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EASTERN

M I C H I G A N U N I V E R S I T Y

1996-1998 Undergraduate Catalog



EASTERN MICHIGAN UNIVERSITY
BULLETIN
1996-1998

THE UNDERGRADUATE CATALOG

136TH ANNUAL EDITION



ACCREDITED BY:

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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.

Volume CXXXVI Number 1

The Eastern Michigan University Bulletin (165940) is published five times each year by the Office of Academic Affairs, 106 Welch Hall, Eastern Michigan University, Ypsilanti, Michigan 48197. Second class postage paid at Ypsilanti, Michigan 48197.

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UNIVERSITY CALENDAR

1996-97 ACADEMIC CALENDAR

FALL SEMESTER, 1996

Aug. 31, Saturday Freshman residence hall
move-in day
Aug. 31, Sept. 1, 2 Freshman Orientation
Sept. 2 and 3 Monday, Tuesday Upperclass
residence hall move-in days
Sept. 4, Wednesday Classes begin
Nov. 27, Wednesday No classes after 5 p.m.
Nov. 28-Dec. 1, Thursday through
Sunday Thanksgiving recess
Dec. 2, Monday Classes resume
Dec. 14, Saturday Last day of classes
Dec. 15, Sunday (afternoon) Fall Commencement
Dec. 16-21, Monday through
Saturday Final examinations
Dec. 21, Saturday Fall session closes

WINTER SEMESTER, 1997

Jan. 5, Sunday ... Move-in day and Winter Orientation
Jan. 6, Monday Classes begin
Jan. 20, Monday Martin Luther King Jr.
Day - No Classes
Feb. 24-March 2, Monday through
Sunday Winter recess
March 3, Monday Classes resume
March 28-30, Friday through Sunday Spring recess
March 31, Monday Classes resume
April 21, Monday Last Day of Classes
April 22-26, Tuesday through
Saturday Final examinations
April 26, Tuesday Winter session closes
April 27, Sunday (afternoon) .. Winter Commencement

SPRING SESSION, 1997

May 4, Sunday Move-in day
May 5, Monday Classes begin
May 26, Monday Memorial Day (no classes)
June 10, Tuesday Last Day of Classes-six week
courses
June 11 & 12, Wednesday & Thursday ... Six-week final
examinations
June 23, Monday Last Day of Classes-seven
and one-half week courses
June 24 & 25, Tuesday & Wednesday Seven and
one-half week final examinations
June 25, Wednesday Spring session closes

SUMMER SESSION, 1997

June 29, Sunday Move-in day
June 30, Monday Classes begin
July 4, Friday Independence Day (no classes)
Aug. 6 & 7, Wednesday & Thursday Six-week final
examinations
Aug. 19 & 20, Tuesday & Wednesday Seven and
one-half week final examinations
Aug. 22, Friday Summer session closes

1997-98 ACADEMIC CALENDAR

FALL SEMESTER, 1997

Aug. 30, Saturday Freshman residence hall
move-in day
Aug. 30, 31 and Sept. 1, Saturday, Sunday,
Monday Freshman Orientation
Sept. 1, 2, Monday, Tuesday Upperclass
residence hall move-in days
Sept. 3, Wednesday Classes begin
Nov. 26, Wednesday No classes after 5 p.m.
Nov. 27-30, Thursday through
Sunday Thanksgiving recess
Dec. 1, Monday Classes resume
Dec. 14, Sunday (afternoon) Fall Commencement
Dec. 15-20, Tuesday through Saturday Final
examinations
Dec. 20, Saturday Fall session closes

WINTER SEMESTER, 1998

Jan. 6, Tuesday Move-in day and Winter
Orientation
Jan. 7, Wednesday Classes begin
Jan. 19, Monday Martin Luther King Jr.
Day - No Classes
Feb. 23-March 1, Monday through Sunday Winter
recess
March 2, Monday Classes resume
April 10-12, Friday through Sunday Spring recess
April 13, Monday Classes resume
April 23-28, Tuesday through
Saturday Final examinations
April 26, Sunday Winter Commencement
April 28, Tuesday Winter session closes

SPRING SESSION, 1998

May 5, Tuesday Move-in day
May 6, Wednesday Classes begin
May 25, Monday Memorial Day (no classes)
June 15 & 16, Monday & Tuesday Six-week final
examinations
June 25 & 26, Thursday & Friday Seven and
one-half week final examinations
June 26, Friday Spring session closes

SUMMER SESSION, 1998

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

WELCOME

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

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

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

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

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

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

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

UNIVERSITY PROFILE

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

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

New colleges precipitated the need for additional acreage. The university campus expanded from its original 275 acres on the south side of the Huron River to an additional 182 acres west of the campus primarily for student residences and athletic facilities. Among the newest buildings on campus are the Olds/Robb Student Recreation Center, opened in the fall of 1982 to provide needed recreational and intramural activities for the growing student body; the Sponberg Theatre addition to the Quirk Building, dedicated in January 1986; and the Coatings Research Building, opened in fall 1987. EMU's campus also extends into downtown Ypsilanti, where its new College of Business building is located.

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

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

Included in the geographic distribution of EMU undergraduates in 1993-94 were 90.1 percent from the

state of Michigan, 6.7 percent from out-of-state, and 3.2 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 Office of Continuing Education and in cooperative agreements with nearby community colleges. The Office of

International Studies plans spring/summer travel-study credit programs abroad and student-faculty exchanges with the University of Warwick, the Bulmershe College of Higher Education, and Nonington College, all in England.

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

Eastern Michigan University today is known world-wide for its educational contributions. Its 125,000 graduates are scattered among many countries as well as coast-to-coast in the United States, both strengthening and supporting the foundation that is the multipurpose university in Ypsilanti, Michigan.

Eastern Michigan University campuses and buildings are detailed on the inside 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 non-traditional ways and settings.

APPLICABLE

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

ATTAINABLE

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

COLLABORATIVE

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

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

QUALITY

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

UNIVERSITY GOVERNMENT

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

Members of the Board of Regents, are James Clifton, Ypsilanti; Robert A. DeMattia, Northville, chair; Anthony A. Derezhinski, Ann Arbor; Philip A. Incarnati, Linden; Mara M. Letica, Bloomfield Hills; Carl Pursell, Plymouth; and Gayle P. Thomas, Dearborn.

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

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

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

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

Americans with Disabilities Act: The University will work to ensure that students who have disabilities will receive accommodations which will equalize their ability to compete with other students in academic classes as well as physical access to student activities or university sponsored events.

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 by the National Association of Schools of Music; Physics and Astronomy; Political Science—accredited by the National Association of Schools of Public Affairs and Administration for its public administration programs; Psychology; Sociology, Anthropology, and Criminology; Women's Studies.

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

College of Education: accredited by the National Council for Accreditation of Teacher Education for the preparation of elementary and secondary teachers and school service personnel; Leadership and Counseling accredited by the Council for Accreditation of Counseling and Related Programs; Health, Physical Education, Recreation and Dance—accredited by the National Recreation and Parks Association for its recreation and park management curriculum; Teacher Education; Special Education—accredited by the American Speech and Hearing Association for its Speech Pathology Program for Teachers of the Speech and Lan-

guage 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 for its Dietetics Program by the American Dietetic Association and accredited by the Foundation for Interior Design Education and Research (FIDER) for its interior design program; Nursing Education—accredited by the National League for Nursing; Social Work—accredited by the Council on Social Work Education.

College of Technology: Business and Technology Education (Office Technology/Administrative Management, Office Technology/Legal Assistant — accredited by the American Bar Association, Office Technology/Office Automation, Marketing Education, Industrial-Vocational Education, and Technology Education — Folio approved by the National Council for Accreditation of Teacher Education/International Technology Education Association/Council on Technology Teacher Education); Industrial Technology (Construction Management — accredited by American Council for Construction Education, Computer-Aided Design — accredited by the National Association of Industrial Technology, and Manufacturing with concentrations in Computer-Aided Manufacturing, Manufacturing Technology, Plastics — all accredited by the National Association of Industrial Technology, and Manufacturing (transfer); and Interdisciplinary Technology (Aviation Management Technology, Communication Technology, Facility Management, Industrial Distribution, Polymers and Coating Technology — all accredited by the National Association of Industrial Technology, Bilingual Vocational Teacher Education, Bilingual Office Teacher Education, and Bilingual Marketing Teacher Education).

ADMISSION

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 to Eastern Michigan University is open to all students who have the potential to succeed and the motivation to continue their education. 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 are provided for those who wish to improve their academic skills and performance.

ACCEPTANCE into the University is dependent upon meeting the admission criteria described below. All students may take courses within 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, 401 Pierce Hall, provides information to meet the various needs of a prospective student. 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 Incentive 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. All applicants must also submit an official high school transcript (or equivalent GED). Applicants under the age of 21 who have earned less than 12 semester hours of transferrable credit (18 quarter hours) are also required to submit results of the ACT or SAT.

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

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

VETERANS who have served in the U.S. Armed Forces for more than 181 consecutive days will be admitted upon receipt of the high school transcript or its equivalent and a DD214 document verifying military duty. Veterans released from active service for reasons of disability will be considered as having met the 181 consecutive day requirement. If the veteran has attempted college work since release from active duty or while on 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 selected 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. Guest applicants who possess a bachelor's degree must apply through the Graduate School. *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 Continuing Education) are subject to regular admission criteria. However, they may be ad-

mitted 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. (See Post-Baccalaureate Academic Options)

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 and will need the following documentation in support of the application:

1. 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 International students.
4. Present a statement of financial responsibility covering the total cost of attending the University.

Undergraduate international student's English proficiency requirements are listed under the Department of Foreign Languages and Bilingual Studies (page 110).

POST-BACCALAUREATE ACADEMIC OPTIONS

Second bachelor's degree

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 a program of study. The program is approved by the appropriate academic department and is the basis for 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 who obtained their bachelor's degree from an institution other than Eastern Michigan University should apply as a Second Bachelor's candidate through the Undergraduate Admissions Office, 401 Pierce Hall. The Undergraduate Admissions Office requires an application, a \$20 non-refundable application fee, and official transcripts from each college, university, or other post-secondary school attended.

Students who have obtained a bachelor's degree from EMU but who now wish to obtain another major, minor, or a different bachelor's degree (i.e. a student with an EMU Bachelor of Science degree may pursue a Bachelor of Arts degree), should re-enroll as a Second Bachelor's candidate through the Undergraduate Records Office, 302 Pierce Hall. Admission as a re-enrollee is based upon the recommendation of the coordinator of Second Bachelor's Programs. (see Re-Enrollment)

Teacher Certification

Students who possess a bachelor's degree and are seeking teacher certification should contact the Undergraduate Records Office in 302 Pierce Hall (313-487-4202) for an advising appointment. Candidates whose undergraduate GPA was less than 2.5 should apply as a Second Bachelor's candidate (see Second Bachelor's Degree). Candidates whose undergraduate GPA was 2.5 or better should apply through the Graduate School.

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 they will be allowed to register.

Students who have attended any institution of higher education since being enrolled at Eastern Michigan University must have an official transcript sent from that institution to the Academic Records Office.

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 register prior to the start of classes 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/or by portfolio. In some instances, students may enroll immediately in advanced courses through various credit-by-examination programs. Especially high test scores may warrant additional academic credit and/or higher placement.

These programs include:

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

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

1. Credit may not be duplicated for separate tests and/or completed courses covering the same subject matter. Credit may be denied if the student has already successfully completed a higher level course in the same subject or enrolled in a similar course.
2. Credit by examination may be awarded up to a maximum of 30 credit hours.

3. The International Baccalaureate Diploma does not equate automatically with sophomore standing, nor does it automatically waive basic studies requirements.

For more information, contact the Academic Advising Center.

Students who submit their AP or IB scores to Eastern Michigan University are assured of at least three hours of academic credit for a score of 3 or higher on an AP exam and 4 or higher on the higher-level IB exam.

Credit by examination and validation is available through academic departments when CLEP examinations are not appropriate in assessing the student's previous education and/or life experiences.

Credit by examination regulations are:

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

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

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

Procedures for credit by examination and validation are:

1. Pick up, fill out, and return application for credit by examination/validation to the Academic Records

Office. Eligibility to sit for credit by examination/validation will be determined by the Academic Records Office, 302 Pierce.

2. Take paper provided by the Academic Records Office to the head of the department in which the course is offered. The department head will evaluate the request and make one of the following decisions:
 - a. Grant permission for credit by examination/validation.
 - b. Deny permission for credit by examination/validation.
 - c. Hold request for further investigation.
3. Once permission is granted and the time and place of exam are agreed upon, the student will validate the permission form by paying the fee to the EMU Cashier's Office.
4. The student will present the validated permission form to the instructor prior to taking any exam or activity for credit by examination/validation.
5. After the instructor evaluates student performance and indicates P/F on permission form, a copy of the written examination or explanation of the activity as well as the instructor's total evaluation will be placed on file in the office of the department head. The department head will sign the permission form indicating receipt of instructor's evaluation.
6. Department head will forward the permission form to the Academic Records Office, 302 Pierce for posting to the student's record.

Portfolio-assisted Prior Learning Assessment is available through participating academic departments when CLEP, credit by examination, and validation are not appropriate in assessing the student's previous learning. Call the PLA Office at (313) 487-0407 or (800) 777-3521 for additional information.

Academic standards for Portfolio-assisted Prior Learning Assessment are:

1. Credit is given only for learning and not for experience.
2. College credit is awarded only for college-level learning.
3. Credit is awarded only for learning that has a

balance, appropriate to the subject, between theory and practical application.

4. The determination of competence levels and credit awards is made by academic experts in the appropriate subject matter.
5. Credit is appropriate to the academic context in which it is accepted.

Procedures for Portfolio-assisted Prior Learning Assessment are:

1. The applicant must contact the PLA Office for information and registration form.
2. The applicant must be admitted to Eastern Michigan University.
3. The student must complete AADV279 before requesting credit through the process of portfolio-assisted prior learning assessment.
4. The student must compile a master portfolio to present for assessment within one year of completion of AADV 279.
5. The student must present the master portfolio and departmental portfolios to the PLA Office for review; upon successful review, the PLA Office will issue an assessment form.
6. The student will validate the assessment form by paying the required fee to the Eastern Michigan University Cashier's Office and returning a receipt to the PLA Office.
7. The PLA Office distributes portfolios to department heads for assignment to faculty assessors.
8. The assessors evaluate portfolios and may request additional demonstration of competence.
9. The assessors return portfolios and assessments to the PLA Office.
10. The PLA Office notifies the student of credit award or denial and also notifies the Academic Records Office of awarded credit for posting to the student's record.

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

ACADEMIC CREDIT AVAILABLE BY DEPARTMENTS

**essay required

Department	Exam/Subject Score	Min.	Credit Awarded	Placement	Departmental Credit-by-exam Available
Art	AP History of Art	3 4	FA 101 (3) FA 108 (3)	FA 107	with special permission
	AP Studio Art: General portfolio or drawing portfolio NOTE: An additional three credit hours may be awarded to art majors and minors through departmental evaluation of art portfolio.	3	FA 179 (3) or FA 379 (3)	See department head	
Biology	CLEP General Biology	46	BIO 105 (4) - Basic studies or elective credit only	BOT 221 or ZOO 222	with special permission
	AP General Biology IB (Higher Level)	3 4	Bio 105 (4) - Basic studies or elective credit only BIO 106 (4) - Basic studies or elective credit only	BOT 221 or ZOO 222 BOT 221 or ZOO 222	
Chemistry	CLEP General Chemistry	48 58	CHM 121 (3) CHM 121 (3) and CHM 123 (3)	CHM 122 CHM 122	with special permission
	AP Chemistry	3 4	CHM 121 (3) CHM 121 (3) and CHM 123 (3)	CHM 122 CHM 122	
Computer Science	CLEP Information Systems & Computer Programming	52	CSC 137 (3)		yes
	AP Computer Science A AP Computer Science AB	3 4	CSC 138 (3) CSC 138 (3) and CSC 238 (3)		
Economics	CLEP Intro to Macroeconomics	50	ECO 201 (3)	ECO 202	yes
	CLEP Intro to Microeconomics AP Macroeconomics AP Microeconomics	50 4 4	ECO 302 ECO 201 (3) ECO 202 (3)		
English	CLEP Freshman College Composition**	50 65	ENG 121 (3) ENG 121 (3) and ENG 225 (3)	ENG 225 any 200-300 level English course	yes
	English Literature**	50 65	LIT 100 (3) LIT 101 (3) and LIT 100 (3)	LIT 101, 102 or 103 any 200-300 level LIT course	
	AP English Language	3 4	ENG 121 (3) ENG 121 (3) and ENG 225 (3)	any 200-300 level English course any 200-300 level English course	
	AP English Literature	3 4	LIT 100 (3) LIT 100 (3) and 101 (3)	LIT 101, 102 or 103 any 200-300 level LIT course	
Foreign Languages***	AP French Language or French Literature	3 4	FRN 121 (5) FRN 122 (5)	FRN 122 FRN 221	yes
	German Language	3 4	GER 121 (5) GER 122 (5)	GER 122 GER 221	
	AP Latin: Vergil or Catullus-Horace	4 3	LAT 121 (5) LAT 122 (5)	LAT 122	
	Spanish Language or Spanish Literature	3 4	SPN 121 SPN 122 (5)	SPN 122 SPN 201	
	CLEP College French	39 45	FRN 121 (3) FRN 121/122 (6)	FRN 122 FRN 221	
	College level German	44 54	GER 121 (3) GER 121/122 (6)	GER 122 GER 221	
	College Spanish	44 54	SPN 121 (3) SPN 121/122 (6)	SPN 122 SPN 201	
History	CLEP American History I	50	HST 123 (3)	Most courses in the department	yes
	American History II Western Civ. I Western Civ. II AP United States History	50 50 50 3	HST 124 (3) HST 101 (3) HST 102 (3) HST 123 (3)		
	AP European History	4 3 4	HST 123 (3) or HST 124 (3) HST 101 (3) HST 101 (3) and HST 102 (3)	HST 124 (3) HST 102	
Management	CLEP Intro to Bus. Management	50	MGT 382 (3)	MGT 386	yes
Marketing	CLEP Intro to Business Law	55	LAW 293 (3)		yes
Mathematics	CLEP College Algebra	51	MTH 105 (3)	MTH 118, 119, 120 or 121	yes
	Trigonometry AP Calculus AB Calculus BC	54 3 3	MTH 107 (2) MTH 120 (4) MTH 120 (4) and MTH 121 (4)		
Music	AP Music Listening and Literature	3	MUS 107 (2)		with special permission
	Music Theory	3	MUS 100 (3)		
Physics	AP Physics B	3 4	PHY 221 (4) PHY 221 (4) and PHY 222 (4)	PHY 222	with special permission
	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 AP Comparative Govt. and Politics	3 3	PLS 112 (3) PLS 211 (3)		
Psychology	CLEP Introductory Psychology AP Psychology	50 3	PSY 101 (3) PSY 101 (3)	Most upper-level courses	yes
Sociology	CLEP Introduction to Sociology	50	SOC 105 (3)	SOC 202 or SOC 204	yes

UNIVERSITY HONORS PROGRAM

William Miller
Director
Jones-Goddard Community of Scholars
487-0341
e-mail: PHI-Miller@emuvax.emich.edu

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. Graduation with honors requires a cumulative GPA of at least 3.3, the completion of either 18 hours of honors credit in basic studies or 12 hours of departmental honors credit, including the senior thesis or project; and community service. Students who complete the program are appropriately recognized by special designations on their transcripts, certificates of achievement, the honors medallion, and letters of recommendation from the honors director explaining their accomplishments.

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

For further information, contact the University Honors Program office, 250 Jones Hall, Community of Scholars, (313) 487-0341, email: EMUHONORS@emuvax.emich.edu.

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.

The registration fee is \$40 for each semester. This service fee is assessed at the time the student registers and is non-refundable.

An additional late registration fee of \$10 is charged to students who, do not complete registration prior to the official first day of classes each semester.

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 signed 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.

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

TUITION

Tuition is assessed for all credit hours for which the student is registered. Regardless of student class level, undergraduate tuition is assessed for all 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 1993 levels are:

1996-97 Michigan Resident Rates

Undergraduate courses lower level (100-200) ..	\$91.00
Undergraduate courses upper level (300-400) ..	\$98.50
Graduate courses (500-600 level)	\$136.00

1996-97 Non-Resident Rates

Undergraduate courses lower level (100-200) ...	\$237.00
Undergraduate courses upper level (300-400) ..	\$253.00
Graduate courses (500-600 level)	\$317.00

RESIDENCE CLASSIFICATION FOR TUITION PURPOSES POLICY

I. REGULATIONS FOR DETERMINING RESIDENCE CLASSIFICATION

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

A. Establishment of Residence

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

B. Minors and Dependents over 18

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

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

C. Nondependent Students

An independent student 18 years of age or older

is considered eligible for residence classification if the student has demonstrated that he/she has established domicile in Michigan.

D. Spouse

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

E. Aliens

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

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

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

F. Migrants

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

Other appropriate evidence also may be used by migrant workers to establish their status.

G. Spouse or Dependent of a U.S. Military Service Person

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

H. U.S. Military Service Veteran

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

II. GUIDELINES AND CRITERIA FOR DETERMINING RESIDENCE CLASSIFICATION

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

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

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

1. Domicile in Michigan of family, guardian, or other relatives or persons legally responsible for the student.
2. Former domicile in Michigan and maintenance

- of significant connections therein while absent.
3. Self-supporting reliance upon Michigan sources for financial support. (Verification of Michigan income tax liability must be provided.)
 4. Continuous presence in Michigan during periods when not enrolled as a student.
 5. Long-term military commitments in Michigan.
 6. Acceptance of an offer of permanent employment in Michigan (in a position not normally filled by a student).
 7. Ownership of real estate in Michigan.

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

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

III. RECLASSIFICATION OF RESIDENCE STATUS

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

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

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

A tuition reciprocity agreement with Ohio, entered into by the Michigan State Board of Education and the Ohio Board of Regents in 1980, allows an Ohio resident to attend Eastern Michigan University at Michigan resident tuition rates. Michigan residents can attend the University of Toledo at Ohio resident tuition rates but only if they reside in Monroe County.

NOTE: *The Residence Classification for Tuition*

Purposes Policy is currently under review and is subject to change by action of the Eastern Michigan University Board of Regents without prior notice and at any time.

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 Book for each semester. To ensure a correct billing address, it is the responsibility of the student to inform the University of any address changes by completing a change of address form in the Registration Office.

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

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

The optional installment payment plan is offered in the fall and winter semesters only and is applicable to tuition and room and board. A minimum of 50 percent must be paid initially and the remainder by the eighth week of the semester. An installment service fee of \$20.00 is assessed with the first installment billing and a late payment fee of \$20.00 per month to a maximum of \$100 per semester or session is assessed on past-due balances.

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

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

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

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

An adjustment of 100 percent of the tuition assess-

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

FEE ADJUSTMENTS

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

For final adjustment deadlines and coordinate fee schedules, see the Class Schedule Books.

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

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

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

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

DECREASE IN ACADEMIC LOAD

For the fall and winter semesters 100 percent tuition credit less a \$10 program adjustment fee will be

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

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

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

1. Obtain a Tuition and Fee Appeal Application from the Student Accounting 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 Assistant Controller 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 may be denied.

SERVICE FEES

Room and board fees are published by the Housing Office and are set by action of the Board of Regents. See the 1993-94 estimated fee schedules at the end of this section.

A Health Care fee is charged at the rate of \$1.95 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 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 permit. To purchase your parking permit, you must first register your motor vehicle with the Public Safety Department, located on the ground floor of the parking structure. The application will contain information to indicate whether the permit will be mailed to you or whether you must pick it up in person.

The 1996-97 motor vehicle rates are as follows:

Permit Type	1996/97 Permit Cost
<i>Commuter Permit:</i>	
Fall/Winter (6:00 am-2:00 am)	\$70.00
Evening Fall/Winter (4:00 pm-2:00 am).....	40.00
Spring or Summer	17.50
<i>Resident Permit:</i>	
Apartment Housing (full year)	34.00
Fall/Winter Dorm	14.00
Brown-Munson Fall/Winter	60.00
Brown-Munson Spring/Summer	30.00
Spring or Summer Dorm	4.00
<i>Graduate Assistant:</i>	
Fall or Winter	16.00

Spring/Summer 16.00

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. Permit cost subject to change.

SPECIAL FEES

Music fees are charged for private lessons according to the following schedule (1995-96 fee schedule):

Music majors: \$60 per semester (maximum) 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: Lessons are available through the EMU Community Music School. Fees vary depending on the length of the lesson, and the instructor. Call the Department of Music for details.

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 209 The Art and Science of Nursing I Lab (3)	\$45
NUR 251 The Art and Science of Nursing II Lab (3).....	\$45
NUR 305 Nursing Care of Childbearing Families Lab (3)...	\$45
NUR 307 Nursing Care of Childrearing Families Lab (3) .	\$45
NUR 331 Adult Health Nursing I Lab (3)	\$45
NUR 341 Concepts of Professional Practice II Clinical Laboratory (3).....	\$45
NUR 351 Psychiatric/Mental Health Nursing Lab (3)	\$45
NUR 405 Adult Health Nursing II Lab (4)	\$60
NUR 451 Community Health Nursing Practice (3)	\$45

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.)

1995-96 Amount

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

STUDENT EXPENSES

Estimated Academic Year Costs (Residence Hall and Commuter Students)

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

Tuition and fees	\$3,200
Books and academic supplies	\$500
Residence hall room and board	\$4,400
Total direct educational costs	\$8,100
Estimated additional costs of personal, transportation, and miscellaneous expenses	\$1,200

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

Students can anticipate the following total costs: tuition and fees, books, room and board, personal and miscellaneous expenses, and transportation for an eight-month academic year (based on projected 1994-95 costs):

On campus student	\$9,300
Commuter student	\$7,000
Off campus student	\$8,900

The above budgets are based on Financial Aid average costs for 1995-96 with projected increases for 1996-97.

FINANCIAL AID

During 1995-96 Eastern Michigan University will pay more than \$56 million dollars in the form of scholarships, grants, part-time employment and loans to over 11,000 students.

Program funding is provided by the federal government, state of Michigan, Eastern Michigan University and private sources. While most awards are based on financial need, scholarships often have academic achievement requirements or other eligibility criteria.

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

APPLICATION FORMS

Academic Scholarships and University Awards

- Freshmen, new students and transfer students will be considered for scholarships and university awards through the EMU Admission application.
- Continuing students apply annually, by filing an Academic Scholarships and Awards application. Applications are available at the office of Financial Aid in October and are due in January.

Federal and State Need-Based Aid

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

By completing the Free Application for Federal Student Aid, undergraduate students are applying for:

- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant
- Federal Perkins Loan
- Federal Subsidized and Unsubsidized Stafford Loans
- Federal Work Study
- Michigan Competitive Scholarship

- Michigan Adult Part-Time Grant
- Michigan Educational Opportunity Grant
- Michigan Work Study

Graduate students are applying for:

- Federal Perkins Loan
- Federal Subsidized and Unsubsidized Stafford Loans
- Federal Work Study
- Michigan Work Study

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

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

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

The cost of education for undergraduate students for Fall and Winter 1996-97 semesters is:

On-campus	\$9,300
Off-campus	\$8,900
Commuter	\$7,000

DETERMINATION OF NEED-BASED FINANCIAL AID AWARDS

The award process for the upcoming academic year begins in April. Aid is awarded to students once they have been officially admitted to EMU and EMU receives the processed Student Aid Report from the federal government. Students will be awarded financial aid according to need, dependency status, program regulations

and available funding through the following programs: Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Michigan grant programs, Federal and Michigan Work Study, Federal Perkins Loans and Federal Subsidized and Unsubsidized Loans.

Once the aid package has been determined by the Office of Financial Aid, a Financial Aid Award Statement will be sent to students. The award statement contains information regarding the type and amount of aid, disbursement information and other instructions necessary to complete the aid process.

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

VERIFICATION OF FINANCIAL AID APPLICATION INFORMATION

Applicants selected for verification must produce evidence to prove the accuracy of certain items reported on the Free Application for Federal Student Aid before aid is disbursed. Major items verified include:

- taxed and untaxed income
- taxes paid
- number of family members in household
- number of family members in household who will attend college at least part-time in the award year
- benefits received from other federal and state sources

The deadline by which verification documentation must be submitted is published annually by the Office of Financial Aid. Failure to submit required documents by the due date may result in the cancellation of financial aid offers.

FINANCIAL AID TRANSCRIPTS

Students who transfer to EMU must submit a Financial Aid Transcript from each school previously attended regardless of whether aid was received at that school. Federal regulations prohibit the disbursement of financial aid until all Financial Aid Transcripts are on file.

SATISFACTORY ACADEMIC PROGRESS

Federal regulations require the Office of Financial Aid to monitor the academic progress of all students

toward the completion of a degree. This monitoring process is called Satisfactory Academic Progress (SAP). Academic progress is evaluated using three factors: grade point average, percentage of attempted courses completed, and maximum credits of eligibility in which to complete a degree. Failure to maintain Satisfactory Academic Progress will result in cancellation of eligibility to receive funds from federal Title IV, state, or university need-based aid programs*.

Undergraduate students are required to maintain a 2.00 overall grade point average (graduate students 3.00 gpa); maintain an overall completion rate of 75% at the University; complete their program of study within the maximum credits of eligibility (maximum credits of eligibility are calculated by multiplying the minimum number of credit hours required for a student's program of study by 150%. Transfer credits are included in the maximum credits of eligibility calculation).

All students who fail to maintain the relevant GPA and/or the required completion rate are placed on SAP probation by the Office of Financial Aid. Students placed on Academic probation by the University will also be placed on SAP probation. Students are eligible to receive financial aid while on probation and will have their progress checked after each semester. Students who fail to maintain the relevant GPA and/or fail to complete 75% of the credit hours attempted for each semester following notification of probation will no longer be eligible to receive financial aid.

