and obtain at least a "C" grade before he or she is allowed to take the next course in the program sequence. Students may repeat any nursing course (NUR prefix) only once. A maximum of two nursing courses may be repeated.

A letter grade of "D" ("D+," "D," "D-") in ZOO 201 Human Anatomy and Physiology I, ZOO 202 Human Anatomy and Physiology II, PSY 101 General Psychology, CHM 120 Fundamentals of Organic and Biochemistry, MIC 328 Introductory Microbiology, or EDP 325 Life Span Human Growth and Development automatically warns the student of difficulty and the need for academic counseling.

Automatic dismissal from the nursing program occurs when the student receives letter grades of:

1. "D's" ("D+," "D," "D-") in two (2) nursing courses (NUR prefix) in one semester or,
2. "D's" ("D+," "D," "D-") in two (2) required courses (ZOO 201 Human Anatomy and Physiology I, ZOO 202 Human Anatomy and Physiology II, PSY 101 General Psychology, CHM 120 Fundamentals of Organic and Biochemistry, MIC 328 Introductory Microbiology, EDP 325 Life Span Human Growth and Development, and HEC 202 Human Nutrition) or,
3. "D's" ("D+," "D," "D-") in one (1) nursing course (NUR prefix) and one (1) required course or,
4. "E's" in one (1) nursing course (NUR) or in one (1) required course.

Opportunity to continue in the nursing program is contingent upon:

1. 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-."
2. retaking the nursing courses (NUR prefix) in which a letter grade of "D" was earned and receiving a final grade of at least a "C-."
3. retaking all courses in which a letter grade of "E" was earned and receiving a final grade of at least "C-."

and

4. readmission to the nursing program.

After meeting both basic studies and curriculum requirements, students then must complete enough electives to total at least the minimum 124 semester hours required for graduation.

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.

Fieldwork in nursing is provided in clinical laboratory 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, and county health agencies. Students are expected to provide their own transportation.

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 will enable 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.

Area	Sem hours
Symbolics and communication	14-17
ENG 121 English Composition	3
CTS 121 or CTS 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	16
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	9
Social science	12
See basic studies requirements (page 34).	
Arts and humanities	11-12
See basic studies requirements (page 35).	
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 Pathiophysiology	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 I	2
NUR 320 Pathiophysiology	3
NUR 340 Concepts of Professional Practice II	3
NUR 341 Concepts of Professional Practice II Clinical Lab	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 Lab	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

NURSING EDUCATION COURSES

NUR 204 Framework for Nursing. 6 sem hours
Study of the concepts and skills upon which professional nursing is based. The nature of nursing, the inter-relatedness of man and his environment, the health illness continuum, and the health care delivery system.
Prereq: Admission to the nursing program.

NUR 210 Use of the Nursing Process. 2 sem hours
Study of the four components of the nursing process and their implementation in nursing practice. Lecture: two hours per week.
Prereq: Department permission.

NUR 250 Nursing Science I. 3 sem hours
Health promotion for individuals and families integrating family and teaching/learning theories.
Prereq: NUR 204 Framework for Nursing, ZOO 201 Human Anatomy and Physiology I, EDP 325 Life Span Human Growth and Development. Pre/Coreq: ZOO 202 Human Anatomy and Physiology II, HEC 202 Human Nutrition, NUR 320 Pathiophysiology.

NUR 251 Nursing Science I Clinical Laboratory. 3 sem hours
Clinical nursing practice in ambulatory care clinics, public schools, and industry with emphasis on the nursing process to promote health.
Prereq: NUR 204 Framework for Nursing, ZOO 201 Human Anatomy and Physiology I, EDP 325 Life Span Human Growth and Development. Pre/coreq: ZOO 202 Human Anatomy and Physiology II, HEC 202 Human Nutrition, NUR 320 Pathiophysiology. Coreq: NUR 250 Nursing Science I.

NUR 270 Pharmacology. 2 sem hours
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 Pathiophysiology and department permission.

NUR 304 Nursing Science II. 3 sem hours
The needs of families facing the crisis of hospitalization. The nursing care needs of selected obstetrical and general medicine patients.
Prereq: NUR 250 Nursing Science I, NUR 251 Nursing Science I Clinical Laboratory. Pre/coreq: NUR 270 Pharmacology, MIC 328 Microbiology.

NUR 305 Nursing Science II Clinical Laboratory. 3 sem hours
Clinical learning experiences in community hospitals. Laboratory: six hours per week.
Prereq: NUR 250 Nursing Science I, NUR 251 Nursing Science I Clinical Laboratory. Pre/coreq: NUR 270 Pharmacology, MIC 328 Microbiology. Coreq: NUR 304 Nursing Science II.

NUR 310 Concepts of Professional Practice. 2 sem hours
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 RN/BSN nursing completion program.

NUR 320 Pathiophysiology. 3 sem hours
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 sem hours
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 Concepts of Professional Practice I, NUR 320 Pathiophysiology and NUR 370 Health Assessment, EDP 325 Life Span Human Growth and Development.

NUR 341 Concepts of Professional Practice II Clinical Lab. 3 sem hours
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 Concepts of Professional Practice I, NUR 320 Pathiophysiology, NUR 370 Health Assessment, EDP 325 Life Span Human Growth and Development.

NUR 350 Nursing Science III. 3 sem hours
Concepts for nursing care of aged and/or chronically ill clients. Lecture three hours per week.
Prereq: NUR 304 Nursing Science II, NUR 305 Nursing Science II Clinical Laboratory. Pre/coreq: NUR 370 Health Assessment.

NUR 351 Nursing Science III Clinical Laboratory. 4 sem hours
Clinical practice in extended care facilities, mental health agencies, and the nursing skills laboratory. Laboratory: eight hours per week.
Coreq: NUR 350 Nursing Science III.

NUR 360 Gerontological Nursing. 2 sem hours
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 sem hours
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 Nursing Science II.

NUR 370 Health Assessment. 3 sem hours
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 and 202 Human Anatomy and Physiology I and II, NUR 320 Pathiophysiology. Department permission.

NUR 380 Health and Illness Problems Throughout the Life Span. 2 sem hours
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 sem hours
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 RN/BSN completion program and department permission.

NUR 404 Nursing Science IV. 3 sem hours
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 Nursing Science III, NUR 351 Nursing Science III Clinical Laboratory.

NUR 405 Nursing Science IV Clinical Laboratory. 5 sem hours

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 Nursing Science III, NUR 351 Nursing Science III Clinical Laboratory. Coreq: NUR 404 Nursing Science IV.*

NUR 410 Concepts of Nursing Practice III. 2 sem hours

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 Pathiophysiology, NUR 370 Health Assessment, NUR 340 Concepts of Professional Practice II, NUR 341 Concepts of Professional Practice II Clinical Laboratory, NUR 390 Theories of Nursing.

NUR 411 Concepts of Nursing Practice III Clinical Laboratory. 3 sem hours

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 Pathiophysiology, NUR 340 Concepts of Professional Practice II, NUR 341 Concepts of Professional Practice II Clinical Laboratory, NUR 370 Health Assessment, NUR 390 Theories of Nursing or department permission.

NUR 450 Nursing Science V. 3 sem hours

Introduction to concepts of nursing research, nursing management theories, and professional issues. Lecture: three hours per week.

Prereq: NUR 404 Nursing Science IV and NUR 405 Nursing Science IV Clinical Laboratory, department permission or NUR 410 and NUR 411 (RN-BSN completion program).

NUR 451 Nursing Science V Clinical Laboratory. 4 sem hours

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 Nursing Science IV and NUR 405 Nursing Science IV Clinical Laboratory, or NUR 410 and NUR 411 (RN-BSN completion program).

NUR 477, 478, 479 Special Topics in Nursing. 1, 2, 3 sem hours

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 sem hours

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, Linda F. Kurtz, Donald M. Loppnow, Emily Jean McFadden

Associate Professors: Don Ifill, Elvia Krajewski-Jaime, George Mink, Lynn Nybell, Leroy Watts, Marjorie Ziefert

Assistant Professors: Sylvia Sims Gray, Elizabeth Kaufman, Raul Madrid, Enos Massie, Elizabeth Schuster

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 and 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 32)	
*SOC 250 Social Statistics I.....	3
Science and technology	13
Requirement 1-A course in physical science (Box page 33)	
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 34)	6
1. Required courses	
*ANT 135 Introduction to Cultural Anthropology.....	3

*SOC 105 Introductory Sociology3
 *SOC 462 Complex Organizations3
 *Two courses on statistics and research completed by taking either Option 1 or Option 26
Option 1
 SOC 341 Quantitative Methods in Social Research I3
 SOC 342 Quantitative Methods in Social Research II3
Option 2
 SOC 250 Social Statistics I (fulfills Area I-mathematical reasoning)3
 SOC 304 Methods in Sociological Research3
 *SWK 120 Introduction to Social Work Services and Professional Roles3
 *S WK 222 Social Welfare Policies and Services3
 *SWK 315 Theoretical Bases for Social Work Practice3
 *SWK 317 Social Work Practice I3
 *S WK 360 Practice Issues with People of Color3
 *S WK 388 Pre-professional Practicum3
 *S WK 403 Practice Issues with Women3
 *S WK 405 Analysis and Change of Social Welfare Policies3
 *S WK 408 Social Work Practice II3
 *S WK 409 Social Work Practice III3
 *SWK 488 Field Experience I6
 *S WK 489 Field Experience II6
 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 Culture of Mexico
 ANT 234 Peoples and Cultures of Latin America
 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
 HST 305 Indians of the United States
 HST 315 History of Black Americans
 HST 341 The Middle East, 1798 to Present
 HST 342 North Africa, 1798 to Present
 HST 348 Sub-Saharan Africa in the Twentieth Century
 HST 356 Latin America: National Period
 HST 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 35) 12
 Education 4
 *EDP 325 Life Span Human Growth and Development4
 Physical education and health 2
 Physical education activity courses2
 Electives 6-7
 Total 124

MINOR IN SOCIAL WORK

Sem hours
 Minor in social work 20-21
 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 Services3
 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 418 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 Lifespan	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 sem hours

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 sem hours

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 Introduction to Social Work Services and Professional Roles.

SWK 222 Social Welfare Policies and Services. 3 sem hours

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 Introduction to Social Work Services and Professional Roles.

SWK 287 Cooperative Education in Social Work. 3 sem hours

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 Pre-Professional Practicum 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 Introduction to Social Work Services and Professional Roles, sophomore standing, approval of the cooperative education office, and department permission.

SWK 315 Theoretical Bases for Social Work Practice. 3 sem hours

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 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, PSY 101 General Psychology, SOC 105 Introductory Sociology, and EDP 325 Life Span Human Growth and Development, or department permission. ANT 135 Introduction to Cultural Anthropology and PSY 360 Abnormal Psychology recommended.

SWK 317 Social Work Practice I. 3 sem hours

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 Pre-Professional Practicum.

Prereq: SWK 120 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, and SWK 315 Theoretical Bases for Social Work Practice. Non-social work majors must have department permission.

SWK 360 Practice Issues with People of Color. 3 sem hours

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 sem hours

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 Pre-Professional Practicum 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 Introduction to Social Work Services and Professional Roles, sophomore standing, approval of the cooperative education office, and department permission.

SWK 388 Pre-Professional Practicum. 3 sem hours

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 minor 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 Social Work Practice I.

Prereq: Non-social work majors must have junior standing, SWK 120 Introduction to Social Work Services and Professional Roles, and department permission.

SWK 403 Practice Issues with Women. 3 sem hours

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 explo-

ration of personal attitudes and beliefs as they effect social work practice with women.

Prereq: SOC 344 Sociology of Sex Roles or PSY 242 Psychology of Women, or department permission.

SWK 405 Analysis and Change of Social Welfare Policies. 3 sem hours

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 Social Work Practice II and SWK 488 Field Experience I.

Prereq: SWK 120 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, and either PLS 112 American Government or PLS 202 State and Local Government.

SWK 408 Social Work Practice II. 3 sem hours

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 Analysis and Change of Social Welfare Policies and SWK 488 Field Experience I.

Prereq: SWK 317 Social Work Practice I, SWK 360 Practice Issues Concerning Minorities and Women, and SWK 388 Pre-Professional Practicum.

SWK 409 Social Work Practice III. 3 sem hours

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 Analysis and Change of Social Welfare Policies and SWK 408 Social Work Practice II.

SWK 413 Women and Aging. 3 sem hours

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 418 Policies and Issues in Services to Families. 3 sem hours

A foundation course for the family and children's services program and an elective for students interested in the field. The field of family and children's services through the process of identifying and analyzing issues crucial to the field, analyzing policies and legislation, and critically examining programs integral to the service delivery structure.

Prereq: SWK 120 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, or department permission.

SWK 419 Family-Centered Practice. 3 sem hours
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 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, or department permission.

SWK 420 Working with Aging People. 3 sem hours
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 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, or department permission.

SWK 422 Specialized Services for Families with Children in Placement. 3 sem hours
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 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, or department permission.

SWK 424 Social Work with Physically and Mentally Handicapped. 3 sem hours
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 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, or department permission.

SWK 431 Substance Abuse. 3 sem hours
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 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, or department permission.

SWK 435 Group Work with Children and Families. 3 sem hours
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 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, or department permission.

SWK 438 The Interdisciplinary Health Care Team. 1 sem hour

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 Introduction to Social Work Services and Professional Roles and SWK 222 Social Welfare Policies and Services 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 sem hours

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 Introduction to Social Work Services and Professional Roles and SWK 222 Social Welfare Policies and Services or department permission.

SWK 440 Issues in Mental Health Practice. 3 sem hours

Issues in mental health practice with emphasis on deinstitutionalization, community mental health, and the role of the entry-level social worker.

Prereq: SWK 120 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, or department permission.

SWK 457 Separation, Loss, and Grief. 1 sem hour
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 Introduction to Social Work Services and Professional Roles and SWK 222 Social Welfare Policies and Services, or department permission.

SWK 460 The Law and Social Work with the Family. 3 sem hours

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 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, or department permission.

SWK 463 Social Work Practice with Legal**Offenders. 3 sem hours**

Professional roles and appropriate practice skills utilized by social workers and allied professionals in working with legal offenders.

Prereq: SWK 120 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, or department permission.

SWK 465 Social Work, Sex, and the Family.**3 sem hours**

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 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, or department permission.

SWK 467 Crisis Intervention. 2 sem hours

Systems in crisis including different types of crises, indications of a system in crisis and crisis intervention strategies.

Prereq: SWK 120 Introduction to Social Work Services and Professional Roles and SWK 222 Social Welfare Policies and Services, or department permission.

SWK 470 Supervising Staff and Volunteers.**3 sem hours**

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 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, or department permission.

SWK 477, 478, 479 Special Topics in Social Work Practice. 1, 2, 3 sem hours

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 Introduction to Social Work Services and Professional Roles, SWK 222 Social Welfare Policies and Services, or department permission.

SWK 488 Field Experience I. 6 sem hours

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 Analysis and Change of Social Welfare Policies and SWK 408 Social Work Practice II.

Prereq: SWK 315 Theoretical Bases for Social Work Practice, SWK 317 Social Work Practice I, SWK 360 Practice Issues Concerning Minorities and Women, SWK 388 Pre-Professional Practicum, and department permission.

SWK 489 Field Experience II. 6 sem hours

A continuation of SWK 488 Field Experience I. 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 Social Work Practice III.

SWK 490 Senior Thesis Seminar. 3 sem hours

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 sem hours

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:	
<i>Psychosocial and environmental aspects of aging</i>	
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	3
<i>Biological and health aspects of aging</i>	
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 the Family or HEC 202 Human Nutrition	3
HEC 412 Nutrition of the Life Cycle	3
PED 420 Health and Aging	3
<i>Policies and services for the aging</i>	
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 Insurance and Economic Security	3
SWK 413 Women and Aging	3
SWK 418 Policies and Issues in Services to Families	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 Dementia	3
GRT 417 Work and Retirement	2
<i>Gerontology practicum or research</i>	2-3
GRT 488-489 Gerontology Practicum	2-3
<i>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.</i>	
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 411 Issues in Caring for People with Alzheimer's and Related Illnesses. 3 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
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

Programs of Study and Course Descriptions

Interim Dean: Robert A. Ristau
Administrative Associate: Victoria L. Gotts
150 Sill Hall
487-0354

DEPARTMENTS AND PROGRAMS

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: Gerald L. Jennings, Harold E. PaDelford, Ann M. Remp, Robert A. Ristau, Mary F. Robek, H. James Rokusek, Rosetta C. Wingo
Associate Professors: James L. Barnes, Alice W. Callum, Lewis D. Kieft, Earl C. Meyer, Herbert H. Wilson
Assistant Professors: John R. Cordani, Thomas L. McDole
Instructor: Kim A. Novak

Business and industrial education offers two degrees as indicated in the following curricula:

Programs of study

Degree:

Bachelor of Business Education

Business education curriculum

Majors:

Marketing education

Business services and technology education

Degree:

Bachelor of Science

Office technology curriculum

Majors:

Executive assistant

Legal assistant

Administrative management

Office automation

Minor:

Office technology

Industrial education curriculum

Majors:

Technology education

Industrial-vocational education

Minor:

Industrial education

Advising Coordinators:

Marketing education: Earl Meyer

Business services and technology education: Rosetta Wingo

Executive assistant: Kim Novak

Legal assistant: Alice Callum

Administrative management: Mary Robek

Office automation: John Cordani

Technology education/industrial-vocational education: Gerald Jennings

Technology education minor: Lewis Kieft

Office technology minor: Mary Robek

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.

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, coordinators of cooperative education, or other positions requiring teacher certification. Students who complete the professional program also will find many teaching and non-teaching careers in business open to them.

Marketing and business services and technology education majors provide opportunities to qualify for the Michigan Secondary Provisional Certificate for teaching or vocational endorsement as specified in the current Michigan State Plan for Vocational Education.

Area	Sem hours
Symbolics and communication	14-15
Requirements 1, 2, and 3 (page 32).....	8-9
MTH 118 Mathematical Analysis for Social Sciences	3
BE 201 Microcomputers for Business Applications	3
Science and technology	10-11
Requirements 1 (omit PHY 100 Science for Elementary Teachers) and 3	7-8
PSY 101 General Psychology	3
Social science	12
Requirement 1 (page 34)	3
Requirement 2 or a history course from approved cross-cultural or international studies list	3
ECO 201, 202 Principles of Economics	6
Arts and humanities	12
Requirements 1, 2d, 3, and 4 (page 35)	12
Physical education and health	2
Physical education activity courses (any two courses in Military Science may be applied)	
Education	28
BE 200 Principles of Marketing and Office Education	3
EDP 322 Human Development and Learning	4
SFD 328 Social Aspects of Teaching	3
EDP 340 Introduction to Measurement and Evaluation	2
RDG 311 Teaching Reading in Secondary Schools	3
SGN 300 Exceptional Children in the Regular Classroom	1
EDU 492 Student Teaching	8
Business methods courses	
BE 364 Methods of Teaching General Business Subjects and methods course appropriate to major: BE 365 Methods of Teaching Office Education or BE 366 Methods of Teaching Marketing Education.	
Choose one of the following majors: Marketing education or business services and technology education	

MAJOR IN MARKETING EDUCATION

The marketing education major leads to a Michigan Secondary Provisional Certificate and vocational endorsement qualifying the prospective teacher in such areas as sales, retailing, marketing and advertising.

Completion of 4,000 hours of recent work experience in the field of marketing is required. Previous work experience may be supplemented by enrollment in BE 387, 487 Cooperative Education in Business Education. (Maximum credit which can be earned through BE 387, BE 487 is 2,000 hours).

This major can be completed only in conjunction with the Bachelor of Business Education curriculum.

	Sem hours
Academic major	50
Business education core	15
BE 100 Contemporary Business	3
ACC 240, 241 Principles of Accounting I and 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 and Purchasing, LAW 393 Law of Business Enterprises, MKT 461 Sales Management, MGT 384 Human Resource Management, MGT 485 Human Resource Development.	
<i>Professional marketing education courses</i>	
BE 367 Curriculum in Marketing Education	2
BE 368 Management of Marketing Education Programs	2
BE 461 Project and Simulation in Marketing Education	2
Restricted electives	11
BE 122 Keyboarding for Computers	2
BE 123 Word Processing/Keyboarding Applications	2
BE 201 Microcomputers for Business Application	3
BE 224 Computer-based Business Mathematics	3
BE 250 Personal Finance	3
BE 387 Cooperative Education in Business Education	3
IE 452 Principles of Vocational-Technical Education	3
BE 487 Cooperative Education in Business Education	3
BE 497, 498, 499 Independent Study	1, 2, 3

FM 145 Introduction to Fashion Merchandising	3
FM 235 Textiles for Consumers	3
FM 255 Apparel Analysis	3
FM 439 Fashion Markets	2
Physical education and health	2
Physical education activity courses	2
(Any two courses in Military Science may be applied)	
Electives	0-3
Total	128-133

MAJOR IN BUSINESS SERVICES AND TECHNOLOGY EDUCATION

The office education major leads to a Michigan Secondary Provisional Teaching 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.

	Sem hours
Academic major	55
Business foundations	18
BE 100 Contemporary Business	3
LA W 293 Legal Environment in Business	3
ACC 240, 241 Principles of Accounting I and II	6
BE 250 Personal Finance	3
MKT 360 Principles of Marketing	3
Information processing and management	29
BE 123 Word Processing/Keyboarding Applications	2
BE 201 Microcomputers for Business Applications	3
BE 210 Concepts of 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 310 Word Processing Administration	3
BE 395 Office Administration	3
BE 396 Records Administration	3
BE 496 Records Administration Using Database	3
Accounting and computing	8
ACC 244 Personal Tax Accounting	2
See adviser for accounting concentration courses	6
Business Education Restricted Electives	
BE 201 Microcomputers for Business Applications	3

BE 205 Women in Business	3
BE 210 Concepts of Word Processing	3
BE 211 Introduction to Legal Assistance	3
ORI 219 File Processing and COBOL Programming	3
BE 220 Word Processing Operations	3
BE 222 Transcription Applications and Technology	3
BE 225 Gregg Shorthand	3
BE 310 Word Processing Administration	3
BE 325 Shorthand Transcription	3
MKT 374 Business to Business Marketing and Purchasing	3
BE 387 Cooperative Education in Business Education	3
LA W 393 Law of Business Enterprises	3
BE 411 Law Office Documents and Procedures	3
BE 412 Court Documents and Procedures	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, 2, 3

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.

MAJOR IN OFFICE TECHNOLOGY/ADMINISTRATIVE MANAGEMENT

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 32).....	6-7
ENG 324 Principles of Technical Communication	3
MTH 118 and MTH 119 Mathematical Analysis for Social Sciences I and II	6
BE 201 Microcomputers for Business Applications	3
Science and technology	9
Requirements 1 and 3 (page 33)	6
PSY 101 General Psychology	3
Social science	12
Requirements 1 and 2 (page 34).....	6
ECO 201 Principles of Economics I	3
ECO 202 Principles of Economics II	3
Arts and humanities	12
Requirements 1, 2, 3, and 4 (page 35)	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 and 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 Information Processing ...	3
BE 224 Computer-based Business Mathematics	3

**MAJOR IN OFFICE TECHNOLOGY/
EXECUTIVE ASSISTANT**

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 32).....	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 33)	6
PSY 101 General Psychology	3
Social science	12
Requirements 1 and 2 (page 34)	6
ECO 201 Principles of Economics I	3
ECO 202 Principles of Economics II	3
Arts and humanities	8-12
See University guidelines (page 35)	
Physical education and health	2
Physical education activity courses	2

EXECUTIVE ASSISTANT MAJOR

Major in executive assistant	56
Management and automation	15
BE 395 Office Administration.....	3
BE 396 Records Administration	3
MGT 386 Organizational Behavior and Theory	3
BE 422 Office Systems	3
MGT 402 Business Report Writing	3
BE 496 Records Administration Using Database	3
Restricted electives	3
CTC 321 Parliamentary Procedure and Meeting Management	3
BE 387 Cooperative Education	3
IDT 436 Electronic Publishing Technology	3
Business foundations	18
BE 100 Contemporary Business	3
ACC 240, 241 Principles of Accounting I and II	6
LAW 293 Legal Environment of Business.....	3
BE 250 Personal Finance.....	3
MKT 360 Principles of Marketing	3
MGT 202 Business Communications.....	3
Information processing	17
BE 123* Word Processing/Keyboarding Applications.....	2
BE 210 Concepts of Information Processing ...	3
BE 220 Word/Information Processing Applications.....	3
BE 222 Transcription Applications and Technology	3
BE 224 Computerbased 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

MAJOR IN OFFICE TECHNOLOGY/LEGAL ASSISTANT (PARALEGAL)

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, 3, and 4 (page 32).....	8-9
BE 201 Microcomputers for Business Applications	3
ENG 324 Principles of Technical Communication	3
Science and technology	9
See University guidelines (page 33)	
Social science	12
Requirements 1 and 2 (page 34)	6
ECO 201 Principles of Economics I	3
ECO 202 Principles of Economics II	3
Arts and humanities	8-12
See University guidelines (page 35)	
Physical education and health	2
Physical education activity courses	2

LEGAL ASSISTANT (PARALEGAL) MAJOR

Major in legal assistant (paralegal)	59
1. 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
CTC 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 (Paralegal) Internship	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, 2, 3
PLS 301 The American Legal System	3

PLS 341 International Law	3
PLS 456 Criminal Law	3
RES 210 Real Estate Principles and Practices	3
LA W 293 Legal Environment of Business	3
LA W 393 Law of Business Enterprises	3
LA W 403 Employment Law	3
LA W 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

MAJOR IN OFFICE TECHNOLOGY/OFFICE AUTOMATION

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. The program supersedes the word processing administration major.

Area	Sem hours
Symbolics and communication	17-18
Requirements 1 and 2 (page 32)	5-6
ENG 324 Principles of Technical Communication	3
MTH 118 and 119 Mathematical Analysis for Social Sciences I and II	6
BE 201 Microcomputers for Business Applications	3
Science and technology	9-10
See University guidelines (page 33)	
Social science	12
Requirements 1 and 2 (page 34)	6
ECO 201 Principles of Economics I	3
ECO 202 Principles of Economics II	3
Arts and humanities	8-12
Requirements 1, 2, 3, and 4 (page 35)	
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 and 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 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

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, with the opportunity to acquire specialized competencies in a number of technical areas.

Area	Sem hours
Symbolics and communication	14-16
ENG 121 English Composition	3
CTS 121 or CTS 124 Fundamentals of Speech	2-3
Either of the following courses:	3
ENG 226 Research and Report Writing or ENG 324 Principles of Technical Communication	
One of the following courses:	3-4
MTH 112 Topics in Pre-Calculus, MTH 118 Math Analysis for Social Science I, or MTH 120 Calculus I	
One of the following courses:	3
CSC 136 Computers for the Non-specialist, IT 105 Computer Applications for Industry, IDT 201 Microcomputer Applications, BE 201 Microcomputers for Business Applications, CSC 137 Introduction to FORTRAN Programming	
Science and technology	11-12
CHM 119 Fundamentals of Chemistry or CHM 121/122 General Chemistry I	4
PHY 221 Mechanics, Sound, and Heat or PHY 223, if math prerequisite is met	4-5
PSY 101 or 102 General Psychology	3
Social science	12-15
PLS 112 or PLS 113 American Government (or) PLS 202 State and Local Government	3
Choose one of the following sequences:	
ECO 201 Principles of Economics I	3
ECO 202 Principles of Economics II	3
or	
ECO 200 The American Economy <i>and</i> either ECO 300 Contemporary Economics or ECO 326 Consumer Economics	6
Choose one of the following history courses:	
HIS 290 Introduction to the History of Technology, HIS 101 History of Western Civilization to 1648, HIS 102 History of Western Civilization, 1648-WWII, HIS 103 20th Century Civilization, HIS 123 History of US to 1877, HIS 124 History of US, 1877-present, HIS 106 History of Non-Western Civilization	
Arts and humanities	12
FA 122 Two dimensional Design	3
Choose two of the following:	6
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 150 Humanity & Technology	
A course in crosscultural or international studies	3
Choose one of the following:	3
PHI 100 Introduction to Philosophy, PHI 130 Introduction to Logic, PHI 150 Humanity and Technology	
Education	30
EDP 322 Human Development and Learning	4

SFD 328 Social Aspects of Teaching	3
RDG 311 Teaching Reading in the Secondary School	3
SGN 251 Education of Exceptional Children	3
EDP 340 Introduction to Measurement and Evaluation	2
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	10
Practical arts	50
Choose one of the following majors:	
Technology Education	
Industrial-Vocational Education	
Electives	0
Total	129-132

MAJOR IN TECHNOLOGY EDUCATION

The technology education major is designed to prepare teachers of technology education for grades K-12. All graduates with this major qualify for a 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 that is related to the area of study. Options for cooperative work experience are available to the students as partial credit toward that occupational requirement.

	Sem hours
Major in technology education	50
Components of technology	12
IT 103 Introduction to Automation	3
IE 106 Processing Technology	3
• IE 114 Information and Control Technology ...	3
IE 118 Energy Technology	3
Technological systems	11
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
Professional education	6
IE 250 Foundations of Technology and Industrial-Vocational Education	3
IE 350 Curriculum in Technology and Industrial-Vocational Education	3
Applications	5
IE 246 Safety in Technology and Industrial-Vocational Education	2
IE 450 Solving Technological Problems	3
Area of concentration	16

In addition to the courses listed above, each technology education major will complete 16 hours in an area of concentration. Concentrations include construction, manufacturing, power/energy, communication, or combined technology systems.

Construction

Select 16 semester hours from the following:
 IT 201 Construction Systems, IT 206 Surveying, IT 229 Planning Commercial Structures, IT 303 Electrical, Mechanical, and Equipment Systems, IE 387 Cooperative Education in Industrial Education, IT 402 Construction Materials, IE 487 Cooperative Education in Industrial Education

Manufacturing

Select 16 semester hours from the following:
 IT 103 Introduction to Automation, IT 124 Manufacturing Processes and Methods II, IT 202 Plastics, IT 215 Machine Tool Metalworking, IT 218 Industrial Electricity and Controls II, IT 223 Engineering Graphics I, IT 231 Industrial Computer Graphics, IT 251 Materials Analysis and Testing, IT 306 Plastics Processing, IT 316 Manufacturing Tooling, IT 318 Fluid Power, IE 387 Cooperative Education in Industrial Education, IT 416 Computer Numerical Control, IT 417 Industrial Robotics, IT 425 Advanced Manufacturing Methods, IE 487 Cooperative Education in Industrial Education

Graphic communication

Select 16 semester hours from the following:
(Drafting option)
 IT 101 Introduction to Industrial Drawing, IT 122 Engineering Graphics I, IT 206 Surveying, IT 223 Engineering Graphics II, IT 228 Construction Drawing, IT 230 Introduction to Computer Graphic Systems, IT 231 Industrial Computer Graphics, IT 324 Industrial Drawing, IE 387 Cooperative Education in Industrial Education, IT 431 Interactive Industrial Computer Graphics, IT 432 3-D Computer-Aided Design, IT 433 Color Concepts in Computer-Aided Design, IE 487 Cooperative Education in Industrial Education
(Graphics arts option)
 IDT 104 Introduction to Communication, IDT 204 Photographic Communications, IDT 205 Photo-Technology, IDT 207 Photographic Reproduction, IDT 304 Advanced Photographic Communication, IDT 305 Communication Transmission Systems, IDT 318 Graphic Arts Workshop, IE 387 Cooperative Education in Industrial Education, IDT 404 Photo Communication Workshop, IDT 409 Emerging Technologies in Storage and Retrieval, IDT 421 Photographic Typesetting, IDT 425 Communication Technology and Social Change, IDT 436 Electronic Publishing Technology, IE 487 Cooperative Education in Industrial Education

Power

Select 16 semester hours from the following:

(Electronics option)

- IT 218 Industrial Electricity and Controls, IT 314 Integrated Circuits: Digital, IT 387 Cooperative Education in Industrial Education, IT 414 Integrated Circuits: Linear, IT 415 Communication Circuits, IT 434 Microcomputer Circuits, IE 487 Cooperative Education in Industrial Education

(Energy systems option)

- IT 219 Techniques of Energy Control, IT 318 Fluid Power, IT 324 Applied Mechanics, Kinematics, and Design, IE 387 Cooperative Education in Industrial Education, IT 417 Industrial Robotics

MAJOR IN INDUSTRIAL-VOCATIONAL EDUCATION

The industrial-vocational major is designed to prepare teachers of industrial-vocational subjects for senior high school and community college vocational education programs. Graduates who complete this major and have a minimum of two years of 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 provides very 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.

This major qualifies individuals to teach only in selected occupational areas. The temporary vocational authorization is valid for six years. By that time individuals must have completed additional requirements to qualify for full vocational authorization.

Individuals should consult with the advising coordinator for the industrial education curriculum or with the head of the Department of Business and Industrial Education.

Major in industrial-vocational education.....	50
Required courses	14
IDT 150 Understanding Technology	3
IT 246 Safety in Technology and Industrial-Vocational Education	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 Education	3

Area of concentration 36

Courses comprising these 36 hours should represent 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.

MINORS OFFERED IN THE DEPARTMENT OF BUSINESS AND INDUSTRIAL EDUCATION

OFFICE TECHNOLOGY MINOR

	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
<i>Option I Shorthand:</i>	
BE 225 Gregg Shorthand	3
BE 325 Shorthand Transcription	3
BE 222 Transcription Applications and Technology	3
<i>Option II Information Processing:</i>	
BE 210 Concepts of Information Processing ...	3
BE 222 Transcription Applications and Technology.....	3
BE 396 Records Administration	3

TECHNOLOGY EDUCATION MINOR

Any student following an elementary or special education curriculum may choose this minor. It is not available to students on other programs.

	Sem hours
Minor in Technology Education	20
1. Required courses	15-17
IE 253 Technology Education for Children	3
and	
IE 354 Experiences in Technology for Children or IE 252 Prevocational/Vocational Special Needs Program	2-4
<i>Choose 11-12 credits from the following .. 11-12</i>	
IE 103 Structures and Design in Technology, IE 106 Processing technology, IE 114 Information and Control Technology, IE	

118 Energy Technology, IE 152 Arts and Crafts, IE 250 Foundations of Technology and Industrial-Vocational Education, IE 355 Seminar in Technology for Elementary School

2. Restricted electives 4-5

Choose 3-5 credits from the following: 3-5
IE 350 Curriculum in Technology and Industrial-Vocational Education, IE 452 Principles of Vocational-Technical Education, IE 497 Directed Study, IDT 121 Graphic Communication, IDT 204 Photographic Communication

BUSINESS EDUCATION COURSES

BE 100 Contemporary Business. 3 sem hours
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 sem hours
Basic touch keyboarding skills for persons who plan to work with modern information processors, all of which utilize a basic alphabet/figure keyboard and/or a 10-key numeric pad. Lab fee required. For non-majors.

BE 122 Keyboarding for Office Technology. 2 sem hours
Basic techniques and manipulative skills for efficient machine operation. Speed and control emphasized. Introduction to applications through centering, tabulating and structuring typewritten material for various purposes. Lab fee required.

BE 123 Word Processing/Keyboarding Applications. 2 sem hours
Continued skill development. Application of skill to typing special communication forms, letters, manuscripts and tabulated reports. Improved form and punctuation. Lab fee required.
Prereq: BE 119 Keyboarding for Computers or BE 122 Keyboarding for Office Technology or one year of high school typewriting. No credit is given to students who have received credit for two years of high school typewriting.

BE 200 Principles of Marketing and Business Education. 3 sem hours
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 sem hours
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 sem hours
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 sem hours
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 Paralegalism and Legal Terminology. 3 sem hours
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 sem hours
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 Word Processing/Keyboarding Applications or equivalent and BE 201 Microcomputers for Business Applications.

BE 222 Transcription Applications and Technology. 3 sem hours
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 Word/Information Processing Operations.

BE 224 Computer-based Business Mathematics. 3 sem hours
Application of computer-based tools and procedures to the solution of mathematical problems encountered in the business office. No lab fee required.
Prereq: BE 201 Microcomputers for Business Applications or department permission.

BE 225 Gregg Shorthand. 3 sem hours
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 Word Processing/Keyboarding Applications or equivalent.

BE 250 Personal Finance. 3 sem hours
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 sem hours

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 sem hours

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 English Composition.

BE 305 Advanced Legal Writing, Research and Analysis II. 3 sem hours

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 Legal Writing and Research I.

BE 308 Personal Injury Law and Litigation. 3 sem hours

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 Processing Administration. 3 sem hours

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. Lab fee required.

Prereq: BE 201 Microcomputers for Business Applications, BE 210 Concepts of Word/Information Processing, BE 220 Word/Information Processing Operations.

BE 311 Probate, Estates and Wills. 3 sem hours

The student will study the Probate Code and probate procedures, descendents' 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 sem hours

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 court documents and other tasks of the paralegal in this area.

BE 325 Shorthand Transcription. 3 sem hours
Development of transcription skills. Application of shorthand, typewriting and English skills to produce business communications neatly and accurately at an acceptable rate.

Prereq: BE 225 Gregg Shorthand, or a measured speed of 80 wpm or more in one of the shorthand systems and a typewriting speed of 50 net words per minute.

BE 364 Methods of Teaching General Business Subjects. 2 sem hours

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 Teaching of Reading and EDP 322 Human Development and Learning. A 2.0 GPA in all business education subjects taken at EMU is required before enrollment, with no academic probation. To be taken semester before student teaching.

BE 365 Methods of Teaching Office Education. 2 sem hours

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 Human Development and Learning, and BE 364 Methods of Teaching General Business Subjects. A 2.0 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 sem hours

Techniques and practices utilized in teaching marketing and cooperative education in secondary schools, community colleges and adult evening schools.

Prereq: EDP 322 Human Development and Learning. A 2.0 GPA in all business education subjects taken at EMU is required before enrollment, with no academic probation.

BE 367 Curriculum in Marketing Education. 2 sem hours

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 sem hours

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 sem hours

These courses are offered on an experimental basis or for some special need.

Prereq: Department permission.

BE 387, 487 Cooperative Education in Business Education. 3 sem hours each

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: For BE 487, BE 387.

BE 395 Office Administration. 3 sem hours

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 Microcomputers for Business Applications.

BE 396 Records Administration. 3 sem hours

Management methodology in records, control, costs, protection, retention, retrieval and disposal. Records administration as a management tool.

Prereq: BE 201 Microcomputers for Business Applications.

BE 411 Civil Litigation, Investigation, and Procedure. 3 sem hours

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 sem hours

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 sem hours

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 Probate, Estates and Wills.

BE 415 Bankruptcy Law. 3 sem hours

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 sem hours
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 Legal Writing and Research I, BE 305 Advanced Legal Writing and Research II, BE 411 Civil Litigation and Procedure, BE 412 Court Documents and Court Rules.

BE 422 Office Systems. 3 sem hours
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 Word/Information Processing Operations, BE 222 Transcription Applications and Technology, BE 224 Computer-based Business Mathematics.

BE 461 Projects and Simulations in Marketing Education. 2 sem hours

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 sem hours

These courses are offered on an experimental basis or for some special need.

Prereq: Department permission.

BE 495 Office Automation. 3 sem hours

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 Microcomputers for Business Applications, BE 210 Concepts of Word/Information Processing, BE 220 Word/Information Processing Operations, BE 224 Computer-based Business Mathematics, BE 395 Office Administration.

BE 496 Records Administration Using Database. 3 sem hours

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 Microcomputers for Office Applications and BE 396 Records Administration.

BE 497, 498, 499 Independent**Study. 1, 2, 3 sem hours**

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 102 Woodwork. 3 sem hours**

Basic wood processing with hand and power tools. Learning experiences in design, pattern development, project construction and finishing. Selection, use and care of hand and power tools. Lecture: two hours per week. Laboratory: two hours per week.

IE 103 Structures and Design in Technology. 3 sem hours

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.

Pre- or coreq: FA 122 Two-Dimensional Design.

IE 105 History of Industrial Technology. 3 sem hours

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 sem hours

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.

Prereq: Course work in high school and/or college chemistry or physics recommended.

IE 114 Information and Control Technology. 3 sem hours

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.

IE 118 Energy Technology. 3 sem hours

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.

IE 119 Consumer Automotives. 3 sem hours

A basic study of the operation of automobile engine and chassis systems, fuels and lubricants. The problems of purchasing, selection of repairmen, cost of operation,

tune-ups, safety and the social impact of the automobile. Open to all students, but specifically designed for those with little or no technical background. Lecture: two hours per week. Laboratory: two hours per week.

IE 152 Arts and Crafts. 3 sem hours
Experience in design and use of a wide variety of craft materials. A vocational and recreational use of craft media.

IE 246 Safety in Technology and Industrial-Vocational Education. 3 sem hours
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 sem hours

An introduction to the foundations and implementation of industrial arts 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 sem hours

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.

IE 253 Technology Education for Children. 3 sem hours

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.

IE 255 Art Metalwork. 2 sem hours
Copper, brass and silver jewelry and other art metal objects designed and made by the student. Emphasis on design and the basic processes. Open to all students. Lecture: one hour per week. Laboratory: two hours per week.

IE 305 Forest Products. 3 sem hours
A study of products derived from the trees; analysis of wood structure, wood hydrolysis, destructive distillation, veneers, wood pulp, solid members and related materials; machining, fabrication, testing and production. Lecture: two hours per week. Laboratory: two hours per week.

Prereq: IT 202 Plastics.

IE 350 Curriculum in Technology and Industrial-Vocational Education. 3 sem hours

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 Foundations of Technology and Industrial-Vocational Education.

IE 354 Experiences in Technology for Children. 2 sem hours

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 Technology Education for Children.

IE 355 Seminar in Technology for the Elementary School. 2 sem hours

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 Experiences in Technology for Children.

IE 358 Tools and Materials. 3 sem hours

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.

Prereq: Occupational Therapy major or department permission.

IE 377, 378, 379 Current Topics in Industrial Education. 1, 2, 3 sem hours

These courses are offered on an experimental basis or for some special need.

Prereq: Department permission.

IE 387 Cooperative Education in Industrial Education. 3 sem hours

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 sem hours

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 Structures and Design in Technology, IE 106 Processing Technology, IE 114 Information and Control Technology, IE 118 Energy Technology, IE 350 Curriculum in Technology and Industrial-Vocational Education; senior standing and department approval.

IE 452 Principles of Vocational-Technical Education. 3 sem hours

Concepts and principles of vocational-technical education; current issues in vocational education in Michigan. *Prereq: IE 350 Curriculum in Technology and Industrial-Vocational Education or department permission.*

IE 460 Practicum in Technology and Industrial-Vocational Education. 2 sem hours

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 The Teaching of Technology and Industrial-Vocational Education and student teaching.

Prereq: IE 350 Curriculum in Technology and Industrial-Vocational Education.

IE 461 The Teaching of Technology and Industrial-Vocational Education. 2 sem hours

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 Practicum in Technology and Industrial-Vocational Education and student teaching.

Prereq: IE 350 Curriculum in Technology and Industrial-Vocational Education.

IE 477, 478, 479 Current Topics in Industrial Education. 1, 2, 3 sem hours

These courses are offered on an experimental basis or for some special need.

Prereq: Department permission.

IE 487 Cooperative Education in Industrial Education. 3 sem hours

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 Cooperative Education in Industrial Education.

IE 497, 498, 499 Directed Study. 1, 2, 3 sem hours

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-chairman.

INDUSTRIAL TECHNOLOGY

Everett N. Israel
Department Head
 115 Sill Hall
 487-2040

Professors: Ronald J. Baird, Jerald A. Griess, Everett N. Israel, John A. Weeks

Associate Professors: Daniel J. Fields, John J. Jellema, Max E. Kanagy, Su-Chen (Jonathon) Lin, Thomas G. Soyster, Walter Tucker

Assistant Professors: Erik Lokensgard, Alfred C. Roth, Fuh-Cwo (Tony) Shiue, Karen L. Sterzik, Tracy S. Tillman

Instructors: Peter J. Loughney, Philip Rufe

The Industrial Technology Department offers three curricula: construction with one major, industrial technology with one major, and manufacturing with four majors; and an industrial technology 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

Industrial technology curriculum

Major:

Industry

Minor:

Industrial technology

Manufacturing curriculum

Majors:

Computer-aided design
 Computer-aided manufacturing
 Manufacturing
 Plastics technology

Engineering pre-professional program

Pre-engineering

Architecture pre-professional program

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: Tony Shiue, Karen Sterzik
 Computer-aided manufacturing: Max Kanagy, Jonathon Lin

Construction: Peter Loughney, John Weeks

Industry: John Jellema

Manufacturing technology: Tracy Tillman, Thomas Soyster, Walter Tucker, Alfred Roth

Plastics technology: Erik Lokensgard

Industrial technology minor: Karen Sterzik

Pre-engineering: Daniel Fields

Pre-architecture: Peter Loughney

Graduate study leads to the Master of Science degree in industrial technology. Available areas of concentration are manufacturing and construction. These degrees are described in the Graduate Catalog.

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 adviser), and technical courses. A minor is not required.

CONSTRUCTION MAJOR

The construction 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 major reflects the current needs and trends in the construction industry.

Area	Sem hours
Symbolics and communication	19
CTS 121 Fundamentals of Speech	2
ENG 121 English Composition	3
ENG 324 Principles of Technical Writing	3
IT 105 Computer Applications for Industry	3
MTH 107 Plane Trigonometry	2
MTH 118 Mathematical Analysis I for Social Sciences I	3
MTH 119 Mathematical Analysis II for Social Sciences II	3
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 Principles of Economics I	3
ECO 202 Principles of Economics II	3
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

Academic major in construction	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 Specification	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
IT 496 Industry Based Special Topics	3
GLG 160 Physical Geology	4
Construction restricted elective	3
<i>(Adviser approval required)</i>	
Math/science restricted elective	3
<i>(Adviser approval required)</i>	
Business restricted elective	15
<i>(Adviser approval required)</i>	
ACC 240 Principles of Accounting and	3
ACC 241 Principles of Accounting or	3
ACC 130 Accounting for Non-Business Majors	3
FIN 350 Principles of Finance	3
FIN 352 Law of Business Enterprises	3
FIN 358 Analysis of Financial Statements	3
LAW 293 Legal Environment of Business	3
LAW 393 Law of Business Enterprises	3
LAW 403 Employment Law	3
MGT 202 Business Communications	3
MGT 384 Human Resource Management	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
<i>(Two semester hours of Military Science may be substituted for physical education.)</i>	
Free electives	1-2
Total	124

INDUSTRIAL TECHNOLOGY CURRICULUM

The industrial technology curriculum has been designed to accommodate the needs of students transferring from community colleges and other similar educational institutions with an associate's degree in a technical field related to manufacturing. Students transferring from other accredited technical schools and from

four-year higher education institutions with a technical major may also find this major suitable. No minor is required.

INDUSTRY MAJOR

The major in industry is designed to serve those individuals who wish to continue their 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 major includes course work in basic studies, some specified science and mathematics courses, and additional adviser approved technical course work at the upper level.