Students will no longer be eligible for financial aid if any of the following occurs: failure to achieve the relevant GPA during any semester following notification of probation; failure to complete 75% of the credit hours attempted during any semester following notification of probation; academic dismissal; earned the maximum credits of eligibility allowed for their program of study. Details regarding reinstatement of financial aid eligibility appear on individual SAP cancellation letters.

Students who had extenuating circumstances which resulted in failure to maintain Satisfactory Academic Progress may appeal the cancellation. Students must submit a letter of explanation addressed to the Financial Aid Review Committee and attach third party documentation, as appropriate. The Financial Aid Review Committee meets weekly. Cases are reviewed and decisions are made within 10 to 15 business days after receipt. Students are notified in writing of the outcome of their appeals.

*Federal Title IV, state, and university aid pro-

grams include but are not limited to: Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Federal Perkins Loan, Federal Subsidized and Unsubsidized Stafford Loans, Federal Work Study, Federal PLUS Loan (Parent Loan for Undergraduate Students), Michigan Educational Opportunity Grant, Michigan Adult Part-Time Grant, Michigan Work Study, and Michigan Competitive Scholarship.

YOUR RIGHT TO APPEAL AID DECISIONS

All decisions made by the Office of Financial Aid follow federal and state regulations and university policy. Students may experience special circumstances or problems which warrant an exception to these regulations and/or policies. Strict federal guidelines regarding student dependency status limit the scope of professional judgement exercised by staff. Financial aid decisions may be changed by completing the appeal process. Procedures for the appeal process are available at the Office of Financial Aid.

PAYMENT OF FINANCIAL AID

A financial aid file must be complete and verified, if required, before aid is paid to a student's account. A completed file is one that contains a valid Free Application for Federal Student Aid Report; financial aid transcripts, if required; income documentation and family information, if selected for verification; and other student specific information as requested to determine eligibility.

The following aid is paid directly to a student's account:

- Federal Pell and Supplemental Educational Opportunity Grants
- State of Michigan grants and competitive scholarships
- University grants and scholarships
- Outside scholarships
- Federal Subsidized and Unsubsidized Stafford Loans with electronic funds transfer
- Federal Perkins Loans

Proceeds from paper checks from lenders participating in the Federal Subsidized and Unsubsidized Stafford Loan Program will be applied to a student's account once the check is endorsed.

Federal and state work study checks are issued to students for hours worked on a bi-weekly basis.

Students will be issued a refund check for aid applied to their account which exceeds the charges on that account.

REPAYMENT POLICY

Any student who withdraws from all classes before the end of the semester and who has received federal or state aid, may be required to repay aid paid toward room/board and personal costs.

Financial aid is used for expenses incurred while attending school. Aid is prorated over the entire semester and any portion allocated to the weeks the student did not attend classes must be repaid.

Students are notified when funds are returned to their lender and/or when they are required to repay aid. Consult the Office of Financial Aid before dropping a class or withdrawing from all classes to determine whether aid must be repaid or reduced.

TAX INFORMATION

Generally, financial aid is exempt from taxes if the amount received is for qualified tuition and related expenses required for courses at the educational institution (tuition, fees, books, supplies and equipment). The recipient must maintain records that establish the amounts used for qualified tuition and related expenses for their tax records. Records supporting such amounts include copies of relevant bills, receipts, cancelled checks or other documents which clearly reflect the use of the money from financial aid. Students who do not earn enough money to file an income tax return may need to determine if their financial aid makes a difference in their tax filing status. Questions regarding tax issues should be directed to the IRS or your income tax preparer.

REFUND POLICY

Please refer to the refund policy issued by Student Accounting.

FINANCIAL AID PROGRAMS

By completing the Free Application for Federal Student Aid, eligible students will be considered for all federal and state aid programs. To receive federal need-based aid, students must:

- be enrolled in an eligible program;

- be a U.S. citizen or an eligible noncitizen;
- demonstrate need;
- make Satisfactory Academic Progress toward a degree;
- not be in default on a federal student loan;
- not owe a refund on any federal Title IV, state or university aid program.

Eligible Michigan residents are also considered for state need-based aid.

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

FEDERAL FINANCIAL AID PROGRAMS

Federal Pell Grants - Annual awards of \$400 to \$2,340 are available to undergraduate students who are enrolled and have demonstrated financial need.

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

Federal Perkins Loan - Annual awards are available to undergraduate and graduate students who are enrolled at least half-time and have demonstrated financial need. Undergraduates may borrow up to \$3,000 per year (\$15,000 maximum) and graduate students may borrow \$5,000 per year up to a maximum of \$30,000 including loans borrowed as an undergraduate. Priority is given to students who receive a Federal Pell Grant.

Federal Subsidized and Unsubsidized Loan Program - Loans are provided through banks, savings and loan institutions and credit unions.

MICHIGAN FINANCIAL AID PROGRAMS

Michigan Competitive Scholarships - This state-funded scholarship program is based on a combination of competitive ACT tests results and financial need, as determined from completing the Free Application Federal Student Aid. Students initially apply by taking the American College Test no later than October of their senior high school year and having the test results sent to the State Scholarship Program. The second step of the application process is to submit the Free Application for Federal Student Aid (FAFSA). Students may

annually renew the scholarship by maintaining a 2.0 GPA and demonstrating continued financial need.

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

To apply for the following state need-based aid programs, students complete the Free Application for Federal Student Aid.

Michigan Adult Part-Time Grant - Need-based gift aid available to undergraduates who are enrolled 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 - Need-based gift aid 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.

Michigan Work-Study Program - 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. Awards range from \$900 to \$3,000 per year.

ARMED FORCES PROGRAMS

ARMY ROTC Scholarship Programs - 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 \$150 per month stipend while the scholarships are in effect.

Air Force ROTC Scholarships - Offered by the Air Force on a competitive basis to students interested in completing the AFROTC program and entering the Air Force as a commissioned officer. Two, three, and four-year scholarships are available. Scholarships pay full tuition and fees, a book allowance, and a \$150 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 - 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 ineligible for 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 the required registration forms with the University and pay full tuition and fees. Subsequent procedures will be explained at the Veterans Services office.

TEACHER CERTIFICATION

Students admitted to the teacher certification program will be automatically packaged with a Stafford loan limit of \$10,500 for a two-semester loan period.

UNIVERSITY SHORT TERM LOANS

Emergency Educational Expense Loans - Available to part-time and full-time students who (1) are

currently enrolled at the University, (2) have earned previous credit at Eastern, (3) qualify academically (minimum 2.0 "C" undergraduate, 3.0 "B" graduate), (4) have no past due obligations, and (5) have repaid previous loans satisfactorily. Students may borrow up to \$250 without a co-signer or up to \$500 with a co-signer. Loans are made available from memorials to groups or individuals. Applications may be obtained at the Student Loan Accounting Office, Pierce Hall. Loans are processed within 24 hours.

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

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

FAMILY FEDERAL PLUS LOAN

The Federal Parent Loan for Undergraduate Students (PLUS) is a loan from private lenders to parents of dependent students. Parents may borrow up to the cost of education less any other financial aid (including the Unsubsidized Stafford Loan amount). The PLUS loan is available to parents without adverse credit histories.

Interest rates are determined by the bond equivalent rate of the 52-week Treasury Bill plus 3.10 percent, not to exceed 10 percent. A 4 percent origination fee is paid directly to the federal government from the loan proceeds.

Repayment begins within 60 days after loan disbursement. Repayment may take up to 10 years. Minimum monthly payment is \$50.

Obtain an application from your chosen lender and submit the completed PLUS application to the Office of Financial Aid. Loan checks are made payable to the

parent and Eastern Michigan University and are sent to EMU in two disbursements.

MI-LOAN

The MI-LOAN Program provides credit-worthy students and their parents an alternate source of loan funds to assist in meeting college costs. The student must be enrolled at a Michigan college or university, have a financial need and be making satisfactory academic progress. The student borrower and co-signer must be:

- At least 18 years of age or an emancipated minor (the co-signer may not be an emancipated minor)
- A U.S. citizen or permanent resident
- Not be in default on any educational loans

The minimum amount is \$1,500 with an annual maximum amount of \$10,000 per academic year (9 months). The cumulative program maximum is \$50,000. The interest rate is a fixed rate of 8.4 percent with a 4 percent reserve fee; variable interest rate loans also are available. The repayment period is 15 years with a minimum monthly payment of at least \$50.

ACADEMIC SCHOLARSHIPS

Eastern Michigan University offers a variety of academic scholarships to freshmen and upper-class students. New Eastern Michigan students are considered for the following scholarships through the Admission Application:

Presidential Scholarship - Four year award that pays thirty credit hours per year of in-state tuition, housing, food allowance, and mandatory fees. Awards are based on a competitive exam. High school seniors must have either a 3.70 GPA or a 3.50 to 3.69 GPA with a minimum 25 ACT or 1150 SAT. Requires an additional application, available at high schools beginning each September. Ten awards are made per year. Minimum 3.50 GPA for renewal. Recipients must live in university residence halls their first two years. Deadline to apply is generally November 20 of each year.

Regents Scholarship - Four year award that pays \$2,400 freshman year, \$2,600 sophomore year, \$2,800 junior year, \$3,000 senior year. High school seniors must have a 3.50 GPA with a 25 ACT or 1150 SAT. Minimum

3.50 for renewal. Recipients must live in university residence halls their first two years. Must be admitted by February 15 for the next fall semester.

Recognition of Excellence Scholarship - Four year award that pays twelve credit hours per year (six per semester) plus mandatory fees. High school seniors must have a 3.30 GPA with a 21 ACT or 1000 SAT. Minimum 3.30 for renewal. Recipients must live in university residence halls their first two years. Must be admitted by February 15 for the next fall semester.

National Scholars Program - Four year award that pays thirty credit hours per year (fifteen per semester) of out-of-state tuition differential. High school seniors must have a 3.50 GPA with a 25 ACT or 1150 SAT. Minimum 3.50 for renewal. Recipients must live in university residence halls their first two years. Must be admitted by February 15 for the next fall semester.

Valedictorian and Salutatorian Scholarship - One year award of \$2,000. This scholarship will be awarded to new freshmen who graduate as the Valedictorian or Salutatorian from their high school, and who are admitted by February 15 for the next fall semester.

Merit Scholarship - One year award of \$500. High school seniors must have a GPA between 3.0 and 3.49 and must show volunteer involvement in their school or community for consideration. Students must be admitted by February 15 for the next fall semester.

Community College Scholarship - One year award of \$1,000. Students must be nominated by community college presidents or their designees. Students must have completed at least 30 credit hours with a minimum cumulative 3.50 community college GPA and must be admitted by May 1 for the next fall semester.

Departmental Scholarship - Award amounts vary. Selections can be based on academic as well as representative talent within that department or major. Students must be admitted by February 15 for the next fall semester.

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

Communication/Theater Arts Service Awards - Awards are made to students who perform in forensics, theater arts programs or make outstanding contributions to the Communication Theater Arts Department. Deadline is June 1 for the next fall semester.

Michigan Competitive Scholarship - Four year award of up to \$1,200 each year. Combines ACT test results with financial need (as determined by the Free Application for Federal Student Aid). Freshman deadline to apply is February 15 each year. Following the first year of eligibility, students must re-apply through the Free Application for Federal Student Aid by March 15 of each year.

Robert C. Byrd Scholarship - Four year award that pays \$1,500 per year. All applicants must be nominated by their high school principal through the Academic All-State Program, which is administered by the Michigan Association of Secondary School Principals and the Detroit Free Press. Award recipients and the high school principal are notified in May each year.

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

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 spring and summer sessions, five to six hours. Full-time enrollment for the fall and winter semesters is 12 hours or more. Full-time enrollment for the spring and summer semesters is six hours or more.

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

1. First semester freshmen may not take more than the recommended full-time academic load without special permission from the Academic Advising Center, 301 Pierce.
2. Students on academic probation may not take more than the recommended full-time academic load without special permission from the Academic Advising Center. Pass/fail semester hours are included in the total course load.

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

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

riterion 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 registered 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 register for the class, obtain a permission to audit card from registration, receive the approval of the head of the department offering the course, turn in the audit card, and pay the required tuition and fee as if 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 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

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

Guest	GS
Self Improvement	IM
Non-Matriculated	NM
Second Bachelors	SB

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

Course Number	Level of Difficulty*
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 approval from the Graduate School. Request forms are available at Starkweather Hall. 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 or other restrictions, unless waived by instructor's permission, may be prevented from registering for or required to drop the course. Courses at the 200, 300, and 400 levels that carry no prerequisites are taught at the academic levels described above.

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

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

If the student finds that he/she has three examinations scheduled on one day, he/she may request the instructor of the class having the first examination of the day to arrange to take the examination at another time. If he/she finds that he/she has four examinations scheduled for one day, he/she may request the instructors of the first two examinations to make arrangements

so that no more than two are scheduled in one day. He/she may appeal to the head of the department in which the course is offered if a satisfactory solution is not reached.

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

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

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

GRADES

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

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

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

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

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

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

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

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

approved for a course in which the student previously received a letter grade.

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

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

An "I" (incomplete) grade is awarded only when a student has completed the majority of the work of a course and the student's work has been of acceptable quality ("C" or better) but the required amount of work has not been completed because of illness, necessary absence, or other satisfactory reasons. It is never applied to poor work or to nonattendance of class by the student. It means that the student has informed the instructor of the reason for the requested incomplete, and the instructor has agreed to the request.

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

The initiative for conversion of an "I" to a letter grade rests with the student. If not converted to a grade by the end of the one-year period, the "I" will remain as a permanent part of the student's academic record.

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

Grade changes attempted by students must be initiated no later than the end of the eighth week of the next regular semester (fall or winter) following the semester or session in which the grade was given. A grade grievance must be initiated within five working days after the start of the next regular semester (see Grade Grievance Procedure in Student Reference Section). For instructor-requested changes, this means that the appropriate form has been submitted to the department

head. For student appeals, it means that the instructor has refused to make a change and the issue has been formally turned over to the departmental grievance board.

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

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

1. No course may be taken more than three times, except by permission of the head of the department in which the course is offered.
2. No student may repeat more than 10 different courses in the process of completing a baccalaureate degree, except by permission of the Admissions Review/Academic Standards Committee. Contact is made through the Academic Advising Center.
3. All grades earned by a student will be retained on the student's permanent record and repeats will be indicated.
4. Only the grade received the last time the course is taken will be used in compiling graduation credits and in determining the cumulative grade point average.
5. A course failed at Eastern Michigan University may not be repeated at another accredited college or university to satisfy Eastern Michigan University requirements without prior written approval of the director of Records, Registration, and Advising.

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

The scholarship index or grade point average is the total number of Eastern Michigan University grade points acquired, divided by the total number of Eastern Michigan University semester hours taken which carry

grade points. When a course is repeated, only the last grade is used in the computation of the grade point average.

Transfer credit from another accredited institution is allowed for all transferable courses in which a grade of "C" or better is received, but is not included in computation of the grade point average. Non-index courses are not included in the computation of the grade point average.

Calculation of GPA for **returning former or transfer students** who have not attempted any college or university work for at least two calendar years does not include courses in which a grade of less than "D-" was assigned.

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

GRADE GRIEVANCE PROCEDURE

The grade grievance procedure provides each student with the opportunity to appeal formally a final grade in a course because he or she believes that the grade has been awarded capriciously or unfairly. This procedure is not intended to handle disputes that may arise about the grading of individual exams or assignments during the semester. When such disputes arise, the student should contact the instructor immediately, rather than waiting until the end of the semester. Each grade grievance submitted according to this procedure must be an individual action by an individual student. 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 schedul-

ing 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 with 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 cannot require his/her attendance, and the grievance hearing is then held as previously scheduled. If a closed meeting is held, 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) students 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 will contain a numerical report of the vote and will 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 or designee 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 that 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 personally 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 are available during 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

A student's academic status will change from "GOOD" to either "PROB" OR "DISM" when the cumulative grade point average at EMU is less than 2.0 ("C" Average) at the completion of any term of enrollment. The resulting academic status is determined by the relationship between the cumulative grade point credits and cumulative grade point average. The status will be changed to "PROB" for academic probation or "DISM" for dismissal.

Academic probation means that the student's grade point average has fallen below 2.0, but the student is eligible to continue course work. A student not subject to dismissal will remain on probation until he/she raises the cumulative grade point average to 2.0 or higher. To avoid the risk of academic dismissal, a student must earn at least a term grade point average of 2.0 or higher while on probation.

Certain conditions are attached to an academic status of probation.

Students on probation may not:

- Enroll in more than the established maximum load for regular full-time status in any term of enrollment. For Fall and Winter, this would be 16 credits; in Spring and Summer, 8 credits.
- Enroll in education courses or courses which require admission to the College of Education.
- Receive credit for graduate level courses (500 level).
- Take courses on Pass/Fail.

Students whose grade point average and grade point credits place them in the dismissal range will be academically dismissed, unless the term grade point average is 2.0 or higher. Even students who have not been on probation previously may risk dismissal; there is no automatic grace period, even for those new to EMU. Any dismissal action is subject to an appeal through the Academic Advising Center. Instructions and deadlines for such appeals are included with a written notice of dismissal, which is sent to each student after the conclusion of the term of enrollment. Students who appeal may be reinstated, which means that the most recent dismissal action is rescinded and the student is eligible to continue in course work; if the student's grade point average is still less than 2.0 at the time of reinstatement, probation policies will apply. The student must earn a term grade point average of 2.0 to avoid the risk of dismissal again.

Policies and actions relating to probation and dismissal are defined by the Academic Standards Committee and administered by the Assistant Director for Academic Actions in the Academic Advising Center.

A dismissed student will be considered for readmission to EMU after two successive enrollment periods (one of which must Fall or Winter) have elapsed. Procedures for readmission involve submitting a written statement explaining readiness to return, supported by at least two letters of support and other relevant documentation. Any course work taken elsewhere subsequent to dismissal must be 2.0 or better and EMU residency policies for transfer credits will apply. Specific details and procedures are provided by the Academic Advising Center and may be obtained by contacting that office at 313-487-1207. Materials concerning readmission must be submitted to the Assistant Director for Academic Actions in writing. Deadlines for Fall and Winter are July 1 and November 15 respectively. Students who have been dismissed more than once previously (reinstatements excluded) normally will not be considered for readmission.

WITHDRAWALS

Withdrawals from individual classes

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

**First eight days:* 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.

**Ninth day through tenth week:* All student-initiated withdrawals are accepted automatically and recorded as "W." A withdrawal may be processed through the touchtone registration system or by submitting a withdrawal form to the Registration Office, 303 Pierce Hall. Withdrawals initiated during this period are not eligible for tuition adjustment. (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 with-

out officially withdrawing from the class and does not take the final examination, University policy requires that the instructor assign a grade of "E" for the course.

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

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

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

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

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

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

WITHDRAWALS FROM THE UNIVERSITY

Withdrawal from the University and all classes currently being taken is accorded students who apply in person at the Registration Office, or by mailing a written request to the Registration Office. 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 eight class days

of the semester (four class days for spring/summer) will receive a 100 percent tuition credit adjustment less an administrative fee and no grades will be posted.

2. Students who withdraw from the 9th through the 19th class days of the semester (the 5th through the 10th class days for spring/summer) will receive a 50 percent tuition credit adjustment, less an administrative fee and grade of 'w' will be posted.
3. Students who withdraw from the 20th through the 38th class day (11th through 19th class days for spring/summer) will receive a 25% tuition credit adjustment, less an administrative fee.
4. Students who withdraw after 38 class days of the semester (20 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.
5. No withdrawal will take place after the official University final examination period has begun.

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

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

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

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

In either situation, the student must initiate the request at the Academic Advising Center, 301 Pierce Hall. Upon review of the documented evidence and possible further consultation, the director or designee will

recommend action to the office of the vice president for academic affairs.

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

STUDENT CONDUCT/GRIEVANCES

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

COURSE PREFIXES

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

	PREFIX		
ACADEMIC AFFAIRS DIVISION	AAD		
COLLEGE OF ARTS AND SCIENCES			
African American Studies	AAS		
Art	FA		
Art Education	FA		
Art History	FA		
Studio Art	FA		
Biology	BIOL		
Botany	BOTN		
Elementary Science	ESCI		
Microbiology	MICR		
Zoology	ZOOZ		
Chemistry	CHEM		
Computer Science	COSC		
Communication and Theatre Arts	COTA		
Activity	CTAA		
Communication	CTAC		
Drama/Theatre for the Young	CTAD		
Interpretation/Performance Studies	CTAO		
Telecommunications and Film	CTAT		
Theatre Arts	CTAR		
Speech	CTAS		
Economics	ECON		
English Language and Literature			
English	ENGL		
Journalism	JRNL		
Linguistics	LING		
Literature	LFTR		
Foreign Language and Bilingual Studies			
Classics Courses	CLAS		
English as a Second Language	ESLN		
Foreign Language	FLAN		
French	FRNH		
German	GERN		
Greek	GREK		
Japanese	JPNE		
Language	LNGE		
Latin	LATN		
Spanish	SPNH		
Teaching English as a Second Language (TESOL)	TSLN		
Geography and Geology			
Earth Science	GESC		
Geography	GEOG		
Geology	GEOL		
Historic Preservation	GHPR		
History and Philosophy			
History	HIST		
Philosophy	PHIL		
Mathematics	MATH		
Music	MUSC		
Applied Music	AMU		
Physics and Astronomy			
Astronomy	ASTR		
Physics	PHY		
Political Science	PLSC		
Psychology	PSY		
Sociology, Anthropology, and Criminology			
Anthropology	ANTH		
Criminology	CRM		
Sociology	SOCL		
Women's Studies	WMST		
COLLEGE OF BUSINESS	COB		
Accounting	ACC		
Decision Science	DS		
Finance and Computer Information Systems			
Finance	FIN		
Insurance	INS		
Information Systems	IS		
Production/Operations Management	POM		
Management	MGMT		
Marketing	MKTG		
Law	LAW		
Real Estate	RES		
COLLEGE OF EDUCATION			
Leadership and Counseling			
Educational Leadership	EDLD		
Guidance and Counseling	GDCN		
Health, Physical Education, Recreation and Dance			
Athletics	ATHL		
Dance	DANC		
Health Education	HLED		
Physical Education	PHED		
Physical Education Activity-General	PEMG		
Physical Education Activity—Majors	PEMJ		
Recreation	RECR		
Special Education			
Emotionally Impaired	SPEI		
General	SPGN		
Hearing Impaired	SPHI		
Learning Disabled	SPLD		
Mentally Impaired	SPMI		
Physically and Otherwise Health Impaired	SPPI		
Speech and Language Impaired	SPSI		
Visually Impaired	SPVI		
Student Teaching	EDUC		
Teacher Education			
Curriculum and Instruction	CURR		
Educational Media	EDMD		
Educational Psychology	EDPS		
Educational Technology	EDTC		
Reading	RDNG		
Social Foundations of Education	SOFD		
COLLEGE OF HEALTH AND HUMAN SERVICES	HHS		
Associated Health Professions	AHPR		
Clinical Laboratory Sciences	CLSC		
Health Administration	HLAD		
Occupational Therapy	OCTH		
Human, Environmental, and Consumer Resources	HECR		
Dietetics	DTC		
Hospitality Management	HM		
Family and Consumer Science	FCS		
Fashion Merchandising	FM		
Interior Design	IDE		
Nursing	NURS		
Social Work	SWRK		
Gerontology	GRET		
COLLEGE OF TECHNOLOGY			
Business and Technology Education			
Business Education	BEDU		
Technology Education	TEDU		
Industrial Technology	INTE		
Interdisciplinary Technology	INDT		
Military Science	MS		

GRADUATION REQUIREMENTS

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

The minimum number of credit hours required for graduation is 124. To earn a degree, students must complete the basic studies (which follow), complete a major of 30 to 36 hours and a minor of 20 to 24 hours, as specified in their fields of study or a self-contained program of 50-60 hours, 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 Academic Records Office 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 (BS) and the Bachelor of Arts (BA) degrees, described fully in the introduction to the College of Arts and Sciences.

Bachelor's degrees are also awarded in fine arts (BFA) and art education (BAE)—see Department of Art, College of Arts and Sciences; business administration (BBA)—see College of Business; Bachelor of Business Administration and Bachelor of Arts in language and world business (BBA/BA)—see College of Business or Department of Foreign Languages, College of Arts and Sciences; business education (BBE)—see Department of Business and Industrial Education, College of Technology; music education (BME), music-performance (BMU), and music therapy (BMT)—see Department of Music, College of Arts and Sciences; nursing (BSN)—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 Social Work, Master of Nursing, Master of Science in organizational behavior and development, and Master of Liberal Studies. In addition, there is a Specialist in Arts degree and a post-master's program called Certificate of Advanced Study in Curriculum and Instruction (CASCI) and a doctorate in educational leadership. All are listed in the Graduate Catalog.

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

These subject group areas are:

Language and Literature (Group I)

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

Science and Mathematics (Group II)

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

Social Sciences (Group III)

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

Education (Group IV) Teacher Education only)

Education (including methods courses and student teaching).

Fine Arts (Group V)

Art, music.

Practical Arts (Group VI)

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

Physical Education and Health Education (Group VII)

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

BASIC STUDIES PROGRAM

History

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

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

Implementation Schedule

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

Rationale

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

Requirements: 16 courses

All students are required to complete courses in four areas:

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

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

Special Note 2: A set of interdisciplinary courses may be elected by honors students and, as space is available, by students with a cumulative grade point average of at least 3.0 to satisfy the requirements in fine arts, history, literature, music, philosophy, and theatre arts. For further information, consult the Honors Courses in Basic Studies on page 46.

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

ENGL 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 ENGL 120, you must then complete ENGL 121.

ENGL 121 English Composition

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

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

2. A course in speech communication

Complete one of the following courses:

CTAS 121 Fundamentals of Speech (2 sem hrs.)

CTAS 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 Communication and Theatre Arts department.

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:

ANTH 200 Writing for Anthropology

ENGL 225 Intermediate English Composition

ENGL 324 Principles of Technical Communication

ENGL 223 Writing in the Professional World

ENGL 227 Writing about Literature

ENGL 326 Research Writing

3b. An upper level course in speech communication

Complete one of the following courses:

CTAC 224 Public Speaking

CTAC 225 Listening Behavior

CTAC 226 Non-Verbal Communication

CTAC 227 Interpersonal Communication

*CTAC 374 Intercultural Communication

*CTAC 375 Interracial/Interethnic 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).

LATN 121/122 Beginning Latin

GREK 121/122 Beginning Ancient Greek

FRNH 121/122 Beginning French

FRNH 233/234 Intermediate French Conversation, Composition, and Grammar

GERN 121/122 Beginning German

GERN 233/234 Intermediate German Conversation, Composition, and Grammar

JPNE 121/122 Beginning Japanese

JPNE 211/212 Intermediate Japanese

SPNH 121/122 Beginning Spanish

SPNH 201/202 Intermediate Spanish

4. A course in mathematical reasoning

Complete one of the following courses:

MATH 109 Mathematics for Elementary Teachers II

MATH 118 Mathematical Analysis for Social Sciences I

MATH 119 Mathematical Analysis for Social Sciences II

MATH 120 Calculus I

MATH 121 Calculus II

MATH 122 Elementary Linear Algebra

MATH 150 Mathematical Reasoning

MATH 270 Elementary Statistics

MATH 341 College Geometry

SOCL 250 Social Statistics I

Note: Students are entitled to a waiver of this requirement if they have submitted a score of 22 or above on the mathematics portion of the enhanced ACT or a

score of 500 or above on the SAT. A waiver form must be obtained from the Academic Advising Center. Curriculum or major requirements must still be satisfied.

5. A course in computer literacy

Complete one of the following courses:

- BEDU 201 Microcomputers for Business Applications
- COSC 136 Computers for the Non-Specialist
- COSC 137 Introduction to FORTRAN Programming
- COSC 138 Computer Science I
- COSC 237 Computer Programming and Numeric Methods
- IHHS 226 Computers for Health and Human Services
- INTE 105 Computer Applications for Industry
- INDT 201 Microcomputer Applications in Technology
- IS 215 End-User Computing

AREA II: SCIENCE AND TECHNOLOGY

Requirements: 3 courses

1. A course in physical science.

- a. You must complete a course in chemistry or physics unless you have submitted appropriate evidence to the Academic Advising Center that you completed a one unit course in high school with a grade of "C" or above.
- b. If you have submitted proof of having completed a one unit high school course in chemistry or physics, you may satisfy this requirement by choosing among chemistry, earth science/geology, or physics/astronomy.

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

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

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

A. Rationale

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

Observation of the natural world leads to theories, from which hypotheses are generated. These hypoth-

eses 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
- CHEM 105 Survey of Chemistry
- CHEM 115 Chemistry and Society (no laboratory)
- CHEM 115-116 Chemistry and Society
- CHEM 119 Fundamentals of Chemistry
- CHEM 120 Fundamentals of Organic and Biochemistry
- CHEM 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:

- ASTR 203 Exploration of the Universe (no laboratory)
- ASTR 203-204 Exploration of the Universe
- ASTR 205 Principles of Astronomy (no laboratory)
- ASTR 204-205 Principles of Astronomy
- GESC 108 Earth Science
- GEOG 120 The Fossil Record (no laboratory)
- GEOG 160 Physical Geology

2. A course in life science

Complete one of the following courses.

- BIOL 105 Biology and the Human Species
- BOTN 221 General Botany

ESCI 303 Science for the Elementary Teacher
 ZOOL 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:**
 CHEM 101 Science for Elementary Teachers
 INDT 150 Understanding Technology (no laboratory)
 INTE 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 pub-

lic 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:
 PLSC 112 American Government
 PLSC 113 American Government Honors
2. **A course in history**
 Complete one of the following courses:
 HIST 101 Western Civilization to 1648
 HIST 102 Western Civilization, 1648 to World War I
 HIST 103 Twentieth Century Civilization
 HIST 106 Asian and African Civilizations
 HIST 123 The United States to 1877
 HIST 124 The United States, 1877 to the Present
Note: Some students may be eligible to fulfill the requirements in history by pursuing options described in the Honors Courses in Basic Studies on page 46.
3. **A course in anthropology, economics, geography, or sociology**
 Complete one of the following courses:
 ANTH 135 Introduction to Cultural Anthropology
 ECON 201 Principles of Economics I
 GEOG 107 Introduction to Geography
 GEOG 110 World Regions
 SOCL 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:
 HIST 102 (follows 101) Western Civilization, 1648 to World War I
 HIST 103 (follows 102) Twentieth Century Civilization
 HIST 124 (follows 123) The United States, 1877 to the Present
- 4b. **A second course in a two-course sequence in anthropology, economics, geography, or sociology**
 Complete one of the following courses:
 ANTH 140 (follows 135) Introduction to Prehistoric Anthropology

ECON 202 (follows 201) Principles of Economics II
 GEOG 111 (follows 110) Regions and Resources
 SOCL 202 (follows 105) Social Problems

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

Complete one of the following courses:

- *AAS 101 Introduction to African American Studies
- *ANTH 205 Minority Women in the United States
- *ANTH 233 Peoples and Cultures of Mexico
- *ANTH 236 Peoples and Cultures of Africa
- *ANTH 237 Indians of North America
- *ANTH 245 Culture of Japan
- *ANTH 214 Racial and Cultural Minorities
- *ANTH 355 Anthropology of Women
- *ECON 321 Minority Workers in the Labor Market
- *ECON 328 Economics of Women
- *HIST 305 Indians of the United States
- *HIST 315 History of Black Americans
- *HIST 336 History of Women in the United States and Great Britain, 1800 to the Present
- *HIST 341 The Middle East, 1798 to Present
- *HIST 342 North Africa, 1798 to Present
- *HIST 348 Twentieth Century Africa
- *HIST 356 Latin America: National Period
- *HIST 375 Modern India
- *SOCL 205 Minority Women in the United States
- *SOCL 214 Racial and Cultural Minorities
- *SOCL 344 Sociology of Sex Roles
- *WMST 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 46.

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

1a. A course in literature

Complete one of the following courses:

- LITR 100 The Reading of Literature
- LITR 101 The Reading of Literature: Fiction
- LITR 102 The Reading of Literature: Poetry
- LITR 103 The Reading of Literature: Drama

1b. A course in intermediate or advanced foreign language literature

Complete one of the following courses:

- FRNH 221/222 Intermediate French Reading
- FRNH 341/342 Survey of French Literature
- GERN 221/222 Intermediate German Reading
- GERN 341/342 Survey of German Literature
- SPNH 221/222 Intermediate Spanish Reading
- SPNH 341/342 Survey of Spanish Literature
- SPNH 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:

- LITR 101 The Reading of Literature: Fiction
- LITR 102 The Reading of Literature: Poetry
- LITR 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 CTAO 210 Interpretative Reading

2d. A course in cross-cultural or international studies

Complete one of the following courses:

*FLAN 215 The Culture of the Latino Groups in the United States

*LITR 204 Native American Literature

*LITR 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:

PHIL 100 Introduction to Philosophy

PHIL 110 Philosophies of Life

PHIL 120 Introduction to Critical Reasoning (3)

PHIL 130 Introduction to Logic

PHIL 212 Philosophy of Art

PHIL 215 Philosophy of Religion

PHIL 220 Ethics

PHIL 221 Business Ethics

PHIL 225 Political Philosophy

*PHIL 226 Philosophy of Women

3b. A course in the study of religion

Complete one of the following courses:

HIST 100 The Comparative Study of Religion

PSY 225 Psychology of Religion

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

Complete one of the following courses:

FA 100 Art Appreciation

FA 101 Introduction to Art

FA 107 Art History Survey I

FA 108 Art History Survey II

FA 122 Two-Dimensional Design

FA 123 Drawing I

FA 165 Graphic Design for Non-Majors

FA 166 Ceramics for Non-Majors

FA 167 Jewelry for Non-Majors

*FA 222 African and African American Art

4b. A course in dance

Complete DAN 106 Introduction to the Performing Arts

4c. A course in music

Complete one of the following courses:

MUSC 100 Introduction to Music Theory

MUSC 106 Introduction to the Performing Arts

MUSC 107 Music Appreciation

4d. A course in theatre arts

Complete one of the following courses:

CTAR 106 Introduction to the Performing Arts

CTAR 145 Introduction to Film Appreciation

CTAR 150 Introduction to Theatre

*CTAR 151 African American Theatre: An Introduction

CTAR 158 Fundamentals of Acting

CTAR 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:

CLAS/HIST 104 Quest for Power: Famous Figures in History	3 credits	Area: LIT or HIS
CLAS/LITR 106 Rome and America	6 credits	Area: LIT
HIST 127 The Splendid Centuries of Austria	3 credits	Area: HIS
HIST/LITR 128 Russia in the Age of Tolstoy and Dostoevsky	3 credits	Area: LIT or HIS
FA/HIST 151 Reason and Revolution	3 credits	Area: FA or HIS
HIS/LITR 152 From the Gay Nineties to the Crash	3 credits	Area: LIT or HIS
PHIL/LITR 155 Narrative in Literature and Film	3 credits	Area: LIT or PHI
179/279/379/479 Special Topics	3 credits	Area: Varies

FUTURE CHANGES IN THE BASIC STUDIES PROGRAM

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

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

THE MACRAO AGREEMENT

Eastern Michigan University is a signator of the MACRAO (Michigan Association of Collegiate Registrars and Admissions Officers) agreement. The purpose of this agreement is to ensure that students who complete a specified distribution of general education courses at a community college will have satisfied general education requirements at signatory four-year colleges. Eastern Michigan University accepts the MACRAO agreement with the following provision:

Students who have been certified by a signatory community college as having satisfied the general education requirements of the MACRAO Agreement and have earned a grade of "C" or better in each required course, will be required to fulfill only the four additional courses now a part of Eastern Michigan University's basic studies requirements: an advanced writing or speaking course or a foreign language composition course; a mathematics course (unless waived by ACT scores); a computer literacy course; and a multicultural

course, all from the approved list. This agreement applies only to basic studies and does not exempt the community college students from meeting all curriculum and graduation requirements.

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 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, clinical laboratory sciences, criminal justice, nursing, music therapy, industrial technology, interior design, 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 academic department 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 grade point average.

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

Physical Education: 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 for the subsequent graduation period.

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

CERTIFICATION

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

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

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

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

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

**A holder of this certificate who has completed EMU's curricular requirements in art, speech pathology, industrial arts, music, Japanese, 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 vocational certificates issued are:

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

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

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

PROFESSIONAL CERTIFICATE

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

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

Other professional certificates and procedures are as follows:

Registration in 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 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 de-

gree 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, and major(s) and minor(s) elected. In addition, a check list is provided for degrees expected and teacher certification expected. 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 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.

ACADEMIC ASSESSMENT

The North Central Association of Colleges and Schools (NCA) is EMU's regional accrediting body. The have mandated that every college and university in the NCA region have a plan for assessing both Basic Studies and each academic major in place for all students enrolling in the Fall 1995 semester and later. EMU endorses this mandate and believes that the University will benefit by identifying the key skills and concepts that academic programs are developing and how well

these skills and concepts are being developed in our students.

Because it is important to assess a representative sample of students, Eastern Michigan University considers involvement in this assessment mandatory for students asked to participate.

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

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

STUDENT SERVICES

ACADEMIC ADVISING CENTER

Patricia Williams
Associate Director
301 Pierce Hall
487-2170/487-2171

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 (AADV 179) in addition to other University courses. This program

offers smaller classes, special tutoring assistance, and an intrusive advising program.

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

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

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

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

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

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

Career planning information also is available at the following:

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

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.

BASIC DEGREE CURRICULA

Bachelor of Science and Bachelor of Arts

Patricia L. Williams
Associate Director
Academic Advising Center
301 Pierce Hall
487-2170/487-2171

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

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

- b. an upper-level course in speech communication.
 - c. a course in foreign language composition.
- One course in mathematical reasoning.
One course in computer literacy.

Science and technology 9-14

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

Social science 12

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

Arts and humanities 11-12

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

Cross-cultural or international studies..... 3
 One course selected from basic studies areas I-IV.

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

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

Physical education and health 2
 (PEGN 210: Lifetime Wellness and Fitness or any two courses in Military Science or approved substitution)

Electives 20-39

Total 124

Advising: Sequence of Courses

Use the following program 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: _____

Individualized Interdisciplinary Concentration

Charles Fulford
 Assistant Director
 Academic Advising Center
 301 Pierce Hall
 487-2170/487-2171

An optional, individualized interdisciplinary concentration may be designed to replace the major and minor for students whose educational, vocational, or professional goals cannot be met by majors and minors currently available at Eastern Michigan University. Because of its individual design, this program is especially attractive for non-traditional students and for those with a clear personal goal.

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

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

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

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

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

Career Services Center

J. Michael Erwin, PhD
 Director
 Fourth Floor, Goodison Hall
 487-0400
 Adjunct Office: 210 Owen
 487-4099

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

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

CSC offers an innovative career planning program called Career Choice. CSC, in conjunction with a number of other EMU departments, focuses on helping students select majors and occupational fields early in their academic careers. Assistance is provided through self-assessment, information about occupations, and opportunities to secure employment and volunteer experience in career-related fields.

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 employ-

ment, 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 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

Linda Vengroff
Associate Director

3rd Floor, Snow Health Center
487-1107

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

Health Services

Diane Sobell
Clinical Administrator
2nd Floor, Snow Health Center
487-1122

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

- General Medicine
- Allergy Injections
- Gynecology
- TB Testing
- Immunizations
- Physical Exams
- HIV/AIDS Testing and Counseling

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

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

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

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

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

- Charge to student account
- Visa/MasterCard
- Cash/check
- Payroll deduction (EMU faculty/staff)

Counseling Services

Rosalyn L. Barclay
Associate Director
3rd Floor, Snow Health Center
487-1118

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

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

The Campus Peer Program, sponsored by Counseling Services and Health Services, offers student volunteers the opportunity to assist their peers with a variety of personal and social concerns, sexual health and substance abuse issues. Campus Peers receive extensive training to prepare them to present interactive programs and lead discussions throughout the campus. For further information about the Campus Peer Program, call 487-3047.

Counseling Services is located on the top floor of Snow Health Center. Students may make appointments or initiate counseling during walk-in hours on Monday or Thursday, beginning at 12:45 p.m. Hours are 8 a.m. to 12 noon, and 1 p.m. to 5 p.m. Monday through Friday.

Health Resource Center

3rd Floor, Snow Health Center
487-2226

The Health Resource Center is the health education unit of University Health Services. Health educators with expertise in college health issues provide workshops and lectures to student organizations and aca-

ademic classes; plan and implement special health education events; and, when appropriate, schedule individual consultations with students. A variety of topics are covered, such as: personal growth and development issues, sexual health concerns, and alcohol and other drug information. Specific programs include: HIV/AIDS testing and counseling, Lifelines performance company, Checkpoint, Project REACH-Out, and the Campus Peer Program.

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

All services are free to students.

Children's Institute

Lindy Buch
Associate Director

Lorraine Paffenroth
Coordinator of Services

1st Floor, Snow Health Center
487-1126

1st Floor, 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. Children's Institute is closed when the University is closed, however additional time may be purchased during University breaks. The Children's Institute also serves as the practicum placement site for training undergraduates in the fields of Early Childhood Education and Child Development.

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

Flights of Imagination, the summer day camp offered at the Children's Institute, operates from 9 a.m. to 4 p.m. Monday through Friday with two-week sessions offered throughout the summer. The camp features

a variety of activities including swimming, gym, outdoor play, arts and crafts and nature study. Children entering kindergarten through third grade are invited to attend. Extended care is available from 7:30 a.m. to 9:00 a.m. and from 4:00 p.m. to 5:30 p.m.

The toddler (18-30 months) program is housed on the first floor of the Snow Health Center. The preschool/ kindergarten and day camp are housed on both the first and second floors 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

326 Snow Health Center
487-2226

Eastern Michigan University recognizes that alcohol and other drug issues can and do create barriers for students seeking to be successful, both academically and socially. Therefore, the University has designed several programs to assist students to achieve their goals.

Checkpoint is a six-hour educational program that addresses participants' attitudes, knowledge and behaviors concerning alcohol and other drugs, encourages responsible decision making, and provides appropriate referral.

Project REACH-Out is a program in which EMU student volunteers, serving as role models, give presentations in area schools to educate youth that consuming alcohol before the legal drinking age or using illicit drugs is harmful and illegal.

The **Student Advisory Council** uses student leadership to coordinate campus-wide special events while **Campus Peers** use trained peers to educate and encourage students to make their own informed decisions about involvement with alcohol and other drugs.

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

The Alcohol and Other Drug Programs are housed in the Health Resource Center office, located in Room 326, Snow Health Center. This office is the primary location for the distribution of substance abuse prevention information and for the coordination of program

activities. All services are free to students and student involvement is encouraged.

HOUSING & DINING SERVICES

Rebecca Figura
University Housing Director

Michael Crabb
University Dining Services Director

Lower Level Dining Commons ONE
487-1300

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

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

By Mail:

1. Contact the Housing Office and request a Housing Packet.
2. Read all of the materials in the packet including the Housing and Dining Services brochure, the Residence Hall/Dining Service Contract and the Assignment Request form.
3. Select a lifestyle option and hall that accommodates your 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 in the envelope provided to the Cashier's Office, 201 Pierce Hall.
6. Hall assignments are mailed during the latter part of July through August.

At Fast Track Programs or In Person:

1. Students participating in Fast Track have the opportunity to reserve residence hall space as part of the program.

2. Students coming to campus can reserve a space by completing steps 1-6 above in person.

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

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

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

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

- 4 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, 201 Pierce Hall, with a \$45 non-refundable application fee.

Off-Campus Housing

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

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

University Dining Services

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

Eastern Eateries is located between Phelps-Sellers & Walton-Putnam Residence Halls, steps away from Pray-Harrold on the other side of Downing Hall. This high-tech, fast food mall with shops that offer burgers, pizza, chicken, confections, salad bar, deli, Taco Bell, cappucino, yogurt, plus pinball machines. Located on the lower level of the Eateries is **QUICKFIXX**, a convenience store offering over 400 video rentals, VCR rentals, groceries, film, photographic processing, greeting cards and snack foods. An **A&W**, located within Hoyt Conference Center is a full service facility featuring hot entree meal transfer selections (Blue Plate Specials), which are available for carry out. The **Pittstop**, located near the A&W, is a small convenience store offering: snacks, frozen foods and **RACERS DELI**.

Dining Commons ONE, located within the Downing Residence Hall complex offers an all-you-can-eat, self-serve buffet line with three hot entrees, super salad bar, dessert bar, home made soup, sandwich line and stir fry. Located outside of Dining Commons ONE, **What's NU** offers take out service. Other facilities that are conveniently located include the **Flying Eagles** trailer outside of Pray-Harrold, offering sandwiches, hot dogs, cappucino/espresso/specialty coffees and other on-the-go items. The **Food for Thought** cart located inside the south end of Sill Hall on Forest Street offers sandwiches, salads, donuts, candy, fruit, plus other on-the-go items. Inside the foyer of the Quirk Sponberg Theatres, the **TO BE Cafe** offers specialty coffees, beverages, pastries, salads and sandwiches. The **Eagle Club** is Eastern's only full service restaurant. It is open to Faculty, Staff, and Students and is located on the fifth floor of the REC/IM building (Fall and Winter hours only). Also located within the REC/IM building is the **Courtside**, a snack shop offering deli sandwiches, yogurt, nachos, hot dogs, and salads.

Located within McKenny Union is **Pumpernickel's Deli**, offering a variety of salads and sandwiches made-to-order, home-made bread baked daily on site, quiche, soup, and an extensive breakfast menu. **Que Pasta, Pizza & Peppers** and **Taco Bell Express** features a unique combination of pizza, pasta, and Taco Bell items to go. There is also a **Wendy's** and the **Club Cappucino**, a coffee and yogurt shop. The

Lobby Shop offers snacks, toiletries, film, photographic processing, and gourmet items.

Student Housing

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

Residence Halls:

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

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

Phelps-Sellers-Walton-Putnam, a second four-unit complex, has physically attached buildings that share a common dining area. Also built to accommodate 1,200 students, the 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-Hoyt are contemporary 11-story, high-rise towers and the most recently constructed campus residential units. All halls have ample social and study space on each floor and each room offers a pan-

oramic view of the campus and surrounding area. Marvin Pittman was director of rural education and a teacher trainer from 1921-1934; Susan B. Hill was dean of women from 1939-1962, then dean of students from 1962-1969 and also served as a Ypsilanti city councilwoman.

Student Apartments:

The Brown-Munson Apartments were remodeled from a residence hall facility to 207 single-student apartments in the early 1970s. They are designed primarily for two tenants, although some single and multiple occupancy units are available. Apartments are furnished, carpeted and air-conditioned, and all utilities except telephone are included in the monthly rent. The apartments carry the names of James M. "Bingo" Brown, football and baseball coach from 1923-29 and the first dean of men from 1925-1962, and John M. Munson, an EMU graduate who served as president from 1933-1948.

Pine Grove Terrace, on the northwest corner of the main campus, is the closest family housing unit to campus and has 140 one-bedroom apartments and 29 two-bedroom apartments in two-story masonry units.

Each building contains laundry and storage facilities, provides exterior balconies and private furnaces. Constructed in the late 1950s, the apartments are furnished.

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

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

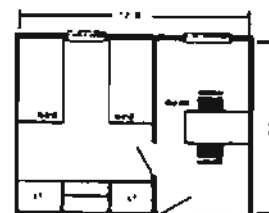
Note: In the three student family housing areas, a limited number of unfurnished units are available for those desiring to provide their own furnishings, but early reservations must be made with the Housing Office for these unfurnished units.

Typical Residence Hall Room Floor Plans

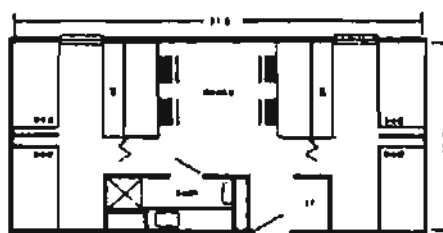
WISE HALL



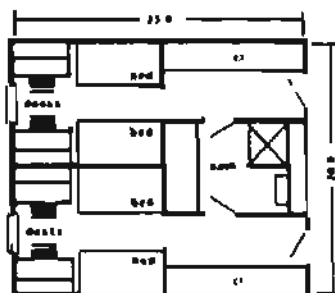
JONES HALL



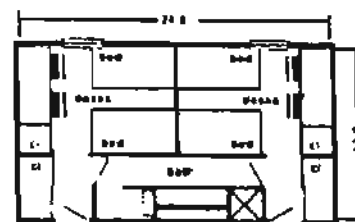
DOWNING, BUELL, AND GODDARD HALLS



RESIDENCE HALL TOWERS
HILL, HOYT, AND PITTMAN HALLS



BEST, PHELPS-SELLARS AND
WALTON-PUTNAM HALLS



CAMPUS LIFE

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

Office of Campus Life

Glenna Frank Miller
Director
11 McKenny Union
487-3045

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

Office of Campus Life student development services include leadership training, student organization support services (for more than 200 student organizations), and freshman and parent orientation programs. The new volunteer program, The VISION (Volunteers Incorporating Service Into Our Neighborhoods) Project, offers service opportunity to students and staff.

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

Below please find a list of the more than 200 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
 Alpha Epsilon Rho National Broadcasting Society
 Alpha Kappa Psi Professional Business Fraternity
 Alpha Phi Alpha Fraternity, Inc.
 American Center for Design

American Production and Inventory Control Society
 American Society of Interior Designers
 Anthropology Club
 Athletic Trainer's Club
 Beta Alpha Psi
 Beta Beta Beta Biological Honor Society
 Beta Gamma Sigma
 Campus Peer Program
 Chemistry Club
 College Democrats
 College Republicans
 Collegiate Deca
 Computer Information Systems Club
 Design Group
 Eagle Cadet Battalion
 Eastern Constructors
 EMU Student Broadcasters Association
 English Club
 Family and Consumer Education Society
 Finance Club
 French Club
 Graduate Business Student Association
 Health Administration Student Organization
 Hospitality Management Club
 Intermedia Gallery/Group
 Institute of Internal Auditors Student Chapter
 International Facility Management Association
 Legal Assistance Club
 Legal Careers Association
 Living History Club
 Marketing Students Association
 Michigan Teacher of Emotionally Disturbed Children
 National Association of Black Accountants
 Phi Alpha Theta History Honor Society
 Philosophical Club
 Pi Omega Pi
 Pi Sigma Alpha
 Pi Theta Epsilon
 Premedical Student Association
 Professional Association for Industrial Distribution (PAID)
 Public Relations Student Society
 Psychology Club
 Recreation Organization
 Sigma Tau Gamma
 Society of Plastic Engineers
 Student Council for Exceptional Children
 Student Dietetic Association
 Student Michigan Education Association
 Student Nurses Association

Student Occupational Therapy Association
 Student Organization for Educators of Hearing Impaired
 Student Social Work Organization
 Students Against Hunger and Homelessness
 Travel & Tourism Association
 United Ministries in Higher Education
 University Organists' Association
 Women in Communication

Advisory

Campus Life Council
 Campus Peer Program
 Collegiate Deca
 Exercise Science
 Older & Wiser
 Organization for the Learning Disabled
 Student Government at EMU
 Student Occupational Therapy Association

Athletic/Recreational

Ballroom Dance Club
 Bujinkan Ninjustu Club at EMU
 EMU Army ROTC Eagle Guard Drill Team
 Hockey Club
 Kappa Kappa Psi
 Men's Gymnastics Club
 Men's Volleyball Club
 Physical Education Organization
 Reserve Officer Training Corps Intramural Athletic Club
 Ski Club
 Water Polo Club
 Women's Soccer Club

Communications

Alpha Epsilon Rho National Broadcasting Society
 Association of Black Communicators
 English Club
 Public Relations Student Society
 Society for Technical Communication, Inc.
 Society of Physics Engineering
 Wo/Men in Communications, Inc.
 WQBR 640 AM Ypsilanti

Cultural/Entertainment/Coordinating

African Students Association
 Alpha Phi Alpha Fraternity, Inc.
 Art History Club
 Astronomy Club

Campus Life Council
 Caribbean Student Association
 Chess Club
 Eastern People of Color Coalition
 English Club
 Gamers of Eastern Michigan
 General Union of Palestinian Students
 Hillel
 Hong Kong and Macau Student Association
 Honors Student Organization
 Indian Student Association
 Intermedia Gallery/Group
 International Student Association
 Latino Student Association
 Legal Careers Association
 Lifelines Company
 Living History Club
 National Association for the Advancement of Colored People (NAACP)
 National Organization to Reform Marijuana Laws (NORML)
 Pakistan Student Association
 Palestine Democratic Youth Organization
 Phi Beta Sigma Fraternity, Inc.
 Phi Beta Sigma Sweethearts
 Phi Eta Psi Emeralds
 Phi Eta Psi Fraternity, Inc.
 Players at EMU
 Premedical Student Association
 Psychology Club
 Race Relations Task Force
 Residence Hall Association
 Society of Physics Students
 Spanish Club
 Student Action Team
 S.I.S.T.A.H.S.
 Student Dietetic Association
 Student Hemp Activists
 Student Organization for African-American Unity
 Student Organization United for Peace (SOUP)
 Students Organized for Alternative Learning
 Table Top Entertainment
 Umoja
 United Ministries in Higher Education
 Watercolorists at EMU
 Yemeni Students Union

Ethnic/Minority

African American Dance Company "Eclipse"
 African Students Association

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
 Delta Sigma Theta Sorority
 Eastern People of Color Coalition
 Indonesian Student Association
 Japanese Student Association
 Korean Student Association
 Latino Student Association
 Lesbian, Gay, and Bisexual Student Association
 (LGBSA)
 Malaysian Student Association
 National Association for the Advancement of Colored
 People (NAACP)
 National Association of Black Accountants
 Native American Student Organization
 Omega Pearls
 Phi Eta Psi Fraternity, Inc.
 Phi Eta Psi Emeralds
 S.I.S.T.A.H.S.
 Student Association of Black Filmmakers
 Student Organization for African-American Unity
 Thai Student Association
 Turkish Student Association
 Umoja

Honorary

Beta Alpha Psi
 Beta Beta Beta
 Beta Gamma Sigma
 Golden Key National Honor Society
 Honors Student Organization
 Kappa Delta Pi
 Mortar Board, Inc.
 Omicron Delta Epsilon
 Phi Alpha Theta
 Phi Kappa Phi
 Phi Sigma Pi National Honor Fraternity
 Stoic Society
 University Ambassadors Society

Political

Black Student Union
 College Democrats
 College Republicans

Student Hemp Activists
 Student Huron Restoration Alliance
 Student Organization for African-American Unity
 Student Organization United for Peace (SOUP)
 Take Back the Night Organization

Religious

Campus Advance
 Campus Crusade for Christ
 Chi Alpha Christian Fellowship
 Christ With-in Ministries
 Christian Challenge
 Christian Life Center Student Outreach
 Christian Science College Organization
 Fellowship of Christian Athletes
 Gospel Choir
 Hillel
 Holy Trinity Chapel Peer Ministers
 Intervarsity Christian Fellowship
 Magickal Life
 Students for Christ at EMU
 United Ministries in Higher Education
 University Lutheran Chapel

Service

Alpha Phi Omega
 Black Student Union
 Caribbean Student Association
 Christ With-in Ministries
 Circle K Club
 Fellowship of Christian Athletes
 Golden Key
 Holy Trinity Chapel Peer Ministers
 Hong Kong and Macau Student Association
 International Student Association
 Latino Student Association
 Lifelines Company
 Mortar Board
 National Association for the Advancement of Colored
 People (NAACP)
 Older and Wiser
 Omega Pearls
 Omega Xi
 Phi Beta Sigma Fraternity, Inc.
 Phi Beta Sigma Sweethearts
 Phi Eta Psi Emeralds
 Phi Theta Epsilon
 Players at EMU
 Project REACH-Out
 Public School Outreach Program

Stoic Society
 Student Council for Exceptional Children
 Student Huron Restoration Alliance
 Student Organization for African-American Unity
 Students Against Hunger and Homelessness
 Turkish Student Fellowship
 United Ministries in Higher Education
 University Ambassadors Society
 Wo/Men in Communications, Inc.
 Ypsilanti Food Co-op

Social/Environmental Awareness

Black Student Union
 Chi Gamma Iota Veterans Society
 English Club
 Hillel
 Honors Student Organization
 International Student Association
 Latino Student Association
 Lesbian, Gay, and Bisexual Student Association
 (LGBSA)
 National Association for the Advancement of Colored
 People (NAACP)
 Omega Xi
 Panhellenic Council
 Phi Beta Sigma Fraternity, Inc.
 Phi Beta Sigma Sweethearts
 Phi Eta Psi Fraternity, Inc.
 Project REACH-Out
 Psychology Club
 Public School Outreach Program
 Residence Hall Association
 Student Council for Exceptional Children
 Student Organization for African-American Unity
 Student Organization United for Peace (SOUP)
 Student's Against Driving Drunk
 Students Against Hunger and Homelessness
 Students Organized for Alternative Learning
 United for Peace (SOUP)
 Take Back the Night Organization
 Tau Kappa Epsilon
 Turkish Student Association
 United Ministries in Higher Education
 Womynspace
 Ypsilanti Food Co-op
 Zeta Phi Beta Sorority

Fraternity All subclassifications

Alpha Epsilon Pi

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

Sorority All subclassifications

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

DEAN OF STUDENTS

Bette C. White
Dean

Gregory A. Peoples
Associate Dean

215 Goodison Hall
487-3118

The Office of the Dean of Students serves undergraduate and graduate students through the combined offices of Foreign Student Affairs, Veterans Services, Services for Students with Disabilities, Multi-Cultural Center, and Greek letter organizations.

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

Office of Foreign Student Affairs

Paul Dean Webb
Coordinator
209 Goodison Hall
487-3116

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

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

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

Veteran Services Office

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

The Veteran Services Office coordinates all cam-

pus 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.

Services for Students with Disabilities Office

Bette C. White
Dean
215 Goodison Hall
487-3118

The Services for Students with Disabilities Office utilizes resources of both the campus and the community and its agencies to meet the needs of 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

Floyd Carroll
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

233 Goodison Hall
487-1470

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

Student Media

Paul Heaton
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. *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.

- **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, has been affiliated with National Public Radio since 1978. It is under the auspices of the vice president for university relations 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 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 professional staff.

Intercollegiate Athletics

Tim L. Weiser
Director

Carole Huston
Associate Director

Bowen Field House
487-1050

The Department of Intercollegiate Athletics offers a broad-based 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 10 schools, including EMU's sister institutions, Central Michigan and Western Michigan, as well as Akron, Ball State, Bowling Green, Kent State, Miami, Ohio, and Toledo.

The mission of Eastern Michigan University's intercollegiate athletic program is to sponsor competitive men's and women's sports. These sports, represented by the team members, shall strive within the contest rules and regulations to attain 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/Robb Student Recreation Center
487-1338

The Olds/Robb Student Recreation Center, opened

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

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

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

Student membership is automatic with a fee assessed through tuition and entitles the membership card holder to all facility uses. There are additional fees for lockers, towel rental, outdoor equipment rental, and guests. Others desiring to regularly use the facilities may purchase a membership card during building hours. The Competitive Edge pro shop in the building sells all types of sports equipment and clothes.

The Rec/IM programs are based on a recognition of the importance of a total fitness approach in our lives. Scheduled programming in step, hi/low combo, low impact, and aqua aerobics reflect this thought. Body sculpting, step and sculpt, along with power walking, are also available.

The Intramural Sports Program, which utilizes the Olds/Robb 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 competitions, as

well as field goal kicking and home run contests.

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

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

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

RESOURCE CENTERS

Centers for Corporate Training

Walter DiMantova

Director

487-2259

The Centers for Corporate Training was established in 1988 through a consolidation of the college service centers. Its primary responsibility is to carry out the University mission of service through contract learning. The Center for Corporate Training provides business, industry, education, health, and human services agencies with short- and long-term assistance in training, research and development. The Center for Corporate Training's 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. Training and consulting has been provided across the U.S. and Canada, as well as in Mexico, Venezuela, Germany, and Portugal. Contracts have ranged from one day to one year, with much of the Centers for Corporate Training's activities relating to workforce training-on-site in manufacturing plants.