Area	Sem hours
Symbolics and communication	19
CTS 121 Fundamentals of Speech	2
ENG 121 English Composition	3
ENG 324 Principles of Technical Writing	3
IT 105 Computer Applications for Industry	3
MTH 107 Plane Trigonometry	2
MTH 118 Mathematical Analysis I for Social Sciences I	3
MTH 119 Mathematical Analysis II for Social Sciences II	3
Science and technology	11
CHM 115 and 116 Chemistry and Society	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 Principles of Economics I	3
ECO 202 Principles of Economics II	3
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 industry	55
Required courses	
IT 103 Introduction to Automation	3
IT 203 Industrial Processes	3
A minimum of 15 hours at the 300- and 400-level to fulfill graduation requirements	15
Transfer credits (adviser approval required)	34
Physical education and health	2
Physical education activity courses	2
<i>(Two semester hours of Military Science may be substituted for physical education.)</i>	
Free electives	12-13
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
CTS 121 Fundamentals of Speech	2
ENG 121 English Composition	3
ENG 324 Principles of Technical Writing	3
IT 105 Computer Applications for Industry	3
MTH 107 Plane Trigonometry	2
MTH 118 Mathematical Analysis I for Social Sciences I	3
MTH 119 Mathematical Analysis II for Social Sciences II	3
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 Principles of Economics I	3
ECO 202 Principles of Economics II	3
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

Academic major in CAD	63
CSC 137 Introduction to FORTRAN Programming	3
CSC 239 Assembly Machine Language Programming	3
CSC 350 Programming in Unix Environment	3
IT 103 Introduction to Automation	3
IT 106 Microcomputer Applications in Manufacturing	3
IT 122 Engineering Graphics I	3
IT 123 Manufacturing Processes and Methods I	3
IT 124 Manufacturing Processes and Methods II	3
IT 203 Industrial Processes	3
IT 223 Engineering Graphics II	3
IT 231 Industrial Computer Graphics	3
IT 316 Manufacturing Tooling	3
IT 325 Applied Mechanics, Kinematics, and Design	3
IT 387 Co-operative Education in Industrial Technology	3
IT 425 Advanced Manufacturing Methods	3
IT 426 Manufacturing Information Systems	3
IT 431 Interactive Industrial Computer Graphics	3
IT 432 3-D Computer-Aided Design	3
IT 433 Color Concepts in 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
(Two semester hours of Military Science may be substituted for physical education.)	
Free electives	1-2
Total	124

COMPUTER-AIDED MANUFACTURING MAJOR

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 major combines instructional experiences in robotics, electronics, power systems, and numerical control. The major is designed to prepare individuals for supervisory and management positions in automated plants and factories of both today and in the future.

Area	Sem hours
Symbolics and communication	19
CTS 121 Fundamentals of Speech	2
ENG 121 English Composition	3
ENG 324 Principles of Technical Writing	3
IT 105 Computer Applications for Industry	3
MTH 107 Plane Trigonometry	2
MTH 118 Mathematical Analysis I for Social Sciences I	3
MTH 119 Mathematical Analysis II for Social Sciences II	3
Science and technology	19
CHM 121 and 122 General Chemistry I (High school chemistry or CHM 119 Fundamentals of Chemistry)	4
CHM 241 and 242 Materials Science	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 Principles of Economics I	3
ECO 202 Principles of Economics II	3
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
Academic major in CAM	60
IT 103 Introduction to Automation	3
IT 106 Microcomputer Applications in Manufacturing	3
IT 122 Engineering Graphics I	3
IT 123 Manufacturing Processes and Methods I	3
IT 124 Manufacturing Processes and Methods II	3
IT 200 Industrial Electricity and Controls I	3
IT 203 Industrial Operations	3
IT 218 Industrial Electricity and Controls II	3
IT 223 Engineering Graphics II	3
IT 318 Fluid Power	3
IT 387 Co-operative Education in Industrial Technology	3
IT 416 Computer Numerical Control	3
IT 417 Industrial Robotics	3
IT 420 Industrial Quality Control	3
IT 426 Manufacturing Information Systems	3
IT 427 Advanced Industrial Control	3
IT 485 Flexible Manufacturing Systems	3
MGT 386 Organizational Behavior and Theory	3
Restricted elective	6
<i>Recommended</i>	
ACC 130 Accounting for Non-Business Majors	3
and any other course approved by your adviser.	

Physical education and health	2
Physical education activity courses	2
(Two semester hours of Military Science may be substituted for physical education.)	
Free electives	1-2
Total	124

MANUFACTURING MAJOR

The manufacturing technology major 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 major provides technical knowledge, skills, and attitudes necessary for working closely with other people in solving technical, managerial, and production problems.

Area	Sem hours
Symbolics and communication	19
CTS 121 Fundamentals of Speech	2
ENG 121 English Composition	3
ENG 324 Principles of Technical Writing	3
IT 105 Computer Applications for Industry	3
MTH 107 Plane Trigonometry	2
MTH 118 Mathematical Analysis I for Social Sciences I	3
MTH 119 Mathematical Analysis II for Social Sciences II	3
Science and technology	19
CHM 121 and 122 General Chemistry I (High school chemistry or CHM 119 Fundamentals of Chemistry)	4
CHM 241 and 242 Materials Science	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 Principles of Economics I	3
ECO 202 Principles of Economics II	3
Arts and humanities	11-12
A course in philosophy or religion	3
A course in art, dance, music, or theatre arts	2-3
LIT 100 The Reading of Literature	3
A course in cross-cultural or international studies	3
Academic major in manufacturing	60
IT 103 Introduction to Automation	3
IT 106 Microcomputer Applications in Manufacturing	3
IT 122 Engineering Graphics I	3
IT 123 Manufacturing Processes and Methods I	3
IT 124 Manufacturing Processes and Methods II	3
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 387 Co-operative 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 426 Manufacturing Information Systems ...	3
IT 490 Manufacturing Technology Laboratory	3
ACC 130 Accounting for Non-Business Majors	3
MGT 386 Organizational Behavior and Theory	3
Physical education and health	2
Physical education activity courses	2
(Two semester hours of Military Science may be substituted for physical education.)	
Free electives	0-1
Total	124

PLASTICS TECHNOLOGY MAJOR

The plastics technology major 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.

Area	Sem hours
Symbolics and communication	19
CTS 121 Fundamentals of Speech	2
ENG 121 English Composition	3
ENG 324 Principles of Technical Writing	3
IT 105 Computer Applications for Industry	3
MTH 107 Plane Trigonometry	2
MTH 118 Mathematical Analysis I for Social Sciences I	3
MTH 119 Mathematical Analysis II for Social Sciences II	3
Science and technology	20
CHM 121 and 122 General Chemistry I (High school chemistry or CHM 119 Fundamentals of Chemistry)	4
CHM 123 and 124 General Chemistry II	4
CHM 270 and 271 Organic Chemistry	5
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 Principles of Economics I	3
ECO 202 Principles of Economics II	3

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
Academic major in plastics technology	57
IT 103 Introduction to Automation	3
IT 106 Microcomputer Applications in Manufacturing	3
IT 122 Engineering Graphics I	3
IT 123 Manufacturing Processes and Methods I	3
IT 124 Manufacturing Processes and Methods II	3
IT 200 Industrial Electricity and Controls I	3
IT 202 Plastics	3
IT 203 Industrial Operations	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 325 Applied Mechanics, Kinematics, and Design	3
IT 387 Co-operative Education in Industrial Technology	3
IT 409 Plastics Mold Design and Construction	3
IT 410 Plastic Product Design	3
IT 411 Plastics Fabricating and Decorating	3
IT 420 Industrial Quality Control	3
IDT 310 Polymers for Engineers and Technologists	3
Physical education and health	2
Physical education activity courses	2
(Two semester hours of Military Science may be substituted for physical education.)	
Free electives	2-3
Total	124

INDUSTRIAL TECHNOLOGY MINOR

The industrial technology minor is designed to provide majors in industry, business, and science with an introduction to technical applications. 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 MINOR

	Sem hours
Minor in industrial technology	24
1. Required course	3
IT 201 Construction Systems or IT 203 Industrial Operations	3

2. **Restricted electives** 5-6
 Choose five or six semester hours from the following: IT 103 Introduction to Automation, IT 122 Engineering Graphics I, or IT 228 Construction Drawing; or IT 213 Occupational Safety and Health
3. **Electives (must be approved)** 15-16

MANUFACTURING MINOR

- | | Sem hours |
|---|------------------|
| 1. Required courses | 6 |
| IT 103 Introduction to Automation | 3 |
| IT 203 Industrial Operations | 3 |
| 2. Restricted electives | 15 |
| Select an additional 15 hours from the courses included in the manufacturing curriculum core with the approval of the department adviser. | |
| Suggested are: | |
| *IT 105 Computer Applications for Industry, IT 106 Industrial Computer Applications for Manufacturing, IT 122 Engineering Graphics I, IT 123 Manufacturing Process and Methods I, IT 124 Manufacturing Process and Methods II | |
| and/or from the following major program courses: | |
| IT 200 Industrial Electricity and Controls I, IT 218 Industrial Electricity and Controls II, IT 202 Plastics, IT 223 Engineering Graphics II, IT 230 Introduction to Computer Graphic Systems, IT 231 Industrial Computer Graphics, IT 318 Fluid Power, IT 324 Industrial Drawing | |

**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 | 57 |
| ENG 121 English Composition | 3 |
| ENG 225 Intermediate English Composition | 3 |
| MTH 120 and 121 Calculus I and II | 8 |
| MTH 122 Elementary Linear Algebra | 3 |
| MTH 223 Multivariable Calculus | 4 |
| CSC 237 Computer Programming and
Numeric Methods | 3 |
| CHM 121 and 122 General Chemistry I | 4 |
| CHM 241 and 242 Materials Science | 4 |
| PHY 223 Mechanics, Sound, and Heat | 5 |
| PHY 224 Electricity and Light | 5 |
| ECO 201, ECO 202 Principles of Economics
I and II | 6 |
| Two literature courses | 6 |
| A humanities course | 3 |
| 2. Recommended course (course may not transfer) | 3 |
| IT 122 Engineering Graphics I | 3 |
| IT 223 Engineering Graphics II | 3 |
| IT 231 Industrial Computer Graphics | 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 |
| CTS 121 Fundamentals of Speech | 2 |
| MTH 120 and 121 Calculus I and 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 |
| HST 123 United States to 1877 | 3 |
| ECO 201, ECO 202 Principles of Economics
I and II | 6 |
| PHI 130 Introduction to Logic or approved
alternative | 3 |
| FA 123 Drawing I, dance, music, or the
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 sem hours

An introductory mechanical drawing course emphasizing lettering, measuring, geometric construction, sketch-

ing, equipment usage, pictorials, orthographic projection, and dimensioning. This course is intended for students without previous drafting experience. Lecture and laboratory course.

IT 103 Introduction to Automation. 3 sem hours
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 sem hours
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 sem hours
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 sem hours
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 Introduction to Industrial Drawing or one year of high school drafting.

IT 123 Manufacturing Processes and Methods I. 3 sem hours
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 sem hours
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 Manufacturing Process and Methods I and MTH 107 Plane Trigonometry.

IT 125 Introduction to Construction. 2 sem hours
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 sem hours
The application of fundamental concepts and principles of electricity. Topics include direct and alternating cur-

rent, 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 sem hours
Structural Systems, associated non-structural components, and considerations appropriate to mechanical, electrical, plumbing, and support equipment. Lecture and laboratory course.
Prereq: IT 125 Introduction to Construction and IT 228 Construction Drawing.

IT 202 Plastics. 3 sem hours
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 Manufacturing Processes and Methods I.

IT 203 Industrial Operation. 3 sem hours
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 Manufacturing Process and Methods I.

IT 206 Surveying. 3 sem hours
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 Plane Trigonometry.

IT 213 Construction Safety. 3 sem hours
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 sem hours
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 sem hours
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 Industrial Electricity and Controls I.

IT 219 Techniques of Energy Control. 3 sem hours
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 sem hours
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 Plane Trigonometry and IT 122 Engineering Graphics I.

IT 228 Construction Drawing. 3 sem hours
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 sem hours
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 Construction Drawing or department permission.

IT 230 Introduction to Computer Graphic Systems. 3 sem hours
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 sem hours
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 Plane Trigonometry and CSC 137 Introduction to FORTRAN programming.

IT 240 Science, Technology, and People. 3 sem hours
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 sem hours
Study of the structure, characteristics, and working qualities of common industrial materials. Lecture and laboratory course.

IT 301 Planning and Scheduling. 3 sem hours
The planning process of the construction industry. Various scheduling systems commonly used within the industry.
Prereq: IT 201 Construction Systems or department permission.

IT 302 Contract Document, Regulations, and Specifications. 3 sem hours
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 Construction Systems, LAW 293 Legal Environment of Business, or department permission.

IT 303 Electrical, Mechanical, and Equipment Systems. 3 sem hours
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 Construction Systems and IT 228 Construction Drawing.

IT 306 Plastic Processing. 3 sem hours
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 Plastics.

IT 314 Integrated Circuits: Digital. 3 sem hours
The study of combinational and sequential logic. Concepts of digital control and computer circuits. Lecture and laboratory course.
Prereq: IT 200 Industrial Electricity and Controls I.

IT 316 Manufacturing Tooling. 3 sem hours
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 Plane Trigonometry, IT 103 Introduction to Automation, IT 124 Manufacturing Processes and Methods II, IT 203 Industrial Operations, and IT 223 Engineering Graphics II.

IT 318 Fluid Power. 3 sem hours
Industrial hydraulic and pneumatic power transmission. Emphasis is on components, system control techniques, logic, system analysis, and design. Lecture and laboratory course.
Prereq: PHY221 Mechanics, Sound, and Heat.

IT 324 Industrial Drawing. 3 sem hours
An examination and application of fundamental engineering design and drawings including design and analysis techniques, gear and cam, linkage mechanisms, and tolerances. A computer-aided design and manufacturing system will be used as the method of producing designs and drawings. Lecture and laboratory course.
Prereq: IT 122 Engineering Graphics I and IT 223 Engineering Graphics II.

IT 325 Applied Mechanics, Kinematics, and Design. 3 sem hours
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 Mechanics, Sound, and Heat and IT 223 Engineering Graphics II.

IT 387 Cooperative Education in Industrial Technology. 3 sem hours

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 sem hours

The principles and procedures for developing estimates, bids, and contracts for residential and commercial construction.

Prereq: IT 201 Construction Systems and IT 229 Analysis of Commercial Prints.

IT 402 Construction Materials. 3 sem hours

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 Construction Systems.

IT 403 Production Control. 2 sem hours

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 401 Construction Estimating and Bidding, IT 301 Planning and Scheduling, and ACC 130 Accounting for Non-Business Majors.

IT 406 Construction Law. 2 sem hours

Common basic legal problems associated with construction contracting. Current areas of concern and the significant implications are covered.

Prereq: IT 302 Contract Document, Regulations, and Specifications and LAW 293 Legal Environment of Business.

IT 409 Plastics Mold Design and Construction. 3 sem hours

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 Plastic Processing.

IT 410 Plastics Product Design. 3 sem hours

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 202 Plastics.

IT 411 Plastics Fabricating and Decorating. 3 sem hours

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 202 Plastics.

IT 414 Integrated Circuit: Linear. 3 sem hours

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 Industrial Electricity and Controls I or department permission.

IT 415 Communication Circuits. 2 sem hours

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 Industrial Electricity and Controls I or department permission.

IT 416 Computer Numerical Control. 3 sem hours

NC part programming for both mills and lathes. NC-code fundamentals, computer-assisted programming, and CAD/CAM programming are emphasized. Verification if accomplished by computer graphics and laboratory work. Lecture and laboratory course.

Prereq: MTH 107 Plane Trigonometry, IT 106 Industrial Computer Applications for Manufacturing, IT 124 Manufacturing Processes and Methods II, and IT 223 Engineering Graphics II.

IT 417 Industrial Robotics. 3 sem hours

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 Industrial Computer Applications for Manufacturing, IT 203 Industrial Operations, IT 218 Industrial Electricity and Controls II, and IT 318 Fluid Power.

IT 420 Industrial Quality Control. 3 sem hours

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 Mathematical Analysis for Social Sciences I, MTH 119 Mathematical Analysis for Social Sciences II, and IT 203 Industrial Operations.

IT 421 Manufacturing Product and Process Analysis. 3 sem hours

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 Mathematical Analysis for Social Sciences II and IT 420 Industrial Quality Control.

IT 424 Industrial Plant Facilities and Planning. 3 sem hours

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 sem hours

The course emphasizes computerized methods of planning, material handling, machining cells, and inspection. Lecture and laboratory course.

Prereq: IT 103 Introduction to Automation, IT 124 Manufacturing Processes and Methods II, IT 203 Industrial Operations, and IT 223 Engineering Graphics II.

IT 426 Manufacturing Communication Systems. 3 sem hours

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 Introduction to Automation, IT 106 Industrial Applications of Microcomputer, IT 124 Manufacturing Processes and Methods II, IT 203 Industrial Operations, and IT 223 Engineering Graphics II.

IT 427 Advanced Industrial Control. 3 sem hours

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 Industrial Electricity and Controls II and IT 318 Fluid Power.

IT 431 Interactive Industrial Computer Graphics. 3 sem hours

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 Industrial Computer Graphics and a course in FORTRAN programming.

IT 432 3-D Computer-Aided Design. 3 sem hours

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 Interactive Industrial Computer Graphics.

IT 433 Color Concepts in Computer-Aided Design. 3 sem hours

Advanced computer-aided design color applications including the definition and use of menus and icons, complex surface shading with a light source, defining multiple

hardware surfaces, pixel manipulation, raster color concepts, and hardware pan and zoom. Lecture and laboratory course.

Prereq: IT 431 Interactive Industrial Computer Graphics.

IT 434 Microcomputer Circuits. 3 sem hours

The microprocessor and its applications in the control of machines and industrial process. Lecture and laboratory course.

Prereq: IT 314 Integrated Circuits: Digital and a computer programming course.

IT 450 Fundamentals of Construction Project Management. 3 sem hours

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 Planning and Scheduling; IT 302 Contract Document, Regulations, and Specifications; IT 401 Construction Estimating and Bidding; and MGT Human Resource Management.

IT 477, 478, 479 Current Topics in Industrial Technology. 1, 2, 3 sem hours

These courses are offered on an experimental basis or for some special need.

Prereq: Department permission.

IT 485 Flexible Manufacturing Systems. 3 sem hours

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 416 Computer Numerical Control, IT 417 Industrial Robotics, and IT 420 Industrial Quality Control.

IT 487 Cooperative Education in Industrial Technology. 3 sem hours

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 Cooperative Education in Industrial Technology.

IT 490 Manufacturing Technology Laboratory. 3 sem hours

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 Manufacturing Tooling; IT 324 Applied Mechanics, Kinematics, and Design; IT 420 Industrial

Quality Control; IT 421 Manufacturing Product and Process Analysis; IT 425 Advanced Manufacturing Methods; and ENG 324 Principals of Technical Writing.

IT 494, 495, 496 Industry-Based Special

Topics. 1, 2, 3 sem hours

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 sem hours

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, John C. Graham, Frank Jones, Felix Kaufmann, Paul D. Kuwik, Demo Stavros, Ronald M. Westrum
Associate Professors: Alexandra B. Aldridge, Wayne Hanewicz, John Preston
Assistant Professors: John Boyless, David Gore, Gerald Lawver
Instructors: 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
- Coating process 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
- Coating process technology: Taki Anagnostou
- 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

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 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 Principles of Economics I	3
ECO 202 Principles of Economics II	3
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 international 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 Science I and II	6
ORI 265 Business Statistics I	3
ACC 240, 241 Principles of Accounting	6
ECO 325 Collective Bargaining	3
FIN 350 Principles of Finance	3

Physical education and health 2
 Physical education activity courses2
 (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 Principles of Economics I	3
ECO 202 Principles of Economics II	3
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 Secondary Reading	3
SFD 328 Social Aspects of Teaching	3

SGN 251 Education of Exceptional Children ..	2
EDP 340 Introduction to Measurement and Evaluation	2
<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	8
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 Education	3
IDT 478 Teaching Methods in Bilingual Vocational Education	2
IDT 479 Seminar in Bilingual Vocational Education	3
Occupational specialty***	35
Physical education	2
Physical education activity or Military Science Courses	
Total	130-135

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.C.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 Principles of Economics I	3
ECO 202 Principles of Economics II	3
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 Distributive and Office Education	3
EDP 322 Human Development and Learning ...	4
SFD 328 Social Aspects of Teaching	3
EDP 340 Introduction to Measurement and Evaluation	2
RDG 311 Teaching Reading in Secondary Schools	3
SGN 300 Exceptional Children in the Regular Classroom	1
EDU 492 Student Teaching	8
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 Distributive 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 and II	6
BE 250 Personal Finance	3
LAW 293 Legal Environment in Business	3
MKT 360 Principles of Marketing	3
BE 395 Office Administration	3
BE 396 Records Administration	3
IDT 478 Teaching Methods in Bilingual Vocational Education	2
IDT 479 Seminar in Bilingual Vocational Education	3
Major in Business Education/Office Educa tion ..	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	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
** <i>Students electing business education!</i> <i>accounting or data processing should take a</i> <i>three hour restricted elective instead of BE</i> <i>422 Office Systems</i>	
ORI 317 Systems 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 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 Processing	3
BE 220 Word Processing Operations	3
BE 222 Transcription Applications and Technology	3
BE 310 Word 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 Processing	3
BE 211 Introduction to Legal Assistance	3
ORI 219 File Processing and COBOL Programming	3
BE 220 Word Processing Operations	3
BE 222 Transcription Applications and Technology	3
BE 225 Gregg Shorthand	3
BE 310 Word Processing Administration	3
BE 325 Shorthand Transcription	3
MKT 374 Business to Business Marketing and Purchasing	3
BE 387 Cooperative Education in Business Education	3
LAW 393 Law of Business Enterprises	3
BE 411 Law Office Documents and Procedures	3
BE 412 Court Documents and Procedures	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, 2, 3
Physical education and health 2
 Physical education activity courses 2
 (Any two courses in Military Science may be
 applied)
Electives 0-3
Total 128

**Students electing the business education/data processing option must take ORI 215 End-User Computing in place of BE 201, Math 118, and Math 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.C.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 Principles of Economics I	3
ECO 202 Principles of Economics II	3
Arts and humanities	12
A course in literature	
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 Distributive and Office Education	3
EDP 322 Human Development and Learning	4
SFD 328 Social Aspects of Teaching	3
EDP 340 Introduction to Measurement and Evaluation	2
RDG 311 Teaching Reading in Secondary Schools	3
SGN 300 Exceptional Children in the Regular Classroom	1
EDU 492 Student Teaching	8
<i>Business methods courses</i>	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 and 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 and Purchasing, LAW 393 Law of Business Enterprises, MKT 461 Sales Management, MGT 384 Human Resource Management, MGT 485 Human Resource Development.	
<i>Professional marketing education courses</i>	
BE 367 Curriculum in Marketing Education	2
BE 368 Management of Marketing Education Programs	2
BE 461 Project and Simulation Programs in Marketing Education	2
IDT 478 Teaching Methods in Bilingual Vocational Education	2
IDT 479 Seminar in Bilingual Vocational Education	3
Restricted Electives	11
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

IE 452 Principles of Vocational-Technical Education

FM 145 Introduction to Fashion Merchandising, FM 235 Textiles for Consumers, FM 255 Apparel Analysis, FM 439 Fashion Markets

Physical education and health 2
Physical education activity courses2
(Any two courses in Military Science may be applied.)

Electives..... 0-3

Total 124-128

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
Symbolics and communication	15
A course in written communication	
A course in speech communication	
ENG 324 Principles of Technical Communication or CTC 227 Interpersonal Communication or CTC 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	7-10
A course in physical science	
PSY 101 General Psychology	3
IDT 150 Understanding Technology	3
Social science	8-12
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	8-12
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

CTT 130 Introduction to Telecommunications and Film

3

CTT 141 Introduction to Radio-TV-Film Production

3

CTT 331 Fundamentals of Radio Production and Direction or CTT 332 Fundamentals of Television Production and Direction

3

Transmission systems

IT 200 Industrial Electricity

3

IDT 305 Communication Transmission Systems

3

Computer technology

CSC 238 Topics in Computer Science

3

CSC 239 Assembly and Machine Language Programming

3

CSC 338 Computer Organization

3

CSC 435 Introduction to Microprocessors

3

Communication theory and practice

CTC 227 Interpersonal Communications

3

CTC 354 Organizational Communications

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

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

COATING PROCESS TECHNOLOGY CURRICULUM

This curriculum is designed to develop technical professionals trained in the selection, use, and management of coating systems for fabricated products. The 124 semester hours include basic studies with some

courses specified to meet these requirements and a series of technical courses.

Students completing this curriculum have met the major and minor requirements for graduation. No outside minor is needed.