Major areas of programming include:

- Workplace literacy; technical skills enhancement
- Quality and productivity consulting and training
- Management and leadership
- Labor/management relations
- Skill assessment and enrichment

- Occupational Health and safety training
- Management training
- Communication skills

The Centers for Corporate Training is currently regarded as one of the premier agencies capable of providing comprehensive training and consultation in technical skills development, quality and productivity improvement, occupational health and safety, and labor-management relations.

Coatings Research Institute

The Coatings Research Institute (CRI) was established in 1985 with the assistance of a major grant (totalling nearly one million dollars) from the state of Michigan. The institute is designed to conduct research and development efforts under contract to industry and government, and represents the formalization of research activities that started in 1980.

The CRI comprises a fully-equipped laboratory capable of conducting research ranging from the synthesis and modification of polymers to the formulation and testing of paints. Including the adjacent PRA (Paint Research Associates), the coatings effort comprises a microcosm of a large paint company including research, development, analysis, formulation, and testing capabilities.

The coatings effort occupies 12 thousand square feet of facilities with an additional three thousand under construction to house the Emissions Evaluation Center.

Corporate Education Center

Marcia D. Harrison
Director
1275 Huron Street
487-0600

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

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

- two auditoriums seating 100 and 200 respectively, complete with audiovisual systems including rear screen projection, a simultaneous translation system, and closed circuit teleconferencing.

- a networked computer laboratory with 15 stations
- seven conference rooms and five seminar rooms
- an executive boardroom
- an outdoor court area for informal gatherings during the spring, summer and fall seasons.

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

Center for Public Service (Formerly ICARD)

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

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

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

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

Examples of ICARD activities include economic development and planning efforts for local communities, economic and environmental impact assessments, management analysis, evaluation of personnel systems, and scientific analysis of environmental concerns. Twice

a year, ICARD publishes an economic forecasting report, available by subscription, *Regional Economic Forecasts for Michigan*. Also published twice a year is the newsletter *Michigan Economic Notes*. Each spring, ICARD hosts an Economic Forum on campus.

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

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

For further information, contact ICARD at 487-0243.

Institute for the Study of Children and Families

Patricia Ryan and Bruce L. Warren

Directors

102 King Hall

487-0372

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

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

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

National Institute for Consumer Education

Rosella Bannister

Director

207 Rackham

487-2292

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

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

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

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

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

UNIVERSITY COMPUTING

Alan McCord
Executive Director
Administrative Office: 487-1491
U.C. Call-Center: 487-2120

University Computing is responsible for managing the campus information technology infrastructure and for providing administrative computing services. University Computing operates the campus data network, various network servers, an IBM mainframe, and DEC Alpha and Unix systems. Learning Technologies, a unit of the Division of Academic Affairs, provides support for instructional and research computing.

Administrative applications include student records and registration, financial aid, accounting, payroll and personnel. Telephone registration is provided for EMU students, and test scoring services are provided to faculty. UC provides network connectivity to each campus building, as well as building electronics for faculty and staff connections. A variety of communication and productivity software is available on the network, and anti-virus software is provided to all network users. Users of EMU's data network can access all campus resources as well as resources available on the Internet. Off-campus users can access EMU campus resources through dial-up connections provided by the MichNet network.

UC publishes its newsletter, "Computing in the 90s," on a quarterly basis, and maintains a World Wide Web home page. The University Computing Advisory Council provides input to the Executive Director on UC services and EMU information technology plans. The UC Call Center (487-2120) is the focal point for resolving problems with EMU information technology resources.

LEARNING RESOURCES AND TECHNOLOGIES

Morell D. Boone
Dean

Sandra G. Yee
Library Department Head

Jennie Meyer Howard
Associate Dean, Learning Technologies
487-3316

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

Associate Professors: Sarell W. Beal, Rita Bullard, Margaret A. Eide, J. Ronda Glikin, Joanne J. Hansen, Walter P. Hogan

Assistant Professors: Ann Andrew, Margaret E. Best, Sarah Cogan, Ronald P. Colman, Edna Ewell, Rhonda Fowler, Barbara Glover, Raymond A. Lukasavitz, Mary A. Meernik, Heidi Mercado, Keith J. Stanger, Rosina Tammany

Instructors: Joseph Badics, Carolyn Kirkendall, Glenn Mensching, Elizabeth Retzel

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

The Library is essential to the instructional programs of the University. It houses more than 630,000 volumes, 220,000 government documents, and 746,000 microforms. The library is fully automated and provides a variety of electronic reference sources.

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

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

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

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

The center is responsible for the purchase, storage, and circulation of non-print materials which include films and videocassette recordings. Other services include providing the equipment required to utilize the non-print materials, a pool of audio-visual machines to check out, preview rooms for viewing video materials, and a campus instructional television system.

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

The Instructional Support Center (Room 102) provides individual and group assistance to registered students with a well-equipped facility, including a recently upgraded microcomputer laboratory. The Instructional Support Center offers:

1. Free tutoring in a variety of basic studies areas (current schedules are posted in Room 102).
2. Audio-cassette recordings and compact discs as well as stereo and video equipment for personal use or class assignment.

Learning Technologies provides support for research and instructional computing for students and faculty by managing the University's Internet connection and mainframe and workstation services and facilities.

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

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

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

COLLEGE OF ARTS AND SCIENCES

BARRY FISH, DEAN
ELLENE TRATRAS CONTIS, INTERIM ASSOCIATE DEAN
JAMES WALTZ, ACTING ASSOCIATE DEAN
VELMA CLARKE, ADMINISTRATIVE ASSOCIATE
411 PRAY-HARROLD
487-4344

DEPARTMENTS

AFRICAN AMERICAN STUDIES
ART
BIOLOGY
CHEMISTRY
COMMUNICATION AND THEATRE ARTS
COMPUTER SCIENCES
ECONOMICS
ENGLISH LANGUAGE AND LITERATURE
FOREIGN LANGUAGES AND BILINGUAL STUDIES
GEOGRAPHY AND GEOLOGY
HISTORY AND PHILOSOPHY
MATHEMATICS
MUSIC
PHYSICS AND ASTRONOMY
POLITICAL SCIENCE
PSYCHOLOGY
SOCIOLOGY, ANTHROPOLOGY, AND CRIMINOLOGY
WOMEN'S STUDIES

COLLEGE OF ARTS AND SCIENCES

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

BACCALAUREATE DEGREES

Most students in the college pursue one of the two basic undergraduate degrees, Bachelor of Science (BS) or Bachelor of Arts (BA). Both degrees require completion of university basic studies requirements, a major and a minor, and a *minimum* total of 124 credit hours. The Bachelor of Arts degree includes in that total one year of college credit in a foreign language. The Bachelor of Science degree provides greatest flexibility in selection of the major and minor and in the use of electives.

Additionally, the following specialized degrees are offered: Bachelor of Fine Arts (BFA), Bachelor of Art Education (BAE), Bachelor of Music Education (BME), Bachelor of Music-Performance (BMu), and Bachelor of Music Therapy (BMT). These specialized degrees are described more fully within the individual departments.

Several professional certificate and preprofessional programs are also available within the College. These programs, described more fully within individual department listings, include: registered music therapy (RMT); international diplomas in business French, German, and Spanish; certified actuarial science (CAS); pre dental hygiene; pre dentistry; pre forestry; 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.

COLLEGE OF ARTS AND SCIENCES COURSES

AADV 177/178/179 Academics, Affiliation, and Achievement. 1/2/3 hrs

Restricted to first-time entering freshmen 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.

AADV 279 Special Topics: Prior Learning and Portfolio Development 3 hrs

Course goals are to assist students in clarifying educational, career, and personal goals by developing a portfolio which documents experience and identifies learning for evaluation by appropriate departmental faculty for possible award of degree credit.

Prereq: Department permission.

CAS 177/178/179 Special Topics 1/2/3 hrs.

Study and exploration of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CAS 277/278/279 Special Topics 1/2/3 hrs.

Study and exploration of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CAS 377/378/379 Special Topics 1/2/3 hrs.

Study and exploration of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CAS 477/478/479 Special Topics 1/2/3 hrs.

Study and exploration of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

AFRICAN AMERICAN STUDIES

Ronald C. Woods
Department Head
 620 Pray-Harrold
 487-9460

Professors: Clovis E. Semmes, Ronald C Woods
Assistant Professors: Victor Okafor, Melvin T. Peters
Instructor: Janice Rowley Cooper

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.

ACADEMIC MAJOR

AFRICAN AMERICAN STUDIES MAJOR

Sem hours

Major in African American Studies 33

1. Required courses 9

AAS 101 Introduction to African American Studies ... 3

AAS 201 Foundations of Knowledge in African American Studies 3

AAS 401 African American Studies Research Seminar 3

2. Restricted electives 21

Choose twenty-one credits from the following:

AAS 221 African American Social Movements,

AAS 231 Urbanization and the African American Community, AAS 311 The African Diaspora, AAS 351 The Social Context of African American Health, AAS 361 The African American Family, AAS 441 Law in the African American Experience, HIST 315 History of

Black Americans, LITR 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:

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

ACADEMIC MINOR

AFRICAN AMERICAN STUDIES MINOR

Sem hours

Minor in African American Studies 21

1. Required courses 9

AAS 101 Introduction to African American Studies ... 3

AAS 201 Foundations of Knowledge in African American Studies 3

AAS 401 African American Studies Research Seminar 3

2. Restricted electives 9

Choose nine credits from the following:

AAS 221 African American Social Movements,

AAS 231 Urbanization and the African American Community, AAS 311 The African Diaspora, AAS 351 The Social Context of African American Health, AAS 361 The African American Family, AAS 441 Law in the African American Experience, LITR 260 African American Literature, HIST 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:

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

AFRICAN AMERICAN STUDIES COURSES

AAS 101 Introduction to African American Studies. 3 hrs

An introductory examination of the African American experience. Acquaints students with the trends, issues, and forces that have shaped that experience, considers the concepts of cultural adaptation, institutional development, and group self-definition, and surveys the contemporary status and condition of African Americans.

AAS 177/178/179 Special Topics. 1/2/3 hrs
Each time offered, this course will explore a topic on an experimental basis, based on student interests and needs. This course can be used in completing requirements for the major or minor in African American Studies.

Prereq: Department permission.

AAS 201 Foundations of Knowledge in African American Studies. 3 hrs

Examines the empirical and theoretical foundations of African American studies, the evolution of the field, and the role of key scholars in its development.

Prereq: AAS 101.

AAS 221 African American Social Movements. 3 hrs

Explores the collective efforts undertaken by African Americans to elevate their group status in American society. Analyzes the struggle for human freedom through an examination of resistance to chattel slavery, the quest for civil rights, and the response to structured inequality.

Prereq: AAS 101.

AAS 231 Urbanization and the African American Community. 3 hrs

Examines the urban African American community. Studies relevant migratory patterns, and the impact of urbanization on the culture, politics, and economic status of African Americans. Considers public policy issues involving African Americans in an advanced industrialized society.

Prereq: AAS 101.

AAS 277/278/279 Special Topics. 1/2/3 hrs

Each time offered, this course will explore a topic on an experimental basis, based on student interests and needs. This course can be used in completing requirements for the major or minor in African American Studies.

Prereq: AAS 101 or department permission.

AAS 297/298/299 Independent Study. 1/2/3 hrs

Independent study of a selected topic under the supervision of the staff. Possible approaches include library research, field research, and participant-observer experiences.

Prereq: AAS 101 or department permission.

AAS 311 The African Diaspora. 3 hrs

Examines the African diaspora—the dispersion of persons of African descent throughout the world. It studies the process of dispersion, examines selected diasporic communities, and considers the impact of the African presence on world development.

Prereq: AAS 101 or department permission.

AAS 351 The Social Context of African American Health. 3 hrs

Examines the health status of African Americans. Explores the interplay between environment, biology, and culture; folk and popular health practices; and the organization and delivery of health care.

Prereq: AAS 101 or department permission.

AAS 361 The African American Family. 3 hrs

Examines the historical and contemporary forces shaping the African American family. Analyzes urbanization, economic transformations, and institutionalized racism. Studies the role of the family in human survival and progress.

Prereq: AAS 101 or department permission.

AAS 377/378/379 Special Topics. 1/2/3 hrs

Each time offered, this course will explore a topic on an experimental basis, based on student interests and needs. This course can be used in completing requirements for the major or minor in African American Studies.

Prereq: AAS 101 or department permission.

AAS 401 African American Studies Research Seminar.

3 hrs

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

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

AAS 441 Law in the African American Experience.

3 hrs

Examines the African American legal experience from the Atlantic slave trade to the present. Reviews the formation of the Constitution, the law of slavery, Reconstruction era developments, Jim Crow segregation, and recent legal trends in areas such as education, voting, and employment. Emphasizes law as a social process.

Prereq: AAS 101 and jr. / sr. standing, or department permission.

AAS 477/478/479 Special Topics. 1/2/3 hrs

Each time offered, this course will explore a topic on an experimental basis, based on student interests and needs. This course can be used in completing requirements for the major or minor in African American Studies.

Prereq: AAS 101 or department permission.

AAS 497/498/499 Independent Study. 1/2/3 hrs

Independent study of a selected topic under the supervision of the staff. Possible approaches include library research, field research, and participant-observer experiences.

Prereq: AAS 401 and junior standing, or department permission.

ART

Roy Johnston
Department Head
 114 Ford Hall
 487-1268

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

Associate Professors: Julia R. Myers, Gretchen Otto, Diana Pancioli, Richard E. Washington

Assistant Professors: Susan LaPorte, Carole Pawloski

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

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

Degrees:

Bachelor of Fine Arts
 Bachelor of Fine Arts plus teacher certification
 Bachelor of Arts in Art History
 Bachelor of Art Education
 Bachelor of Science in Art

Programs of Study

Curricula:

Art Education
 Fine Arts
 Fine Arts plus teacher certification
 Art History

Majors:

Art
 Art History
 Art for K-12 education

Minors:

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

Advising Coordinators:

Art major and minor, fine arts curriculum: Igor Beginin
 Art education curriculum: Christopher Bocklage
 Art history major and minor: Ellen Schwartz, Richard Rubenfeld, Julia Myers
 Honors in art: Jay Yager

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

ACADEMIC MAJORS

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 p. 41. 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 20th Century Art	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 (Studio courses)	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

ART MAJOR

Students may elect the following 30 semester hour major, but the preceding 54-60 semester hour Fine Arts major is advised.

Teacher certification in art is not obtainable using this major.

	Sem hours
Major in art	30
1. Required courses	18
FA 107 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. Nine out of 12 credits must be in advanced courses, 300 level or above.	

ART HISTORY MAJOR

This 30-hour major prepares students for graduate study, for gallery or museum work, or, with the addition of science and studio courses, for a career in conservation.

Students taking the Art History Major should note that one year of college credit in a foreign language is required for the B.A. degree. Students preparing for graduate study are strongly advised to pursue courses in French and German. Most graduate programs in art history require reading proficiency in at least two foreign languages.

Teacher certification in art is not obtainable using this major.

	Sem hours
Major in art history	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 215 History of 19th Century Art	3
FA 216 History of 20th Century Art	3
FA 428 Seminar in 20th Century Art	3
2. Electives	12
<i>Pre-Renaissance Art (choose 1)</i>	3
FA 340 History of Classical Art (3)	
FA 426 Medieval Art History (3)	
<i>Renaissance/Baroque Art (choose 1)</i>	3

FA 341 History of Renaissance Art (3)	
FA 427 Baroque Art (3)	
<i>Nonwestern or Women's Art (choose 1)</i>	3
*FA 222 African and African American Art (3)	
FA 421 History of Oriental Art (3)	
FA 422 Chinese and Japanese Art History (3)	
FA 430 Mesoamerican Art (3)	
FA 436 Women in Art (3)	
<i>Free elective (choose 1)</i>	3
FA 335 American Painting and Sculpture Prior to World War II (3)	
FA 429 History of American Architecture (3)	
FA 440 Art since 1945 (3)	
FA 497/498/499 Independent Study (1/2/3)	
Any upper-level art history course not taken to fulfill another requirement*	

*Students may contract with art history faculty to include lower-numbered FA courses for elective credit, with additional work.

ACADEMIC MINORS

ART MINOR

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

ART HISTORY MINOR

Students with an art major who elect the art history minor must replace FA 107 Art History Survey I, FA 108 Art History Survey II, FA 215 History of 19th Century Art, FA 216 History of 20th Century Art on the major with studio courses.

	Sem hours
Minor in art history	21
1. Required courses	15
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 20th Century Art..... 3
 FA 428 Seminar in 20th Century Art..... 3

2. **Restricted electives** 6

Choose six credits from art history courses in consultation with art history minor advising coordinators.

TEACHING MAJORS

ART EDUCATION AND BACHELOR OF FINE ARTS PLUS TEACHER CERTIFICATION

K-12 TEACHER CERTIFICATION

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

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 I-B-2. *Basic Studies requirement. See inside back cover*
 I-B-3. *Basic Studies requirement. See inside back cover*
 I-B-4. *Basic Studies requirement. See inside back cover*
 I-B-5. *Basic Studies requirement. See inside back cover*
 II-B-1. *Basic Studies requirement. See inside back cover*
 II-B-2. *Basic Studies requirement. See inside back cover*
 II-B-3. *Basic Studies requirement. See inside back cover*
 III-B-1. *Basic Studies requirement. See inside back cover*
 III-B-2. *Basic Studies requirement. See inside back cover*
 III-B-3. *Basic Studies requirement. See inside back cover*
 III-B-4. *Basic Studies requirement. See inside back cover*
 IV-B-1. *Basic Studies requirement. See inside back cover*
 IV-B-2. *Basic Studies requirement. See inside back cover*
 IV-B-3. *Basic Studies requirement. See inside back cover*
 IV-B-4. FA 107 Art History Survey I (3)^a

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 50

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

- FA 108 Art History Survey II (3)
 FA 122 Two-Dimensional Design (3)
 FA 123 Drawing I (3)
 FA 124 Drawing II (3)
 FA 210 Life Drawing (3)

FA 215 History of 19th Century Art (3)

FA 216 History of 20th Century Art (3)

FA 231 Three-Dimensional Design (3)

Twenty-seven credits from the following list of courses:

If following the BAE curriculum, *nine courses*:

If following the BFA plus teacher certification, *six courses* plus a sequence of *three* advanced courses from one of the areas (e.g., FA 355 Textiles, FA 356 Textiles, FA 455 Textiles):

- FA 201 Introduction to Graphic Design (3)
 FA 235 Textiles (3)
 FA 304 Beginning Photographic Imagery (3)
 FA 305 Printmaking (3)
 FA 307 Ceramics (3)
 FA 310 Sculpture (3)
 FA 313 Painting (3)
 FA 314 Watercolor I (3)
 FA 320 Jewelry (3)
 FA 432 Drawing III (3)

Credit hours in Specialty Studies:..... 51

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
 EDTC 300 Introduction to Computer Applications in Education (1)
 SPGN 300 Exceptional Children in the Regular Classroom (1)
 EDPS 322 Human Development and Learning (4)
 FA 317 Teaching of Art (2)

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

- CURR 305 Curriculum and Methods: Secondary (3)
 RDNG 311 Teaching Reading in the Secondary School (3)
 SOFD 328 Schools in a Multicultural Society (3)
 EDPS 340 Introduction to Assessment and Evaluation (3)
 EDMD 345 Media for the Classroom Teacher (1)
 FA 416 Art Methods and Materials (2)
 EDUC 496 Student Teaching (6)
 EDUC 497 Student Teaching (6)

Credit hours in Professional Studies:..... 35

Total credit hours required:..... 136

^aCourse required for and applicable to major.

ART MAJOR

K-12 TEACHER CERTIFICATION

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

The curriculum for this major is that which is listed above under "teaching major" in the K-12 art program, plus the IV-B-4 requirement from that program's Basic Studies requirements. No minor is required.

51 hours, not including course work applicable to Basic Studies.

TEACHING MINOR

ART MINOR

ELEMENTARY, SECONDARY, K-12, SPECIAL EDUCATION-ELEMENTARY, AND SPECIAL EDUCATION-SECONDARY TEACHER CERTIFICATION

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

FA 122 Two-Dimensional Design (3)

FA 123 Drawing I (3)

FA 231 Three-Dimensional Design (3)

One art history course (FA 108 suggested) (3)

9 hours in studio art and/or art history, of which at least 6 hours must be in courses numbered 300 or above. FA 124, FA 201, *FA 300, FA 304, FA 305, FA 307, FA 310, FA 313, FA 314, and FA 320 may be used to meet this requirement.

FA 317 Teaching of Art (2)

**FA 416 Art Methods and Materials (2)

25 hours (including hours satisfied in Basic Studies and professional studies)

*Prereq: Admission to the teacher education program. Required in professional studies for elementary program. May be substituted for FA 317 and FA 416.

**Prereq: Admission to the teacher education program.

ART COURSES FOR NONMAJORS

FA 100 Art Appreciation. 3 hrs
The aim is to acquaint students with art philosophies, their elements, principles, and values. *Non-art majors or minors only.*

FA 101 Introduction to Art. 3 hrs
Studio and lecture course designed to develop seeing and understanding of the formal and cultural aspects of the visual arts. Guided attendance at selected exhibitions on an optional basis may be provided. *Non-art majors only.*

FA 151 Reason and Revolution. 3 hrs
An examination of the transition in political history, philosophy, art, literature, and music from Puritan England and Louis XIV's France to Napoleon. Team taught by members of the Art and History departments. *This course satisfies one art or one history requirement. Note: See Honors Humanities Courses, page 46.*

FA 165 Graphic Design for Nonmajors. 3 hrs
Introduction to typography and illustration. Problems will explore fundamental design and basic production considerations and the development of a professional design thought process.

FA 166 Ceramics for Nonmajors. 3 hrs
A hands-on approach to provide students with the opportunity to develop skills and aesthetic understanding in forming, glazing, and kiln stacking. The emphasis in this beginning course is on handbuilding forms; however, the use of the potter's wheel will be introduced the latter part of the semester.

FA 167 Jewelry for Nonmajors. 3 hrs
A hands-on approach to provide students with the opportunity to develop artistic and technical skills with metal and other jewelry materials.

ART EDUCATION COURSES

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

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

FA 317 Teaching of Art. 2 hrs
Focuses on discipline-based art education and will include library research, readings, writings, and discussions of current events aided by presentations of guest speakers. Final requirement: the development of a written personal philosophy pertaining to the teaching of art and the formulation of a general curriculum. Not open to students on academic probation.
Prereq: Junior standing.

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

STUDIO ART COURSES

FA 122 Two-Dimensional Design. 3 hrs
A foundation course dealing with an analytical approach to the study of the elements of design: color, line, shape, value, pattern, texture, and form.

FA 123 Drawing I. 3 hrs
A beginning drawing course for students who plan to specialize in art. A variety of media and approaches help the student to achieve the control necessary in drawing. Individual problems are assigned and group criticism is frequent.
Prereq: Art major or minor only.

FA 124 Drawing II. 3 hrs
Emphasis is on study of composition as an extension of the principles explored in Drawing I. Imaginative organization is stressed. Extensive experimentation with various media. Subjects such as the human figure are introduced as drawing problems.
Prereq: FA 123.

FA 201 Introduction to Graphic Design I. 3 hrs
Projects examine two-dimensional typographic space; language sequence and information hierarchy; type families and their structure; typographic aesthetic; typographic history. Introduces appropriate tools.
Prereq: FA 122, FA 123, one art history course

FA 205 Introduction to Graphic Design II. 3 hrs
Projects examine type methodology; complex typographic systems; rhetorical devices; word-image struc-

tures; typographic history and theory. Introduces appropriate tools.
Prereq: FA 201.

FA 210 Life Drawing. 3 hrs
Study of the human form through drawing. Primarily nude models are used for subject matter. Various media are explored in search of the figurative element.
Prereq: FA 123 and FA 124, or department permission.

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

FA 232 Representational Drawing. 3 hrs
A course in analytical drawing emphasizing the use of volume, light, and structure in the construction of a variety of representationally illusionistic objects and environments.
Prereq: FA 124.

FA 235 Textiles. 3 hrs
An introductory textiles class dealing with concepts of design as they relate to fiber structures and fabric processes.
Prereq: FA 122 and FA 123.

FA 302 Intermediate Graphic Design I. 3 hrs
Deals intensively with conceptual and technical issues; explores topics relevant to audience demographic; theories, philosophies, aesthetics and techniques related to mass audience communication. Introduces appropriate methodologies.
Prereq: FA 205.

FA 303 Intermediate Graphic Design II 3 hrs
Course analyzes symbol codes as learned and interpreted messages. Projects explore audience; context; sequence; theories, philosophies, aesthetics, techniques and cultural references in symbol language message building. Introduces appropriate methodologies.
Prereq: FA 205.

FA 304 Beginning Photographic Imagery. 3 hrs
Introduction to photography as an art form. Basic camera and darkroom techniques demonstrated, with emphasis on exhibition printing. Student must furnish own camera equipment.
Prereq: FA 122 and FA 123.

FA 305 Printmaking. 3 hrs
Acquaintance with graphic techniques; woodcut and silkscreen. *Prereq: FA 210. Art majors only.*

- FA 306 Printmaking.** 3 hrs
Advanced graphic techniques with emphasis on development of individual style through experimentation with etching and processes.
Prereq: FA 305. Art majors only.
- FA 307 Ceramics.** 3 hrs
Basic ceramics, including wheel throwing and handbuilding techniques, compounding earthenware and stoneware clay bodies, formulating glazes, firing electric and gas kilns.
Prereq: FA 231 or department permission.
- FA 308 Ceramics.** 3 hrs
Advanced ceramic techniques, emphasis on personal expression, compounding of individual clay bodies and glazes, loading and firing of kilns.
Prereq: FA 307. Art majors only.
- FA 310 Sculpture.** 3 hrs
Exploratory experiences in volume and space; the use of clay, stone, wood, metal, etc.
Prereq: FA 231. Art majors only.
- FA 311 Sculpture.** 3 hrs
Continuing experiences in volume and space; development of further skills with sculpture materials and concepts.
Prereq: FA 310. Art majors only.
- FA 313 Painting.** 3 hrs
Painting problems; development of technique and concepts through experimentation with painting media.
Prereq: FA 122 and FA 124. Art majors only.
- FA 314 Watercolor I.** 3 hrs
Intensive exploration of watercolor techniques with emphasis on developing individuality and self-expression related to the medium.
Prereq: FA 122 and FA 124. Art majors only.
- FA 316 Life Drawing.** 3 hrs
Advanced study problems; the human form as composition and design; varied media.
Prereq: FA 210. Art majors only.
- FA 320 Jewelry.** 3 hrs
Design and creation of jewelry by fabricating, casting, lapidary, stone setting, and combination of metal and wood. Emphasis on the aesthetic aspect of decorative art objects.
Prereq: FA 231 or department permission. Art majors only.
- FA 321 Jewelry.** 3 hrs
Processes and techniques applied toward a professional development in jewelry design. Advanced processes, casting, setting of precious stones.
Prereq: FA 320 or equivalent.
- FA 323 Intermediate Photographic Imagery.** 3 hrs
Advanced black and white techniques and alternative processes are demonstrated. Development of personal vision is realized through individual projects and discussion.
Prereq: FA 304. Art major or department permission.
- FA 324 Design and Development of Public Works of Art.** 3 hrs
An experimental studio course in which students and instructors will design, plan, and execute urban environmental murals, sculpture, parks, and malls.
Prereq: Department permission.
- FA 346 Image Making I.** 3 hrs
Image making as it applies to the materials and processes of communicating specific visual concepts. Introduces a wide variety of materials and imaging methods.
Prereq: FA 205.
- FA 348 Intermediate Graphic Design Workshop.** 3 hrs
Practicum dealing with various aspects of visual communication.
Prereq: FA 302 and FA 303.
- FA 355 Textiles.** 3 hrs
An intermediate textiles class dealing with concepts and design as they relate to fiber structures, created either on or off the loom.
Prereq: FA 235. Art majors only.
- FA 356 Textiles.** 3 hrs
An intermediate textiles class dealing with concepts and design as they relate to basic fabric processes of surface decoration and manipulation.
Prereq: FA 235. Art majors only.
- FA 387 Cooperative Education.** 3 hrs
Employment in a graphic design firm, studio, or agency with an opportunity for practical design experience. Placement approval required by graphic design area.
Prereq: Department permission.

- FA 405 Printmaking.** 3 hrs
An advanced laboratory course designed for art majors specializing in graphics. Individual assignments in creative use of the more fundamental techniques learned in previous courses.
Prereq: FA 306. Art majors only.
- FA 406 Printmaking.** 3 hrs
An advanced laboratory course for art majors taking their sequence in graphics. Projects could include lithography, etching, and aquatint processes plus individual assignments.
Prereq: FA 405. Art majors only.
- FA 407 Ceramics.** 3 hrs
Intensive work for art majors specializing in ceramics with an emphasis on larger scaled, increasingly complex techniques and forms. Historical and contemporary works examined.
Prereq: FA 308. Art majors only.
- FA 408 Ceramics.** 3 hrs
Summation of the undergraduate ceramics program; emphasis on individual style, production techniques, studio management, exhibition programs.
Prereq: FA 407. Art majors only.
- FA 409 Advanced Photographic Imagery.** 3 hrs
The contextual development of personal vision is emphasized through discussion of the student's work in relationship to established photographers' work.
Prereq: FA 304, FA 323.
- FA 410 Metal Casting Techniques.** 3 hrs
An advanced sculpture course covering all aspects of the lost wax casting process. Includes information on other metal casting processes and on construction and operation of an inexpensive sculpture foundry.
Prereq: FA 310 or department permission.
- FA 411 Sculpture.** 3 hrs
Advanced sculpture problems, including steel and open form construction; intensive study of contemporary methods and techniques of sculpture.
Prereq: FA 311 or department permission. Art majors only.
- FA 412 Sculpture.** 3 hrs
Advanced sculpture problems; development of individual style in three-dimensional form.
Prereq: FA 411. Art majors only.
- FA 413 Painting.** 3 hrs
Further development of painting skills and aesthetic understanding of the two-dimensional surface complex. Emphasis on development of individual style.
Prereq: FA 313. Art majors only.
- FA 414 Watercolor II.** 3 hrs
Further development of watercolor skills and aesthetic understanding of the two-dimensional surface complex. Emphasis on development of individual style.
Prereq: FA 314. Art majors only.
- FA 418 Portraiture.** 3 hrs
Emphasizes analytical drawing and painting of the volume and structure of the human form; also those specifics of detail and gesture necessary to illusionistically represent a person.
Prereq: FA 210.
- FA 419 Life Drawing.** 3 hrs
The study of the human form as part of the development of a personal style in art.
Prereq: FA 316. Art majors only.
- FA 423 Watercolor III.** 3 hrs
Further development of individual style in watercolor.
Prereq: FA 414. Art majors only.
- FA 424 Watercolor IV.** 3 hrs
Further development of individual style in watercolor.
Prereq: FA 423. Art majors only.
- FA 432 Drawing III.** 3 hrs
Drawing as expressive composition. Integration of the techniques of previous courses. Development of individual directions. Includes a variety of media and the study of master drawings.
Prereq: FA 210. Art majors only.
- FA 433 Color Theory.** 3 hrs
An advanced course, which can be used as part of the BFA painting sequence, dealing with formal problems of color phenomena and interaction in painting. New media and contemporary concepts are emphasized. Studio and lecture.
Prereq: FA 313.
- FA 439 Life Drawing.** 3 hrs
The study of the human form as part of the development of a personal style of art.
Prereq: FA 419. Art majors only.

FA 441 Studies in Clay and Glazes. 3 hrs

Research and experimentation with earthenware, stoneware, and porcelain clays and slips. Students will examine, formulate, calculate, vary, and correct glazes for low and high temperatures, in electric and gas firings.
Prereq: FA 407 or department permission.

FA 442 Jewelry. 3 hrs

Advanced problems such as raising metal into hollow forms, cutting and polishing of gem stones, gem identification, and advanced metal joining and forming processes.

Prereq: FA 321. Art majors only.

FA 443 Jewelry. 3 hrs

Individual advanced problems in jewelry and metalworking.
Prereq: FA 442. Art majors only.

FA 449 Photography Portfolio. 3 hrs

Development of a unified body of work representing the undergraduate photographic experience and culminating in a photographic project.

Prereq: FA 409.

FA 455 Textiles. 3 hrs

Advanced problems in fiber structure and fabric processes. Emphasis on innovative development of images.
Prereq: FA 355 or FA 356. Art majors only.

FA 460 Advanced Graphic Design. 3 hrs

Advanced work in visual communications; students are exposed to theories, philosophies, aesthetics, techniques and experiences used in complex visual communication environments. (Course may be repeated twice for credit.)
Prereq: FA 302, and FA 303.

FA 462 Image Making II. 3 hrs

Image making as applied to advanced communication concepts. Students are exposed to theories, philosophies, aesthetics, techniques, and experiences used in visual message building.

Prereq: FA 346 and FA 302 or FA 303.

FA 464 Advanced Graphic Design Workshop. 3 hrs

Special problems with various aspects of visual communication of particular interest to advanced visual communication students.

Prereq: FA 302 and FA 303

FA 480 Painting. 3 hrs

Further development of individual painting style.

Prereq: FA 413. Art majors only.

FA 481 Painting. 3 hrs

Further development of individual painting style.

Prereq: FA 480. Art majors only.

FA 487 Cooperative Education. 3 hrs

Continuation of FA 387.

Prereq: FA 387. Approval by graphic design area.

ART HISTORY COURSES**FA 107 Art History Survey I. 3 hrs**

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

FA 108 Art History Survey II. 3 hrs

A continuation of Art History Survey I from the Renaissance through modern times.

FA 215 History of 19th Century Art. 3 hrs

Begins with a survey of European art in the late 18th century as the beginning of the modern period, and concludes with Post-Impressionism at the end of the 19th century.

Prereq: FA 107 and FA 108.

FA 216 History of 20th Century Art. 3 hrs

A survey of the visual arts of the 20th century, from Post-Impressionism through the latest contemporary developments.

Prereq: FA 215 or department permission.

FA 222 African and African American Art. 3 hrs

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

FA 335 American Painting and Sculpture Prior to World War II. 3 hrs

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

Prereq: FA 107 and FA 108, or department permission.

FA 338 History of Impressionism and Post-Impressionism. 3 hrs

Focuses on an understanding and appreciation of the painting, sculpture, and graphic arts of the last three decades of the 19th century.

Prereq: FA 108 or FA 215.

FA 340 History of Classical Art. 3 hrs

A study of the art and architecture of the classical civilization of Greece and Rome.

Prereq: FA 107 or department permission.

FA 341 History of Renaissance Art. 3 hrs

A history of art from the Proto-Renaissance (about 1250 AD) through the period of mannerism (1600).

Prereq: FA 107 or FA 108.

FA 421 History of Oriental Art. 3 hrs

A survey of the art of the Far East, with significant examples chosen from India, China, Japan; investigation of the influences forming their styles.

FA 422 Chinese and Japanese Art History. 3 hrs

A detailed study of the major figure and landscape painters of China and Japan along with the ceramic, jade, and bronze traditions.

Prereq: FA 107 or FA 108 or FA 421 or department permission.

FA 426 Medieval Art History. 3 hrs

The development of medieval art from the Early Christian through Gothic periods.

Prereq: FA 107 or FA 108 or department permission.

FA 427 Baroque Art. 3 hrs

Principal developments in Italian and northern art of the 17th century. Emphasis on major themes and aesthetic problems.

Prereq: FA 107 or FA 108 or department permission.

FA 428 Seminar in 20th Century Art. 3 hrs

Readings, reports, and group discussions on 20th century art. Topics may vary.

Prereq: FA 216 or art major.

FA 429 History of American Architecture. 3 hrs

Exploration of styles and techniques in American architecture from the colonial period to the present with special emphasis on the sources in foreign traditions. Major figures, including Thomas Jefferson, Louis Sullivan, Frank Lloyd Wright, Eero Saarinen, and ma-

ior stylistic trends, Greek Revival, International Style, will be traced back through their origins and development.

Prereq: FA 107 or FA 108 or department permission.

FA 430 Mesoamerican Art. 3 hrs

A survey of the art of Mesoamerica, the civilization that existed in Mexico and Central America from about 1500 B.C. until the coming of Cortés in 1519. The major emphasis of the course will be on urban planning architecture and monumental sculpture. Significant attention will also be devoted to painting, ceramics, small-scale sculpture, textiles, and jewelry.

Prereq: Junior or senior standing, department permission.

FA 436 Women in Art. 3 hrs

A survey of the contributions of female artists in the history of art. Discussions will include the history of women as patrons of the arts, and the uses of the female image in art.

Prereq: FA 108 or department permission.

FA 440 Art since 1945. 3 hrs

A study of contemporary art from 1945 to the present with an intensive concentration on recent developments in art. A continuation of FA 216.

Prereq: FA 216.

SPECIAL TOPICS COURSES

These courses are available to all art students.

FA 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

FA 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

FA 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

FA 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

INDEPENDENT STUDY COURSES

These courses are available to all art students.

FA 497/498/499 Independent Study. 1/2/3 hrs

Advanced study on an individual basis in areas in which the department does not have regular course work.

Prereq: Department permission.

BIOLOGY

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

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

Associate Professors: Catherine E. Bach, Jamin Eisenbach, Allen Kurta, Robert K. Neely, John A. Novak, P. Peter Reinthal, George Simone, James L. Vanden Bosch, Elizabeth L. Waffle

Assistant Professors: Teresa M. Morton, Robert S. Winning

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

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

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

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

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

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

Degrees:

Bachelor of Science
 Bachelor of Arts

Programs of Study

Major in Biology:

Biology for elementary education
 Biology for secondary education

Concentrations:

Ecosystem biology (aquatic and terrestrial)
 General biology
 Microbiology
 Physiology

Minors:

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

Preprofessional programs:

Prechiropractic
 Preforestry
 Premedicine (allopathic and osteopathic)
 Preoptometry
 Prepodiatry

Departmental advising procedures are posted opposite the biology office (316 Mark Jefferson), or this office may be contacted for additional information.

SPECIAL ADVISING REQUIREMENTS

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

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

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

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

Premedical and preosteopathic medical students must meet with the advising coordinator to take advantage of the Premedical Advisory Committee system for expediting medical school admission testing and recommendation.

Advising Coordinators:

Undergraduate coordinator: John A. Novak
 Conservation and resource use: Catherine E. Bach
 Ecosystem biology: Robert K. Neely
 Elementary science education: Suzanne J. Stevens
 General biology: John A. Novak
 Microbiology: James L. VandenBosch
 Physiology: Contact Biology Department for current advisor
 Preforestry: Gary L. Hannan
 Premedicine (allopathic and osteopathic), preoptometry, podiatry, and prechiropractic: Contact Biology Department for current advisor
 Preveterinary medicine: Elizabeth L. Waffle
 Secondary biology education: John A. Novak

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

ACADEMIC MAJORS

BIOLOGY MAJOR

Majors should start with BOTN 221 General Botany followed by ZOO 222 General Zoology in their freshman year. Majors without a strong high school biology preparation should take BIOL 105 Biology and the Human Species before electing either BOTN 221 or ZOO 222. (BIOL 105 will not count toward the biology

major or minor, although credit earned in this course will count toward the 124 hours required for graduation.)

Chemistry Requirement: The minimum requirement in chemistry for all biology majors is CHM 121-124 General Chemistry I-II with labs, and either of the following sequences: CHEM 270-271 Organic Chemistry with lab and CHEM 451 Biochemistry I, or CHEM 371-373 Organic Chemistry I and II with laboratory. Students who plan to pursue graduate work in biology or are in a pre-professional program should select CHEM 371-373 Organic Chemistry I-II with lab. It is *highly recommended* that CHEM 451-453 Biochemistry I-II with lab also be selected by students who plan to pursue graduate work in biology.

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 MATH 120 Calculus I or MATH 270 Elementary Statistics I. It is strongly recommended that students who plan to pursue graduate work in biology take MATH 120 Calculus I and MATH 121 Calculus II, as well as MATH 270 Elementary Statistics I.

The following courses may NOT be counted toward a biology major or minor: BIOL 105 Biology and the Human Species, ESCI 302 Elementary School Science, ESCI 303 Science for the Elementary Teacher, BIOL 205 Field Biology, and BIOL 403 Methods and Materials for Teaching Biology.

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

ECOSYSTEM BIOLOGY CONCENTRATION (AQUATIC AND TERRESTRIAL)

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

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

	Sem hours
Ecosystem biology concentration (aquatic and terrestrial).....	54
1. Required courses	20
BIOL 320 Introduction to Cell Physiology	4
A botany taxonomic field course*	3
A zoology taxonomic field course*	3
BIOL 420 General Ecology	4
Approved electives	6

*See list at end of general biology concentration.

2. Required group science minor	34
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
PHY 221 Mechanics, Sound, and Heat	4
PHY 222 Electricity and Light	4
GEOL 160 Physical Geology	4
GESC 324 Weather	3
COSC 137 Introduction to FORTRAN Programming, COSC 138 Computer Science I, or COSC 237 Computer Programming and Numeric Methods	3

Take one of the following sequences

CHEM 270 Organic Chemistry (4)	8
CHEM 271 Organic Chemistry Laboratory (1)	
CHEM 451 Biochemistry I (3)	

or

CHEM 371 Organic Chemistry I (3)	
CHEM 372 Organic Chemistry II (3)	
CHEM 373 Organic Chemistry Laboratory (2)	

In addition, it is strongly recommended that students intending to pursue graduate work take the following:

CHEM 452 Biochemistry II (3)	
CHEM 453 Biochemistry Laboratory (2)	
Honors courses	
BIOL 387/487 Cooperative Education	3/3
BIOL 488 Honors Practicum in Ecosystem Biology 2	
BIOL 497/498/499 Independent Study	1/2/3

GENERAL BIOLOGY CONCENTRATION

Students entering preprofessional programs in chiropractic medicine, dentistry, allopathic medicine, osteopathic medicine, podiatry, veterinary medicine, or optometry; and students specializing in field biology, plant and animal taxonomy, cell biology, preforestry, or laboratory and museum research may select the gen-

eral biology concentration as preparation for continuing in a professional or graduate school program.

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

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

	Sem hours
General biology concentration	19
BIOL 320 Introduction to Cell Physiology	4
One taxonomic field course* (in either botany or zoology)	3
BIOL 420 General Ecology	4
*See list at end of concentration.	

Electives

Choose eight semester hours in biology, botany, microbiology, or zoology *except* BIOL 105 Biology and the Human Species, BIOL 205 Field Biology, BIOL 207 Elements of Ecology, ZOOL 326 Human Physiology, ESCI 302 Elementary School Science, ESCI 303 Science for the Elementary Teacher, and BIOL 403 Methods and Materials for Teaching Biology.

Courses designated as botanical taxonomic field courses:

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

Courses designated as zoological taxonomic field courses:

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

Chemistry requirements	16
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3

CHEM 124 General Chemistry II Laboratory .. 1
 Take one of the following sequences 8
 CHEM 270 Organic Chemistry (4)
 CHEM 271 Organic Chemistry Laboratory (1)
 CHEM 451 Biochemistry I (3)

or

CHEM 371 Organic Chemistry I (3)
 CHEM 372 Organic Chemistry II (3)
 CHEM 373 Organic Chemistry Laboratory (2)

In addition, it is strongly recommended that students intending to pursue graduate work take the following:

CHEM 452 Biochemistry II (3)
 CHEM 453 Biochemistry Laboratory (2)

MICROBIOLOGY CONCENTRATION

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

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

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

Sem hours

Microbiology concentration 29
 1. **Required courses** 17
 MICR 329 General Microbiology 5
 MICR 333 Principles of Immunology 3
 MICR 335 Immunology and Serology Laboratory ... 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, *BIOL 542 Molecular Genetics

Group B—Cellular/Molecular Biology

MICR 340 Basic Virology, BIOL 461 Oncology, *BIOL 540 Cell Biology

Group C—Medical Microbiology

MICR 432 Clinical Microbiology, BOTN 446 Medical Mycology, ZOO 462 Parasitology

Group D—Environmental/Field and Applied Microbiology

BOTN 404 Mycology, BOTN 451 Freshwater Algae, BOTN 453 Taxonomy and Ecology of Diatoms, MICR 442 Microbial Ecology, MICR 445 Food Microbiology, ZOO 480 Protozoology, *BOTN 540 Plant Morphology of Algae and Fungi

*Qualified students may take graduate level courses (listed in the graduate catalog) with approval of their adviser and the Graduate School.

3. Required biochemistry minor 22-25

CHEM 121 General Chemistry I 3
 CHEM 122 General Chemistry I Laboratory ... 1
 CHEM 123 General Chemistry II 3
 CHEM 124 General Chemistry II Laboratory .. 1
 CHEM 281 Quantitative Analysis 4
 CHEM 451 Biochemistry I 3
 CHEM 453 Biochemistry Laboratory 2

Take either:

CHEM 270 Organic Chemistry (4)
 CHEM 271 Organic Chemistry Laboratory (1)

or

CHEM 371 Organic Chemistry I (3)
 CHEM 372 Organic Chemistry II (3)
 CHEM 373 Organic Chemistry Laboratory (2)

4. Mathematics requirement 4

MATH 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 Independent Study (one/two/three credits); MICR 387/487 Cooperative Education (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 as well as entry into a professional program such as medicine (allopathic and osteopathic) or dentistry. It is recommended that students consider continuing with graduate study to expand their career opportunities.

	Sem hours
Physiology concentration	35
1. Required course	4
BIOL 320 Introduction to Cell Physiology	4
2. Restricted electives	9
Choose nine credits from the following:	
BOTN 442 Plant Physiology, MICR 444 Microbial Physiology, ZOOL 427 Vertebrate Physiology, ZOOL 437 Invertebrate Physiology, ZOOL 439 Physiological Ecology.	
3. Electives	6
Choose 6 credits from the following:	
BIOL 413 Animal and Plant Preservation Techniques, BIOL 415 Basic Histological Techniques, BIOL 416 Biological Instrumentation—Theory and Practice, BIOL 420 General Ecology, BIOL 480 Radiation Biology, *BIOL 540 Cell Biology	
BOTN 412 Plant Anatomy	
MICR 329 General Microbiology	
ZOOL 317 Human Gross Anatomy, ZOOL 323 Animal Embryology, ZOOL 431 Comparative Anatomy of Vertebrates, ZOOL 404 Mammalian Histology, ZOOL 417 Neuroanatomy	
*Qualified students may take graduate level courses (listed in the graduate catalog) with approval of their adviser and the Graduate School.	
4. Chemistry Requirement	16-19
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
CHEM 451 Biochemistry I	3
Take either:	
CHEM 270 Organic Chemistry 4	
CHEM 271 Organic Chemistry Laboratory 1	
or	
CHEM 371 Organic Chemistry I 3	
CHEM 372 Organic Chemistry II 3	
CHEM 373 Organic Chemistry Laboratory 2	

ACADEMIC MINORS

BIOLOGY MINOR

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

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

	Sem hours
Minor in biology	20-24
1. Required courses	11
BOTN 221 General Botany	4
ZOOL 222 General Zoology	4
BIOL 301 Genetics	3
2. Electives*	9
Choose 9 credits from the following: biology, botany, microbiology, or zoology <i>except</i> ESCI 302 Elementary School Science, ESCI 303 Science for the Elementary Teacher, BIOL 105 Biology and the Human Species, BIOL 205 Field Biology, and BIOL 403 Methods and Materials for Teaching Biology. Either BIOL 204 The Biology of Cancer or BIOL 239 Biology of Aging may be used in this minor, but <i>not</i> both courses.	

*No more than two hours of electives toward the minor may be taken in any combination of BIOL/BOTN/ZOOL 497/498/499 Independent Study courses. BIOL/BOTN/MICR/ZOOL 387/487 Cooperative Education courses will not count on this minor. A minimum of three elective hours *MUST* be selected from 300-level or higher courses.

BOTANY MINOR

Open only to students majoring in Biology. Students electing this minor must file an approved program of required/elective courses with a faculty advisor and with the Department of Biology Undergraduate Coordinator. Any program changes require *prior written approval* of the faculty advisor and the Department of Biology Undergraduate Coordinator.

This minor is not to be considered as a teaching minor for prospective elementary or secondary teachers. Prospective teachers who wish to elect this minor must complete a second minor outside of the Biology Department to satisfy the current requirements for teacher certification.

	Sem hours
Minor in botany	20

ZOOLOGY MINOR

Open only to students majoring in Biology. Students electing this minor must file an approved program of required/elective courses with a faculty advisor and with the Department of Biology Undergraduate Coordinator. Any program changes require *prior written approval* of the faculty advisor and the Department of Biology Undergraduate Coordinator.

This minor is not to be considered as a teaching

minor for prospective elementary or secondary teachers. Prospective teachers who wish to elect this minor must complete a second minor outside of the Biology Department to satisfy the current requirements for teacher certification.

Sem hours

Minor in zoology 20

CONSERVATION AND RESOURCE USE MINOR

This program is administered jointly by the heads of the Biology department; the Economics department; the Geography department; and the Sociology, Anthropology, and Criminology 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 PLSC 202 State and Local Government.

Sem hours

Minor in conservation and resource use 24

1. Required courses 13

* GESC 108 Earth Science or GEOL 160 Physical Geology 4

**BIOL 207 Elements of Ecology 2

BIOL 224 Principles of Conservation 4

*** ECON 200 The American Economy 3

2. Electives 11

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

BOTN 215 Economic Botany, BOTN 221 General Botany, ZOOL 222 General Zoology, BIOL 410 Limnology, BIOL 412 Biogeography, BIOL 436 Terrestrial Ecosystems, and any taxonomic field course.

CHEM 115 Chemistry and Society, CHEM 415 Environmental Chemistry

ECON 201-202 Principles of Economics I-II, ECON 336 Economics of Environment and Natural Resources, ECON 337 Energy Economics and Policies

GESC 114 National Parks and Monuments, GESC 208 Natural Environmental Hazards, GEOG 215 Introduction to Urban and Regional Planning, GEOG 235 Economic Geography, GEOL 229 Rocks of Michigan, GESC 305 Aerial Photograph Interpretation, GEOG 310 Energy Awareness, GEOG 320 Geography of the

United States and Canada, GESC 320 The Oceans, GESC 324 Weather, GESC 327 Soil Science, GEOG 332 Urban Geography, GEOG 361 Geography of Population, GESC 424 Climatology, GEOL 448 Hydrogeology, GESC 495 Environmental Assessment and Planning
SOCL 306 The Urban Community, SOCL 334 Population

**Students required to take GESC 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 BIOL 207 Elements of Ecology is BIOL 105 Biology and the Human Species. Students planning to take this minor should elect BIOL 105 for basic studies credit in the freshman year. Biology majors minoring in conservation will take BIOL 420 General Ecology on the major and substitute additional approved electives on the minor.*

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

TEACHING MAJORS BIOLOGY MAJOR

SECONDARY TEACHER CERTIFICATION

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

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *Basic Studies requirement. See inside back cover*

I-B-4. MATH 120 Calculus I (4) or MATH 270 Elementary Statistics I (3)^a

I-B-5. *Basic Studies requirement. See inside back cover*

II-B-1. CHEM 121 General Chemistry I (3)^a

CHEM 122 General Chemistry I Laboratory (1)^a

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. PHY 221 Mechanics, Sound, and Heat (4)^a

- III-B-1. *Basic Studies requirement. See inside back cover*
 III-B-2. *Basic Studies requirement. See inside back cover*
 III-B-3. *Basic Studies requirement. See inside back cover*
 III-B-4. *Basic Studies requirement. See inside back cover*
 IV-B-1. *Basic Studies requirement. See inside back cover*
 IV-B-2. *Basic Studies requirement. See inside back cover*
 IV-B-3. *Basic Studies requirement. See inside back cover*
 IV-B-4. *Basic Studies requirement. See inside back cover*
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 50

Teaching Major

Hours must be distributed such as to include at least seven hours in botany (may include microbiology) and seven hours in zoology. See note "a" above for courses applicable to both Basic Studies and the major.

- CHEM 123 General Chemistry II (3)
 CHEM 124 General Chemistry II Laboratory (1)
 BOTN 221 General Botany (4)
 PHY 222 Electricity and Light (4)
 ZOOL 222 General Zoology (4)
 BIOL 301 Genetics (3)
 BIOL 320 Introduction to Cell Physiology (4)
 BIOL 420 General Ecology (4)

Take one of the following sequences:

- CHEM 270 Organic Chemistry (4)
 CHEM 271 Organic Chemistry Laboratory (1)
 CHEM 451 Biochemistry I (3)

or

- CHEM 371 Organic Chemistry I (3)
 CHEM 372 Organic Chemistry II (3)
 CHEM 373 Organic Chemistry Laboratory (2)

One of:

- ZOOL 300 Natural History of Invertebrates (3)
 ZOOL 310 Natural History of Vertebrates (3)
 BOTN 354 Trees and Shrubs (3)
 ZOOL 421 Entomology (3)
 ZOOL 422 Ichthyology (3)
 ZOOL 425 Ornithology (3)
 BOTN 450 Aquatic Tracheophyta (3)
 BOTN 451 Freshwater Algae (3)
 BOTN 453 Taxonomy and Ecology of Diatoms (3)
 BOTN 455 Systematic Botany (3)
 ZOOL 474 Herpetology (3)
 ZOOL 480 Protozoology (3)
 ZOOL 482 Aquatic Entomology (3)
 ZOOL 485 Mammalogy (3)

Eight credits in biology, botany, microbiology, or zoology except BIOL 105, BIOL 205, BIOL 207, ZOOL 326, ESCI 302, ESCI 303, and BIOL 403 (8)

Credit hours in major and related areas: 46

Minor

Select a minor from the approved list (see p. 363)

Credit hours in minor: 20¹

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
 EDTC 300 Introduction to Computer Applications in Education (1)
 SPGN 300 Exceptional Children in the Regular Classroom (1)
 EDPS 322 Human Development and Learning (4)

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

- CURR 305 Curriculum and Methods: Secondary (3)
 RDNG 311 Teaching Reading in the Secondary School (3)
 SOFD 328 Schools in a Multicultural Society (3)
 EDPS 340 Introduction to Assessment and Evaluation (3)
 EDMD 345 Media for the Classroom Teacher (1)
 BIOL 403 Methods and Materials for Teaching Biology (3)
 EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: 150

¹Course required for and applicable to major.

BIOLOGY MAJOR

ELEMENTARY TEACHER CERTIFICATION

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

The curriculum for this major is that which is listed under "Major" in the secondary biology program given above, plus the "science" requirements from that program's Basic Studies requirements. Approved minors are those for the elementary program as given on page 362.

51 hours, not including the minor or course work applicable to Basic Studies.

TEACHING MINOR BIOLOGY MINOR

ELEMENTARY, SECONDARY, K-12, SPECIAL EDUCATION-ELEMENTARY, AND SPECIAL EDUCATION-SECONDARY TEACHER CERTIFICATION

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

BOTN 221 General Botany (4)

ZOOL 222 General Zoology (4)

BIOL 301 Genetics (3)

Nine hours from biology, botany, microbiology, or zoology except BIOL 105, ESCI 302, ESCI 303, BIOL 205, BIOL 403. Either BIOL 204 or BIOL 239 may be used, but not both. No more than two hours may be taken in any combination of BIOL/BOTN/ ZOOL 497/498. BIOL/BOTN/ MICR/ ZOOL 387/487 will not count.

Strongly advised: CHEM 119; or CHEM 121-122 and CHEM 123-124.

An additional four cognate hours of science, other than biology, must be completed to meet NCA requirements (24 hours) for teaching this minor at the junior-senior high school level. However, BIOL 403 may be selected for these additional hours. Students with no previous biology in high school must start with BIOL 105, which does not count toward the minor.

24 hours (including hours satisfied in Basic Studies)

PREPROFESSIONAL PROGRAMS

PREFORESTRY

Forestry schools set their own requirements for admission. It is imperative that during the first year at EMU exact requirements be obtained from current catalogs of specific schools at which students seek to complete professional training. Students should initially follow the general biology program curriculum, which allows sufficient flexibility to accommodate admission requirements of professional schools. Students should consult with the preforestry adviser to establish the most appropriate program of courses.

The preforestry curriculum is designed for such diverse fields as conservation biology, wildlife management, resource policy, and fisheries biology, as well as forestry.

PREMEDICINE (ALLOPATHIC AND OSTEOPATHIC), PREOPTOMETRY, PREPODIATRY, AND PRECHIROPRACTIC

Students can complete course requirements at EMU for admission to optometry, podiatry, and chiropractic programs. For information on these programs, see the advising coordinator for premedical programs. The requirements are similar to those for allopathic and osteopathic medical schools as described below.

While medical schools do not prescribe a premedical 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 premedical 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 August in various centers throughout the nation. This test should be taken during the junior year.

Each allopathic and osteopathic medical school establishes its own admission requirements. The course requirements are similar but differ enough so that students should consult the catalogs of the schools in which they are interested. The latest edition of Medical School Admission Requirements, available at the reference desk of the EMU library and in the premedicine adviser's office, should be consulted. The introductory chapters of this book should be read by every prospective medical student.

If students electing the premedicine sequence are not achieving at least a 2.75 grade point average (overall and in their major), their chances of acceptance by a medical school are minimal, and they should plan their programs so that other professional or vocational goals are possible.

Students planning to apply for admission to a medical school should plan their schedule to include the following general requirements:

Sem hours

ENGL 121 English Composition	3
Elective in English language or literature	3
ZOOL 222 General Zoology	4
BIOL 301 Genetics	3
BIOL 320 Introduction to Cell Physiology	4

BOTN 221 General Botany	4
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
CHEM 371 Organic Chemistry I	3
CHEM 372 Organic Chemistry II	3
CHEM 373 Organic Chemistry Laboratory	2
CHEM 451 Biochemistry I	3
PHY 221 Mechanics, Sound, and Heat	4
PHY 222 Electricity and Light	4
Sociology and psychology courses	8

Because of the nature of the premedical program, if the student is a biology or chemistry major it is almost mandatory to follow the first year as patterned below.

First Year Premedicine

	Sem hours
First semester	12-18
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
BOTN 221 General Botany	4
*Mathematics	2-4
Basic studies	2-6
**Second semester	13-19
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
*Mathematics	2-4
ZOOL 222 General Zoology	4
Basic studies	3-7

*Students with one to two years of less than high quality algebra take MATH 105 College Algebra. Students with only one year of algebra take MATH 104 Intermediate Algebra, followed by MATH 105 College Algebra. Students without trigonometry take MATH 107 Plane Trigonometry.

Although students may need to take MATH 104 Intermediate Algebra, MATH 105 College Algebra, or MATH 107 Plane Trigonometry these courses do not satisfy Basic Studies requirements. Students must still complete a mathematics course from the list of approved mathematics courses; biology majors will satisfy both basic studies and biology major requirements by taking either MATH 120 Calculus I or MATH 270 Elementary Statistics.

**Prior to registering for the second semester the student should see the premedical coordinator.

BIOLOGY COURSES

BIOL 105 Biology and the Human Species. 4 hrs
The basic concepts of biology, with emphasis on human structure and function, as well as key issues and problems confronting the human. Designed for the student who is taking neither major nor minor in biology. Meets for two lecture hours, one recitation hour, and three laboratory hours per week. Audio-tutorial laboratory covers basic biological concepts.
Not open to students with credit in BOTN 221, and/or ZOOL 222. Does not count toward the major or minor.