Area	Sem hours
Symbolics and communication	14
ENG 121 English Composition	3
CTS 121 Fundamentals of Speech	2
ENG 324 Principles of Technical Communication	3
MTH 270 Elementary Statistics	3
IDT 201 Microcomputer Applications in Technology	3
Science and technology	13
CHM 121 General Chemistry 1	3
CHM 122 Chemistry Lab I	2
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 Principles of Economics I	3
ECO 202 Principles of Economics II	3
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
Academic major in coating process technology ...	45
IDT 310 Polymers for Engineers and Technologists	3
IDT 387 Cooperative Education in Interdisciplinary Technology	3
IDT 400 Polymer and Coating Technology I ...	3
IDT 401 Polymer and Coating Technology Lab I	3
IDT 402 Polymer and Coating Technology II ...	3
IDT 403 Polymer and Coating Technology Lab II	3
IDT 405 Coating Processes	3
IDT 406 Coating Processes Laboratory	3
IDT 479 SPC in Coatings Technology	3
IT 122 Technical Drawing	3
IT 203 Manufacturing Technology	3
IT 420 Controlling Manufacturing Systems	3
IT 424 Industrial Plant Facilities and Planning ...	3
ORI 374 Production/Operations Management ...	3
MGT 386 Organizational Behavior and Theory	3
Science and mathematics	23
CHM 123 General Chemistry II	3
CHM 124 Chemistry Lab II	2
MTH 105 College Algebra	3
MTH 107 Plane Trigonometry	2
PHY 222 Electricity and Light	4
CHM 241 Material Science	3
CHM 242 Material Science Laboratory	1
CHM 270 Organic Chemistry	4
CHM 271 Organic Chemistry Laboratory	1

Physical education and health	2
Physical education activity course	2
(any two courses in Military Science may be applied.)	
Electives	3
Choose three credits from the following recommended courses: IT 213 Construction Safety, IT 318 Energy Transfer Systems, IDT 487, Cooperative Education in Interdisciplinary Technology	
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.

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 34	
Arts and humanities	12
See basic studies requirements, page 35	
Physical education	2
See basic studies requirements, page 38	
Cross-cultural or international studies See basic studies requirements, page 36	
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, Ventilation, and Air Conditioning	4
IDT 314 Utility Rates and Building	2
IDE 364 Introduction to 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
<i>Energy management</i>	13
IT 200 Industrial Electricity	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
<i>Interior environments</i>	15
IDE 349 Space Planning	3
HEC 387 Cooperative Education	3
HM 441 Commercial Purchasing	3
IDE 449 Facility Programming and Past 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	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	15
ENG 121 English Composition	3
CTS 121 Speech	3
An upper level course in speech communication	3
MTH 118 or MTH 270	3
IDT 201 Micro Computer 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 Principles of Economics I	3
ECO 202 Principles of Economics II	3
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	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 and Purchasing	3
MKT 461 Sales Management	3
Technology	24
IT 122 Technical Drawing	3
IT 123 Metal Processes	3
IT 200 Industrial Electricity	3
IT 314 Integrated Circuits.....	3
IT 318 Energy Transfer Systems	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 Co-op for Industrial Distribution	3
IDT 440 Industrial Distributor Operation	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 Metallurgy	3
IT 251 Material Analysis and Testing	3
IT 420 Controlling Manufacturing	3
Electives	4
Electronics	13
IT 415 Communication Circuits	3
IT 414 Solid State Electronics	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 Communications	3
IDT 300 Energy Management Controls	3
IT 316 Advanced Machinery Processes	3
FIN 350 Principles of Finance.....	3
FIN 358 Analysis of Financial Statements	3
MGT 402 Business Report Writing.....	3
IT 416 Computer Numerical Control	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
CTS 121 Fundamentals of Speech	2
ENG 324 Principles of Technical Communication	3
MTH 120 Calculus I	4
IDT 201 Microcomputer Application in Technology	3
Science and technology	13
CHM 121 General Chemistry I	3
CHM 122 Chemistry Lab I	2
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 Principles of Economics I	3
ECO 202 Principles of Economics II	3
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 General Chemistry II	3
CHM 124 Chemistry Lab II	2
MTH 105 College Algebra	3

MTH 107 Plane Trigonometry	2
PHY 222 Electricity and Light.....	4
CHM 381 Instrumentation for Chem Technology	2
Academic major in polymers and coatings technology	44
Required courses	44
CHM 261 Introduction to Physical Chemistry	3
CHM 281 Quantitative Analysis	4
IDT 310 Polymers for Engineers and Technology.....	3
CHM 371 Organic Chemistry I	3
CHM 372 Organic Chemistry II.....	3
CHM 373 Organic Chemistry Laboratory	2
IDT 387 Cooperative Education in Interdisciplinary Technology	3
IDT 400 Polymers and Coating Technology I ...	3
IDT 401 Polymers and Coating Technology Lab.....	3
IDT 402 Polymers and Coating Technology II ...	3
IDT 403 Polymers and Coating Technology Lab II	3
IDT 405 Coating Technology Processes	3
IDT 460 Advanced Coating Topics.....	3
IDT 479 Statistical Process Control in Coatings.....	3
Electives.....	10-11
Choose 10-11 credits from the following:	
CHM 241 Material Science, CHM 340 Industrial Chemistry, CHM 415 Environmental Chemistry, CHM 478 Industrial Toxicology, IDT 487 Co-op II	
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 DEPARTMENT OF INTERDISCIPLINARY TECHNOLOGY

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 Application Technology	3
IDT 304 Advanced Photographic Communication	3
IDT 318 Graphic Arts Workshop	3
IDT 404 Photographic Communication Workshop	3
IT 231 Industrial Computer Graphics	3
FA 165 Graphics Design	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
HST 290 History of Technology	2

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 310 Energy Awareness, GEO 315 Land Use Planning, GEO 440 World Food Systems	
SOC 334 Population	
<i>Subgroup B:</i>	
CTT 446 Contemporary Problems in Telecommunications	
ECO 386 Technology and Economic Growth	
GEO 100 Future Worlds, GEO 235 Economic Geography, GES 495 Environmental Impact Assessment	
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 Society	

INTERDISCIPLINARY TECHNOLOGY COURSES

IDT 100 Introduction to General Aviation. 1 sem hour
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.

ID 104 Introduction to Communication Technology. 2 sem hours
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 sem hours
The functions and roles of maintenance personnel in an aviation maintenance organization structure. Lecture: three hours per week.

IDT 120 Flight Operations I. 3 sem hours
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 sem hours
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 sem hours
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 sem hours
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 sem hours
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 Keyboarding for Computers is suggested.

IDT 202 Introduction to Facility Management. 3 sem hours
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 sem hours
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 sem hours
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 Graphic Communication and a chemistry course.

IDT 207 Photographic Reproduction. 3 sem hours
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 Introduction to Communication Technology or IDT 121 Graphic Communication.

IDT 210 Aircraft Maintenance II. 3 sem hours
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 Aircraft Maintenance I.

IDT 214 Rubber Technology I. 2 sem hours
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 sem hours
In-depth study of the functions and organization of operations and the relationship with the other departments within an aviation organization.
Prereq: IDT 120 Flight Operations I.

IDT 240 Introduction to Industrial Distribution. 3 sem hours
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 sem hours
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 sem hours
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 261 Basic Flight II. 2 sem hours
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 Basic Flight I.

IDT 271 Basic Flight III. 2 sem hours
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 Basic Flight II.

IDT 277, 278, 279 Special Topics in Interdisciplinary Technology. 1, 2, 3 sem hours
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 sem hours**

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 Heating Ventilation and Air Conditioning.

IDT 303 Aviation Law and Insurance. 3 sem hours

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 sem hours**

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 Photographic Communication.

IDT 305 Communication Transmission**Systems.****3 sem hours**

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 sem hours**

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 sem hours**

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 sem hours**

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 Introduction to Construction, IT 228 Construction Drawing.

IDT 313 Aviation Industry Regulations. 3 sem hours

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 sem hours**

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 Microcomputer Applications in Technology.

IDT 315 Airport Management.**3 sem hours**

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 sem hours**

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 Microcomputer Applications in Technology.

IDT 318 Graphic Arts Workshop.**3 sem hours**

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 Photographic Reproduction or department permission.

IDT 320 Aviation Safety, Accident Investigation, and Training.**3 sem hours**

In-depth study of aviation safety (flight and ground); accident prevention, accident investigation, and personnel training.

Prereq: IDT 170 Aviation Ground Instruction.

IDT 340 The Industrial Climate and its Effects**Upon Distribution.****3 sem hours**

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 sem hours**

The factors affecting operation of aircraft in instrument meteorological conditions (IMC); the impact upon scheduling and related considerations.

Prereq: IDT 170 Aviation Ground Instruction.

IDT 350 Wire Technology II. 3 sem hours
An intermediate course designed to study contemporary concepts and practices of wire manufacturing.
Prereq: IDT 250 Wire Technology I or approval of instructor.

IDT 351 Advanced Flight L 2 sem hours
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 Basic Flight III.

IDT 361 Advanced Flight II. 2 sem hours
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 Advanced Flight I.

IDT 371 Advanced Flight III. 2 sem hours
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 Advanced Flight II.

IDT 387, 487 Cooperative Education in Interdisciplinary Technology. 3 sem hours
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 sem hours
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 sem hours
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, cellulose.
Prereq: CHM 270 Organic Chemistry, CHM 271 Organic Chemistry Laboratory.

IDT 401 Polymers and Coatings Technology I Laboratory. 3 sem hours
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.C., I.R.T., G.P.C., and calorimetry.
Coreq: IDT 400 Polymers and Coatings Technology I.

IDT 402 Polymers and Coatings Technology II. 3 sem hours
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 Polymers and Coatings Technology I.

IDT 403 Polymers and Coatings Technology II Laboratory. 3 sem hours
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 Polymers and Coatings Technology II.

IDT 404 Photo Communication Workshop. 3 sem hours
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 Advanced Photographic Communication.

IDT 405 Coating Process I. 3 sem hours
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 Polymers for Engineers and Technologist or IDT 400 Polymers and Coatings Technology I, or department permission.

IDT 406 Coatings Processes I Laboratory. 3 sem hours
Hands-on experience in industrial coating processes. Substrate preparation, coatings application, and industrial coating systems design and operational control.
Coreq: IDT 405 Coating Processes I.

IDT 407 Coating Processes II. 3 sem hours
Processes and equipment for coatings application, economic analysis of coating operations, paint defects, and line design for productivity and energy conservation.
Prereq: IDT 405 Coating Processes I or department permission.

IDT 409 Emerging Technologies in Storage and Retrieval. 3 sem hours
Conventional as well as emerging technologies of information storage and retrieval. Lecture and laboratory.

IDT 410 Mechanical and Physical Properties of Polymers. 3 sem hours
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, rheology and their relationship to polymer fabrication processes.
Prereq: IDT 310 Polymers for Engineers and Technologists or department permission.

IDT 411 Mechanical and Physical Properties of Polymers Laboratory. 1 sem hour
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 Mechanical and Physical Properties of Polymers.

IDT 412 Energy Measurement. 2 sem hours
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 Microcomputer Applications in Technology.

IDT 413 Computers in Aviation. 3 sem hours
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 Computers in Business.

IDT 414 Rubber Technology II. 2 sem hours
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 Rubber Technology I or department permission.

IDT 415 Computer Programming for Energy Management. 3 sem hours
The use of existing energy auditing programs as well as creation of programs for specialized use.
Prereq: IDT 201 Microcomputer Applications in Technology.

IDT 420 Women and Technology. 3 sem hours
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 sem hours
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 sem hours
Utilization of information covered in other courses to solve functional problems using simulation and real data.
Prereq: IDT 100 Introduction to Aviation, IDT 110 Aircraft Maintenance I, IDT 120 Flight Operations I, IDT 170 Aviation Ground Instruction, IDT 210 Aircraft Maintenance, IDT 303 Aviation Law and Insurance, IDT 320 Aviation Safety, Accident Investigation, and Training, IDT 341 Instrument Flight/IFR Operations, and IDT 413 Computers in Aviation.

IDT 425 Communication Technology and Social Change. 3 sem hours
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 sem hours
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 sem hours
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 436 Electronic Publishing Technology. 3 sem hours
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 sem hours
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 Introduction to Industrial Distribution, junior standing, and approval of instructor.

IDT 444 Industrial Distribution. 3 sem hours
Seminar approach to study of problems of industrial distribution with assistance of representative from industrial distributor organizations in the geographical area.

Prereq: IDT 440 Industrial Distributor Operations, senior standing.

IDT 450 Advanced Coatings Topics III. 3 sem hours
Advanced wire technology; in-depth study of wire in manufactured products.

Prereq: IDT 350 Wire Technology II or permission of instructor.

IDT 460 Advanced Coatings Topics. 3 sem hours
Development of in-depth formulating skills; new technology areas in coatings and polymers.

Prereq: IDT 402 Polymers and Coatings Technology II, IDT 403 Polymers and Coatings Technology II Laboratory, or department permission.

IDT 470 Senior Seminar in Communication Technology. 2 sem hours

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 477, 478, 479 Special Topics in Interdisciplinary Technology. 1, 2, 3 sem hours

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 495 Technology, Values, and the Future. 3 sem hours

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 sem hours

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. Michael W. Maasberg
Department Head
18 Roosevelt Building
487-1020

Assistant Professors: Capt. John Borg, Capt. Mark A. Gaston, Capt. Donald D. Guthrie, Capt. Mark Wolfe

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 \$140 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. Michael W. Maasberg

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.

MINOR IN 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, First Year—Basic Program. 2 sem hours

An introduction to the U.S. defense establishment with emphasis on the role and structure of the U.S. Army as compared to that of the Soviet Union. Students also participate in adventure mini-courses (rappelling, rifle marksmanship, etc.)

MS 101 Fundamentals of Leadership and Management II, First Year—Basic Program. 2 sem hours

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, Second Year—Basic Program. 2 sem hours

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, Second Year—Basic Program. 2 sem hours

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, First Year—Advanced Program. 3 sem hours

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, First Year—Advanced Program. 3 sem hours

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, First Year—Advanced Program.

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, Second Year—Advanced
Program. 3 sem hours**

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, Second Year—Advanced
Program. 3 sem hours**

The essentials of the army personnel and logistics managementsystems. 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, Second Year—
Advanced Program.**

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 sem hours**

Intensive study or project approved by the department head. Study or project is directly related to a military subject.

Prereq: Department permission.

OFFICES, OFFICERS, AND OTHER CAMPUS DEPARTMENTS AND LOCATIONS

CONTINUING EDUCATION

THE GRADUATE SCHOOL

UNIVERSITY ADVANCEMENT

STUDENT REFERENCES

UNIVERSITY CAMPUSES

ATHLETIC FIELDS

ADMINISTRATIVE OFFICERS

FACULTY AND STAFF

EMERITUS FACULTY

CONTINUING EDUCATION

Dean: Paul T. McKelvey
321 Goodison Hall
487-0407

Continuing Education at Eastern Michigan University is responsible for non-traditional credit programs. It is Continuing Education's mission to serve a broad spectrum of students by offering quality learning experiences using innovative formats, locations, and delivery systems. Of particular importance is the learner who does not fit the pattern of the traditional full-time student. EMU is committed to meeting the academic needs of lifelong learners through a wide variety of relevant courses accessible to those meeting the commitments of work and family.

Continuing Education assists the University by assessing learning needs in the community and working with academic departments to find collaborative ways to meet those needs. In addition to serving an extension function, Continuing Education is at the center of innovative change at EMU. It stands for interactive modes of teaching with the emphasis on the learner. The credit students earn in courses offered through Continuing Education is regular academic University credit. The only difference between courses offered through Continuing Education and other University courses is that Continuing Education courses are considered non-traditional in some way—in terms of either location, content, or format.

Eastern Michigan University considers courses non-traditional if they are:

- offered off-campus
- offered on the weekend
- have new and innovative content (special topics courses)
- offered in a condensed or unusual format
- designed for a very specific group of students (i.e., courses contracted for by school systems).

Continuing Education offers credit courses through the five program areas described below. A complete listing of our courses appears in the Continuing Education catalogue entitled *Learning Opportunities* printed three times a year and available at several on-campus office displays and upon request. Inquiries about current programs and suggestions for new services should be directed to the Office of the Dean, 321 Goodison Hall, Eastern Michigan University, Ypsilanti, MI 48197.

CONTINUING EDUCATION PROGRAM AREAS

REGIONAL LEARNING CENTERS

Continuing Education offers regular University courses through Regional Learning Centers located in Metropolitan Detroit, Flint (at Mott Community College) and Jackson (at Jackson Community College). Courses include many of the arts and science disciplines, education, business, technology and human services.

For more information about courses offered through each of these centers, you can contact the regional coordinators at:

Detroit: (313) 831-5280
Flint: (313) 762-0303
Jackson: (517) 787-7265

ACADEMIC PROGRAMS ABROAD

The Office of Academic Programs Abroad provides opportunities for Eastern Michigan University students to complement their university education through several different kinds of study abroad programs.

Semester Abroad Program: The Fall European Cultural History Program is a travel study program that visits 40 cities in 18 countries throughout Europe and the Mediterranean. Professors travel with the group, lecturing on the important features of each stop. The courses are centered in the humanities and team taught in an interdisciplinary context. This program offers up to 15 hours of credit in history, art, literature and political science.

The European Cultural History Program: This program has been offering low-cost extended European travel for University credit for 17 years. Since its beginning, the program has grown to be the largest university-sponsored program of its kind in the country, drawing students from EMU as well as colleges and universities throughout the United States. Options offered for travel include Europe, the former Soviet Union, Greece, and Egypt with university credit available in history, music, art, and literature.

Other travel study programs: Many other study abroad programs are initiated and directed by EMU faculty through the Office of International Studies. These programs usually are offered in the summer and carry credit in such fields as biology, business, education, history, music and political science. These educational trips have taken students to countries in Asia, Europe, and South America.

Residential Language Program: This program, offered in cooperation with the Department of Foreign Languages and Bilingual Studies, provides intensive foreign language instruction in foreign countries during the spring/summer sessions. Currently, residential foreign language programs are offered in Spanish, French, and German. Interested students should contact the head

of the Department of Foreign Language and Bilingual Studies.

For more information, call (313) 487-2424 or (800) 777-3541.

ADVENTURES IN EDUCATION

The learning opportunities available through our Adventures in Education program are built around the concept of high quality academic experiences offered in condensed formats in beautiful settings. We offer a wide range of courses and locations, including Traverse City, Petoskey, Holland, and Gaylord, Michigan. We also offer Adventures programs in Anchorage, Alaska; Davos, Switzerland; New York, New York; and Key West, Florida. For more information, call (313) 487-0407 or (800) 777-3521.

WEEKEND UNIVERSITY

The Weekend University provides learning opportunities for students seeking personal fulfillment or working toward a degree. A new Weekend MBA program is now available through the Weekend University. All Weekend University Courses are held either on the main campus or at the Corporate Education Center close to campus. Courses are scheduled for Friday evenings beginning after 3:00 p.m. and Saturdays. For more information, call (313) 487-0407 or (800) 777-3521.

INDEPENDENT STUDY (DISTANCE EDUCATION)

EMU's distance education program allows students to acquire knowledge and earn college credits without classroom attendance. Students may enroll anytime; registration is not tied to traditional semester schedules. The time limit for course completion is six months.

Individuals registering for Independent Study courses receive study guides containing all required assignments and instructions. Courses also use audio or video materials. Students are advised to complete assignments one at a time and send them to EMU for grading by designated professors. Graded papers are returned to students. A proctored final exam is an integral part of each course and is individually scheduled.

Registration

Students may register at any time by completing the attached registration form and bringing it to the Independent Study Office; students at a distance can register by mail. The six month registration period begins when the completed form (with payment) is received by Continuing Education.

Costs

The current cost of an Independent Study course is \$185. This includes tuition, fees, study guides, tapes and University postage. Required textbooks are additional (available from local bookstores) and students are responsible for postage on all lessons mailed to Eastern Michigan University.

Basic Studies, Credit Limitations, Graduate Credit

Independent Study courses may be used to satisfy EMU basic studies requirements. Courses such as the Reading of Literature and U.S. History are used by many Eastern Michigan students to meet graduation requirements. There is a limit of 15 credit hours earned via this program that can be applied to an undergraduate degree at EMU. Graduate students may, with written approval from their adviser and The Graduate School, elect upper level courses such as The History of the English Language and apply the credits toward an advanced degree.

Grading, Pass-Fail Option, Non-Credit

Students who complete Independent Study courses receive letter grades (A, A-, B+, B, etc.) that directly affect grade point averages. Students who desire to take a course pass/fail should contact Eastern's Academic Advising Office.

Individuals not pursuing a degree who wish to enroll on a non-credit basis may do so. This option must be elected at the time of initial registration. Students choosing non-credit receive a 25 percent discount and are not required to sit for examinations.

Current Course Offerings

The following courses are currently available. As new courses are regularly added, a student interested in other courses is advised to check with the Independent Study Office, Continuing Education, for information about other offerings.

MTH 104 Intermediate Algebra
 SOC 105 Introductory Sociology
 IDT 150 Understanding Technology
 MGT 281 Basic Supervision
 ENG 325 Expository Writing
 LIN 402 Modern English Grammar
 LIN 421 The History of the English Language
 HIST 123 U.S. History to 1877
 MGT 202 Business Communication
 BIO 301 Genetics
 MGT 281 Basic Supervision
 LIT 100 The Reading of Literature
 LIT 207 Introduction to Children's Literature
 HIS 124 U.S. History, 1877 to the Present
 RES 210 Real Estate Principles

Admission to the University and Registration for Continuing Education Courses

As with all University courses, students must first be admitted to the University before registering for Continuing Education courses. Completion of the Continuing Education Course Registration Form does not lead to regular university admission.

- For undergraduate admission, contact the Admissions Office at (313) 487-3060
- For graduate admission, contact Graduate School Admissions at (313) 487-3400.

Once admitted, students should register immediately. For registration details, contact Continuing Education at (313) 487-0407.

Costs

All University tuition and fees apply to courses taken through Continuing Education. The only exception pertains to Independent Study (see costs under Independent Study). With some Continuing Education programs (i.e. Adventures in Education and Academic Programs Abroad) that involve travel, housing, or additional expenses not typical of regular courses, there are additional fees. For more information, contact the individual program offices.

THE GRADUATE SCHOOL

Dean: Ronald E. Goldenberg
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 EMU undergraduate senior 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 Eastern Michigan University Bookstore, 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 nondegree 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 70,000 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, 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 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 is an ex-officio member of the board and 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 an individual on the basis of 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.

- (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 individual 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 an individual on the basis of 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.
- (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 members 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 supervising 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 opportunity 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 Tranquilizers (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 schoolhouse, 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 Busi-

ness 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 Nonnal College (1893-1899).

Wilhur 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 facilities, 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. Goodison 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

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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	Barabara Richardson
Assistant to the Dean	James Waltz
Administrative Associate II	Velma G. Clarke

Departments:

African American Studies, Director	Ronald C. Woods
Art, Head	John E. Van Haren
Biology, Head	William E. Fennel
Chemistry, Head (Acting)	Michael J. Brabec
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	Elwood J.C. Kureth
History and Philosophy, Head	Ira M. Wheatley
Mathematics, Head	Don R. Lick
Music, Head	James B. Hause
Physics and Astronomy, Head	Dan Trochet
Political Science, Head	Josanna V. Scott
Psychology, Head (Acting)	Kenneth Rusiniak
Sociology, Head	Gregg Barak

COLLEGE OF BUSINESS

Dean	Stewart L. Tubbs
Associate Dean	Dan Devine
Departments:	
Accounting, Head	Mohsen Sharifi
Finance, Head	Asrat Tessema
Management, Head	Ray Hill
Marketing, Head (Acting)	H. Robert Dodge
Operations Research and Information Systems, Head	V.M. Rao Tummalala

College of Education:

Dean Jerry H. Robbins
 Associate Dean (Acting) 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 Jeanne Pietig
 Center for Community Education,
 Director William F. Kromer

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. Lopnow

College of Technology:

Dean (Interim) Robert A. Ristau

Departments:

Business and Industrial
 Education, Head H. James Rokusek
 Industrial Technology, Head Everett N. Israel
 Interdisciplinary Technology, Head Paul D. Kuwik
 Military Science, Head Michael W. Maasberg

Academic Advising Center:

Director (Interim) Edgar L. Jones
 Assistant Director (Interim) Patricia Williams
 Coordinators Joan Schiller,
 Mary Krieger

University Honors Program:

Director Robert Holkeboer
 Assistant Director Ruth Gordon
 Coordinator, Talented and
 Gifted Programs Lynn Proegler

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Registrar (Interim) Ann Kettles
 Associate Registrar Paul L. Zabawa

Continuing Education:

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 Coordinator, Independent Study Michael McPhillips
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 Coordinator, Weekend University Arthur Hoover

Graduate School:

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 Associate Dean (Temporary) Jeanne Clerc
 Associate Dean (Temporary) Jean Folkerth
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Learning Resources and Technologies:

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 Associate Dean (Interim) Sandra G. Yee

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 Associate Directors Cheryl Kozell

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 Affirmative Action Tamara Fackler
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Marketing and

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Music Program Manager Linda Yolm

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Assistant Controller: Accounts

Payable, Payroll Regina Kelly

Assistant Controller: Funds Accounting Lee Lien

Assistant Controller: Student

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Principal Plant Engineer Glen Bolling

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Manager, Facilities Maintenance Ray Sowers

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Director, Risk Management, Procurement

and Stores Mary C. Brooks

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Resident Director, Kresge Environmental

Education Center, Lapeer, Mich. Ben Czinski

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Assistant Vice President Courtney O. McAnuff

Admissions and Financial Aid:**Admissions:**

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Assistant Director, Enrollment Conversion Vacant

Assistant Director, Internal Operations Patricia Molloy

Assistant Director, Outreach Operations Alberto Perales

Equity Programs:

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Coordinator Patrick Pieh

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Shelley Wilson

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Career Planning Manager Joanne Burns

Career Development Associates Gloria August

Jocelyn Clark

Theo Hamilton

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Employee Relations Associate Kermet L. Meyer

Manager of Operations Jan BenDor

Assistant Manager of Operations James Locke

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Director, Foreign Student Affairs Paul Dean Webb

Veterans Affairs Officer Robert Teehan

Health Services:

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Associate Director Linda Vengioff

Health Care:

Clinical Administrator Diane Sobell

Staff Physicians James M. Reaume

Patricia Curdenberg

Employee Assistance:

Program Coordinator Vacant

Counseling:

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University Children's Institute:

Director Lindy Buch

Coordinator of Services Lorraine Paffenroth

Coordinator of Programs Terry McVicar

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Director Jim Vick

Assistant to Director Deborah Profit Yost

Housing:

Director Vacant

Facilities Neal Belitsky

Apartments Michael Constant

Dining Services:

Director Michael Crabb

Purchasing Margaret Brown

Senior Manager Larry Gates

McKenny Union:

Manager Ceil Paulsen

Special Events Coordinator P.J. Moffett

Financial Operations:

Director Sandra Williams

Recreation/Intramurals:

Director Robert England

Associate Director Vacant

Assistant Directors Lou Giannina

Kristi Jacobs

Jack Moffett

Student Media:

Director Christine Coleer

University Marketing:

Director Cynthia Lawson

Associate Director Dennis Lefond

Manager, Video Production John Rice

FACULTY AND STAFF

A

- Abbott, Richard H. (1966), Professor, History and Philosophy.
Ph.D., University of Wisconsin
- Abdullah, Dewan A. (1988), Assistant Professor, Economics.
Ph.D., University of Kentucky
- Abramson, Armand R. (1967), Professor, Music.
M.M., Eastman School of Music
- Adams, Anthony (1988), Assistant Professor, Sociology,
Anthropology, and Criminology.
M.A., University of Michigan
- Adams, John R. (1960), Professor, Health, Physical Education,
Recreation, and Dance.
Ph.D., University of Michigan
- Adams, Leah D. (1969), Professor, Teacher Education.
Ph.D., University of Michigan
- Aebersold, JoAnn (1980), Professor, Foreign Languages and
Bilingual Studies.
Ph.D., University of Michigan
- Ahlbrandt, Gisela E. (1984), Associate Professor, Mathematics.
Ph.D., University of Illinois at Chicago
- Ahmad, S. Imtiaz (1983), Professor, Operations Research and
Information Systems.
Ph.D., University of Ottawa
- Ahmed, Anjum S. (1983), Programmer Analyst, University
Planning, Budgeting, and Analysis.
M.B.A., Eastern Michigan University
- Aldridge, Henry B. (1972), Professor, Communication and Theatre
Arts.
Ph.D., University of Michigan
- Allen, Irene A. (1968), Professor, Teacher Education.
Ed.D., Ball State University
- Allen, Nancy (1991), Instructor, English Language and Literature.
Ph.D., Purdue University
- Al-Khafaji, Mahmoud (1983), Assistant Professor, Mathematics.
Ph.D., New Mexico State University
- Almqvist, Bradley. (1991), Assistant Professor, Music.
D.M.A., University of Michigan
- Ametrano, Irene M. (1981), Associate Professor, Leadership and
Counseling.
Ed.D., Rutgers University
- Ames, Charles N. (1975), Professor, Music.
Ph.D., University of Iowa
- Anagnostou, Takl J. (1986), Professor, Interdisciplinary
Technology.
Ph.D., North Dakota State University
- Anderson, John E. (1977), Professor, Economics.
Ph.D., Claremont Graduate School
- Anderson, Mary Kay (1985), Nurse, Health Services.
B.S., B.A., University of Wisconsin
- Anderson, Marvin C. (1963), Professor, Art.
M.F.A., Cranbrook Academy of Art
- Anderson, Roberta (1977), Assistant Professor, Special Education.
M.A., Eastern Michigan University
- Andrew, Ann (1969), Assistant Professor, Learning Resources and
Technologies.
M.A.L.S., University of Michigan
- Angle, James B. (1964), Professor, English Language and
Literature.
M.A., Kansas State University
- Antiochia, Sergio (1968), Associate Professor, Operations Research
and Information Systems.
M.B.A., Wayne State University
- Arlstar-Dry, Helen (1991), Professor, English Language and
Literature.
Ph.D., University of Texas at Austin
- Arrington, Phillip K. (1984), Associate Professor, English
Language and Literature.
Ph.D., University of Louisville

- Atchinson, Bernard J. (1986), Assistant Professor, Occupational
Therapy.
M.Ed., Georgia State University
- August, Gloria (1984), Career Development Assistant, Career
Services Center.
B.A., Eastern Michigan University
- Avedon, Barry (1966), Professor, Art.
M.F.A., Rochester Institute of Technology

B

- Badll, Larry L. (1965), Professor, Mathematics.
Ph.D., Oregon State University
- Balrd, Ronald J. (1966), Professor, Industrial Technology.
Ed.D., Michigan State University
- Bairley, Susan M. (1983), Director, Public Information.
B.A., University of Michigan
- Baldwin-Morgan, Amella A. (1991), Assistant Professor,
Department of Accounting.
Ph.D., Virginia Polytechnic Institute and State University
- Barak, Gregg (1991), Department Head, Professor, Sociology,
Anthropology, and Criminology.
Ph.D., University of California, Berkeley
- Barnes, James (1987), Associate Professor, Business and Industrial
Education.
Ed.D., Virginia Tech
- Barnes, Michelle (1990), Research Office Associate, Office of
Research Development.
B.S.E., University of Michigan
- Bajwa, Ranjit S. (1963), Professor, Teacher Education.
Ed.D., Wayne State University
- Banks, Gary (1969), Associate Professor, Health, Physical
Education, Recreation, and Dance.
J.D., Detroit College of Law
- Banks, Marlan (1986), Admissions Officer, Admissions.
- Barach, George J. (1969), Associate Professor, Special Education.
Ed.D., Wayne State University
- Barber, Betty Lou (1969), Assistant Professor, Human,
Environmental, and Consumer Resources.
M.A., Eastern Michigan University
- Barclay, Rosalyn L. (1981), Coordinator, Counseling Services.
Ph.D., Wayne State University
- Barnes, Geraldine K. (1964), Associate Professor, Health, Physical
Education, Recreation, and Dance.
M.A., Michigan State University
- Barnett, William D. (1972), Program Coordinator, Campus Life.
M.A., Eastern Michigan University
- Bartle, Robert (1990), Professor, Department of Mathematics.
Ph.D., The University of Chicago
- Barton, Daryl L. (1975), Assistant Professor, Marketing.
J.D., University of Michigan
- Beagen, Dennis M. (1968), Department Head, Professor,
Communication and Theatre Arts.
M.A., University of Michigan
- Beal, Sarel W. (1970), Associate Professor, Learning Resources
and Technologies.
M.A., Eastern Michigan University
- Beard, Betty (1976), Professor, Nursing.
Ph.D., University of Michigan
- Beauvais, Kathleen Jeakle (1991), Assistant Professor, Teacher
Education.
M.A., University of Michigan
- Beck, Mary Clare (1970), Associate Professor, Learning Resources
and Technologies.
M.A.L.S., University of Denver
- Bedford, Eddie (1988), Assistant Professor, Health, Physical
Education, Recreation, and Dance.
M.S., University of Wisconsin-LaCrosse
- Bednar, Anne K. (1991), Associate Professor, Teacher Education.
Ed.D., Indiana University
- Beebe, Michael (1976), Associate Professor, Special Education.
Ph.D., University of Michigan

- Beginin, Igor** (1968), Professor, Art.
M.A., Wayne State University
- Belltsky, Neal** (1977), Assistant Director, Facilities, University Housing.
M.A., Western Michigan University
- Beller, Jennifer** (1991), Assistant Professor, Health, Physical Education, Recreation, and Dance.
Ph.D., University of Idaho
- Belskus, Albert W.** (1969), Associate Professor, Marketing.
M.S., Indiana State University
- Beltsos, Nicholas J.** (1962), Assistant Professor, Management.
M.A., Michigan State University
- Bemish, Lawrence M.** (1972), Assistant Professor, Special Education.
Ed.D., University of Michigan
- BenDor, Jan** (1983), Manager, Operations, Career Services Center.
A.B.D., University of Michigan
- Bennett, Norma Jean M.** (1956), Assistant Professor, Occupational Therapy.
M.A., University of Michigan
- Bennlon, Donald H.** (1984), Associate Vice President, Academic Affairs.
Ph.D., Ohio University
- Best, Margaret E.** (1977), Assistant Professor, Learning Resources and Technologies.
M.A.L.S., University of Michigan
- Bevlington, Ann-Marie** (1990), Instructor, Department of Foreign Languages and Bilingual Studies.
Lic. Universite de Paris XII, France
- Bigler, Mary G.** (1977), Professor, Teacher Education.
Ph.D., University of Michigan
- Blair, John R.** (1970), Professor, Teacher Education.
Ph.D., University of Michigan
- Blanchard, P. Nick** (1979), Associate Professor, Management.
M.A., San Diego State College
- Blum, Fred** (1974), Professor, Learning Resources and Technologies.
Ph.D., University of Iowa
- Bocklage, Christopher J.** (1986), Associate Professor, Art.
M.F.A., Southern Illinois University
- Bonem, Marilyn K.** (1987), Associate Professor, Psychology.
Ph.D., Utah State University
- Boone, Morell** (1980), Dean, Professor, Learning Resources and Technologies.
Ph.D., Syracuse University
- Booth, Howard D.** (1967), Professor, Biology.
Ph.D., Michigan State University
- Bornemeler, Betty L.** (1965), Professor, Human, Environmental, and Consumer Resources.
Ph.D., Texas Women's University
- Bowen, Harry W.** (1967), Professor, Communication and Theatre Arts.
Ph.D., University of Pittsburgh
- Boyer, Lee R.** (1970), Professor, History and Philosophy.
Ph.D., University of Notre Dame
- Boyle, John** (1977), Assistant Professor, Interdisciplinary Technology.
M.A., Eastern Michigan University
- Brabec, Michael J.** (1965), Professor, Chemistry.
Ph.D., University of Wyoming
- Brackney, Barbara E.** (1975), Associate Professor, Psychology.
Ph.D., University of Michigan
- Braden, Joseph L.** (1970), Professor, Marketing.
D.B.A., Indiana University
- Brady, Brad** (1985) Academic Adviser, Academic Advising Center.
M.S., Eastern Michigan University
- Brandon, Ernest M.** (1975), Associate Professor, Music.
M.N., Northwestern University
- Braun, Benjamin A.** (1985), Head Coach, Men's Basketball Athletics.
B.A., University of Wisconsin-Madison
- Brewer, Stephen W., Jr.** (1969), Professor, Chemistry.
Ph.D., University of Wisconsin
- Briggs, Douglas** (1985), Associate Professor, Health, Physical Education, Recreation, and Dance.
Ph.D., Indiana University
- Briggs, W. Donald** (1964), Professor, History and Philosophy.
Ph.D., University of Michigan
- Brooks, Mary C.** (1978), Director, Risk Management, Procurement and Stores.
B.S., Wayne State University
- Brown, Kaaren** (1976), Professor, Social Work.
M.S.W., University of Michigan
- Brown, Ronald E.** (1986), Associate Professor, Political Science.
Ph.D., University of Michigan
- Brozo, William** (1988), Assistant Professor, Teacher Education.
Ph.D., University of South Carolina
- Bruss, Paul S.** (1969), Professor, English Language and Literature.
Ph.D., University of Rochester
- Buckeye, Donald A.** (1968), Professor, Mathematics.
Ed.D., Indiana University
- Buchanan, Pauline** (1980), Assistant Professor, Human, Environmental, and Consumer Resources.
M.S., Michigan State University
- Bullard, Rita J.** (1986), Assistant Professor, Learning Resources and Technologies.
A.M.L.S., University of Michigan
- Burns, Joanne M.** (1967), Career Development Associate, Career Services Center.
Ph.D., Michigan State University
- Bush-Bacells, Jean** (1984), Assistant Professor, Management.
M.A., University of Michigan
- Bush, Russell L.** (1957), Assistant Professor, Health, Physical Education, Recreation, and Dance.
M.P.E., Purdue University
- Bushey, James T.** (1969), Associate Professor, Teacher Education.
Ed.D., Wayne State University
- Buzas, Thomas** (1989), Associate Professor, Marketing.
Ph.D., University of Michigan
- ## C
- Callum, Alice W.** (1987), Associate Professor, Business and Industrial Education.
J.D., Detroit College of Law
- Camp, Richard** (1979), Associate Professor, Management.
M.A., Wayne State University
- Capeced, John** (1990), Assistant Professor, Communication and Theatre Arts.
M.A., University of North Carolina
- Carl, Michael** (1984), Financial Aid Adviser, Financial Aid.
M.A., Eastern Michigan University
- Carlsen-Jones, Michael T.** (1973), Professor, History and Philosophy.
Ph.D., Ohio State University
- Carrroll, Timothy B.** (1986), Associate Professor, Mathematics.
Ph.D., Western Michigan University
- Carter, Williams A.** (1991), Associate Professor, Teacher Education.
Ph.D., University of Oklahoma
- Case, Franklin D.** (1962), Professor, English Language and Literature.
M.A., University of Michigan
- Cassar, George H.** (1968), Professor, History and Philosophy.
Ph.D., McGill University
- Cassidy, Cheryl M.** (1990), Assistant Professor, English Language and Literature.
Ph.D., The University of Michigan
- Cavanaugh, Patric L.** (1968), Department Head, Professor, Health, Physical Education, Recreation, and Dance.
Ph.D., University of Michigan
- Cere, Ronald C.** (1985), Professor, Foreign Languages and Bilingual Studies.
Ph.D., New York University

- Cerroni-Long, Ellsabetta** (1990), Associate Professor, Sociology.
Ph.D., University of California, Los Angeles and University of Venice, Italy
- Chamberlain, Marjorie K.** (1967), Assistant Professor, Special Education.
M.A., Wayne State University
- Chan, Amella S.** (1980), Assistant Dean, Coordinator of Undergraduate Advising, College of Business.
M.B.A., Eastern Michigan University
- Chattopadhyay, Rita** (1984), Associate Professor, Mathematics.
Ph.D., University of South Florida
- Chaudhuri, Ranjan** (1984), Associate Professor, Computer Science.
Ph.D., University of South Florida
- Cheek, Cameron S.** (1985), Manager, Custodial Services.
B.S., University of Michigan
- Cherem, Gabriel J.** (1987), Associate Professor, Geography and Geology.
Ph.D., University of Michigan
- Chew, Robert E.** (1968), Professor, Art.
M.F.A., University of Illinois
- Chirio, Michael L., Jr.** (1972), Academic Budget Officer.
M.A., Central Michigan University
- Choudry, Pradeep** (1980), Associate Professor, Management.
Ph.D., University of Arkansas
- Christian, Ursula R.** (1954), Registrar.
Sp.A., Eastern Michigan University
- Chu, Shenghul** (1986), Assistant Professor, Mathematics.
Ph.D., University of Michigan
- Chung, Young-Iob** (1966), Department Head, Professor, Economics.
Ph.D., Columbia University
- Cichanski, Allen** (1965), Assistant Professor, Geography and Geology.
M.S., Ohio State University
- Clone, Jean S.** (1963), Associate Professor, Health, Physical Education, Recreation, and Dance.
M.S., University of Illinois
- Citino, Robert** (1991), Associate Professor, History.
Ph.D., Indiana University
- Clark, George S.** (1973), Associate Professor, Department of Accounting.
L.L.M., Wayne State University
- Clark, Jocelyn** (1982) Career Development Assistant, Career Services Center.
B.A., Eastern Michigan University
- Clark, Richard T.** (1958), Supervisor, Athletic Facilities, Athletics.
B.S., Eastern Michigan University
- Clarke, Velma G.** (1974), Administrative Associate, College of Arts and Sciences.
M.A., Fisk University
- Clemens-Noda, Phyllis A.** (1987), Director, Bilingual Bicultural Teacher Education, Foreign Languages and Bilingual Studies.
Ed.D., Wayne State University
- Clerc, Jeanne M.** (1983), Associate Professor, Program Director, Clinical Laboratory Sciences.
Ed.D., University of Houston
- C Clifford, David L.** (1986), Director and Associate Graduate Dean, Research Development.
Ph.D., University of Michigan
- Cline, William J.** (1970), Professor, Foreign Languages and Bilingual Studies.
Ph.D., State University of New York at Buffalo
- Cogan, Sarah** (1989), Instructor, Learning Resources and Technologies.
A.M.L.S., University of Michigan
- Collins-Eaglin, Jan** (1983), Assistant Professor, Teacher Education.
Ph.D., University of Michigan
- Collins, Ronald W.** (1965), Provost and Vice President, Academic Affairs; Professor, Chemistry.
Ph.D., Indiana University
- Collins, Sylvia** (1985), Assistant Manager, Operations, Career Services Center.
B.B.A., Eastern Michigan University
- Colman, Ronald P.** (1972), Assistant Professor, Learning Resources and Technologies.
M.L.S., State University of New York
- Compere, Edward L., Jr.** (1964), Professor, Chemistry.
Ph.D., University of Maryland
- Compton, Gall W.** (1969), Professor, Communication and Theatre Arts.
Ph.D., University of Wisconsin
- Conley, James H.** (1969), Professor, Management.
Ph.D., Michigan State University
- Contis, Ellene T.** (1971), Associate Professor, Chemistry.
M.S., University of Pittsburgh
- Cooper, John K., Jr.** (1980), Assistant Professor, Computer Science.
Ph.D., Michigan State University
- Cordani, John R.** (1991), Assistant Professor, Business and Industrial Education.
Ed.D., Teacher's College at Columbia University
- Cortez, Christopher** (1983), Head Soccer Coach, Athletics.
B.S., Wayne State University
- Coryell, Roger E.** (1973), Head Baseball Coach, Athletics.
B.A., Eastern Michigan University
- Cowan, Ralph H.** (1967), Admissions Officer, Admissions.
M.A., Eastern Michigan University
- Coyner, Joe** (1969), Associate Professor, Special Education.
Sp.A., Eastern Michigan University
- Crary, David B.** (1980), Assistant Professor, Economics.
Ph.D., University of Maryland
- Creamer, Hector L.** (1986), Senior Systems Programmer, University Computing.
B.S., State University of New York at Plattsburg
- Cross, Gilbert B.** (1966), Professor, English Language and Literature.
Ph.D., University of Michigan
- Crouch, Margaret A.** (1987), Associate Professor, History and Philosophy.
Ph.D., University of Minnesota
- Crowner, Robert P.** (1976), Associate Professor, Management.
M.S., Butler University
- Czinski, Ben** (1979), Manager, Kresge Environmental Education Center.
B.S., Eastern Michigan University

D

- Dahl, Nancy L.** (1969), Associate Registrar, Registrar's Office.
Sp.A., Eastern Michigan University
- Dalbey, Marcia A.** (1988), Department Head, Professor, English Language and Literature.
Ph.D., University of Illinois
- Danak, Jagdish T.** (1969), Associate Professor, Management.
Ph.D., University of Oklahoma
- Dansky, Jeffrey L.** (1976), Professor, Psychology.
Ph.D., Bowling Green State University
- Day, E. Catherine** (1982), Professor, Foreign Languages and Bilingual Studies.
Ph.D., University of Illinois
- Decker, Bernard C.** (1971), Professor, English Language and Literature.
M.S., Boston University
- Defebaugh, Sandra** (1987), Assistant Professor, Marketing.
J.D., Detroit College of Law
- deLaski-Smith, Deborah L.** (1978), Associate Professor, Human, Environmental, and Consumer Resources.
M.S., Michigan State University
- Delprato, Dennis J.** (1969), Professor, Psychology.
Ph.D., Michigan State University
- Dempster, Andrew C.** (1966), Associate Professor, Computer Science.
Ph.D., University of Michigan
- Dennling, Kelth** (1989), Assistant Professor, English Language and Literature.
Ph.D., Stanford University

- Devers, James** (1968), Professor, English Language and Literature.
Ph.D., University of California at Los Angeles
- Devine, E.A.** (1976), Associate Dean, College of Business;
Professor, Department of Accounting.
Ph.D., Louisiana State University
- Diallo, Alahassane** (1985), Associate Professor, Finance.
Ph.D., Ohio State University
- Diamond, Barbara J.** (1986), Associate Professor, Teacher
Education.
Ph.D., Michigan State University
- Dickle, Virginia** (1988), Assistant Professor, Occupational Therapy.
M.S., Wayne State University
- Dirltkov, Stoll** (1987), Professor, Interdisciplinary Technology.
Ph.D., Czechoslovak Academy of Science
- Dltzhazy, Helen** (1987), Associate Professor, Leadership and
Counseling.
Ph.D., University of Michigan
- Dodge, H. Robert** (1991), Department Head, Professor, Marketing.
Ph.D., Ohio State University
- Douglass, Richard L.** (1987), Director, Health Administration;
Associate Professor, Associated Health Professions.
Ph.D., University of Michigan
- Doyle, Patrick J.** (1974), Assistant Vice President, Business and
Finance.
B.S., University of Detroit
- Doyle, Timothy** (1986), Instructor, Interdisciplinary Technology.
M.A., Eastern Michigan University
- Drobek, Dennis L.** (1982), Supervisor, Chemistry.
B.S., Eastern Michigan University
- Dugan, J. Sanford** (1974), Professor, Foreign Languages and
Bilingual Studies.
Ph.D., Washington University, Missouri
- Duncan Jeffrey L.** (1971), Professor, English Language and
Literature.
Ph.D., University of Virginia
- Dunlap, Elaine** (1990), Instructor, English Language and Literature
Ph.D., University of Massachusetts
- Durant, Barbara T.** (1981), Academic Adviser, Academic Services
Center.
M.A., Eastern Michigan University
- Durham, Eddie** (1980), Academic Athletic Coordinator.
B.S., Western Michigan University
- Durham, Lora J.** (1982), Assistant Professor, Mathematics.
M.A., Eastern Michigan University
- Dye, Jean E.** (1987), Associate Professor, English Language and
Literature.
Ph.D., Miami University