BIOL 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

BIOL 204 The Biology of Cancer. 2 hrs
Introduces the types, characteristics, putative causes, and current treatments of cancer.
Prereq: BIOL 105 or ZOOL 222

BIOL 205 Field Biology. 4 hrs
A lecture, laboratory, and field course in the behavior, ecology, and broad classification of plants and animals, giving training in recognition of common plants and animals of Michigan. Gives background material to the nonspecialist interested in outdoor life, and to the elementary school teacher. Not open to students having credit in BOTN 221 General Botany or ZOOL 222 General Zoology except by department permission. **Does not count toward the biology major or biology minor.**

BIOL 207 Elements of Ecology. 2 hrs
The interactions of plants and animals with their physical and biological environment. Consideration is given to the way in which principles of ecology are applied in conservation practices. Lectures and readings are supplemented by field trips to locations of ecological interest in the area.
Prereq: BIOL 105 or equivalent. Does not count toward the major.

BIOL 224 Principles of Conservation. 4 hrs
Introduces the basic resources of water, soil, vegetation, animal life, land as space, land in its unaltered condition, minerals and human powers, and develops the principles by which they may be wisely utilized and conserved with major emphasis on the renewable resources.

BIOL 232 Nature Interpretation. 3 hrs

Combines intensive field and museum work in natural history with practical training and experience in interpreting natural objects and settings to individuals and groups.

BIOL 239 Biology of Aging. 2 hrs

The study of the aging process at the molecular, cellular, tissue, and systems level of organization. Theories of aging will be considered.

Prereq: BIOL 105 or equivalent.

BIOL 277/278/279 Special Topics. 1/2/3 hrs

An examination of topics in biology not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Department permission.

BIOL 301 Genetics. 3 hrs

A lecture course emphasizing the basic principles of inheritance with their application to plants and animals.

Prereq: BOTN 221 and ZOOLOGY 222 or equivalent.

BIOL 302 Genetics Laboratory. 2 hrs

A laboratory course designed to accompany or follow BIOL 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: BIOL 301 (may be taken concurrently).

BIOL 307 Introduction to Hematology. 3 hrs

The study of the formed elements of the blood, their precursors, and some of their products. An introduction to the theory and principles of routine medical laboratory procedure and technique. Not open to those with credit in CLSC 307.

Prereq: Department permission.

BIOL 320 Introduction to Cell Physiology. 4 hrs

A lecture and laboratory course in introductory physiology devoted to the study of physiological mechanisms common to all living organisms. Basic processes at the cellular level emphasized, rather than the applications of such processes to a particular organism. Organic chemistry with laboratory is highly recommended.

Prereq: BOTN 221 and ZOOLOGY 222; CHEM 121-124.

BIOL 334 Immunohematology/Urinalysis. 3 hrs

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

Prereq: ZOOLOGY 201, 202; or ZOOLOGY 222 and ZOOLOGY 326; BIOL 307 and MICR 333.

BIOL 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

BIOL 387 Cooperative Education. 3 hrs

Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in biology or technology. The program consists of two work experiences (BIOL 387 and BIOL 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.

BIOL 403 Methods and Materials for Teaching Biology. 3 hrs

A lecture-laboratory course providing knowledge, training and practice in the presentation of biological principles, analysis of texts, selection of course content, effective classroom methods, and preparation of classroom materials used in the teaching of biology. Does not count toward major or minor.

Prereq: BOTN 221, ZOOLOGY 222, and department permission. Junior standing. Not open to students on academic probation.

BIOL 407 Advanced Hematology. 3 hrs

Theory and application of hematological test procedures. Includes interpretation of results, problem-solving, and correlation of laboratory findings with disease states. Not open to those with credit in CLSC 407.

Prereq: BIOL 307. Coreq: MICR 333.

BIOL 410 Limnology. 3 hrs

A lecture, laboratory, and field course dealing with physicochemical and biological interrelationships in standing waters.

Prereq: BIOL 420 and one taxonomic field course, or department permission.

BIOL 412 Biogeography. 3 hrs

A lecture course involving the descriptive and historical aspects of plant and animal distribution and the basic principles governing their natural distribution in both space and time.

Prereq: A 100- or 200-level college biology course, and a 100- or 200-level college earth science or a 100- or 200-

level geology course, or department permission.

BIOL 413 Animal and Plant Preservation Techniques. 1 hr

A laboratory, lecture, and demonstration mini-techniques course in the preservation of biological specimens: minute whole animal slide mounts to large animal and plant techniques, such as freeze-drying, pressing, skeleton making, study-skins, and plastic embedding.

Prereq: Two college biology courses at the 100-, 200- or 300-level.

BIOL 415 Basic Histological Techniques. 1 hr

A laboratory, lecture, and demonstration mini-techniques course giving basic theory and practice in mammalian tissue slide preparation including dissection, fixation, dehydration, embedding, sectioning, affixing, and staining.

Prereq: Two college biology courses at the 100-, 200- or 300-level.

BIOL 416 Biological Instrumentation Theory and Practice. 1 hr

A lecture and laboratory course that covers testing, adjustments, operation, and maintenance of scientific instruments and their uses in the biological area.

Prereq: Two college biology courses at the 100-, 200- or 300-level, or department permission.

BIOL 420 General Ecology. 4 hrs

A lecture, laboratory, and field course introducing the concepts involved in the study of terrestrial and aquatic communities, their physical environment, and their integration into ecosystems. Emphasis on properties at the ecosystem, community, and population levels.

Prereq: BOTN 221 and ZOOL 222.

BIOL 434 Advanced Immunohematology. 3 hrs

Principles and procedures used in the blood bank are studied and related to problem situations in the laboratory. Not open to those with credit in CLSC 434.

Prereq: BIOL 307 and CLSC 335.

BIOL 435 Wetland Ecosystems. 3 hrs

Advanced field ecology course in the theory and method of study of wetland ecosystems.

Prereq: BIOL 420; one taxonomic field course (BOTN 354, BOTN 450, BOTN 451, BOTN 453, BOTN 455, ZOOL 300, ZOOL 310, ZOOL 474, ZOOL 480, ZOOL 482, or ZOOL 485); or department permission.

BIOL 436 Terrestrial Ecosystems. 3 hrs
Advanced field ecology course in the theory and methods of study of the structure and dynamics of terrestrial ecosystems.

Prereq: BIOL 420; one taxonomic field course (BOTN 354, BOTN 450, BOTN 451, BOTN 453, BOTN 455, ZOOL 300, ZOOL 310, ZOOL 474, ZOOL 480, ZOOL 482, or ZOOL 485); or department permission.

BIOL 461 Oncology. 3 hrs

A lecture course on physico-chemico-biological agents and factors of nonhuman 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.

BIOL 477/478/479 Special Topics. 1/2/3 hrs

An examination of advanced topics in biology not covered in other department offerings.

Prereq: Department permission.

BIOL 480 Radiation Biology. 3 hrs

A lecture and laboratory course in introductory physiology devoted to the study of physiological mechanisms common to all living organisms. Basic processes at the cellular level emphasized, rather than the applications of such processes to a particular organism. BIOL 301 Genetics is highly recommended.

Prereq: MICR 444, or BOTN 442, or ZOOL 427; PHY 221 and PHY 222 or equivalent; CHEM 121-124.

BIOL 487 Cooperative Education. 3 hrs

Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in biology or technology. The program consists of two work experiences (BIOL 387 and BIOL 487) alternated with full-time attendance at the University. Admittance to program by application only. Graded on a credit/no credit basis.

Prereq: BIOL 387.

BIOL 488 Honors Practicum in Ecosystem Biology.

2 hrs

A practical experience in an environmental field study including experimental design and collection, analysis, and interpretation of data as a member of a research team. Emphasis is placed on the application of biological theory to problem solving.

Prereq: Senior status (85 hours); GPA 3.0 overall and 3.3 in biology, a sponsoring faculty member, and/or ap-

approval of the Ecosystem Biology Program Committee; prior application required.

BIOL 489 Practicum in Biology. 3 hrs
Provision of practical experience in a particular field of study, including experimental design and collection, analysis, and interpretation of data as a member of a research team. Emphasis placed on the application of a biological theory to problem solving.
Prereq: Department and adviser permission.

BIOL 497/498/499 Independent Study. 1/2/3 hrs
Individual work in some area of biology under direction of a staff member. Preliminary draft of proposed study must be approved by the department prior to enrollment. May be elected more than once, after resubmission and approval.
Prereq: Department permission.

BOTANY COURSES

BOTN 177/178/179 Special Topics. 1/2/3 hrs
An examination of topics in botany not covered in other department offerings. Students may elect this course more than once as long as different topics are studied.
Prereq: Department permission.

BOTN 209 Ornamental Plants. 2 hrs
A general cultural course to acquaint students with ornamental shrubs and trees, common weeds, and house plants. Stress on identification and methods of propagation. Much time is spent in the greenhouse and on short field trips.

BOTN 215 Economic Botany. 3 hrs
A study of plants useful to man, especially those which yield food, fibers, wood, rubber, drugs, and other products of value. It is a lecture-demonstration course supplemented by reading. Open to all students without prerequisite, though previous training in biology, botany, or agriculture is desirable.

BOTN 221 General Botany. 4 hrs
The structure and function of seed plants and of representative lower plants, together with the fundamentals of plant heredity, ecology, and evolution. Two one-hour lectures, one one-hour recitation, plus four hours of laboratory experience.
Prereq: High school biology or BIOL 105 or equivalent. Cannot be taken concurrently with ZOOL 222 except by department permission.

BOTN 234 General Field Botany. 1 hr
This course stresses field identification and ecological relationships of the higher plants. There is much opportunity for practice in the use of taxonomic keys.

BOTN 277/278/279 Special Topics. 1/2/3 hrs
An examination of topics in botany not covered in other department offerings. Students may elect this course more than once as long as different topics are studied.
Prereq: Department permission.

BOTN 354 Trees and Shrubs. 3 hrs
A taxonomic field course on identification of native trees and shrubs in winter and summer conditions. Counts as taxonomic field course.
Prereq: BIOL 205 or BOTN 221.

BOTN 377/378/379 Special Topics. 1/2/3 hrs
An examination of topics in botany not covered in other department offerings. Students may elect this course more than once as long as different topics are studied.
Prereq: Department permission.

BOTN 387 Cooperative Education. 3 hrs
Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in botany or technology. The program consists of two work experiences (BOTN 387 and BOTN 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.

BOTN 404 Mycology. 3 hrs
A lecture-laboratory course on the study of molds, rusts, mildews, edible and poisonous mushrooms, and other fungi. Their life history, economic importance, method of identification, and preservation are considered.
Prereq: BOTN 221.

BOTN 412 Plant Anatomy. 3 hrs
A basic lecture-laboratory course in plant histology emphasizing recognition of primary and secondary tissues as variously combined in root, stem, leaf, and flower of a wide variety of representative seed plants.
Prereq: BOTN 221.

BOTN 442 Plant Physiology. 3 hrs
A detailed study of major plant functions with emphasis on growth and development presented by lecture,

demonstration, and experimentation in laboratory and greenhouse.

Prereq: BOTN 221; CHEM 270 and 271 or CHEM 371-373; and BIOL 320.

BOTN 446 Medical Mycology. 4 hrs

The medical and public health importance of diseases caused by fungi. Diagnostic methods and significant characteristics of the causal agents of mycoses are studied in this lecture-laboratory course. Fungi included are the contaminants, dermatophytes, and systemics.

Prereq: MICR 328 or MICR 329 or BOTN 404.

BOTN 450 Taxonomy and Ecology of Aquatic Vascular Plants. 3 hrs

Field and laboratory work in identification of herbaceous and shrubby vascular plants growing in aquatic habitats and in both vegetative and reproductive phases. Counts as taxonomic field course.

Prereq: BOTN 221.

BOTN 451 Freshwater Algae. 3 hrs

A survey of the freshwater algal divisions; their morphology, taxonomy, ecology, and economic importance. 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: BOTN 221.

BOTN 453 Taxonomy and Ecology of Diatoms. 3 hrs

A taxonomic field course on the collection, preservation, and identification of freshwater diatoms. A survey of the diatom genera and the common or ecologically important species. Emphasis is placed on developing a familiarity with the more significant world literature. Collection required. Counts as taxonomic field course.

Prereq: BOTN 451 or department permission.

BOTN 455 Systematic Botany. 3 hrs

Covers the essentials of the collection, identification, and classification of flowering plants. The student will become familiar with the major plant groups, both from lecture and herbarium study and from field experience in varied habitats. Counts as taxonomic field course.

Prereq: BOTN 221.

BOTN 477/478/479 Special Topics. 1/2/3 hrs

An examination of 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.

BOTN 487 Cooperative Education. 3 hrs

Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in botany or technology. The program consists of two work experiences (BOTN 387 and BOTN 487) alternated with full-time attendance at the University. Admittance to program by application only. Graded on a credit/no credit basis.

Prereq: BOTN 387.

BOTN 497/498/499 Independent Study. 1/2/3 hrs

Individual work in some area of botany 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.

ELEMENTARY SCIENCE COURSES

BIOL 205 Field Biology. 4 hrs

(See Biology Courses.)

ESCI 177/178/179 Special Topics. 1/2/3 hrs

An examination of topics in elementary science not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Department permission.

ESCI 277/278/279 Special Topics. 1/2/3 hrs

An examination of topics in elementary science not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Department permission.

ESCI 302 Elementary School Science. 3 hrs

Intended for those planning to teach in the elementary grades. Prepares the student to organize the problems, collect the materials, and direct the activities of the elementary science class. Methods of presenting simple experiments to children and conducting field trips will be demonstrated. Two one-hour lectures and one two-hour laboratory. *Not open to students who have taken ESCI 303.*

ESCI 303 Science for the Elementary Teacher. 3 hrs
Important biological concepts, especially relating to the interrelationships of organisms within their environment; the investigative or "discovery" approach; methodology involved in the new approaches to teaching science. One hour of lecture and four hours weekly involving recitation, laboratory, or fieldwork. Concluding course in the elementary science sequence.

ESCI 377/378/379 Special Topics. 1/2/3 hrs
An examination of topics in elementary science not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.
Prereq: Department permission.

ESCI 477/478/479 Special Topics. 1/2/3 hrs
An examination of topics in elementary science not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.
Prereq: Department permission.

MICROBIOLOGY COURSES

MICR 177/178/179 Special Topics. 1/2/3 hrs
An examination of topics in microbiology not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.
Prereq: Department permission

MICR 277/278/279 Special Topics. 1/2/3 hrs
An examination of topics in microbiology not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.
Prereq: Department permission

MICR 328 Introductory Microbiology. 3 hrs
Introduction to the biology of bacteria and other microbes; transmission of infectious diseases; and principles of, control of, and immunity to infectious diseases. A lecture/lab course. Does not apply on the curriculum in clinical laboratory sciences or on microbiology concentration in biology major, but will count as elective on general biology concentration or biology minor.
Prereq: BIOL 105 and CHEM 120; or ZOOLOGY 201,202; or department permission.

MICR 329 General Microbiology. 5 hrs
A lecture and laboratory course on the nature and biology of bacteria and other microbes, their physiological relationships in natural and controlled environments, and the interactions of pathogenic microorganisms with their hosts. Laboratory includes an introduction to the techniques of isolating, cultivating, and identifying bacteria and other microbes, and their physiological, serological, and pathological properties. Not open to those who take MICR 328. CHEM 451 Biochemistry I is highly recommended.
Prereq: BOTN 221, ZOOLOGY 222 and BIOL 301; CHEM 270 and 271 or CHEM 371-373.

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

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

MICR 340 Basic Virology. 3 hrs
A basic lecture and laboratory course on physico-chemico-biological nature of bacteriophages and viruses causing diseases in animals and plants, including their transmission, infection, replication (both transcription/translation of either DNA or RNA), cultivation in vitro, titration, host-virus interaction, and control.
Prereq: MICR 329.

MICR 377/378/379 Special Topics. 1/2/3 hrs
An examination of topics in microbiology not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.
Prereq: Department permission

MICR 387 Cooperative Education. 3 hrs
Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in microbiology

or technology. The program consists of two work experiences (MICR 387 and MICR 487) alternated with full-time attendance at the University. Graded on a credit/no credit basis.

Prereq: MICR 329 and junior standing. Admittance to program by application only.

MICR 432 Clinical Microbiology. 4 hrs

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 CLSC 432.

Prereq: MICR 329 or department permission.

MICR 442 Microbial Ecology. 3 hrs

Interactions among microbes (fungi, bacteria, some phages), other living organisms, and the environment, with emphases on parasitism, mutualism, commensalism, and biogeochemical recycling of matter. Includes both laboratory and field exercises.

Prereq: BOTN 221 or ZOOLOGY 222, and MICR 329 or equivalent.

MICR 444 Microbial Physiology. 3 hrs

A lecture and laboratory course of physiological studies on bacteria and fungi. Emphasis will be placed on nutrition, metabolism, fermentation, physiology of parasitism, and biosynthesis of polymers by microbes. CHEM 451 Biochemistry I and CHEM 453 Biochemistry Laboratory are highly recommended.

Prereq: MICR 329.

MICR 445 Food Microbiology. 3 hrs

A lecture and laboratory course on the qualitative and quantitative nature of microbiology in relation to foods and food systems, behavior and detection of bacteria, toxin production, destruction of microbes by heat and other means, and food sanitation.

Prereq: MICR 328 or MICR 329.

MICR 452 Advanced Microbiology. 4 hrs

A lecture and laboratory course to provide an in-depth study of the morphological, biochemical, and genetic relationships of bacteria. Emphasis will be on physiological transformations carried out by autotrophic and heterotrophic organisms in their environment, regulation of growth, and advanced isolation and characterization techniques.

Prereq: MICR 329, MICR 444, and CHEM 451.

MICR 454 Molecular Biology of Bacteria and Viruses.

3 hrs

A lecture course on ultrastructure 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; and a course in physiology (BIOL 320, MICR 444, BOTN 442, ZOOLOGY 427, OR ZOOLOGY 437).

MICR 477/478/479 Special Topics. 1/2/3 hrs

An examination of topics in microbiology not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Department permission.

MICR 487 Cooperative Education. 3 hrs

Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in microbiology or technology. The program consists of two work experiences (MICR 387 and MICR 487) alternated with full-time attendance at the University. Graded on a credit/no credit basis.

Prereq: MICR 387.

MICR 497/498/499 Independent Study. 1/2/3 hrs

Individual work in an area of microbiology under direction of a staff member. Preliminary draft of proposed study must be approved by the department prior to enrollment. May be elected more than once, after resubmission and approval.

Prereq: Department permission.

ZOOLOGY COURSES

ZOOLOGY 177/178/179 Special Topics. 1/2/3 hrs

An examination of zoology topics not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Department permission.

ZOOLOGY 201 Human Anatomy and Physiology I.

3 hrs

An intensive lecture and laboratory course investigating human anatomy and physiology with emphasis on both normal and 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 ZOOLOGY 201 and ZOOLOGY 202 are taken consecutively.

Prereq: CHEM 120.

ZOOLOGY 202 Human Anatomy and Physiology II. 3 hrs

An intensive lecture and laboratory course investigating human anatomy and physiology with emphasis on both normal and pathological conditions, in a two-semester sequence. The second semester will cover circulation, metabolism, the endocrine, digestive, excretory and reproductive systems, and the integration of the systems of the body.

Prereq: CHEM 120 and ZOOLOGY 201.

ZOOLOGY 222 General Zoology. 4 hrs

A general survey of the groups of invertebrate and vertebrate animals according to the evolutionary sequence. Emphasis is placed upon the classification and structures, also on such aspects as physiology, life histories, habits, distribution, and economic relations. Two one-hour lectures, one one-hour recitation, and four hours of audio-tutorial laboratory.

Prereq: High school biology or BIOL 105 or equivalent. Cannot be taken concurrently with BOTN 221 except by department permission.

ZOOLOGY 223 Field Bird Study. 1 hr

Identification of birds and their songs and nesting habits, studied in laboratory and field.

ZOOLOGY 277/278/279 Special Topics. 1/2/3 hrs

An examination of zoology topics not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Department permission.

ZOOLOGY 300 Natural History of Invertebrates. 3 hrs

A field course in the recognition, collection, identification, and preserving of common invertebrates of Michigan, exclusive of the insects, with emphasis on their natural history, ecology, and economic importance. Counts as taxonomic field course.

Prereq: ZOOLOGY 222.

ZOOLOGY 310 Natural History of Vertebrates. 3 hrs

A survey of vertebrates, emphasizing their adaptations and their natural history. Laboratory work will stress the taxonomic classification, identification, and distribution of local and other forms. Fieldwork will emphasize accurate observation and permanent recording of origi-

nal data on local species. Counts as taxonomic field course.

Prereq: ZOOLOGY 222.

ZOOLOGY 317 Human Gross Anatomy. 5 hrs

A lecture, demonstration, and laboratory course on gross anatomy of the human body with emphasis on the extremities.

Prereq: BIOL 105 and department permission.

ZOOLOGY 318 Laboratory in Human Anatomy. 2 hrs

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

Coreq: PHED 200.

ZOOLOGY 323 Animal Embryology. 3 hrs

Fundamental facts and principles of the reproduction and development of animals with laboratory studies of the frog, chicken, pig, and other forms.

Prereq: ZOOLOGY 222.

ZOOLOGY 326 Human Physiology. 3 hrs

A study of the functioning of the human body. Lecture, laboratory, and demonstration. Not open to biology majors, but can be taken on a biology minor in which case ZOOLOGY 222 is prerequisite. Credit will be given for both ZOOLOGY 326 and ZOOLOGY 427 on the minor.

Prereq: BIOL 105. Open to Dietetics and Occupational Therapy majors, and biology minors.

ZOOLOGY 366 Economic Zoology. 2 hrs

A survey of the species and breeds of animals that are used as beasts of burden; supply food, clothing, sport, and recreation; or serve as pets. A lecture course.

Prereq: One 100-, 200- or 300-level course in college zoology.

ZOOLOGY 377/378/379 Special Topics. 1/2/3 hrs

An examination of zoology topics not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Department permission.

ZOOLOGY 387 Cooperative Education. 3 hrs

Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in zoology or technology. The program consists of two work experiences (ZOOLOGY 387 and ZOOLOGY 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.

ZOOL 404 Mammalian Histology. 3 hrs

A lecture/laboratory course dealing with the structure and properties of mammalian organs and their component tissues.

Prereq: ZOOL 222.

ZOOL 417 Neuroanatomy. 3 hrs

A lecture/laboratory course concerned with the study of the human nervous system, lesions, and resulting disabilities.

Prereq: ZOOL 317 and department permission.

ZOOL 421 Entomology. 3 hrs

A survey of the world of insects, their structure, function, behavior, and ecology. The identification and classification of local insects will be stressed. A student field project will be required. Counts as a taxonomic field course.

Prereq: ZOOL 222.

ZOOL 422 Ichthyology. 3 hrs

A study of the biology, classification, distribution, and evolution of fishes. Attention is given to the morphology, physiology, behavior, natural history, and ecology of fishes through work in lecture, laboratory, and in the field. Specific experience in the identification of the freshwater fishes of the Great Lakes region is provided in addition to a general survey of some marine fish families. Counts as a taxonomic field course.

Prereq: ZOOL 222.

ZOOL 425 Ornithology. 3 hrs

A course in bird biology for the secondary teacher and students with advanced interest in biology. Field identification and census methods will be used to introduce the study of bird populations, behavior, and ecology. A survey of major North American bird families will be made in the laboratory. A student field project will be required. Counts as a taxonomic field course.

Prereq: ZOOL 222.

ZOOL 427 Vertebrate Physiology. 3 hrs

A detailed study of physiological phenomena of the vertebrate body at the cellular and organ level with laboratory experiments to illustrate. Organ to organ interaction is emphasized. One year of college physics is highly recommended.

Prereq: ZOOL 222; BIOL 320; CHEM 270, 271 or CHEM 371-373; or department permission.

ZOOL 430 Invertebrate Zoology. 4 hrs

Phylogenetic and anatomical study of one or more representative types from each phylum of invertebrates, with special emphasis on taxonomy, classical literature, and current research. Three lectures and two two-hour labs weekly.

Prereq: ZOOL 222.

ZOOL 431 Comparative Anatomy of Vertebrates. 4 hrs

The anatomy of the vertebrate organ systems is studied on a comparative basis, which emphasizes the evolutionary development of the groups. Laboratory work includes detailed dissection of the shark and cat. Three one-hour lectures and two two-hour laboratory periods per week.

Prereq: ZOOL 222.

ZOOL 437 Invertebrate Physiology. 3 hrs

A lecture/lab course to study the functional processes of both terrestrial and aquatic insects and other major invertebrate groups. Builds upon a general understanding of physiology to compare the ways different invertebrates have evolved solutions to common physiological problems. In the laboratory, standard physiological research techniques will be used to demonstrate the lecture concepts. Some of these techniques will be applied in a student-designed research exercise and report.

ZOOL 430 Invertebrate Zoology is highly recommended. *Prereq: ZOOL 222; CHEM 270, 271 or CHEM 371-373; BIOL 320.*

ZOOL 439 Physiological Ecology. 3 hrs

A lecture, laboratory, and discussion course covering thermoregulation, metabolic rate, torpor, water flux, and specific adaptations for life in the cold, deserts, high altitude and great depths. Laboratory work emphasizes computerized data acquisition.

Prereq: ZOOL 222, BIOL 320.

ZOOL 462 Parasitology. 3 hrs

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

Prereq: ZOOL 222.

ZOOL 474 Herpetology. 3 hrs

The biology of amphibians and reptiles; taxonomy, origins and evolution, anatomy, adaptations, behavior, ecology, zoogeography. Local hibernating and spring-breeding populations will be studied in the field, including at night and/or during inclement weather and on two Saturday field trips. Laboratory work will cover dissection

of a representative amphibian and reptile, and study of living and preserved specimens of extant orders and families and North American species. Counts as a taxonomic field course.

Prereq: ZOOLOGY 222 and one of the following: BIOL 420, ZOOLOGY 310, or ZOOLOGY 431.

ZOOLOGY 477/478/479 Special Topics. 1/2/3 hrs

An examination of zoology topics not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Department permission.

ZOOLOGY 480 Protozoology. 3 hrs

Survey of the protozoa with emphasis on their life cycles, morphology, and ecology. Both free living and parasitic forms will be discussed. Techniques of collecting, culturing, and preserving protozoans and their identification will be emphasized in the laboratory. Counts as a taxonomic field course.

Prereq: ZOOLOGY 222.

ZOOLOGY 482 Aquatic Entomology. 3 hrs

The study of aquatic insect families and their general ecology, life histories, and taxonomy. A collection of the common aquatic insect families of the area is required. Counts as a taxonomic field course.

Prereq: ZOOLOGY 222. ZOOLOGY 421 recommended.

ZOOLOGY 485 Mammalogy. 3 hrs

Some aspects of the biology of mammals: origins and evolution, anatomy, classification, adaptations, and zoogeography. Natural history and aspects of their ecology are studied in the field. A collection of study specimens of different species is required of each student. Counts as a taxonomic field course.

Prereq: ZOOLOGY 222 and one of the following: ZOOLOGY 310, BIOL 420, or ZOOLOGY 431.

ZOOLOGY 487 Cooperative Education. 3 hrs

Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in zoology or technology. The program consists of two work experiences (ZOOLOGY 387 and ZOOLOGY 487) alternated with full-time attendance at the University. Admittance to program by application only. Graded on a credit/no credit basis.

Prereq: ZOOLOGY 387.

ZOOLOGY 497/498/499 Independent Study. 1/2/3 hrs

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, Arthur S. Howard, Judith T. Levy, Elva Mae Nicholson, Donald B. Phillips, Krishnaswamy Rengan, Stephen E. Schullery, Ronald M. Scott, John M. Sullivan, Stewart D. Work, Masanobu Yamauchi

Associate Professors: Ellene Tratras Contis, Maria C. Milletti, Ross S. Nord, Ralph R. Powell, Wade J. Tornquist, Jerry R. Williamson

Assistant Professors: Deborah Heyl-Clegg, Steven J. Pernecky, Donald M. Snyder, 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 preprofessional programs in dentistry, mortuary science, and pharmacy. Although the premedicine program is not administered by the department, the biochemistry and chemistry curricula provide excellent preparation for a career in medicine.

Housed in the spacious Mark Jefferson Science Complex, the department has laboratories available for all areas of study. Major items of equipment include: research-quality UV, visible, and Fourier-transform IR spectrophotometers; gas and high performance liquid chromatographs; X-ray diffraction and fluorescence apparatus; preparative ultracentrifuges; fluorometers; a DTA-DSC-TGA thermal analysis system; a gas chromatograph-mass spectrometer; and a titration microcalorimeter. The department also has a Bruker 250 MHz superconducting nuclear magnetic resonance (NMR) spectrometer. In addition, a computer laboratory and specialized facilities and equipment for radiochemistry and cell culture are available.

The Chemistry department offers Honors General Chemistry I & II, Honors Quantitative Analysis, and Honors Organic Chemistry Laboratory. Eligibility for these courses is based on admission to the University's Honors Program, or the student's interest and performance in previous chemistry courses. Prospective candidates are selected by instructors and the Chemistry Honors Committee; or students may apply to the Honors Committee for permission to enroll in an honors course.

The department also offers graduate study leading to the master's degree in chemistry. The MS degree

program is described in the Graduate Catalog.

Accreditation: The professional chemistry curriculum (with an appropriate selection of electives) is certified by the American Chemical Society.

Degrees:

Bachelor of Science and Bachelor of Arts

Programs of Study:

Major:

Chemistry for secondary education

General chemistry

Curricula:

Professional chemistry

Professional biochemistry

General biochemistry

Biochemistry/toxicology

Minors:

Chemistry

Chemistry for secondary, K-12, and special education-secondary

Biochemistry

Preprofessional Programs:

Predentistry

Premedicine

Premortuary science

Prepharmacy

Advising for students desiring to pursue a program 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

Predentistry (including dental hygiene and dental assisting programs): John M. Sullivan

Premedicine: Elva Mae Nicholson

Premortuary Science: Ralph Powell

Prepharmacy: Ralph Powell

Cooperative Education in Chemistry: Elva Mae Nicholson

ACADEMIC MAJORS

PROFESSIONAL CHEMISTRY

CURRICULUM

This curriculum provides the necessary background for those planning to become professional chemists. With appropriate electives, it meets the requirements established by the American Chemical Society. Students successfully completing the curriculum are prepared to enter technical positions in industrial and governmental research, or to undertake graduate study in chemistry. The program includes a group minor 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
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
CHEM 281 Quantitative Analysis	4
CHEM 361 Fundamentals of Physical Chemistry	3
CHEM 365 Physical Chemistry Laboratory	2
CHEM 371 Organic Chemistry I	3
CHEM 372 Organic Chemistry II	3
CHEM 373 Organic Chemistry Laboratory	2
CHEM 432 Advanced Inorganic Chemistry	3
CHEM 433 Inorganic-Organic Synthesis Laboratory	2
CHEM 465 Quantum and Statistical Mechanics ...	3
CHEM 481 Instrumental Analysis	4
MATH 120 Calculus I	4
MATH 121 Calculus II	4
<i>(Students deficient in high school preparation must take MATH 105 College Algebra before entering calculus.)</i>	
MATH 122 Elementary Linear Algebra	3
MATH 223 Multivariable Calculus	4
MATH 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). Certification by American Chemical Society requires appropriate selection of electives from among those indicated by "*" ;

Chemistry

CHEM 411 Toxicology I, CHEM 412 Toxicology II, CHEM 413 Toxicology Laboratory, CHEM 414 Regulatory Toxicology, CHEM 451* Biochemistry I, CHEM 452* Biochemistry II, CHEM 453* Biochemistry Laboratory, CHEM 475* Introduction to Polymer Chemistry, CHEM 485* Introduction to Radiotracer Techniques, CHEM 477/478/479 Special Topics, CHEM 487/488/489 Cooperative Education, CHEM 497/498*/499* Independent Study, CHEM 553* Enzymology, CHEM 555* Neurochemistry, CHEM 561* Quantum Chemistry and Spectroscopy, CHEM 562* Statistical Mechanics and Chemical Kinetics, CHEM 565* Nuclear Chemistry, CHEM 571* Advanced Organic Chemistry, CHEM 572* Spectrometric Organic Structure Determination, CHEM 574* Advanced Organic Chemistry Topics

Mathematics and computer science

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

Physics

PHY 330 Intermediate Mechanics I, PHY 360 Heat and Thermodynamics, PHY 440 Optics, PHY 450 Electricity and Magnetism II, PHY 452 Electrical Measurements, PHY 456 Electronics for Scientists, PHY 471 Nuclear Physics, PHY 475 Introduction to Quantum Mechanics

PROFESSIONAL BIOCHEMISTRY

CURRICULUM

The professional biochemistry curriculum provides preparation for students anticipating graduate study or a research career in biochemistry. The program includes a group minor comprised of the required courses in biology, mathematics, and physics. No other minor is needed to meet graduation requirements.

**Required courses and electives in science and mathematics are listed below. Additional basic studies and elective courses totaling 124 semester hours are required to complete a degree.*

	Sem hours
Science and mathematics	78
1. Required courses	71
CHEM 121 General Chemistry I.....	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
CHEM 281 Quantitative Analysis	4
CHEM 361 Fundamentals of Physical Chemistry	3
CHEM 365 Physical Chemistry Laboratory	2
CHEM 371 Organic Chemistry I.....	3
CHEM 372 Organic Chemistry II	3
CHEM 373 Organic Chemistry Laboratory	2
CHEM 451 Biochemistry I	3
CHEM 452 Biochemistry II	3
CHEM 453 Biochemistry Laboratory	2
CHEM 465 Quantum and Statistical Mechanics ...	3
BOTN 221 General Botany or ZOOLOGY 222 General Zoology	4
BIOL 301 Genetics	3
MATH 120 Calculus I	4
MATH 121 Calculus II	4
MATH 122 Elementary Linear Algebra	3
MATH 223 Multivariable Calculus	4
MATH 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:

CHEM 411 Toxicology I, CHEM 412 Toxicology II, CHEM 413 Toxicology Laboratory, CHEM 414 Regulatory Toxicology, CHEM 433 Inorganic-Organic Synthesis Laboratory, CHEM 475 Introduction to Polymer Chemistry, CHEM 477/478/479 Special Topics, CHEM 481 Instrumental Analysis, CHEM 485 Introduction to Radiotracer Techniques, CHEM 487/488/489 Cooperative Education, CHEM 497/498/499 Independent Study, CHEM 553 Enzymology, CHEM 555 Neurochemistry, CHEM 572 Spectrometric Organic Structure Determination

Choose three credits from any courses in biology numbered 300 or above.

GENERAL BIOCHEMISTRY CURRICULUM

This curriculum is designed for students with an interest in biochemistry but who require a less extensive background. It is often selected by students in pre-medical and pre-dental programs.

The program includes a group minor comprised of the required courses in biology, mathematics, and physics. No other minor is needed to meet graduation requirements.

**Required courses and electives in science and mathematics are listed below. Additional basic studies and elective courses totaling 124 semester hours are required to complete a degree.*

	Sem hours
Science and mathematics	55-56
1. Required courses	50-51
CHEM 121 General Chemistry I.....	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
*CHEM 270 Organic Chemistry	4
*CHEM 271 Organic Chemistry Laboratory	1
(*Premed and pre-dentistry students should substitute CHEM 371-373 Organic Chemistry I-II with lab to satisfy most medical and dental school requirements for organic chemistry.)	
CHEM 281 Quantitative Analysis	4
CHEM 361 Fundamentals of Physical Chemistry ...	3
CHEM 381 Instrumentation for Chemical Technology	2
CHEM 451 Biochemistry I	3
CHEM 452 Biochemistry II	3
CHEM 453 Biochemistry Laboratory	2
BOTN 221 General Botany or ZOOLOGY 222 General Zoology	4
BIOL 301 Genetics	3
MATH 120 Calculus I	4
PHY 223 Mechanics, Sound, and Heat	5
PHY 222/224 Electricity and Light	4-5
2. Electives	5
Choose five credits from any biology courses numbered 300 or above.	

BIOCHEMISTRY/TOXICOLOGY CURRICULUM

The biochemistry/toxicology curriculum is designed to prepare students for employment in laboratories doing toxicology testing in such fields as pharmaceutical

chemistry, environmental studies, occupational health and safety, and forensic toxicology. This curriculum also provides preparation for students anticipating graduate study and a research career in toxicology and pharmacology-related fields. Included in the required courses is a group minor of biology, mathematics, and physics. No other minor is needed to meet graduation requirements.

**Required courses and electives in science and mathematics are listed below. Additional basic studies and elective courses totaling 124 semester hours are required to complete a degree.*

	Sem hours
Science and mathematics	73-78
Required courses	
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
CHEM 281 Quantitative Analysis	4
CHEM 361 Fundamentals of Physical Chemistry	3
CHEM 371 Organic Chemistry I	3
CHEM 372 Organic Chemistry II	3
CHEM 373 Organic Chemistry Laboratory	2
CHEM 381 Instrumentation for Chemical Technology	2
CHEM 411 Toxicology I	2
CHEM 412 Toxicology II	2
CHEM 413 Toxicology Laboratory	2
CHEM 451 Biochemistry I	3
CHEM 452 Biochemistry II	3
CHEM 453 Biochemistry Laboratory	2
CHEM 485 Introduction to Radiotracer Techniques	2
BIOL 320 Introduction to Cell Physiology or ZOO 326 Human Physiology	3-4
ZOO 222 General Zoology	4
ZOO 404 Mammalian Histology	3
ZOO 431 Comparative Anatomy of Vertebrates or ZOO 317 Human Gross Anatomy	4-5
MATH 120 Calculus I	4
PHY 223 Mechanics, Sound, and Heat	5
PHY 222/224 Electricity and Light	4-5
One toxicology class numbered above 413, or enrollment in a toxicology cooperative education project (CHEM 487/488/489)	2-4
A statistics course (MATH 170 Elementary Statistics I or PSY 205 Quantitative Methods in Psychology)	3

GENERAL CHEMISTRY MAJOR

The general chemistry major is for those who seek a general cultural education with emphasis on chemistry, who are preparing for careers in health fields such as medicine or dentistry, or who are interested in a career combining chemistry with fields such as business, patent law, technical writing, or industrial health and safety. Students planning to pursue a career as a professional chemist, or who are interested in graduate training in chemistry should elect the professional chemistry curriculum.

	Sem hours
Major in general chemistry	30
1. Required courses	25
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
CHEM 281 Quantitative Analysis	4
*CHEM 361 Fundamentals of Physical Chemistry	3
CHEM 371 Organic Chemistry I	3
CHEM 372 Organic Chemistry II	3
CHEM 373 Organic Chemistry Laboratory	2
CHEM 381 Instrumentation for Chemical Technology	2

**Prerequisites for CHEM 361 include MATH 120 Calculus I, PHY 223 Mechanics, Sound, and Heat, and either PHY 222/PHY 224 Electricity and Light, a total of 13-14 semester hours, all of which are required for a chemistry major.*

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

ACADEMIC MINORS

CHEMISTRY MINOR

	Sem hours
Minor in chemistry	20
1. Required courses	17
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
CHEM 270 Organic Chemistry	4
CHEM 271 Organic Chemistry Laboratory	1
CHEM 281 Quantitative Analysis	4
<i>(The CHEM 371-373 Organic Chemistry sequence may be substituted for CHEM 270-271 Organic Chemistry if a stronger background is desired.)</i>	

2. **Electives** 3
Choose from courses numbered above 200 in chemistry

BIOCHEMISTRY MINOR

Minor in biochemistry	Sem hours
Required courses	22

CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
CHEM 270 Organic Chemistry	4
CHEM 271 Organic Chemistry Laboratory	1
CHEM 281 Quantitative Analysis	4
CHEM 451 Biochemistry I	3
CHEM 453 Biochemistry Laboratory	2

(The CHEM 371-373 Organic Chemistry sequence may be substituted for CHEM 270-271 Organic Chemistry if a stronger background is desired.)

TEACHING MAJOR CHEMISTRY MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in chemistry, certification code "DC," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #18, "Chemistry."

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
I-B-2. *Basic Studies requirement. See inside back cover*
I-B-3. *Basic Studies requirement. See inside back cover*
I-B-4. MATH 120 Calculus I (4)^b
I-B-5. *Basic Studies requirement. See inside back cover*
II-B-1. PHY 223 Mechanics, Sound, and Heat (5)^b
II-B-2. *Basic Studies requirement. See inside back cover*
II-B-3. CHEM 121 General Chemistry I (3)^a
CHEM 122 General Chemistry I Laboratory (1)^a
III-B-1. *Basic Studies requirement. See inside back cover*
III-B-2. *Basic Studies requirement. See inside back cover*
III-B-3. *Basic Studies requirement. See inside back cover*
III-B-4. *Basic Studies requirement. See inside back cover*
IV-B-1. *Basic Studies requirement. See inside back cover*
IV-B-2. *Basic Studies requirement. See inside back cover*
IV-B-3. *Basic Studies requirement. See inside back cover*

IV-B-4. *Basic Studies requirement. See inside back cover*
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 52

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

- CHEM 123 General Chemistry II (3)
CHEM 124 General Chemistry II Laboratory (1)
CHEM 281 Quantitative Analysis (4)
CHEM 361 Fundamentals of Physical Chemistry (3)
CHEM 451 Biochemistry I (3)
CHEM 371 Organic Chemistry I (3)
CHEM 372 Organic Chemistry II (3)
CHEM 373 Organic Chemistry Laboratory (2)
CHEM 381 Instrumentation for Chemical Technology (2)
Four credits from 300- and 400-level courses in chemistry

One of:

- PHY 222 Electricity and Light (4)
PHY 224 Electricity and Light (5)

Additional hours, such as to total 16 taken in physics, biology, and earth science and including at least one course from each of physics, biology, and earth science (7)

MINOR

Select a minor from the approved list (see p. 441)

Credit hours in minor: 20¹

Subtotal, Major and minor: 59

PROFESSIONAL STUDIES

- 100 clock hours of approved prestudent teaching field experiences (0)
EDTC 300 Introduction to Computer Applications in Education (1)
SPGN 300 Exceptional Children in the Regular Classroom (1)
EDPS 322 Human Development and Learning (4)

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

- CURR 305 Curriculum and Methods: Secondary (3)
RDNG 311 Teaching Reading in the Secondary School (3)

- PHY 325 Methods of Teaching the Physical Sciences (3)
 SOFD 328 Schools in a Multicultural Society (3)
 EDPS 340 Introduction to Assessment and Evaluation (3)
 EDMD 345 Media for the Classroom Teacher (1)
 EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: . 145

^aCourse required for and applicable to major.

^bPrerequisite for another course in program.

^cCould be less, depending on the minor and the possible application of basic studies courses to the minor.

TEACHING MINOR

CHEMISTRY MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in chemistry, certification code "DC." The certification test covering this field is #18, "Chemistry."

- CHEM 121 General Chemistry I (3)
 CHEM 122 General Chemistry I Laboratory (1)
 CHEM 123 General Chemistry II (3)
 CHEM 124 General Chemistry II Laboratory (1)
 CHEM 270 Organic Chemistry (4)
 CHEM 271 Organic Chemistry Laboratory (1)
 CHEM 281 Quantitative Analysis (4)

(The CHEM 371-373 Organic Chemistry sequence may be substituted for CHEM 270-271 Organic Chemistry with lab if a stronger background is desired.)

7 hours in chemistry from courses numbered above 200.

In some programs, CHEM 121-122 may be taken to satisfy Basic Studies Area II requirements.

24 hours (including hours satisfied in Basic Studies)

PREPROFESSIONAL PROGRAMS

PREDENTISTRY

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 US and Canadian Dental Schools*, available in the office of the predentistry adviser.

The majority of pre dental students complete four years of undergraduate work, earning a BS degree. Since admission to dental school is very competitive, it is recommended that alternative career plans be a part of every pre dental student's program.

Students seeking admission to dental school take the Dental Aptitude Test, usually late in the junior year or early in the senior year. Application is generally made between August and December for the class beginning the following fall. Virtually all dental schools require the use of a central agency, the American Association of Dental Schools Application Service, when applying for admission.

Science 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:

- CHEM 121 General Chemistry I, CHEM 122 General Chemistry I Laboratory, CHEM 123 General Chemistry II, CHEM 124 General Chemistry II Laboratory, CHEM 371 Organic Chemistry I, CHEM 372 Organic Chemistry II, CHEM 373 Organic Chemistry Laboratory (2)
 PHY 221 Mechanics, Sound, and Heat; PHY 222 Electricity and Light
 ZOO 222 General Zoology plus one other biology course

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-Mercy. 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 (CHEM 119 Fundamentals of Chemistry), psychology, sociology, and political science, plus electives in social science, natural science, and humanities, generally will be transferable. More specific descrip-

tions of requirements should be obtained by writing to the schools in question since requirements vary from school to school.

PREMORTUARY SCIENCE

The premortuary 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:

- CHEM 121 General Chemistry I
- CHEM 122 General Chemistry I Laboratory
- CHEM 123 General Chemistry II
- CHEM 124 General Chemistry II Laboratory
- BIOL 105 Biology and the Human Species
- MATH 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 (suggested appropriate courses in parentheses):

- Behavioral sciences (PSY 225 Psychology of Religion, PSY 323 Psychology of Human Aging, SOCL 105 Introductory Sociology, SOCL 311 Social Gerontology)
- Business (LAW 293 Legal Environment of Business; ACC 240 Principles of Accounting I; ECON 200 The American Economy, ECON 201 Principles of Economics I; MKTG 360 Principles of Marketing, MKTG 363 Retailing)
- Counseling (GDCN 450 An Introduction: Counseling Concepts and Skills, with permission)
- First aid (HLED 210 Standard American Red Cross First Aid)
- Public speaking (CTAS 121 or CTAS 124 Fundamentals of Speech, CTAC 225 Listening Behavior, CTAC 226 Nonverbal Communication, CTAC 227 Interpersonal Communication)

PREPHARMACY

Two years of college work (60 transferable semester hours, including the courses listed below) are required for admission to a professional school of pharmacy. Some schools have additional required or recommended courses.

Programs in pharmacy require two to four additional years of study after acceptance into the program.

Clinical experience is required for some, especially doctoral programs.

Recommended courses:

- CHEM 121 General Chemistry I
- CHEM 122 General Chemistry I Laboratory
- CHEM 123 General Chemistry II
- CHEM 124 General Chemistry II Laboratory
- CHEM 371 Organic Chemistry I
- CHEM 372 Organic Chemistry II
- CHEM 373 Organic Chemistry Laboratory
- One semester of biology with lab (some schools require additional courses)
- MATH 120 Calculus I
- ENGL 121 Basic English Composition plus two social science courses and two humanities courses (two foreign language courses may be substituted for the humanities courses).

CHEMISTRY COURSES

CHEM 101 Science for Elementary Teachers. 3 hrs

Designed for students who plan to teach in elementary school. Lectures deal with some basic principles of chemistry while the laboratory work emphasizes the discovery approach as it may be used in an elementary classroom. Simple equipment and easily obtained chemicals are used in the experiments. Does not count on major or minor. Lecture: two hours per week. Laboratory: two hours per week.

Prereq: PHY 100.

CHEM 115 Chemistry and Society. 3 hrs

Examines the relevance of chemistry to the problem of how humans relate to the environment. It is designed for humanities and other nonscience majors. No previous mathematics or chemistry is required. CHEM 116 may be taken concurrently to satisfy the laboratory science requirement. Does not count on major or minor. Lecture: three hours per week.

CHEM 116 Chemistry and Society Laboratory. 1 hr

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

Prereq or Coreq: CHEM 115.

CHEM 119 Fundamentals of Chemistry. 4 hrs

A study of the principles of chemistry, designed for students who have had no prior chemistry. This course may be used to satisfy the chemistry prerequisite for CHEM 121. Does not count on major or minor. Lecture: three hours per week. Laboratory: two hours per week.

Prereq: MATH 104 or one year of high school algebra.

CHEM 120 Fundamentals of Organic and Biochemistry. 4 hrs

A survey of organic chemistry and biochemistry; completes the study of chemistry begun in CHEM 119 and is a terminal course. Does not count on major or minor. Lecture: three hours per week. Laboratory: two hours per week.

Prereq: CHEM 119 or one year of high school chemistry.

CHEM 121 General Chemistry I. 3 hrs

The first semester of a two-semester sequence covering the principles of chemistry for science majors and others with an interest and background in science. Lecture: three hours per week.

Prereq: High school chemistry or CHEM 119; two years of high school algebra or MATH 105. Coreq: CHEM 122.

CHEM 122 General Chemistry I Laboratory. 1 hr

The laboratory class to accompany CHEM 121. Students learn basic techniques employed in a chemistry laboratory, including use of analytical balances, quantitative glassware, spectrophotometry, and computers for data acquisition and analysis. Laboratory: three hours per week.

Coreq: CHEM 121.

CHEM 123 General Chemistry II. 3 hrs

A continuation of the two semester sequence covering the general principles of chemistry for science majors and others with an interest and background in science. Lecture: three hours per week.

Prereq: CHEM 121 and CHEM 122. Coreq: CHEM 124.

CHEM 124 General Chemistry II Laboratory. 1 hr

The techniques learned in CHEM 122 are reemphasized and supplemented. Laboratory: three hours per week.

Coreq: CHEM 123.

CHEM 125 Honors General Chemistry II (Lecture).

3 hrs

A continuation of CHEM 121 General Chemistry for students of superior ability. The sequence of CHEM 121,

122, 125, and 126 can constitute the customary year of general chemistry. Lecture: three hours per week.

Prereq: CHEM 121-122 and consent of Honors Committee. Coreq: CHEM 126.

CHEM 126 Honors General Chemistry II (lab). 1 hr

The laboratory to accompany CHEM 125. The techniques learned in CHEM 122 are reemphasized and supplemented. Preparation of a laboratory notebook is required. The sequence of CHEM 121, 122, 125, and 126 can constitute the customary year of general chemistry. Laboratory: three hours per week.

Coreq: CHEM 125.

CHEM 177/178/179 Special Topics. 1/2/3 hrs

Covers specific chemical topics not discussed in any regular, introductory chemistry course.

Prereq: Department permission.

CHEM 232 Inorganic Chemistry. 2 hrs

Descriptive inorganic chemistry; properties and reactions of the elements and their compounds are correlated with the periodic table, atomic structures, and basic chemical principles. Lecture: two hours per week.

Prereq: CHEM 123-124, or CHEM 125-126.

CHEM 241 Materials Science. 3 hrs

Considers the relation of composition and structure to properties of materials: metals, plastics, ceramics, glass, and composites. Lecture: three hours per week.

Prereq: CHEM 123-124, or CHEM 125-126; PHY 221/223.

CHEM 242 Materials Science Laboratory. 1 hr

Measurement of mechanical properties and investigation of crystal structures, microstructures, imperfections, and transformations (solidification, recrystallization, solid phase changes, and corrosion) of materials. Laboratory: three hours per week.

Coreq: CHEM 241.

CHEM 270 Organic Chemistry. 4 hrs

A comprehensive one-semester survey course in organic chemistry. Includes aliphatic and aromatic compounds plus functional group chemistry. Chemistry majors and other students requiring a full year sequence of organic chemistry should enroll in CHEM 371 and 372. Lecture: four hours per week.

Prereq: CHEM 123-124, or CHEM 125-126.

CHEM 271 Organic Chemistry Laboratory. 1 hr
Instruction in the basic manipulative techniques of experimental organic chemistry and experience with organic chemicals. Laboratory: three hours per week.
Prereq or coreq: CHEM 270.

CHEM 277/278/279 Special Topics. 1/2/3 hrs
Covers specific chemical topics not discussed in any regular chemistry course at this level.
Prereq: One 100-level chemistry course and department permission.

CHEM 281 Quantitative Analysis. 4 hrs
A lecture and laboratory course treating instrumental, gravimetric, and volumetric analysis, and equilibrium. Lecture: two hours per week. Laboratory: six hours per week.
Prereq: CHEM 123-124, or CHEM 125-126.

CHEM 282 Honors Quantitative Analysis. 4 hrs
A lecture and laboratory course treating instrumental, trace, separation, and characterization techniques. Lecture: two hours per week. Laboratory: six hours per week.
Prereq: CHEM 123-124, or CHEM 125-126, and consent of Honors Committee.

CHEM 287/288/289 Cooperative Education. 1/2/3 hrs
Full- or part-time employment at an industrial, federal, or state agency chemistry laboratory providing an applied experience in chemistry. Amount of credit granted determined by the nature of job responsibilities and/or duration of placement. Graded on a credit/no-credit basis. No credit granted toward chemistry degree programs, except with departmental permission.
Prereq: CHEM 123-124, or CHEM 125-126. Admission by application only. Sophomore standing.

CHEM 297 Independent Study. 1 hr
An independent, original endeavor involving laboratory and/or library study under the guidance of a chemistry faculty member. A formal written report is required at the end of the semester.
Prereq: Department permission.

CHEM 340 Introduction to Industrial Chemistry. 3 hrs
Discussion of the important aspects of the manufacture and chemistry of the major organic and inorganic chemicals and their use through commercially available products such as polymers. Includes environmental and economic aspects of industry. Lecture: three hours per week.

Prereq: CHEM 123-124, or CHEM 125-126; CHEM 270 or CHEM 371-372.

CHEM 361 Fundamentals of Physical Chemistry. 3 hrs
Calculus-based introduction to quantum mechanics, thermodynamics, and kinetics. Serves as survey course for general curricula and major, and as the first course of the physical chemistry sequence in the professional curricula (Chem 361, 365, 465).
Prereq: CHEM 123-124 or CHEM 125-126, MATH 120, PHY 223. Co- or prereq: PHY 222/224; CHEM 372 and 281 recommended.

CHEM 365 Physical Chemistry Laboratory. 2 hrs
Determination of the physical properties of substances, rate studies, and measurement of thermochemical properties. Emphasis on scientific report writing and oral presentation of work. Laboratory: six hours per week.
Prereq: CHEM 281 and 361, PHY 223 and 224.

CHEM 371 Organic Chemistry I. 3 hrs
The first semester sequence covering the general principles of organic chemistry for students specializing in science and those preparing for dentistry or medicine. Lecture: three hours per week. Not open to those with credit in CHEM 270.
Prereq: CHEM 123-124, or CHEM 125-126.

CHEM 372 Organic Chemistry II. 3 hrs
A continuation of CHEM 371. CHEM 371 and 372 constitute the customary year of foundation/lecture work in organic chemistry. Lecture: three hours per week.
Prereq: CHEM 371.

CHEM 373 Organic Chemistry Laboratory. 2 hrs
Covers the basic techniques involved in organic chemistry. Laboratory: six hours per week.
Prereq or coreq: CHEM 372.

CHEM 376 Honors Organic Chemistry Laboratory. 2 hrs
Covers the basic techniques involved in organic chemistry for students of superior ability. The sequence of CHEM 371-372, 376 can constitute the customary year of organic chemistry. Laboratory: six hours per week.
Prereq or coreq: CHEM 372 and consent of Honors Committee.

CHEM 377/378/379 Special Topics. 1/2/3 hrs
Covers specific chemical topics not discussed in any regular chemistry course at this level.
Prereq: Department permission.

CHEM 381 Instrumentation for Chemical Technology.**2 hrs**

A lecture and laboratory course that surveys various types of analytical instrumentation and their uses in chemical industry. Lecture: one hour per week. Laboratory: three hours per week.

Prereq: CHEM 281, CHEM 270 or CHEM 372, and CHEM 271 or CHEM 373, or equivalent.

CHEM 387/388/389 Cooperative Education.**1/2/3 hrs**

Full- or part-time employment at an industrial, federal, or state agency chemistry laboratory providing an applied experience in chemistry. Amount of credit granted determined by the nature of job responsibilities and/or duration of placement. Graded on a credit/no-credit basis. For junior-level students. No credit granted toward chemistry degree programs, except with department permission.

CHEM 397 Independent Study.**1 hr**

An independent, original endeavor involving laboratory and/or library study, under the guidance of a chemistry faculty member. A formal written report is required at the end of the semester.

Prereq: Department permission.

CHEM 411 Toxicology I.**2 hrs**

An introduction to the principles and methods of toxicology. Special cases of toxic response including carcinogenesis, teratogenesis and mutagenesis, and the effects of radiation are discussed. Lecture: two hours per week.

Prereq: CHEM 270 or CHEM 372.

CHEM 412 Toxicology II.**2 hrs**

Discussion of the metabolism of toxicants and their effect on specific organ systems; specific classes of toxicants and legal aspects of toxicology. Lecture: two hours per week.

Prereq: CHEM 411. Biochemistry recommended.

CHEM 413 Toxicology Laboratory.**2 hrs**

A lecture and laboratory covering the techniques employed in a toxicology laboratory including methods of calculation, interpretation, and presentation of experimental data. The theory and practical aspects of toxicological procedures will be discussed. Lecture: one hour per week. Laboratory: three hours per week.

Prereq: CHEM 411. CHEM 281 recommended.

CHEM 414 Regulatory Toxicology.**2 hrs**

This lecture course reviews the major environmental laws, building a framework for understanding their intent and application. Lecture: two hours per week.

Prereq: CHEM 270 or CHEM 372.

CHEM 415 Environmental Chemistry.**3 hrs**

A survey of environmental and energy-related problems and the ways in which chemistry may be applied to them. Important topics include air and water pollution, energy and other resources, solid wastes and recycling, and toxic chemicals. Lecture: three hours per week.

Prereq: CHEM 123-124, or CHEM 125-126. A course in organic chemistry and/or quantitative analysis recommended.

CHEM 416 Advanced Topics in Toxicology.**2 hrs**

This course provides a broadening and strengthening of the background of toxicology students in areas which are covered only minimally in the introductory sequence but are of critical importance to toxicologists, particularly those planning careers in industrial or pharmacological areas. Lecture: two hours per week.

Prereq: CHEM 411, ZOO 326, ZOO 427, or equivalent.

CHEM 432 Advanced Inorganic Chemistry.**3 hrs**

An advanced level treatment of the newer inorganic chemical developments, with emphasis on theoretical advances in the interpretation of bonding and reactivity of inorganic compounds. Lecture: three hours per week.

Prereq: CHEM 465 or department permission. CHEM 232 also is recommended.

CHEM 433 Inorganic-Organic Synthesis Laboratory.**2 hrs**

Covers advanced preparative and analytical techniques of inorganic and organic chemistry including extensive use of IR, NMR, UV-visible, and other instruments. Laboratory: six hours per week.

Prereq: CHEM 281 and CHEM 373.

CHEM 451 Biochemistry I.**3 hrs**

Chemistry of biologically significant compounds such as proteins, nucleic acids, carbohydrates, and lipids. Enzymes are introduced, bioenergetics is discussed and the most central topics of metabolism are outlined. This course is intended as a one semester survey of biochemistry for health science students and as the first semester

ter of a two semester sequence for chemistry, biology, and toxicology students. Lecture: three hours per week. *Prereq: CHEM 123-124, or CHEM 125-126, and CHEM 270 or CHEM 372, or equivalent.*

CHEM 452 Biochemistry II. 3 hrs
Continues the survey of biochemistry begun in CHEM 451. Membranes and transport, enzyme kinetics, further topics in metabolism, replication, transcription, translation, and regulation of cell processes are discussed. Lecture: three hours per week. *Prereq: CHEM 451.*

CHEM 453 Biochemistry Laboratory. 2 hrs
Emphasis on the special analytical techniques employed by biochemists, such as chromatography, electrophoresis, fluorimetry, spectrophotometry, and on laboratory report writing. Laboratory: four hours per week. *Prereq: CHEM 271 or CHEM 373, or equivalent and CHEM 281 strongly recommended. Coreq: CHEM 451 or CHEM 452.*

CHEM 465 Quantum and Statistical Mechanics. 3 hrs
The study of quantum mechanics and its application to atomic structure, molecular bonding, and spectroscopy. An introduction to statistical mechanics and modern theories of the rate constant. Lecture: three hours per week. *Prereq: CHEM 361, MATH 223, MATH 325, PHY 223, PHY 224.*

CHEM 475 Introduction to Polymer Chemistry. 3 hrs
An emphasis on the organic chemistry involved in the preparation of synthetic high polymers. Topics include: chain-growth vinyl polymers, step-growth polymerization, copolymerization, cationic and anionic polymerization, and complex coordination catalysts. Lecture: three hours per week. *Prereq: CHEM 270 or CHEM 372.*

CHEM 477/478/479 Special Topics. 1/2/3 hrs
Covers specific chemical topics not discussed in any regular chemistry courses at this level. *Prereq: Department permission.*

CHEM 481 Instrumental Analysis. 4 hrs
Theory and practice of chemical analysis and measurements and data processing by instrumental methods. Lecture: two hours per week. Laboratory: six hours per week. *Prereq: CHEM 281 and CHEM 365. Prereq or coreq: CHEM 465.*

CHEM 485 Introduction to Radiotracer Techniques. 2 hrs

Measurement of radiation and principles of radiation safety; experiments with emphasis on beta and gamma-ray counting and handling radioactivity. Lecture: one hour per week. Laboratory: three hours per week. *Prereq: CHEM 123-124, or CHEM 125-126, and either CHEM 281 or one science laboratory course above the 200 level, or department permission.*

CHEM 487/488/489 Cooperative Education. 1/2/3 hrs
Full- or part-time employment at an industrial, federal, or state agency chemistry laboratory providing an applied experience in chemistry. Amount of credit granted determined by the nature of job responsibilities and/or duration of placement. Graded on a credit/no-credit basis. For senior-level students.