E

- Easto, Patrick C.** (1970), Professor, Sociology, Anthropology, and
Criminology.
Ph.D., Syracuse University
- Edgren, John A.** (1979), Associate Professor, Economics.
Ph.D., University of Michigan
- Eggers, Carter J.** (1967), Professor, Music.
M.Mus., Ithaca College
- Ehlers, Jerome** (1981), Senior Accountant, Housing.
M.B.A., Harvard University
- Ehrlich, Allen S.** (1968), Professor, Sociology, Anthropology, and
Criminology.
Ph.D., University of Michigan
- Elde, Margaret A.** (1967), Associate Professor, Learning Resources
and Technologies.
M.A.L.S., University of Michigan
- Einstadter, Werner J.** (1967), Professor, Sociology, Anthropology,
and Criminology.
D.Crim., University of California at Berkeley
- Eisenbach, Jamln** (1990), Professor, Biology.
Ph.D., University of Massachusetts
- Elsley, John** (1978), Head Wrestling Coach, Athletics.
B.S., Eastern Michigan University
- Elss, Harry E.** (1987), Associate Professor, English Language and
Literature.
Ph.D., University of North Dakota
- Ellis, Wayne C.** (1979), Associate Professor, Operations Research
and Information Systems.
Ph.D., University of Michigan
- England, Elizabeth T.** (1987), Assistant Professor, Foreign
Languages and Bilingual Studies.
Ph.D., University of Illinois-Champaign Urbana
- England, Robert W.** (1968), Director, Recreational Intramurals.
M.A., University of Michigan
- English, Ross R.** (1983), Coordinator, Business and Finance and
Executive Divisions, University Computing.
B.S., Wayne State University
- Erenburg, Sharon J.** (1987), Assistant Professor, Economics.
Ph.D., University of Illinois, Champaign
- Erickson, Nancy** (1981), Unit Manager, Food Services.
- Erwin, J. Michael** (1985), Associate Director, Career Services
Center.
Ph.D., University of Michigan
- Eshleman, Clayton** (1986), Professor, English Language and
Literature.
M.A., Indiana University
- Esposito, Alfredo G.** (1990), Assistant Professor, Economics.
M.A., Temple University
- Esteve, Juan C.** (1990), Assistant Professor, Operations Research
and Information Systems.
Ph.D., Wayne State University
- Ettington, Deborah** (1991), Assistant Professor, Management.
M.B.A., Harvard Business School
- Evans, Gary L.** (1964), Professor, Communication and Theatre
Arts.
Ph.D., University of Michigan
- Ewell-Watson, Edna** (1988), Instructor, Learning Resources and
Technologies.
M.S.L.S., Wayne State University

F

- Fairfield, Richard T.** (1963), Professor, Art.
M.F.A., University of Illinois
- Faetti, Dennis D.** (1975), Women's Cross Country and Track
Coach, Athletics.
B.S., Eastern Michigan University
- Farah, Badle N.** (1982), Associate Professor, Operations Research
and Information Systems.
Ph.D., Ohio State University
- Farley, Beverly** (1985), Associate Director (Acting), University
Development.
M.A., University of Michigan
- Fennel, William E.** (1970), Department Head, Professor, Biology.
Ph.D., University of Michigan
- Feld, Jan Michael** (1965), Professor, Art.
M.F.A., School of the Art Institute of Chicago
- Fields, Daniel J.** (1986), Associate Professor, Industrial
Technology.
M.A., Western Michigan University
- Figart, Deborah** (1990), Assistant Professor, Economics.
Ph.D., American University, Washington, D.C.
- Findley, Lynette** (1985), Director, Equity Programs.
Ph.D., Michigan State University
- Fish, Barry A.** (1970), Dean, College of Arts and Sciences.
Ph.D., Wayne State University
- Flanagan, Brenda P.** (1988), Associate Professor, English
Language and Literature.
Ph.D., University of Michigan
- Fleischer, Cathy** (1990), Assistant Professor, English Language and
Literature.
Ph.D., The University of Michigan
- Flusche, Della M.** (1968), Professor, History and Philosophy.
Ph.D., Loyola University
- Folk, David B.** (1987), Associate Professor, Mathematics.
Ph.D., University of Michigan

- Folkerth, Jean E. (1985), Associate Professor, Health, Physical Education, Recreation, and Dance.
Re.D., Indiana University
- Foster, Daniel L. (1987), Assistant Professor, Music.
M.M., University of Michigan
- Fowler, Pamela (1985), Associate Director, Financial Aid.
B.B.A., Eastern Michigan University
- Fowler-Holland, Rhonda (1989), Instructor, Learning Resources and Technologies.
M.A.L.S., University of Michigan
- Francis-Connolly, Elizabeth (1992), Instructor, Occupational Therapy.
M.S., Boston University
- Franks, Thomas H. (1967), Professor, History and Philosophy.
Ph.D., University of Michigan
- Freeman, Lawrence L. (1969), Professor, Art.
M.P.A., University of Oregon
- French, Dorthea (1990), Associate Professor, Special Education.
Ph.D., Dalhousie University
- Freund, Allan P. (1967), Assistant Professor, Health, Physical Education, Recreation, and Dance.
M.A., Eastern Michigan University
- Friedman, Monroe P. (1964), Professor, Psychology.
Ph.D., University of Tennessee
- Fulford, Charles B. (1979), Acting Director, Academic Advising Center.
M.A., Eastern Michigan University
- Fullerton, Sam D. (1982), Associate Professor, Marketing.
Ph.D., Michigan State University

G

- Gabl, Edward (1990), Associate Professor, Physics and Astronomy.
Ph.D., University of Iowa
- Gadoch, Frank R. (1987), Employment/Affirmative Action Associate, Human Resources.
M.A., University of Michigan
- Gajda, Anne B. (1979), Associate Professor, Music.
M.M., University of Michigan
- Gardner, Christopher J. (1984), Associate Professor, Mathematics.
Ph.D., University of Illinois
- Gardner, Trevor A. (1985), Associate Professor, Teacher Education.
Ph.D., Michigan State University
- Garg, Ramesh (1978), Professor, Finance.
D.B.A., Kent State University
- Garland, John (1963), Director, Public Safety.
- Garza, Hector (1981), Associate Dean, Graduate School.
M.P.H., University of Michigan
- Gates, Helen D. (1985), Buyer, Purchasing.
- Gates, Marle (89), Associate Professor, Nursing.
Ph.D., Wayne State University
- Geffen, Lawrence F. (1968), Associate Professor, Special Education.
Ph.D., George Peabody College
- Geherin, David J. (1969), Professor, English Language and Literature.
Ph.D., Purdue University
- Gendin, Sidney (1970), Professor, History and Philosophy.
Ph.D., New York University
- Ghoshel, Najati S. (1965), Professor, Biology.
Ph.D., University of Illinois
- Gimell, Louis B. (1966), Professor, History and Philosophy.
Ph.D., New York University
- Glinther, John L. (1965), Professor, Mathematics.
Ph.D., University of Illinois
- Girod, Albert P., Jr. (1972), Internal Auditor.
M.A., Eastern Michigan University
- Gluliani, Susan (1986), Staff Nurse, University Health Services.
- Gledhill, Roger C. (1976), Associate Professor, Operations Research and Information Systems.
Ph.D., Virginia Polytechnic Institute
- Gilkin, J. Ronda (1973), Associate Professor, Learning Resources and Technologies.
M.A.L.S., University of Michigan
- Glottelty, Judith (1972), X-Ray Technologist, Health Services.
R.T., Mercy Hospital
- Glover, Barbara (1991), Instructor, Learning Resources and Technologies.
A.M.L.S., University of Michigan
- Goff, Richard D. (1964), Professor, History and Philosophy.
Ph.D., Duke University
- Gold, Ellen R. (1982), Director, Health Services.
M.B.A., Eastern Michigan University
- Goldenberg, Ronald E. (1985), Dean, Graduate School.
Ed.D., Oklahoma State University
- Gomez, Pedro (1988), Assistant Professor, Foreign Languages and Bilingual Studies.
M.A., New York University
- Goodman, Jane S. (1991), Assistant Professor, Leadership and Counseling.
Ph.D., Wayne State University
- Goosey, Bob L. (1959), Associate Professor, Mathematics.
Ph.D., University of Michigan
- Gordon, Norman G. (1975), Professor, Psychology.
Ph.D., Wayne State University
- Gordon, Ruth (1989), Assistant Director, University Honors Program.
Ph.D., University of Michigan
- Gore, David K. (1983), Assistant Professor, Interdisciplinary Technology.
M.S., Eastern Michigan University
- Gorenflo, Carol (1988), Assistant Professor, Special Education.
Ph.D., Michigan State University
- Gottwald, Henry L. (1964), Professor, Special Education.
Ed.D., Wayne State University
- Gousseff, James W. (1963), Professor, Communication and Theatre Arts.
Ph.D., Northwestern University
- Grady, Robert C., II (1971), Professor, Political Science.
Ph.D., Vanderbilt University
- Gray, Sylvia Sims (1988), Assistant Professor, Social Work.
M.S.W., Michigan State University
- Green, Geraldine A. (1989), Professor, Mathematics.
Ph.D., University of Michigan
- Greene, Bert I. (1963), Professor, Teacher Education.
Ph.D., University of Michigan
- Grey, Carlee (1989), Assistant Professor, Nursing.
Ph.D., Wayne State University
- Griess, Jerald A. (1967), Professor, Industrial Technology.
D.Ed., Pennsylvania State University
- Grimes, George (1988), Professor, Learning Resources and Technologies.
Ed.D., Wayne State University
- Gruischow, Nancy J. (1982), Conference Sales Manager, McKenny Union.
B.S., Michigan State University
- Gurt, Joseph (1967), Professor, Music.
M.S., Juilliard School.
- Guy, William L. (1989), Assistant Professor, Biology.
B.S., Eastern Michigan University
- Gwaltney, Thomas M. (1964), Professor, Teacher Education.
Ph.D., Southern Illinois University

H

- Hafter, Daryl M. (1969), Professor, History and Philosophy.
Ph.D., Yale University
- Hale, Vernon (1981), Assistant Manager, McKenny Union.
- Hall, Cindy (1979), Associate Director, Public Safety.
B.S., Eastern Michigan University
- Halmhuber, Nancy (1979), Assistant Professor, Special Education.
Sp.A., Eastern Michigan University

- Hamilton, Theophilus E.** (1967), Career Development Associate, Career Services Center.
Sp.A., Eastern Michigan University
- Hammerberg, Gary** (1984), Assistant Professor, Clinical Laboratory Sciences.
Ed.D., Western Michigan University
- Hammill, Geoffrey D.** (1987), Assistant Professor, Communication and Theatre Arts.
Ph.D., Bowling Green University
- Hancock, Bonnie P.** (1986), Senior Accountant, Accounting.
- Hancock, Lee M.** (1984), Manager, Operations Services, University Computing.
B.B.A., Eastern Michigan University
- Hanewicz, Wayne** (1987), Associate Professor, Interdisciplinary Technology.
Ph.D., University of Michigan
- Hanna, Raouf S.** (1977), Associate Professor, Economics.
Ph.D., Indiana University
- Hannan, Gary L.** (1982), Associate Professor, Biology.
Ph.D., University of California at Berkeley
- Hansen, Joanne J.** (1965), Associate Professor, Learning Resources and Technologies.
M.S.L.S., Case Western Reserve University
- Hansen, Ruth A.** (1976), Associate Professor, Occupational Therapy.
Ph.D., Wayne State University
- Harkema, E. James** (1982), Head Football Coach, Athletics.
M.A., Western Michigan University
- Harley, Rachel B.** (1969), Associate Professor, Music.
Ph.D., University of Michigan
- Harmon, Alison J.** (1990), Assistant Professor, Teacher Education.
Ed.D., The University of Akron
- Harris, Arthur J.** (1967), Professor, English Language and Literature.
Ph.D., University of Birmingham, England
- Harrison, Andrea** (1982), Manager, General Services, McKenny Union.
A.A., Oakland Community College
- Hartmann, Donald** (1990), Assistant Professor, Music.
M.S., University of Oklahoma
- Hauer, William R.** (1969), Assistant Professor, English Language and Literature.
Ph.D., University of Illinois
- Hause, James B.** (1971), Department Head, Professor, Music.
Ed.D., University of Michigan
- Hayden, Lucy** (1988), Professor, English Language and Literature.
Ph.D., University of Michigan
- Haynam, George E.** (1986), Department Head, Professor, Computer Science.
Ph.D., Case Institute of Technology
- Hayworth, Steven C.** (1977), Associate Professor, Economics.
Ph.D., Massachusetts Institute of Technology
- Hee, Christopher E.** (1969), Associate Professor, Mathematics.
Ph.D., University of Notre Dame
- Heezen, Alan** (1967), Associate Professor, Computer Science.
Ph.D., University of Michigan
- Helbig, Alethea K.** (1966), Professor, English Language and Literature.
M.A., University of Michigan
- Hemmelgarn, Linda C.** (1976), Instructor, Health, Physical Education, Recreation, and Dance.
M.A., Butler University
- Hendrickson, Lorraine U.** (1981), Associate Professor, Management.
Ph.D., University of Michigan
- Hennings, Thomas P.** (1969), Associate Professor, English Language and Literature.
Ph.D., University of Wisconsin
- Henry, Oscar M.** (1969), Professor, Music.
Ph.D., Ohio State University
- Henry, Stuart D.** (1987), Associate Professor, Sociology, Anthropology, and Criminology.
Ph.D., The University of Kent
- Herrman, David G.** (1978), Budget Analyst, University Planning, Budgeting, and Analysis.
B.S./B.A., Michigan Technological University
- Hetrick, William** (1990), Associate Professor and Coordinator E.D., Program, Leadership and Counseling.
Ed.D., Western Michigan University
- Hill, Raymond E.** (1989), Department Head, Professor, Management.
Ph.D., Purdue University
- Hilli, Rodney L.** (1969), Professor, Music.
A.Mus.D., University of Michigan
- Hillegas, Kathleen M.** (1981), Assistant Professor, Nursing Education.
M.S., University of Michigan
- Hockey, Randy J.** (1985), Assistant Director, Internal Operations, Housing and Dining Services.
B.S., Eastern Michigan University
- Hodges, V. Kay** (1989), Professor, Director of Clinical Training, Psychology.
Ph.D., University of Maryland
- Höft, Hartmut F.W.** (1970), Professor, Computer Science.
Ph.D., University of Houston
- Hogan, Leola** (1979), Assistant Professor, Nursing Education.
M.S.N., Catholic University
- Hogan, Walter P.** (1984), Assistant Professor, Learning Resources and Technologies.
M.A., University of Michigan
- Holbrook, Mark** (1983), Lead Programmer/Analyst, University Computing.
M.A., Indiana University
- Holkeboer, Robert O.** (1971), Professor, English Language and Literature; Director, University Honors Program.
Ph.D., Ohio University
- Holmes, Peter A.** (1968), Professor, Psychology.
Ph.D., University of Delaware
- Holoka, James P.** (1976), Professor, Foreign Languages and Bilingual Studies.
Ph.D., University of Michigan
- Homel, Michael W.** (1970), Professor, History and Philosophy.
Ph.D., University of Chicago
- Hoodin, Ronald** (1988), Associate Professor, Special Education.
Ph.D., Pennsylvania State University
- Hortin, David W.** (1968), Associate Professor, Political Science.
J.D., University of Michigan
- Hourani, Benjamin T.** (1968), Professor, Political Science.
Ph.D., Michigan State University
- Howard, Arthur** (1990), Associate Professor, Chemistry.
Ph.D., Cambridge University
- Howard, Jennie Meyer** (1991), Associate Dean, Professor, Learning Resources and Technologies.
A.M., University of Missouri at Columbia
- Howard, Paul E.** (1970), Professor, Mathematics.
Ph.D., University of Michigan
- Howay, Brian** (1983), Programmer/Analyst, University Computing.
B.S., Wayne State University
- Hoyer, Denise T.** (1986), Professor, Management.
Ph.D., University of Michigan
- Hubbard, John R.** (1969), Professor, Foreign Languages and Bilingual Studies.
Ph.D., Michigan State University
- Humphreys, Janice** (1991), Associate Professor, Nursing.
Ph.D., Wayne State University
- Hunter, Frederick C.** (1967), Professor, Art.
M.F.A., University of Wisconsin
- Hurlahe, Kevin M.** (1986), Academic Adviser, Academic Advising Center.
M.P.A., Eastern Michigan University
- Hurst, Edith M.** (1973), Professor, Biology.
Ph.D., University of Michigan
- Huszczko, Gregory E.** (1978), Professor, Management.
Ph.D., Michigan State University
- Hutchins, Ronald E.** (1977), Associate Professor, Finance.
Ph.D., University of Missouri-Columbia

Huyvaert, Sarah H. (1986), Associate Professor, Teacher Education.
Ed.D., Indiana University

I

Iannaccone, Anthony J. (1971), Professor, Music.
Ph.D., Eastman School of Music

Iden, Sheldon S. (1968), Professor, Art.
M.F.A., Cranbrook Academy of Art

Ifill, Don A. (1985), Associate Professor, Social Work.
Ed.D., University of Southern California

Ikeji, Augustine C. (1988), Instructor, Computer Science.
M.S., Eastern Michigan University

Ingersoll, Sheila M. (1971), Professor, English Language and Literature.
Ph.D., Northwestern University

Ingram, Betty J. (1967), Professor, English Language and Literature.
Ph.D., University of Pennsylvania

Israel, Everett N. (1986), Department Head, Professor, Industrial Technology.
Ed.D., West Virginia University

Ivey, Suzanne (1987), Assistant Professor, Nursing.
M.S., Northern Illinois University

J

Jackson, Sharon (1983), Assistant Professor, Nursing Education.
M.S.N., University of Michigan

Jackson, Dennis C. (1967), Interim Associate Dean, Graduate School; Professor, Biology.
Ph.D., Michigan State University

Jacobs, Diane A. (1984), Associate Professor, Physics and Astronomy.
Ph.D., University of Texas

Janardan, K.G. (1986), Professor, Mathematics.
Ph.D., Pennsylvania State University

Jaworski, Eugene (1971), Professor, Geography and Geology.
Ph.D., Louisiana State University

Jellema, John (1982), Associate Professor, Industrial Technology.
Ph.D., Michigan State University

Jennings, Gerald L. (1963), Professor, Business and Industrial Education.
Ph.D., Michigan State University

Jernigan, E. Jay (1965), Professor, English Language and Literature.
Ph.D., Kansas State University

Jernigan, Louise F. (1970), Professor, Teacher Education.
Ph.D., Kent State University

Jhung, Stuart M.T., ASCP (1967), Medical Technologist, University Health Services.
B.A., Iander College

Johnson, David C. (1973), Associate Professor, Mathematics.
Ed.D., University of Georgia

Johnson, James D. (1968), Professor, Political Science.
Ph.D., University of Michigan

Johnson, Judith A. (1970), Associate Provost, Academic Affairs; Professor, English Language and Literature.
Ph.D., University of Michigan

Johnson, Marvin J. (1963), Professor, Health, Physical Education, Recreation, and Dance.
Ph.D., University of Michigan

Johnson, Robble A. (1975), Associate Dean, College of Education; Associate Professor, Health, Physical Education, Recreation, and Dance.
Ed.D., Wayne State University

Johnston, George A. (1972), Chief Budget Officer.
M.B.A., University of Michigan

Jones, Edgar L., Jr. (1957), Associate Director, Academic Advising Center, Assistant Professor, English Language and Literature.
M.A., Northwestern University

Jones, Frank (1991), Professor, Interdisciplinary Technology.
Ph.D., Duke University-Durham

Jones, Louise (1990), Assistant Professor, Human, Environmental and Consumer Resources.
M.S., Virginia Polytechnic Institute and State University

Jones, Michael H. (1967), Associate Professor, Health, Physical Education, Recreation, and Dance.
M.S., Eastern Michigan University

Jones, Zenla (1990), Instructor, Computer Science.
M.S., Eastern Michigan University

Jordan, Eunice L. (1970), Professor, English Language and Literature.
Ph.D., Wayne State University

Jorfl, Joseph (1977), Assistant Director, Admissions.
B.S., Eastern Michigan University

Judy, Carole (1990), Instructor, Art.
M.A., California State University

K

Kalib, Sylvan S. (1969), Professor, Music.
Ph.D., Northwestern University

Kanter, Howard F. (1967), Professor, History and Philosophy.
Ph.D., University of Michigan

Kampfner, Christina Jose (1991), Assistant Professor, Teacher Education.
Ph.D., University of Michigan

Kanagy, Max E. (1986), Associate Professor, Industrial Technology.
Ph.D., Ohio State University

Karabenick, Stuart A. (1966), Professor, Psychology.
Ph.D., University of Michigan

Kasenow, Michael C. (1989), Assistant Professor, Geography and Geology.
M.S., Western Michigan University

Kattelus, Susan C. (1990), Assistant Professor, Department of Accounting.
Ph.D., Michigan State University

Kauffman, Janet (1988), Professor, English Language and Literature.
Ph.D., University of Chicago

Kaufman, Elizabeth (1989), Assistant Professor, Social Work.
Ph.D., University of Michigan

Keefer, Jane (1989), Instructor, Learning Resources and Technologies.
Ph.D., University of Illinois

Kelley, Regina A. (1982), Assistant Controller, Accounting.
B.B.A., Ohio University

Keros, John W. (1965), Associate Professor, Department of Accounting.
M.B.A., University of Michigan

Kersten, Lawrence K. (1966), Professor, Sociology, Anthropology, and Criminology.
Ph.D., Wayne State University

Kettles, Ann C. (1972), Interim Registrar.
M.A., Eastern Michigan University

Khallany, Asad S. (1972), Professor, Operations Research and Information Systems.
D.Sc., Washington University

Khan, Zafar U. (1989), Assistant Professor, Department of Accounting.
Ph.D., Louisiana State University

Khorshid, Wafa (1991), Assistant Professor, Operations Research and Information Systems.
Ph.D., Wayne State University

Kleft, Lewis D. (1971), Associate Professor, Business and Industrial Education.
Ph.D., Ohio State University

King, Elizabeth C. (1983), Dean, College of Health and Human Services.
Ph.D., Pennsylvania State University

King, H. Roger (1967), Professor, History and Philosophy.
Ph.D., Vanderbilt University

- Kinney, Martha** (1987), Associate Professor, Teacher Education.
Ph.D., University of Iowa
- Kirby, Steven D.** (1991), Department Head, Professor, Foreign Language and Bilingual Studies.
Ph.D., University of Kentucky
- Kirkendall, Carolyn A.** (1986), Instructor, Learning Resources and Technologies.
A.M.L.S., University of Michigan
- Kirkland, Glenda E.** (1966), Professor, Music.
M.A., Eastern Michigan University
- Kirkpatrick, Susan A.** (1986), Campus Planner, Physical Plant.
Ph.D., Michigan State University
- Kisor, Douglas R.** (1983), Associate Professor, Art.
M.F.A., Western Michigan University
- Kiss, Robert** (1990), Assistant Professor, Finance.
Ph.D., Kent State University
- Klaus, Meredith M.** (1966), Associate Professor, English Language and Literature.
Ph.D., University of Michigan
- Klenczar, Daniel** (1970), Plant Engineer, Physical Plant.
- Knapp, John R.** (1971), Professor, Psychology.
Ph.D., University of Denver
- Kolke, Shohel** (1986), Associate Professor, Foreign Languages and Bilingual Studies.
Ph.D., University of Oregon
- Komblevitz, Doris A.** (1985), Director, State, Federal and Community Relations.
M.A., Michigan State University
- Kozell, Cheryl** (1980), Project Officer, Office of Research Development.
M.P.A., Pennsylvania State University
- Kraft, Robert G.** (1969), Professor, English Language and Literature.
Ph.D., University of Washington
- Krajewski-Jalme, Elvira** (1985), Associate Professor, Social Work.
M.S.W., Temple University
- Kramer, Morrey** (1984), Associate Professor, Operations Research and Information Systems.
Ph.D., University of Michigan
- Kreger, Robert D.** (1990), Associate Professor, Special Education.
Ph.D., The University of Michigan
- Krleger, Mary M.** (1964), Professor, Human, Environmental, and Consumer Resources.
Ph.D., University of Michigan
- Krienke, John** (1983), Mental Health Counselor, Counseling Services.
Ph.D., University of Florida
- Kruse, Geraldine M.** (1965), Assistant Professor, Department of Accounting.
M.B.A., University of Michigan
- Kullsek, Diana** (1991), Assistant Professor, Art.
M.F.A., New York State College of Ceramics
- Kureth, Elwood J.C.** (1968), Department Head, Professor, Geography and Geology.
Ph.D., University of Michigan
- Kurta, Allen** (1988), Assistant Professor, Biology.
Ph.D., Boston University
- Kurtz, Linda F.** (1989), Professor, Social Work.
D.P.A., University of Georgia
- Kuwik, Paul D.** (1970), Department Head, Professor, Interdisciplinary Technology.
Ph.D., Ohio State University
- L**
- LaBenne, Wallace D.** (1967), Professor, Teacher Education.
Ph.D., University of Michigan
- Lake, Marilyn** (1967), Professor, Special Education.
Ph.D., University of Michigan
- Larou, George** (1991), Assistant Professor, Art.
M.F.A., California Institute of Arts
- Larsen, Eric T.** (1983), Senior Systems Programmer, University Computing.
B.S., Eastern Michigan University
- Larson, Russell R.** (1970), Professor, English Language and Literature.
Ph.D., University of Michigan
- Lauckner, Kurt F.** (1963), Professor, Computer Science.
Ph.D., University of Michigan
- Lawalczak, Donald A.** (1967), Professor, English Language and Literature.
Ph.D., Kent State University
- Laws, Duane M.** (1971), Professor, Human, Environmental, and Consumer Resources.
Ed.D., Columbia University
- Lawyer, Gerald** (1987), Assistant Professor, Interdisciplinary Technology.
M.S., Eastern Michigan University
- Lederman, Edward** (1970), Associate Professor, Teacher Education.
Ed.D., Columbia University
- Lefond, Dennis C.** (1980), Associate Director, University Marketing.
Ph.D., Case Western Reserve University
- Lehman-King, Joy L.** (1984), Assistant Director, Operations, Financial Aid.
M.A., University of Toledo
- Leinbach, Richard B.** (1972), Associate Professor, Human, Environmental and Consumer Resources.
Ed.D., Pennsylvania State University
- Lester, Lula** (1985), Assistant Professor, Nursing Education.
M.S.N., Wayne State University
- Levitt, Alvin S.** (1985), Director, Budget Management, University Planning, Budgeting, and Analysis.
M.A., Wayne State University
- Levy, Judith T.Z.** (1985), Department Head, Chemistry.
Ph.D., Johns Hopkins University School of Medicine
- Lewis, Hildred J.** (1971), Director, Upward Bound.
M.A., Eastern Michigan University
- Lick, Don R.** (1985), Department Head, Professor, Mathematics.
Ph.D., Michigan State University
- Liggett, Lucy A.** (1983), Professor, Communication and Theatre Arts.
Ph.D., University of Michigan
- Ligibel, Theodore** (1991), Associate Professor, Geography and Geology.
M.A., Bowling Green University
- Lin, Jonathan S.** (1988), Associate Professor, Industrial Technology.
Ph.D., Iowa State University
- Lindenberg, Karen E.** (1968), Professor, Political Science.
Ph.D., University of Oregon
- Lindseth, Glenda** (1992), Associate Professor, Nursing.
Ph.D., St. Louis University
- Lintner, Mildred D.** (1986), Associate Professor, Computer Science.
Ph.D., University of Michigan
- Llu, Stephen C.Y.** (1965), Professor, Biology.
Ph.D., University of Minnesota
- Lokensgard, Erik** (1986), Assistant Professor, Industrial Technology.
Ph.D., Iowa State University
- Long, Roger** (1990), Assistant Professor, History and Philosophy.
Ph.D., University of California, Los Angeles
- Loppnow, Donald M.** (1976), Department Head, Professor, Social Work.
Ph.D., University of Michigan
- Loree, John P.** (1962), Professor, Art.
M.F.A., Alfred University
- Loughney, Peter** (1986), Instructor, Industrial Technology.
B.S., Eastern Michigan University
- Lukasavitz, Raymond** (1985), Assistant Professor, Learning Resources and Technologies.
M.A., University of Michigan

M

- Maasberg, Michael W.** (1988), Department Head, Military Science.
M.S., Michigan State University
- MacIsaac, Patricia** (1985), Supervisor, Child Development Laboratory, Department of Human, Environmental, and Consumer Resources.
M.A., Eastern Michigan University
- MacMahan, Horace A., Jr.** (1969), Professor, Geography and Geology.
Ed.D., University of Colorado
- Madrid, Raul** (1989), Assistant Professor, Social Work.
Psy.D., Rutgers University
- Magee, James S.** (1972), Professor, Political Science.
Ph.D., Princeton University
- Mancell, Robert B.** (1969), Professor, Geography and Geology.
Ph.D., University of Michigan
- Marshall, Richard W.** (1968), Professor, Mathematics.
Ed.D., University of Michigan
- Martin, Annette** (1968), Professor, Communication and Theatre Arts.
Ph.D., University of Michigan
- Martin, F. Elaine** (1985), Associate Professor, Political Science.
Ph.D., University of Oklahoma
- Martin, Michael A.** (1986), Associate Professor, Teacher Education.
Ph.D., University of Georgia
- Martin, Nora** (1967), Professor, Special Education.
Ph.D., University of Michigan
- Martin, Sarah** (1987), Associate Professor, Teacher Education.
Ph.D., Louisiana State University
- Martin, Steven F.** (1986), Radio/TV Engineer, Communication and Theatre Arts.
- Marts, Malcolm** (1980), Trades and Grounds Foreperson, Heating Plant.
- Martusewicz, Rebecca** (1988), Assistant Professor, Teacher Education.
Ed.D., University of Cincinnati.
- Marz, Mary Sue** (1989), Associate Professor, Nursing.
Ph.D., Wayne State University
- Massenberg, Angela** (1988), Assistant Professor, Special Education.
Ph.D., Michigan State University
- Massle, Enes** (1989), Assistant Professor, Social Work.
M.S.W., M.A., University of Michigan
- Maybauer, Robert** (1985), Head Women's Track Coach, Athletics.
M.A., Central Michigan University
- McAnuff, Courtney O.** (1980), Assistant Vice President, University Marketing.
M.S., Hofstra University
- McCafferty, Arthur N.** (1977), Associate Dean, Continuing Education.
Ed.D., University of Michigan
- McClennen, Sandra E.** (1971), Professor, Special Education.
Ph.D., University of Michigan
- McCombs, Gary B.** (1982), Assistant Professor, Department of Accounting.
M.B.A., University of Michigan
- McCormack, Maureen** (1988), Assistant Professor, Teacher Education.
Ed.D., University of Rochester
- McCoy, Ana-Marla B.** (1972), Associate Professor, Foreign Languages and Bilingual Studies.
Ph.D., University of Michigan
- McCracken, Sally R.** (1968), Professor, Communication and Theatre Arts.
Ph.D., Wayne State University
- McDole, Thomas L.** (1980), Assistant Professor, Business and Industrial Education.
Ph.D., Michigan State University
- McDonald, James R.** (1965), Professor, Geography and Geology.
Ph.D., University of Illinois
- McEney, Jean** (1980), Professor, Management.
Ph.D., Wayne State University
- McFadden, Emily Jean** (1979), Professor, Social Work.
M.S.W., University of Michigan
- McGlynn, Paul D.** (1964), Professor, English Language and Literature.
Ph.D., Rice University
- McGraw, James T.** (1971), Mental Health Counselor, Counseling Services.
M.A., University of Michigan
- McGulre, Michael G.** (1983), Associate Professor, Music.
M.M., State University of New York
- McKanders, Kenneth A.** (1987), University Attorney.
J.D., Wayne State University
- McKee, Judy A.** (1971), Professor, Teacher Education.
Ed.D., Columbia University
- McKelvey, Paul T.** (1983), Dean, Continuing Education.
Ed.D., Indiana University
- McKenzie, Sue I.** (1981), Assistant Director (Acting), University Development.
B.A., University of Michigan
- McLean, Debra K.** (1986), Assistant Manager, Public Information.
B.A., Michigan State University
- McLennan, Marshall S.** (1970), Professor, Geography and Geology.
Ph.D., University of California at Berkeley
- McManus, John L.** (1981), Associate Professor, Psychology.
Ph.D., Ohio State University
- McMillan, William W.** (1984), Associate Professor, Computer Science.
Ph.D., Case Western Reserve University
- McNamara, Joann** (1986), Assistant Professor, Health, Physical Education, Recreation, and Dance.
Ph.D., Texas Woman's University
- McPherson, Charleen F.** (1982), Assistant Professor, Nursing Education.
M.S.N., University of Virginia
- McSurely, Hugh B.** (1981), Professor, Marketing.
Ph.D., Syracuse University School of Management
- Meernik, Mary A.** (1987), Assistant Professor, Learning Resources and Technologies.
A.M.L.S., University of Michigan
- Mehta, Dady N.** (1969), Professor, Music.
D.M.A., State Academy of Music, Vienna
- Mehuron, Kate** (1989), Assistant Professor, History and Philosophy.
Ph.D., Vanderbilt University
- Mels, Ruby L.** (1964), Professor, Human, Environmental, and Consumer Resources.
Ed.D., Pennsylvania State University
- Melsels, Murray** (1965), Professor, Psychology.
Ph.D., State University of New York at Buffalo
- Mensching, Glenn E., Jr.** (1986), Instructor, Learning Resources and Technologies.
A.M.L.S., University of Michigan
- Mercado, Heidi** (1988), Instructor, Learning Resources and Technologies.
M.A.L.S., University of Michigan
- Meretta, Kristy L.** (1987), Associate Professor, Music.
M.A., University of Michigan
- Merz, G. Russell** (1982), Associate Professor, Marketing.
Ph.D., Michigan State University
- Meyer, Earl** (1985), Associate Professor, Business and Industrial Education.
Ph.D., Georgia State University
- Meyer, Kenneth** (1985), Employee Relations Associate, Career Services Center.
B.S., Illinois State University
- Meyer, Thomas O.** (1981), Supervisor of Printing Services, University Publications.
M.A., Eastern Michigan University
- Michael, Calvin B.** (1956), Professor, Teacher Education.
Ph.D., University of Michigan

- Mida, Nancy J.** (1973), Staff Writer, Public Information and Publications.
B.S., Eastern Michigan University
- Miller, Bernard** (1987), Associate Professor, English Language and Literature.
Ph.D., Purdue University
- Miller, Glenna Frank** (1974), Director, Campus Life.
M.S., Wayne State University
- Miller, Kevin** (1991), Assistant Professor, Music.
B.A., Duke University
- Miller, William A.** (1971), Professor, History and Philosophy.
Ph.D., Ohio State University
- Milllett, Marla C.** (1989), Assistant Professor, Chemistry.
Ph.D., University of Wisconsin-Madison
- Millske, Paul W.** (1965), Associate Professor, Biology.
M.A., University of Michigan
- Miller, Connie F.** (1983), Head Softball Coach, Athletics.
B.A., Kearney State College
- Minick, Merlyn C.** (1966), Professor, Biology.
Ph.D., Wayne State University
- Mink, George** (1981), Associate Professor, Social Work.
M.A., University of Michigan
- Minzey, Jack D.** (1968), Director, Center for Community Education, Professor, Leadership and Counseling.
Ed.D., Michigan State University
- Moaddel, Mansoor** (1987), Associate Professor, Sociology, Anthropology, and Criminology.
Ph.D., University of Wisconsin
- Moeller, Susan** (1990), Associate Professor, Finance.
Ph.D., Michigan State University
- Monlods, Paul** (1981), Coordinator of Institutional Analysis and Reporting, University Planning, Budgeting, and Analysis.
M.S., University of Michigan
- Monsma, Charles M.** (1970), Professor, Political Science; Director, Institute for Community and Regional Development.
Ph.D., University of Michigan
- Moore, Pamela A.** (1985), Instructor, Computer Science.
M.S., Michigan State University
- Moore, Sarah E.** (1964), Assistant Professor, Human, Environmental, and Consumer Resources.
M.A., Ball State University
- Moreland, Kemper W.** (1980), Associate Professor, Economics.
Ph.D., University of Wisconsin
- Morgan, Elizabeth** (1991), Assistant Professor, Foreign Language and Bilingual Studies.
Ph.D., State University of New York at Buffalo
- Moses, Karen** (1976), Associate Director, Academic Advising Center.
M.A., Eastern Michigan University
- Moss, Gordon E.** (1971), Professor, Sociology, Anthropology, and Criminology.
Ph.D., State University of New York at Buffalo
- Moss, Nancy** (1983), Staff Nurse, University Health Services.
- Moss, Walter G.** (1970), Professor, History and Philosophy.
Ph.D., Georgetown University
- Moyer, Steve W.** (1988), Associate Professor, Health, Physical Education, Recreation, and Dance.
Ed.D., Temple University
- Mrdalj, Steven** (1987), Associate Professor, Operations Research and Information Systems.
M.S., University of Belgrade, Yugoslavia
- Murray, Thomas J.** (1963), Professor, Communication and Theatre Arts.
Ph.D., University of Michigan
- Myers, Julia R.** (1990), Assistant Professor, Art.
Ph.D., University of Maryland

N

- Nash, Gayle** (1977), Associate Professor, Special Education.
Ed.D., University of Alabama
- Navarre, Gary B.** (1970), Professor, Special Education.
Ed.D., Wayne State University

- Nazzaro, Andrew A.** (1969), Professor, Geography and Geology.
Ph.D., Michigan State University
- Neeb, Leon E.** (1966), Associate Professor, Teacher Education.
Ed.D., Michigan State University
- Neely, Robert K.** (1984), Associate Professor, Biology.
Ph.D., Iowa State University
- Nelson, Olga G.** (1991), Assistant Professor, Teacher Education.
Ph.D., Kent State University
- Nelson, Sandra Lee** (1990), Assistant Professor, Nursing Education.
M.S.N., Wayne State University
- Nerenz, Anne G.** (1986), Associate Professor, Foreign Languages and Bilingual Studies.
Ph.D., University of Wisconsin
- Neuhaus, Colln F.** (1969), Professor, Marketing.
Ph.D., University of Michigan
- Neve, Gloria D.** (1969), Assistant Professor, Health, Physical Education, Recreation, and Dance.
M.A., Central Michigan University
- Nicholson, Elva Mae** (1972), Professor, Chemistry.
Ph.D., Harvard University
- Nightingale, John P.** (1980), Assistant Professor, Management.
M.A., University of North Dakota
- Nord, Ross S.** (1986), Assistant Professor, Chemistry.
Ph.D., Iowa State University
- Norman, Manuel J.** (1985), Senior Systems Programmer, Learning Resources and Technologies.
B.S., London University, England
- North, Virginia** (1980), Assistant Professor, Human, Environmental, and Consumer Resources.
B.A., Michigan State University
- Northey, James H.** (1957), Professor, Mathematics.
Ph.D., University of Michigan
- Norton, Alexandra M.** (1989), Assistant Professor, English Language and Literature.
Ph.D., University of California Berkeley
- Novak, John A.** (1986), Assistant Professor, Biology.
Ph.D., University of Michigan
- Novak, Kim A.** (1986), Instructor, Business and Industrial Education.
M.B.E., Eastern Michigan University
- Nybell, Lynn** (1983), Associate Professor, Social Work.
M.S.W., University of Michigan

O

- Oakes, Alexandra** (1987), Associate Professor, Physics and Astronomy.
Ph.D., Texas A & M University
- O'Dell, Jerry W.** (1966), Professor, Psychology.
Ph.D., University of Michigan
- Oestrike, Ronald E.** (1964), Assistant Professor, Health, Physical Education, Recreation, and Dance.
M.A., University of Michigan
- Ohren, Joseph F.** (1985), Professor, Political Science.
Ph.D., Syracuse University
- Ojala, Carl F.** (1970), Professor, Geography and Geology.
Ph.D., University of Georgia
- Okopny, D. Robert** (1988), Associate Professor, Department of Accounting.
Ph.D., Texas A & M University
- Olsen, James E.** (1967), Coordinator, Admissions Representatives, Admissions.
M.Ed., University of Michigan
- Olson, Judy** (1991), Instructor, Occupational Therapy.
M.S., College of Physicians and Surgeons of Columbia University
- Orsheim, Kathryn B.** (1979), Enrollment Conversion Representative, Admissions.
M. Ed., University of Missouri-Columbia
- Otteson, Steven** (1991), Assistant Professor, Marketing.
D.B.A., Indiana University

Otto, Gretchen M. (1987), Associate Professor, Art.
M.F.A., Cranbrook

P

- Paclerek, Karen (1988), Associate Professor, Teacher Education.
Ph.D., Peabody College of Vanderbilt University
- Paclerek, Michael J. (1981), Professor, Health, Physical Education,
Recreation, and Dance.
Ph.D., Vanderbilt University
- Palasek, James R. (1966), Professor, Special Education.
Ph.D., Syracuse University
- Palmateer, Kenneth (1982), Assistant Football Coach, Athletics.
M.A., Michigan State University
- Palmer, Benjamin W. (1970), Professor, Foreign Languages and
Bilingual Studies.
Ph.D., Northwestern University
- Pappas, John G. (1966), Professor, Leadership and Counseling.
Ph.D., Kent State University
- Pappas, John N. (1960), Professor, Art.
M.A., Wayne State University
- Parks, Robert E. (1966), Associate Professor, Health, Physical
Education, Recreation, and Dance; Head Men's Cross Country
and Track Coach, Athletics.
M.A., Michigan State University
- Parry, Walter R. (1984), Associate Professor, Mathematics.
Ph.D., University of California at Berkeley
- Pasch, Marvin (1982), Professor, Teacher Education.
Ed.D., Indiana University
- Pathak, Chandra P. (1981), Professor, Department of Accounting.
Ph.D., University of Tennessee
- Patni, Zarina A. (1987), Systems Programmer III, University
Computing.
B.A., University of Bombay, India
- Patrick, Floyd A. (1970), Professor, Management.
Ph.D., University of Iowa
- Patrick, Louise Rose (1990), Associate Professor, Music.
Ph.D., Michigan State University
- Pearson, Donald W. (1969), Professor, Economics.
Ph.D., University of Texas
- Pedersen, Erik J. (1968), Professor, Health, Physical Education,
Recreation, and Dance.
P.E.D., Indiana University
- Pedersen, Garik (1989), Assistant Professor, Music.
D.M.A., University of Iowa
- Peel, N. Annette (1971), Assistant Professor, Human,
Environmental, and Consumer Resources.
M.S., Syracuse University
- Pendleton, Sharon Y. (1988), Instructor, Health, Physical
Education, Recreation, and Dance.
M.A., Oklahoma State University
- Perales, Alberto (1979), Assistant Director, Outreach Operations,
Admissions.
B.A., Eastern Michigan University
- Perkins, George B. (1967), Professor, English Language and
Literature.
Ph.D., Cornell University
- Perry, William (1991), Assistant Professor, Foreign Language and
Bilingual Studies.
Ph.D., University of Minnesota
- Peterson, Roger A. (1980), Professor, Marketing.
D.B.A., University of Tennessee
- Pfister, James W. (1970), Associate Professor, Political Science.
Ph.D., University of Michigan
- Pfutz, Susan (1988), Assistant Professor, Nursing.
M.S., University of Michigan
- Phillips, Donald B. (1973), Professor, Chemistry.
Ed.D., University of Georgia
- Pierce, David (1990), Assistant Professor, Music.
Ph.D., University of Illinois, Urbana
- Pletig, Jeanne (1988), Department Head, Professor, Teacher
Education.
Ph.D., University of Minnesota

- Pinson, James (1990), Assistant Professor, English Language and
Literature.
M.A., University of Missouri
- Pinson, John C. (1969), Professor, Foreign Languages and Bilingual
Studies.
Ph.D., University of Michigan
- Pltton, Karen M. (1982), Assistant Manager, Editorial Services,
Public Information and Publications.
B.S., Eastern Michigan University
- Plank, Max E. (1968), Professor, Music.
A.Mus.D., University of Michigan
- Pokay, Patricia (1988), Assistant Professor, Teacher Education.
Ph.D., University of Michigan
- Polakow, Valerie (1988), Associate Professor, Teacher Education.
Ph.D., University of Michigan
- Porter, James C. (1967), Professor, Physics and Astronomy.
Ph.D., Purdue University
- Powell, Ralph R. (1966), Associate Professor, Chemistry.
Ph.D., Purdue University
- Preston, Aaron (1985), Assistant Plant Engineer, Physical Plant.
B.S., Eastern Michigan University
- Preston, John R. (1983), Associate Professor, Interdisciplinary
Technology.
M.S., Eastern Michigan University
- Price, William (1991), Associate Professor, Leadership and
Counseling.
Ph.D., Michigan State University
- Prince, J. Whitney (1981), Professor, Music.
M.M., University of Wisconsin
- Prince, Nancy (1985), Assistant Professor, Nursing Education.
M.S.N., Wayne State University
- Proegler, Lynn (1989), Coordinator, Talented and Gifted Programs.
M.A., Eastern Michigan University

Q

- Quinn, Kathleen S. (1965), Department Head, Associate Professor,
Special Education.
Ph.D., University of Michigan

R

- Racz, Barnabas A. (1968), Professor, Political Science.
Ph.D., University of Michigan
- Racz, Twyla W. Mueller (1968), Associate Professor, Learning
Resources and Technologies.
M.S.L.S., Case Western Reserve University
- Raftiq, Mohammad A. (1970), Associate Professor, Mathematics.
Ph.D., Wayne State University
- Rahman, Mahmud (1991), Assistant Professor, Finance.
Ph.D., University of Texas at Arlington
- Ramanathan, Jayakumar (1990), Associate Professor,
Mathematics.
Ph.D., University of Chicago
- Ramsay, O. Bertrand (1965), Professor, Chemistry.
Ph.D., University of Pennsylvania
- Ramsay, Patricia (1974), Coordinator, Instructional Support
Center, Learning Resources and Technologies.
M.A., Indiana University
- Rankin, Joanne S. (1963), Professor, Mathematics.
Ph.D., University of Michigan
- Rankin, Joseph H. (1984), Associate Professor, Sociology,
Anthropology, and Criminology.
Ph.D., University of Arizona
- Raphael, C. Nicholas (1967), Professor, Geography and Geology.
Ph.D., Louisiana State University
- Ravencroft, Sue (1988), Assistant Professor, Department of
Accounting.
Ph.D., Michigan State University
- Reed, Michael H. (1987), Assistant Professor, History and
Philosophy.
Ph.D., University of Minnesota

- Reese, Laura A. (1985), Associate Professor, Political Science.
Ph.D., Wayne State University
- Reffitt, Gary L. (1979), Director, Purchasing.
B.B.A., Eastern Michigan University
- Relchbach, Gwendolyn M. (1973), Associate Professor, Human,
Environmental, and Consumer Resources.
M.S., Ohio State University
- Reld, David (1988), Instructor, Physics and Astronomy.
M.S., Eastern Michigan University
- Reldsma, Craig F. (1986), Compensation Program Associate,
Human Resources.
- Relnthal, Peter (1991), Assistant Professor, Biology.
Ph.D., Duke University
- Remmers, John H. (1971), Associate Professor, Computer Science.
Ph.D., University of Michigan
- Rengan, Krishnaswamy (1970), Professor, Chemistry.
Ph.D., University of Michigan
- Renk, Clifford M. (1985), Professor, Associated Health
Professions.
Ph.D., University of Florida
- Rescoria, Klm L. (1985), Associate Professor, Mathematics.
Ph.D., University of Utah
- Reynolds, James A. (1967), Professor, English Language and
Literature.
Ph.D., University of Michigan
- Rhodes, Elizabeth A. (1986), Department Head, Professor, Human,
Environmental, and Consumer Resources.
Ph.D., University of Tennessee
- Riccardo, Jerry (1988), Associate Professor, Health, Physical
Education, Recreation, and Dance.
Ph.D., Texas A&M University
- Ricelnto, Leonard L. (1985), Professor, Music.
D.M.A., Michigan State University
- Rice, Dale L. (1967), Professor, Special Education.
Ph.D., University of Michigan
- Rice, John C. (1988), Manager, Video Production.
B.S., Eastern Michigan University
- Richmond-Abbott, Marle L. (1973), Professor, Sociology,
Anthropology, and Criminology.
Ph.D., Florida State University
- Ristau, Robert A. (1973), Professor, Business and Industrial
Education.
Ph.D., University of Wisconsin
- Robbins, Jerry (1991), Dean, College of Education.
Ed.D., University of Arkansas
- Robek, Mary F. (1958), Professor, Business and Industrial
Education.
Ph.D., University of Michigan
- Robertson, Sharon A. (1984), Associate Professor, Foreign
Languages and Bilingual Studies.
Ph.D., University of Michigan
- Robnson, Albert A. (1985), Service Operations Manager, Physical
Plant.
B.S., Central State University, Ohio
- Robnson, James (1988), Assistant Professor, Communication and
Theatre Arts.
Ph.D., University of Michigan
- Robnson James A. (1988), Assistant Professor, Health Physical
Education, Recreation, and Dance.
Ph.D., University of Michigan
- Robnson, Robert S. (1959), Associate Professor, Teacher
Education.
Ph.D., University of Michigan
- Roff, James D. (1976), Professor, Psychology.
Ph.D., University of Minnesota
- Roessten, Thomas J. (1980), Assistant Plant Engineer, Physical
Plant.
- Root, Trudle A. (1987), Instructor, Learning Resources and
Technologies.
A.M.L.S., University of Michigan
- Rosenfeld, Raymond A. (1986), Associate Professor, Political
Science.
Ph.D., Emory University
- Roth, Richard F. (1969), Associate Professor, Physics and
Astronomy.
Ph.D., Princeton University
- Rubensfeld, M. Gale (1986), Assistant Professor, Nursing
Education.
M.S.N., Ohio State University
- Rubensfeld, Richard L. (1986), Associate Professor, Art.
Ph.D., Ohio State University
- Rufe, Phillip D. (1990), Instructor, Industrial Technology.
M.S., Eastern Michigan University
- Rutz, Reynaldo (1979), Associate Professor, Foreign Languages
and Bilingual Studies.
Ph.D., University of New Mexico
- Rupert, Terry (1991), Assistant Professor, Health, Physical
Education, Recreation, and Dance.
Ed.D., University of Southern Mississippi
- Rupp, Ralph (1985), Associate Professor, Special Education.
Ph.D., Wayne State University
- Rusniak, Kenneth W. (1981), Department Head, Psychology.
Ph.D., University of California at Los Angeles
- Ryan, Patricia (1966), Professor, Sociology, Anthropology, and
Criminology; Director, Institute for the Study of Children and
Families.
Ph.D., University of Michigan
- ## S
- Saballunas, Leonas (1966), Professor, Political Science.
Ph.D., Columbia University
- Sabkl, M. Hlsham (1969), Professor, Political Science.
Ph.D., Indiana University
- Sachdev, Harash (1991), Assistant Professor, Marketing.
Ph.D., Georgia State University
- Sachdev, Sushil K. (1980), Associate Professor, Computer Science.
Ph.D., University of Arizona
- Salisbury, Robert A. (1972), Academic Adviser, Academic
Advising Center.
M.B.A., Eastern Michigan University
- Samonte, Quilico S. (1963), Professor, Teacher Education.
Ph.D., University of Michigan
- Samuels, Brian A. (1985), Technician, Chemistry.
B.S., Siena Heights College
- Sanchez, Pedro P. (1972), Professor, Operations Research and
Information Systems.
Ph.D., University of Michigan
- Sandall, James A. (1975), Professor, Art.
M.F.A., Arizona State University
- Satanski, Gregory (1982), Assistant Football Coach, Athletics.
M.A., Central Michigan University
- Sauber, Matthew (1988), Associate Professor, Marketing.
Ph.D., University of Texas at Austin
- Saunders, Ronald J. (1963), Associate Professor, Health, Physical
Education, Recreation, and Dance.
Ph.D., Michigan State University
- Sauve, Rachel (1983), Adviser, Financial Aid.
B.B.A., Eastern Michigan University
- Saxon, Charles S. (1977), Professor, Operations Research and
Information Systems.
Ph.D., University of Michigan
- Sayegh, Matilda Y. (1970), Associate Professor, Health, Physical
Education, Recreation, and Dance.
Ph.D., University of Michigan
- Sayles-Folks, Sherry L. (1978), Associate Professor, Occupational
Therapy.
Ph.D., University of Michigan
- Schatz, Kenneth (1990), Assistant Professor, Special Education.
M.A., Eastern Michigan University
- Schaub, Raymond E. (1969), Interim Director, World College;
Professor, Foreign Languages and Bilingual Studies.
Ph.D., Rice University
- Scheffer, Barbara K. (1976), Assistant Professor, Nursing
Education.
M.S., University of Michigan

- Scherer, Lester B. (1969), Professor, History and Philosophy.
Ph.D., Northwestern University
- Schiller, Joan A. (1973), Academic Adviser, Academic Services Center.
M.B.A., Eastern Michigan University
- Schmitt, Donna M. (1975), Acting Associate Dean, College of Education; Professor, Leadership and Counseling.
Ed.D., Western Michigan University
- Schullery, Stephen E. (1970), Professor, Chemistry.
Ph.D., Cornell University
- Schuster, Elizabeth (1990), Assistant Professor, Social Work.
M.A., University of Michigan
- Schwartz, Ellen C. (1977), Professor, Art.
Ph.D., Institute of Fine Arts, New York
- Schwarze, Richard (1970), University Photographer, Public Information and Publications.
- Scott, Shella K. (1988), Academic Adviser, Academic Advising Center.
M.A., Texas A&M University
- Scott, Joanna V. (1990), Department Head, Professor, Political Science.
Ph.D., University of Strathclyde, Glasgow, Scotland
- Scott, Ronald M. (1959), Professor, Chemistry.
Ph.D., University of Illinois
- Seely, T. Daniel (1988), Assistant Professor, English Language and Literature.
Ph.D., University of Massachusetts-Amherst
- Semmes, Clovis E. (1988), Associate Professor, African-American Studies.
Ph.D., Northwestern University
- Senko, John A. (1985), Coordinator, University Planning, Budgeting, and Analysis.
B.A., Oakland University
- Sentoney, David L. (1989), Assistant Professor, Department of Accounting.
Ph.D., University of Illinois at Urbana-Champaign
- Sharifi, Mohsen (1981), Department Head, Professor, Department of Accounting.
Ph.D., Louisiana State University
- Sharma, Natthi L. (1986), Associate Professor, Physics and Astronomy.
Ph.D., Ohio State University
- Sharp, David W. (1962), Professor, Art.
M.F.A., University of Iowa
- Sheard, Joan (1988), Assistant Professor, Health, Physical Education, Recreation, and Dance.
M.S., Indiana University
- Sheard, John E. (1963), Professor, Health, Physical Education, Recreation, and Dance.
P.E.D., Indiana University
- Sheerin, James (1991), Associate Professor, Physics and Astronomy.
Ph.D., University of Michigan
- Shelton, William (1988), President.
Ed.D., University of Mississippi
- Shlechtman, Martin B. (1984), Associate Professor, English Language and Literature.
Ph.D., University of Iowa
- Shlaskowski, Kenneth M. (1983), Associate Professor, Mathematics.
Ph.D., Lehigh University
- Shlue, Tony F. (1990), Assistant Professor, Industrial Technology.
Ph.D., Iowa State University
- Shuter, William F. (1968), Professor, English Language and Literature.
Ph.D., University of Wisconsin
- Silverman, Deborah W. (1979), Assistant Professor, Human, Environmental, and Consumer Resources.
M.S., University of Cincinnati
- Simpkins, Karen (1974), Assistant Program Director, Institute for the Study of Children and Families.
B.S., Eastern Michigan University
- Simone, P. George (1977), Associate Professor, Biology.
Ph.D., University of New Mexico
- Sims, Marvin L. (1979), Assistant Professor, Communication and Theatre Arts.
M.A., Miami University
- Sinclair, Karen P. (1974), Professor, Sociology, Anthropology, and Criminology.
Ph.D., Brown University
- Skore, Marvin L. (1968), Associate Professor, Special Education.
Ph.D., Wayne State University
- Skurski, Virginia (1980), Professor, Nursing Education.
Ph.D., University of Michigan
- Smart, William (1966), Director, Physical Plant.
M.A., Eastern Michigan University
- Smith, Clark A. (1983), News and Public Affairs Manager, WEMU.
B.S., Eastern Michigan University
- Smith, Eugene (1983), Executive Director, Athletics.
B.A., University of Notre Dame
- Smith, John R. (1969), Assistant Professor, Music.
M.A., Eastern Michigan University
- Smith, Karen M. (1987), Assistant Professor, Communication and Theatre Arts.
M.F.A., Eastern Michigan University
- Smith, Laurence N. (1975), Vice President, University Marketing and Student Affairs.
M.A., State University of New York at Buffalo
- Smith, Lawrence R. (1970), Professor, English Language and Literature.
Ph.D., University of California
- Smith, Margaret J. (1981), Assistant Professor, Special Education.
Ph.D., Michigan State University
- Snylr, Andrew (1984), Associate Professor, Department of Accounting.
Ph.D., Purdue University
- Sobell, Diane M. (1983), Staff Nurse, Health Services.
B.S.N., Madonna College
- Sokkar, Fath F. (1971), Professor, Operations Research and Information Systems.
Ph.D., University of Illinois
- Sonstein, Stephen (1984), Department Head, Associated Health Professions.
Ph.D., Hahnemann Medical College
- Soyster, Thomas G. (1982), Associate Professor, Industrial Technology.
Ed.D., Temple University
- Sparks-Langer, Georgea M. (1985), Associate Professor, Teacher Education.
Ph.D., Stanford University
- Staal, Arle (1968), Professor, English Language and Literature.
Ph.D., University of Michigan
- Stadtfeld, Curtis K. (1966), Professor, English Language and Literature.
M.A., Eastern Michigan University
- Staff, Mary Ann (1986), Development Officer, University Development.
B.A., Hilldale College
- Stanger, Keith J. (1974), Assistant Professor, Learning Resources and Technologies.
M.L.S., University of Illinois
- Starko, Alane J. (1986), Associate Professor, Teacher Education.
Ph.D., University of Connecticut
- Stavros, Demo A. (1984), Professor, Interdisciplinary Technology.
Ph.D., Texas A&M University
- Stempel, Brian F. (1986), Supervisor, Materials Access, Learning Resources and Technologies.
B.A., Eastern Michigan University
- Stevens, Kenneth W. (1972), Professor, Communication and Theatre Arts.
M.A., University of Cincinnati
- Stevens, Suzanne J. (1970), Professor, Biology.
Ph.D., University of Michigan
- Stickel, Sue A. (1991), Assistant Professor, Leadership and Counseling.
Ph.D., Ph.D., University of Wyoming

- Strand-Evans, Katherine E.** (1973), Professor, Communication and Theatre Arts.
M.F.A., Ohio University
- Streeter, James L.** (1974), Manager, Sports Information, Athletics.
B.S., Eastern Michigan University
- Strickland, Gary** (1970), Instructor, Health, Physical Education, Recreation and Dance; Coordinator of Athletic Training, Athletics.
M.S., Western Illinois University
- Sullivan, John M.** (1958), Professor, Chemistry.
Ph.D., University of Michigan
- Sweatman, Donna L.** (1979), Publications Assistant, University Publications.
- Swisher, William V.** (1965), Associate Professor, Communication and Theatre Arts.
M.A., University of Michigan
- Szabo, Edward J.** (1968), Professor, Music.
Ed.D., Columbia University

T

- Tack, Martha W.** (1990), Department Head, Professor, Leadership and Counseling.
Ph.D., University of Alabama
- Tammany, David D.** (1966), Assistant Vice President, Personnel; Professor, Art.
M.F.A., Tulane University
- Tammany, Rosina** (1988), Assistant Professor, Learning Resources and Technologies.
A.M.L.S., University of Michigan
- Tanner, Sandra** (1974), Administrative Assistant, Corporate Services.
- Tatum, Judy B.** (1978), Director, Financial Aid.
B.S., Appalachian State University
- Tayeh, Carla** (1989), Assistant Professor, Mathematics.
Ph.D., Southern Illinois University
- Teal, Mary D.** (1968), Professor, Music.
Ph.D., University of Michigan
- Tehrani-pour, Aby** (1990), Associate Professor, Computer Science.
Ph.D., University of Nebraska
- Terry, Janice J.** (1968), Professor, History and Philosophy.
Ph.D., University of London
- Testke, Yvonne R.** (1970), Associate Professor, Occupational Therapy.
M.A., University of Michigan
- Tessema, Asrat** (1985), Department Head, Professor, Finance.
Ph.D., University of Iowa
- Tew, Michael** (1989), Instructor, Communication and Theatre Arts.
M.A., Eastern Michigan University
- Thalhofer, Nancy N.** (1969), Assistant Professor, Sociology, Anthropology, and Criminology.
Ph.D., University of Michigan
- Thayer, Louis C.** (1969), Professor, Leadership and Counseling
Ed.D., University of Illinois
- Thomsen, J. Marshall** (1986), Associate Professor, Physics and Astronomy.
Ph.D., Michigan State University
- Thornton, James** (1991), Assistant Professor, Economics.
Ph.D., University of Oregon
- Tillman, Tracy S.** (1990), Assistant Professor, Industrial Technology.
Ph.D., Purdue University
- Timko, Arthur** (1970), Director, WEMU.
M.A., Eastern Michigan University
- Tinney, Kathleen D.** (1968), Assistant Vice President, Executive Division.
M.A., University of Michigan
- Todd, James T.** (1990), Assistant Professor, Psychology.
Ph.D., University of Kansas
- Tomkins, Colleen** (1976), Assistant Director, Internal Operations, Housing and Food Service.
M.A., Eastern Michigan University
- Tornquist, Wade J.** (1986), Associate Professor, Chemistry.
Ph.D., University of Minnesota
- Torres, Roberto** (1991), Assistant Professor, Health Administration.
Ph.D., University of Michigan
- Trochet, P. Daniel** (1968), Department Head, Professor, Physics and Astronomy.
Ph.D., University of Michigan
- Truzzi, Marcello** (1974), Professor, Sociology, Anthropology, and Criminology.
Ph.D., Cornell University
- Tabbs, Stewart L.** (1974), Dean, College of Business; Professor, Management.
Ph.D., Cornell University
- Tucker, Walter W.** (1979), Associate Professor, Industrial Technology.
M.A., Eastern Michigan University
- Tummala, V.M. Rao** (1981), Department Head, Professor, Operations Research and Information Systems.
Ph.D., Michigan State University
- Tuscany, William** (1986), Assistant Athletic Trainer, Athletics.
M.S., Eastern Michigan University
- Tyler, Norman** (1990), Assistant Professor, Geography and Geology.
D.Arch., University of Michigan

U

- Ullman, Nelly S.** (1968), Professor, Mathematics.
Ph.D., University of Michigan
- Upshur, Jiu Hwa** (1971), Professor, History and Philosophy.
Ph.D., University of Michigan
- Utke, Cyrena A.** (1986), Office Automation Consultant, University Computing.
M.A., Eastern Michigan University

V

- VandenBosch, James L.** (1987), Associate Professor, Biology.
Ph.D., University of Michigan
- VanHaren, John E.** (1960), Department Head, Professor, Art.
M.A., University of Wisconsin
- Van Felt, Cynthia** (1976), Financial Aid Adviser, Financial Aid.
B.S., Eastern Michigan University
- Van Riper, Benjamin W.** (1968), Professor, Leadership and Counseling.
Ph.D., University of Michigan
- Van Voorhees, Florence E.** (1979), Associate Professor, Special Education.
Ph.D., University of Michigan
- Venls, Ronald M.** (1966), Assistant Professor, Health, Physical Education, Recreation, and Dance; Athletic Trainer, Athletics.
M.S., Indiana University
- Vick, James** (1973), Director, Career Services Center.
M.A., Eastern Michigan University
- Victor, David A.** (1985), Associate Professor, Management.
Ph.D., University of Michigan
- Victor, Gary M.** (1974), Associate Professor, Marketing.
J.D., University of Toledo
- Vidas, Jerry** (1982), Pharmacy Supervisor, Health Services.
M.S., University of Iowa
- Vielhaber-Hermon, Mary E.** (1977), Associate Professor, Management.
Ph.D., University of Michigan
- Vinyard, Jo Ellen** (1986), Professor, History and Philosophy.
Ph.D., University of Michigan
- Vites, Jose** (1991), Assistant Professor, Chemistry.
Ph.D., University of Notre Dame
- Voght, Geoffrey M.** (1971), Interim Associate Director, World College; Professor, Foreign Languages and Bilingual Studies.
Ph.D., University of Michigan
- Vogt, Michael** (1978), Associate Professor, Economics.
Ph.D., University of Wisconsin

- Volz, Paul A. (1969), Professor, Biology.
Ph.D., Michigan State University
- von Kluge, Sylvia (1990), Assistant Professor, Psychology.
Ph.D., Michigan State University

W

- Waffle, Elizabeth L. (1968), Associate Professor, Biology.
Ph.D., Iowa State University
- Wagner, Fraya W. (1982), Associate Professor, Management.
D.B.A., Memphis State University
- Wahl, Klshor N. (1967), Professor, Teacher Education.
Ph.D., University of Michigan
- Waldley, John W. (1968), Professor, Leadership and Counseling.
Ed.D., New York University
- Walker, Ailda (1985), Budget Manager, University Planning,
Budgeting, and Analysis.
- Walker, Ann (1983), Programmer/Analyst, University Computing.
B.A., University of Windsor
- Walker, Glenn K. (1976), Professor, Biology.
Ph.D., University of Maryland
- Walter, James R. (1964), Assistant Professor, Mathematics.
Ph.D., Wayne State University
- Waltman, John L. (1985), Professor, Management.
Ph.D., University of Texas
- Waltz, James C. (1968), Professor, History and Philosophy.
Ph.D., Michigan State University
- Ward, Robert M. (1969), Professor, Geography and Geology.
Ph.D., University of Michigan
- Warren, Bette (1984), Associate Professor, Mathematics.
Ph.D., Indiana University
- Warren, Bruce L. (1969), Professor, Sociology, Anthropology, and
Criminology.
Ph.D., University of Michigan
- Washington, Richard E. (1970), Associate Professor, Art.
M.A., Eastern Michigan University
- Wasik, Caludla B. (1965), Associate Professor, Health, Physical
Education, Recreation, and Dance.
M.S., Eastern Michigan University
- Wasserman, Ira M. (1969), Professor, Sociology, Anthropology,
and Criminology.
Ph.D., University of Michigan
- Watson, Mary Ann (1990), Associate Professor, Communication
and Theatre Arts.
Ph.D., The University of Michigan
- Watts, Leroy W. (1969), Associate to the Provost for Faculty
Recruitment, Associate Professor, Social Work.
M.S.W., University of Iowa
- Webb, Paul Dean (1983), Director, Foreign Student Affairs.
M.T., North Park Theological Seminary
- Weber, Patricia (1981), Director, Center for Entrepreneurship;
Associate Professor, Marketing.
D.B.A., Indiana University
- Weeks, C. Wayne (1978), Associate Professor, Finance.
D.B.A., Kent State University
- Weeks, John A. (1968), Professor, Industrial Technology.
Ph.D., University of Michigan
- Weinsteln, Jay (1986), Professor, Sociology, Anthropology, and
Criminology.
Ph.D., University of Illinois, Urbana
- Welser, Jerome A. (1967), Professor, Teacher Education.
Ed.D., Wayne State University
- Welber, Joel S. (1984), Assistant Professor, Marketing.
J.D., Wayne State University
- Welch, Bethann (1974), User Consultant, University Computing.
- Westman, Ailda S. (1972), Professor, Psychology.
Ph.D., Cornell University
- Westrum, Ronald M. (1972), Professor, Sociology, Anthropology,
and Criminology.
Ph.D., University of Chicago
- Weymouth-Payne, Arlel (1982), Assistant Professor, Health,
Physical Education, Recreation, and Dance.
M.F.A., University of North Carolina
- Wheatley, Ira M. (1966), Department Head, Professor, History and
Philosophy.
Ph.D., University of Iowa
- White, Bette C. (1970), Dean of Students.
Ph.D., Michigan State University
- White, Patrick T. (1967), Professor, English Language and
Literature.
Ph.D., University of Michigan
- Willbanks, Roy (1983), Executive Vice President.
M.A., Eastern Michigan University
- Wilce, Steven (1982), Head Coach, Women's Gymnastics,
Athletics.
B.S., Eastern Kentucky University
- Wiley, Jacqueline (1978), Employment Manager, Human
Resources.
M.A., Eastern Michigan University
- Willets, Stanley C. (1966), Director, Internal Audit.
B.A., Great Lakes College
- Williams, Patricia J. (1979), Professor, Art.
M.F.A., Indiana University
- Williams, Patricia L. (1979), Academic Adviser, Academic
Advising Center.
M.A., Eastern Michigan University
- Williams, Regina (1990), Department Head, Nursing.
Ph.D., University of Michigan
- Williams, Roger L. (1968), Professor, Health, Physical Education,
Recreation, and Dance.
Ed.D., University of Missouri
- Williams, Sandra (1985), Associate Executive Director, Auxiliary
Enterprises.
M.B.A., Wayne State University
- Williams, Warren S. (1969), Professor, Teacher Education.
Ed.D., University of Rochester
- Williamson, Jerry R. (1967), Associate Professor, Chemistry.
Ph.D., University of Iowa
- Williston, Judith C. (1971), Associate Professor, Human,
Environmental, and Consumer Resources.
Ph.D., University of Michigan
- Wilson, Francille R. (1988), Assistant Professor, History and
Philosophy.
Ph.D., University of Pennsylvania
- Wilson, Herbert H. (1970), Associate Professor, Business and
Industrial Education.
M.A., West Virginia University
- Wilson, Lorraine (1988), Associate Professor, Nursing Education.
Ph.D., Wayne State University
- Winder, Diane Steln (1988), Assistant Professor, Music.
M.M., Converse College
- Wingo, Rosetta F. (1968), Professor, Business and Industrial
Education.
Ph.D., Michigan State University
- Winterson, Sherry (1979), Coordinator, Registration
B.B.A., Eastern Michigan University
- Wisniewski, Lech (1991), Assistant Professor, Special Education.
Ph.D., University of Missouri
- Witczak, Andrea (1991), Assistant Professor, Art.
M.F.A., University of Illinois at Urbana-Champaign
- 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, Operations
Research and Information Systems.
Ph.D., University of Michigan

- Woods, Ronald C.** (1978), Department Head, Assistant Professor, African American Studies.
J.D., University of Michigan
- Woodward, M. Patricia** (1986), Nurse Practitioner, Health Services.
- 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, Operations Research and 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, Operations Research and Information Systems.
Ph.D., Purdue University
- Young, Phyllis A.** (1972), Assistant Professor, Human, Environmental, and Consumer Resources.
M.A., Eastern Michigan 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), Associate 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), Business Manager, 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

- 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, Allce 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
- 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
 Casewell, 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
 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
 Dlsbrow, 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
 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
 Fleider, 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
 Fitz, 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

- Galett, 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
 Gibson, Eugene M., B.A., M.A., Ph.D. (1956-81) Professor Emeritus, Foreign Languages
 Gibson, Sibylla A., B.A., M.A., M.A.L.S. (1958-82) Assistant Professor Emeritus, Learning Resources and Technologies
 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
 Harris, Augusta, B.S., M.A. (1928-69) Professor Emeritus, Health, Physical Education, Recreation and Dance
 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
 Holtash, 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, 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
 Kilanski, 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
 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

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
 McCarthy, Mary, B.A., S.C.T., M.A. (1959-83) Associate Professor Emeritus, Economics
 McDaniel, Thelma, B.F.A., M.A. (1964-86) 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
 Menzl, Elizabeth A., B.A., M.A., Ph.D. (1964-86) Professor Emeritus, Health, Physical Education, Recreation and Dance
 Minzey, 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
 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
 Ogden, Russel L., Ed.D. (1956-91) Professor Emeritus, Business and Industrial Education
 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

- PaDefford, 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, Louis, B.A., M.Ed., Ed.D. (1959-83) Professor Emeritus, Teacher Education
 Pyle, Hershel 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

- 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, Jullus 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
 Rulhley, 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
 Saube, 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

- Spilke, Clark G., B.S., M.S., Ph.D. (1958-83) Professor Emeritus, Chemistry
 Spltz, 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, Erna 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
 Treado, Bernard, A.B., M.A. (1953-75) Associate Professor Emeritus, Special Education
 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

U

- Underbrink, Eula, B.Ed., A.M. (1936-65) Associate Professor Emeritus, Home Economics

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
 Wilkinson, Helen, B.A., B.L.S. (1969-88) Assistant Professor Emeritus, University Library
 Williams, Robert J., Ph.D. (1966-91) Professor Emeritus, Marketing
 Williams, Wilbur A., B.S., M.A., Ph.D. (1948-83) Professor Emeritus, Teacher Education
 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
 Witt, Ellen B., A.B., M.A. (1969-85) Associate Professor Emeritus, Art

Wittke, Reinhard, 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

Y

Ylsto, Ingrid P., A.B., M.A., Ph.D. (1951-77) Professor Emeritus, Curriculum and Instruction

Z

Zambito, Stephen, A.B., Ph.D. (1955-86) Professor Emeritus, Teacher Education

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