CHEM 497/498/499 Independent Study. 1/2/3 hrs
Independent, original endeavors involving extensive library and/or laboratory study, under the guidance of a chemistry faculty member. A formal written report is required at the end of the semester. *Prereq: Department permission.*

GRADUATE COURSES

The following graduate level chemistry courses are open to senior chemistry students:

- CHEM 510 Computer Applications in Chemistry
- CHEM 511 Introduction to Industrial Hygiene
- CHEM 512 Industrial Hygiene Laboratory
- CHEM 515 Industrial and Environmental Chemistry
- CHEM 553 Enzymology
- CHEM 555 Neurochemistry
- CHEM 561 Quantum Chemistry and Spectroscopy
- CHEM 562 Statistical Mechanics and Chemical Kinetics
- CHEM 564 Physical-Chemical Characterization of Polymers
- CHEM 565 Nuclear Chemistry
- CHEM 571 Advanced Organic Chemistry
- CHEM 572 Spectrometric Organic Structure Determination
- CHEM 574 Advanced Organic Chemistry Topics
- CHEM 590/591/592 Special Topics

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, Gail W. Compton, Gary L. Evans, James W. Gousseff, Lucy A. Liggett, Annette Martin, Sally R. McCracken, Kenneth W. Stevens, Katherine Strand-Evans, Mary Ann Watson, Patricia Zimmer

Associate Professors: Geoffrey D. Hammill, James A. Robinson, Karen Smith-Meyer

Assistant Professors: Pirooz Aghssa, Wallace A. Bridges, John Cooper, Chris Foreman, Theresa Heck Seibert, Kathleen H. Stacey, Michael Tew

Instructor: Judy Sturgis-Hill

Technical Support: John Charles, EMU Theatre; Steve Martin, Broadcasting

The Communication and Theatre Arts department provides students with communication and performance skills fundamental to careers in broadcasting, theatre, teaching, public relations, sales, and such related professions as law and the ministry. Communication theory and practice are explored in various course offerings in interpersonal, small group, organizational, and public communication. Production and performance theories and techniques emphasized in telecommunications and film studies are enhanced by practical experiences at two campus radio stations—WEMU-FM and WQBR, in closed-circuit TV studios, and through internships and co-ops in the professional field. The arts management and communication technology curricula require business studies in addition to aesthetic and pragmatic communication skills. All the department's programs, including forensics, interpretation/performance studies, theatre arts, and dramatic productions for the young, provide students with opportunities for developing such personal qualities as creativity, leadership, self-expression, and social responsibility.

Degrees:

Bachelor of Science and Bachelor of Arts

Programs of Study

Majors and Curricula:

Arts management curriculum

Communication (Options: interpersonal communication, organizational communication, speech communication)

Communication for elementary and special edu-

cation-elementary

Comprehensive major in communication and theatre arts (Areas of concentration: communication, interpretation/performance studies, speech improvement, telecommunications and film, theatre arts, drama/theatre for the young)

Interdisciplinary major in children's literature and drama/theatre for the young for elementary and special education-elementary (administered by the Teacher Education department)

Interdisciplinary major in children's literature and drama/theatre for the young (administered by the English department)

Interdisciplinary major in public relations

Speech for secondary education

Telecommunications and film

Theatre arts

Minors:

Communication

Communication for elementary education

Comprehensive minor in communication and theatre arts

Comprehensive minor in communication and theatre arts for secondary, K-12, and special education-secondary

Drama/theatre for the young

Drama/theatre for the young for elementary and special education-elementary

Musical theatre

Telecommunications and film

Theatre arts

Joint program with the Interdisciplinary Technology department:

Communication technology curriculum

Advising is initiated by students with a personal adviser who shares the student's interests and objectives. Coordinators listed below should be consulted by each prospective major or minor student.

Advising Coordinators:

Arts management curriculum: Kenneth Stevens

Communication major and minor: Gary Evans, Sally McCracken

Comprehensive major and minor for elementary and secondary education: Michael Tew, Patricia Zimmer, Judy Sturgis-Hill

Communication technology curriculum: Henry B. Aldridge

Comprehensive major and minor in communication and theatre arts: Michael Tew, Patricia Zimmer

Drama/theatre for the young minor: Patricia Zimmer, Karen Smith-Meyer

Interdisciplinary major in children's literature and drama/theatre for the young: Karen Smith-Meyer

Interpretation/performance studies: Annette Martin

Musical theatre minor: Kenneth Stevens

Telecommunications and film major and minor: Geoffrey Hammill and Henry Aldridge

Theatre arts major and minor: Katherine Strand-Evans and Terry Heck-Seibert

Graduate study leads to a Master of Arts in communication; a Master of Arts emphasizing interpretation/performance studies; a Master of Arts in drama/theatre for the young, or a Master of Fine Arts in drama/theatre for the young; and a Master of Arts in theatre arts. For descriptions of graduate courses and programs in the Communication and Theatre Arts department, consult the Graduate Catalog.

ACADEMIC MAJORS

ARTS MANAGEMENT CURRICULUM

The Arts Management curriculum provides career training and practical experience for those with a passion for the arts and whose talents are in the field of administration and/or promotion. The arts manager not only must develop a variety of managing skills but also must maintain a high degree of sensitivity to aesthetics.

Students are provided a broad background in all of the arts with the opportunity to study a specific art in more depth. In addition, each student gains vital practical experience working in the arts during internships on the university campus and in an approved off-campus professional theatre or arts institution.

Combined with training in the arts is the development of skills in accounting, advertising, personnel management, labor relations, and various other areas of business through a program of study in management and marketing. Graduates are equipped to enter the arts management field or to pursue further study in arts administration.

Because the arts management field is relatively new and rapidly changing, it is advantageous for the student to maintain regular contact with an adviser during their entire program to avoid unnecessary difficulties before and after completion of the program. Arts institutions vary in their personnel needs.

EMU's arts management curriculum is divided into four sections: basic studies requirements, arts management major, a management or marketing minor (see

College of Business), and two internships.

Sem hours

Major in arts management 39-47

1. Required courses 23

Arts fundamentals

CTAR 150 Introduction to Theatre 3

CTAR 155 Producing Theatre 3

FA 107 Art History Survey I 3

FA 108 Art History Survey II 3

MUSC 107 Music Appreciation 2

PEGN 161 Modern Dance 1

Media and arts management

CTAT 334 Radio-Television News 3

CTAR 452 Arts Management 2

JRNL 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

CTAR 453 Marketing the Arts

CTAR 454 Law, Public Policy, and the Arts

A course in technical theatre

Minor in management or marketing 21

To be chosen in consultation with the arts management advising coordinator.

Internships

Two are required for this major: a one-semester on-campus internship and a one-semester practicum with an approved off-campus arts institution. Application procedures and minimum requirements for credit should be obtained from the advising coordinator not later than the first semester of the junior year.

On-campus internships are approved part-time work as a member of the management staff of such EMU arts institutions as the Ford Gallery or EMU Dancers.

Practicums are available to the junior-senior level student who has a minimum GPA of 2.5 in the arts management curriculum.

COMMUNICATION MAJOR

Sem hours

Major in communication 35-36

1. Required courses 23-24

CTAS 121/124 Fundamentals of Speech 2/3

CTAC 224 Public Speaking or CTAC 350

Persuasion 3

CTAC 227 Interpersonal Communication 3

CTAC 354 Organizational Communication 3

- CTAC 359 Small Group Communication 3
 CTAC 374 Intercultural Communication or CTAC
 375 Interracial/Interethnic Communication 3
 Choose two courses from the following: 6
 CTAC 440 Survey of Public Address (3)
 CTAC 460 Theories of Speech Criticism (3)
 CTAC 475 Research in Speech Communication (3)
 CTAC 485 Theories of Speech Communication
 Behavior (3)
- 2. Restricted electives 12**
 Choose 12 hours from the list of restricted electives below
 which *were not selected* as the basic requirements:
 CTAC 224 Public Speaking (3)
 CTAC 225 Listening Behavior (3)
 CTAC 226 Nonverbal Communication (3)
 CTAC 350 Persuasion (3)
 CTAC 352 Communication in Negotiation (3)
 CTAC 356 Argumentation and Debate (3)
 CTAC 357 Interviewing as Communication (3)
 CTAC 372 Assertive Communication (3)
 CTAC 373 Family Communication (3)
 CTAC 374 Intercultural Communication (3)
 CTAC 375 Interracial/Interethnic
 Communication (3)
 CTAC 379 Special Topics (3)
 CTAC 440 Survey of Public Address (3)
 CTAC 460 Theories of Speech Criticism (3)
 CTAC 475 Research in Speech Communication (3)
 CTAC 485 Theories of Speech Communication
 Behavior (3)
- A *maximum* of six credit hours from the following
 courses:
 CTAA 166/266/366/466 Forensics (1/1/1/1)
 CTAC 387/388/389 Cooperative Education (1/2/3)
 CTAC 487/488/489 Internship (1/2/3)
 CTAC 497/498/499 Independent Study (1/2/3)
- Alternate courses* (one course may be substituted for a
 restricted elective)
 CTAO 205 Voice and Articulation (3)
 CTAO 210 Interpretative Reading (3)
 CTAT 241 Radio-Television-Film Announcing (3)

COMMUNICATION TECHNOLOGY CURRICULUM

See the Interdisciplinary Technology department
 for program requirements.

COMPREHENSIVE MAJOR IN COMMUNICATION AND THEATRE ARTS

The comprehensive major allows each student to
 develop a variety of communication skills with one or
 two areas of concentration (12-18 semester hours each).
 Within the 36 semester hours, at least six semester hours
 must be in 300- and 400-level courses. Majors should
 plan their course selections carefully with the depart-
 mental advising coordinator and present a copy of this
 plan to Academic Records and Certification when re-
 questing senior checkout.

Sem hours

**Comprehensive major in communication and
 theatre arts 30-43**

1. Required core course 2-3
 CTAS 121/124 Fundamentals of Speech 2-3

2. Restricted electives 15

Choose at least three credits in five of the six following
 concentrations (communication, interpretation/
 performance studies, speech improvement,
 telecommunications and film, theatre arts, drama/
 theatre for the young)

Communication:

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

Interpretation/performance studies:

CTAO 210 Interpretative Reading

Speech improvement:

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

Telecommunications and film:

CTAT 130 Introduction to Telecommunications
 and Film, CTAT 131 Introduction to Audio
 Production and Direction, CTAT 132
 Introduction to Video Production and Direction,
 CTAT 141 Introduction to Radio-TV-Film
 Production,* CTAT 145 Introduction to Film
 Appreciation, CTAT 236 History and Criticism
 of Radio and Television, CTAT 241 Radio-
 Television-Film Announcing, CTAT 445 Film
 Theory and Criticism, CTAT 446 Contemporary
 Problems in Telecommunications

*Department permission required.

Theatre arts:

CTAR 150 Introduction to Theatre, CTAR 151
 African American Theatre: An Introduction,

CTAR 152 Technical Theatre: Scenery and Lighting, CTAR 153 Technical Theatre: Costume and Makeup, CTAR 155 Producing Theatre, CTAR 158 Fundamentals of Acting, CTAR 251 African American Theatre: Creative Problems, CTAR 254 Stage Makeup, CTAR 450 History of the Theatre to 1642, CTAR 451 History of the Theatre: 1642 to the Present

Drama/theatre for the young:

CTAD 222 Drama and Play in Human Experience, CTAD 322 Theatre for the Young, CTAD 323 Improvising and Role-Play, CTAD 327 Plays for the Young, CTAD 429 History and Theory of Developmental Drama/Theatre

3. **Concentration** 9-15
Choose at least one concentration (above) in consultation with advising coordinator (semester hours here are in addition to the restricted electives above)
4. **Department electives** 3-10
Choose from any courses in areas outside the concentration

TELECOMMUNICATIONS AND FILM MAJOR

Sem hours

Major in telecommunications and film 30-34

1. **Required foundation courses** 11
CTAT 130 Introduction to Telecommunications and Film 3
CTAT 131 Introduction to Audio Production and Direction 2
CTAT 132 Introduction to Video Production and Direction 2
Choose one course from the following: 3
CTAT 145 Introduction to Film Appreciation or CTAT 236 History and Criticism of Radio and Television
Choose one of the following: 1
CTAA 165 Television Laboratory or CTAA 169 Radio Station WQBR
2. **Restricted electives** 16-18
Production courses 6
Choose six credits from the following (at least three credits must be at the 300 or 400 level):
CTAT 231 Audio Recording Techniques, CTAT 236 History and Criticism of Radio and Television, CTAT 241 Radio-Television-Film Announcing, CTAT 331 Fundamentals of Radio Production and Direction, CTAT 332 Fundamentals of

Television Production and Direction, CTAT 333 Fundamentals of Film Production and Direction, CTAT 341 Radio-Television-Film Dramatic Performance, CTAT 431 Advanced Radio Production and Direction, CTAT 432 Advanced Television Production and Direction, CTAT 433 Advanced Film Production and Direction

Writing courses 3

Choose one course from the following:

CTAT 334 Radio-Television News, CTAT 344 Continuity Writing for Radio-Television-Film, CTAR 360 Dramatic Composition

Theory courses 6

Choose six credits from the following (at least three credits must be the 400 level):

CTAT 145 Introduction to Film Appreciation, CTAT 236 History and Criticism of Radio and Television, CTAT 335 Studies in Film, CTAT 336 Studies in Telecommunications, CTAT 445 Film Theory and Criticism, CTAT 446 Contemporary Problems in Telecommunications, CTAT 447 Radio-Television Station Management, CTAT 479 Special Topics (must be approved by adviser)

Internship or cooperative education 1-3

CTAT 487/488/489 Internship, CTAT 387/388/389 Cooperative Education

3. **Electives** 3-5

Choose three credits from telecommunications and film and the remaining hours from communication and theatre arts (except CTAS 121/124 Fundamentals of Speech) or journalism.

THEATRE ARTS MAJOR

Sem hours

Major in theatre arts 36

1. **Required courses** 31
CTAR 150 Introduction to Theatre 3
(may be bypassed by examination or interview for no credit)
CTAR 152 Intro. to Tech. Theatre: Scenery and Lighting 2
CTAR 153 Intro. to Tech. Theatre: Costume and Makeup 2
CTAR 155 Producing Theatre 3
CTAR 158 Fundamentals of Acting 3
CTAR 355 Play Direction 3
CTAR 450 History of the Theatre to 1642 3
CTAR 451 History of the Theatre: 1642 to the Present 3

- CTAA 167 and either 267/367/467 Theatre Practice 2
- CTAR 458 Problems in Modern Theatre 3
- CTAR 459 Problems in Pre-Modern Theatre 2
- CTAR 496 Senior Seminar 2
- 2. Restricted electives** 5
- Choose from any Theatre course except CTAR 106
- Other courses that qualify as electives are:
- Drama/Theatre for the Young (CTAD 322 Theatre for the Young or CTAD 323 Improvising and Role-Play)
- Oral Interpretation (CTAO 314 Interpretation of Drama or CTAO 410 Oral Interpretation of Shakespeare)
- Telecommunications and Film (CTAT 332 Fundamentals of Television Production and Direction or CTAT 341 Radio-Television-Film Dramatic Performance)

THEATRE ARTS MINOR

	Sem hours
Minor in theatre arts	24
1. Required courses	20
CTAR 150 Introduction to Theatre	3
(may be bypassed by examination or interview for no credit)	
CTAR 152 Technical Theatre: Scenery and Lighting ...	2
CTAR 153 Intro. to Tech. Theatre	2
CTAR 155 Producing Theatre	3
CTAR 158 Fundamentals of Acting	3
CTAR 355 Play Direction	3
CTAR 450 History of the Theatre to 1642 or CTAR 451 History of the Theatre: 1642 to Present	3
CTAA 167 Theatre Practice	1
2. Restricted electives	4
See Theatre Arts Major	

INTERDISCIPLINARY MAJOR IN CHILDREN'S LITERATURE AND DRAMA/THEATRE FOR THE YOUNG

This major may be used for the Bachelor of Science or Bachelor of Arts degrees without teacher certification. For full details, see the English Language and Literature department.

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 Language and Literature department. Courses from both the English and Communication and Theatre Arts departments are offered as requirements and restricted electives.

Sem hours

Interdisciplinary major in public relations 41-42

- 1. Required fundamental courses** 17-18
- JRNL 215 News Writing and Reporting 3
- JRNL 312 Introduction to Public Relations 3
- JRNL 314 Writing for Public Relations 3
- CTAS 121 or CTAS 124 Fundamentals of Speech 2-3
- CTAT 141 Introduction to Radio-TV-Film Production 3
- CTAC 224 Public Speaking or CTAC 350 Persuasion 3
- 2. Required advanced courses** 12
- JRNL 306 Feature Writing 3
- JRNL 408 Case Studies in Public Relations 3
- CTAT 334 Radio-Television News or CTAT 344 Continuity Writing for Radio-Television-Film .. 3
- CTAC 354 Organizational Communication or CTAC 357 Interviewing as Communication ... 3
- 3. Restricted electives** 12
- JRNL 307 Copy Editing, JRNL 311 Editing Procedures, JRNL 423 Magazine Article Writing, JRNL 455 Journalism and the Law, *JRNL 387/487 Cooperative Education, *JRNL 488/489/490 Internship, ENGL 324 Principles of Technical Communication, CTAC 224 Public Speaking or CTAC 350 Persuasion (whichever is not chosen above), CTAC 227 Interpersonal Communication or CTAC 359 Small Group Communication, CTAT 334 Radio-Television News or CTAT 344 Continuity Writing for Radio-Television-Film (whichever is not chosen above), *CTAC 387/388/389 Cooperative Education, *CTAC 487/488/489 Internship
- A maximum of six hours may be chosen from:*
- FA 165 Graphic Design for Nonmajors, INDT 121 Graphic Communication, INDT 204 Photographic Communication, COSC 136 Computers for the nonspecialist
- *Where applicable to public relations*

Recommended minors:

- Marketing or Management (College of Business), with MKTG 360 Principles of Marketing and MKTG 369 Advertising highly recommended, along with other courses such as statistics, marketing research, buyer behavior, and promotional strategy.
- English writing, sociology, psychology, or a minor chosen by student in specific field of interest.

ACADEMIC MINORS

COMMUNICATION MINOR

Sem hours

- Minor in communication** 20-21
- CTAS 121/124 Fundamentals of Speech 2/3
- CTAC 224 Public Speaking or CTAC 350 Persuasion 3
- CTAC 227 Interpersonal Communication 3
- CTAC 354 Organizational Communication 3
- CTAC 359 Small Group Communication 3
- CTAC 374 Intercultural Communication or CTAC 375 Interracial/Interethnic Communication 3
- Choose one course from the following: 3
- CTAC 440 Survey of Public Address (3)
- CTAC 460 Theories of Speech Criticism (3)
- CTAC 475 Research in Speech Communication (3)
- CTAC 485 Theories of Speech Communication Behavior (3)

COMPREHENSIVE MINOR IN COMMUNICATION AND THEATRE ARTS

Sem hours

- Comprehensive minor in communication and theatre arts** 20-28
1. **Required core course** 2-3
- CTAS 121/124 Fundamentals of Speech
2. **Restricted electives** 12
- Choose at least three credits in four of the six areas of concentration (communication, interpretation/performance studies, speech improvement, telecommunications and film, theatre arts, drama/theatre for the young)
- See courses listed in comprehensive major in communication and theatre arts, page 119.
3. **Concentration** 6-9
- Choose at least one area of concentration. Minors applying for secondary certification must elect their concentration courses from either speech communication or theatre arts (semester hours

here are in addition to the restricted electives above)

4. **Department electives** 0-4
- Choose from any courses in areas outside the concentration

DRAMA/THEATRE FOR THE YOUNG MINOR

The undergraduate minor in drama/theatre for the young is designed to serve students wishing to prepare for a variety of careers—some already existing, others emerging—involving work with and for the young through drama and communication. The minor is useful in conjunction with many other minors and majors including elementary and secondary education, special education, language and literature, history and social studies, art, music, dance, social work, sociology, psychology, recreation, business management, guidance and counseling, library science, home economics, communication and theatre arts, family and child service, and gerontology.

It provides a strong base and, at the same time, flexibility is ensured through freedom in choosing from a wide range of electives.

Sem hours

- Minor in drama/theatre for the young** 20-21
1. **Required courses** 14-15
- CTAS 121/124 Fundamentals of Speech 2-3
- CTAD 222 Drama and Play in Human Experience 3
- CTAD 322 Theatre for the Young 3
- CTAD 323 Improvising and Role-Play 3
- CTAD 324 Oral Interpretation of Literature for the Young 3
2. **Electives** 5-6
- Choose five to six credits from the following:
- CTAD 326 Developmental Drama/Theatre with the Handicapped, CTAD 327 Plays for the Young, CTAD 429 History and Theory of Developmental Drama/Theatre, CTAD 504 Oral Interpretation of Literature and Language with the Young, CTAD 522 TIE: Theatre-in-Education, CTAD 523 Puppetry: Catalyst in Human Development, CTAD 524 Developmental Drama/Theatre with Handicapped Persons, CTAD 525 Developmental Drama/Theatre in Recreational Settings, CTAD 528 Developmental Drama/Theatre in Religion, CTAD 565 Studies in Drama/Theatre for the Young (all 500-level courses are available for undergraduate credit

to qualified seniors)
 CTAA 168/268/368/468 Interpretation
 CTAD 377/378/379 Special Topics
 CTAD 477/478/479 Special Topics (478 Touring
 to Young Audiences)
 CTAD 497/498/499 Independent Study
 LITR 207 Introduction to Children's Literature
 or any course in dramatic literature or any
 communication or theatre arts course

MUSICAL THEATRE MINOR

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.

Theatre Arts:

CTA 155 Producing Theatre, CTA 258 Mime/
 Pantomime and Mask, CTA 457 Tryouts and
 Auditions, CTA 461 Musical Theatre Acting,
 CTA 462 Directors on Directing, CTA 463 The
 American Musical Stage

Dance:

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:

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

TELECOMMUNICATIONS AND FILM MINOR

Sem hours

Minor in telecommunications and film 24

1. **Required foundation courses** 7

CTAT 130 Introduction to Telecommunications
 and Film 3

CTAT 131 Introduction to Audio Production and
 Direction 2

CTAT 132 Introduction to Video Production and
 Direction 2

2. **Restricted electives** 13

Choose one of the following:

CTAT 145 Introduction to Film Appreciation or

CTAT 236 History and Criticism of Radio and
 Television

Choose one of the following:

CTAA 165 Television Laboratory or CTAA 169
 Radio Station WQBR

Choose three credits from each group of the area courses
 listed under the major (page 120) 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 CTAS
 121/124 Fundamentals of Speech) or
 journalism.

THEATRE ARTS MINOR

Sem hours

Minor in theatre arts 20-24

1. **Required courses** 18

CTAR 150 Introduction to Theatre 3
 (may be bypassed by examination or interview
 for no credit)

CTAR 152 Technical Theatre: Scenery and
 Lighting 2

CTAR 155 Producing Theatre 3

CTAR 158 Fundamentals of Acting 3

CTAR 355 Play Direction 3

CTAR 450 History of the Theatre to 1642 or CTAR 451

History of the Theatre: 1642 to the Present 3

CTAA 167 Theatre Practice 1

2. **Electives** 2-5

Choose courses beyond the 100 level in theatre
 arts or in other departmental areas specified
 under the major (see page 120).

TEACHING MAJORS COMPREHENSIVE MAJOR IN COMMUNICATION AND THEATRE ARTS

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of study, in
 the context of other program requirements, qualifies the
 student for recommendation for certification for the
 Michigan Department of Education Secondary Provi-
 sional Certificate endorsed in speech, certification code
 "BD," and, depending on the minor selected, an addi-
 tional endorsement. The certification test covering this
 field is #04, "Speech."

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *One of:*^a

CTAC 224 Public Speaking (3)

CTAC 227 Interpersonal Communication (3)

I-B-4. *Basic Studies requirement. See inside back cover*

I-B-5. *Basic Studies requirement. See inside back cover*

II-B-1. *Basic Studies requirement. See inside back cover*

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. *Basic Studies requirement. See inside back cover*

III-B-1. *Basic Studies requirement. See inside back cover*

III-B-2. *Basic Studies requirement. See inside back cover*

III-B-3. *Basic Studies requirement. See inside back cover*

III-B-4. *Basic Studies requirement. See inside back cover*

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*

IV-B-4. *One of:*^a

CTAT 145 Introduction to Film Appreciation (department permission required)

CTAR 150 Introduction to Theatre

CTAR 151 African American Theatre: An Introduction (also satisfies cross-cultural or international studies requirement)

CTAR 158 Fundamentals of Acting

CTAD 222 Drama and Play in Human Experience

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 49

TEACHING MAJOR

See note "a" above for courses applicable to both Basic Studies and the major.

Restricted electives

Choose at least three credits in four of the five following concentrations.

Interpretation/performance studies

CTAC 210 Interpretative Reading (3)

Speech Improvement

CTAO 102, 202, 302, 402 Voice Development (one credit each)

CTAO 205 Voice and Articulation (3)

CTAO 404 Dynamic Speaking Skills (3) (department permission required)

Telecommunications and Film

One of: (if not taken under IV-B-4 in Basic Studies)

CTAT 130 Introduction to Telecommunications and Film (3)

CTAT 131 Introduction to Audio Production and Direction (3)

CTAT 132 Introduction to Video Production and Direction (3)

CTAT 141 Introduction to Radio-TV-Film Production (3)

CTAT 145 Introduction to Film Appreciation (3) (department permission required)

CTAT 236 History and Criticism of Radio and Television (3)

CTAT 241 Radio-Television-Film Announcing (3)

CTAT 445 Film Theory and Criticism (3)

CTAT 446 Contemporary Problems in Telecommunications

Theatre Arts

One of: (if not taken under IV-B-4 in Basic Studies)

CTAR 150 Introduction to Theatre (3)

CTAR 151 African American Theatre: An Introduction (3)

CTAR 152 Technical Theatre: Scenery and Lighting (3)

CTAR 153 Technical Theatre: Costume and Makeup (3)

CTAR 155 Producing Theatre (3)

CTAR 158 Fundamentals of Acting (3)

CTAR 251 African American Theatre: Creative Problems (3)

CTAR 254 Stage Makeup (3)

CTAR 450 History of the Theatre to 1642 (3)

CTAR 451 History of the Theatre: 1642 to the Present (3)

Drama/theatre for the young

One of: (if not taken under IV-B-4 in Basic Studies)

CTAD 222 Drama and Play in Human Experience (3)

CTAD 322 Theatre for the Young (3)

CTAD 323 Improvising and Role-Play (3)

CTAD 327 Plays for the Young (3)

CTAD 429 History and Theory of Developmental Drama/Theatre (3)

Concentration

Choose either one of the above concentrations or the following in consultation with the advising coordinator.

Communication

CTAC 224 Public Speaking (3) (if not taken under I-B-3 in Basic Studies)

CTAC 227 Interpersonal Communication (3) (if not taken under I-B-3 in Basic Studies)

CTAC 350 Persuasion (3)

CTAC 356 Argumentation and Debate (3)

CTAC 359 Small Group Communication (3)

Department electives

Choose from any courses in areas outside the concentration. The number of courses chosen

must bring the total credit hours for the major to no less than 30 hours (including courses which satisfy Basic Studies).

Minor

A minor from the approved list (see p. 363)

Subtotal, Major and minor: 50¹

Professional Studies

100 clock hours of approved pre-student teaching field experiences (0)

EDTC 300 Introduction to Computer Applications in Education (1)

SPGN 300 Exceptional Children in the Regular Classroom (1)

EDPS 322 Human Development and Learning (4)

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

CURR 305 Curriculum and Methods: Secondary (3)

CTAC 307 The Teaching of Speech (3)

RDNG 311 Teaching Reading in the Secondary School (3)

SOFD 328 Schools in a Multicultural Society (3)

EDPS 340 Introduction to Assessment and Evaluation (3)

EDMD 345 Media for the Classroom Teacher (1)

EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: 133

⁰Course required for and applicable to major.

¹Could be less, depending on the minor and the possible application of basic studies courses to the minor.

COMPREHENSIVE MAJOR IN COMMUNICATION AND THEATRE ARTS

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in speech, certification code "BD." The certification test covering this field is #04, "Speech."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary speech program given above, plus the requirements under I-B-3 and IV-B-4 in that program's Basic Studies require-

ments. Approved minors are those for the elementary program as given on page 362.

30 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

TEACHING MINORS COMMUNICATION MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in speech, certification code "BD." The certification test covering this field is #04, "Speech."

*CTAS 121/124 Fundamentals of Speech (2/3)

CTAC 224 Public Speaking or CTAC 350 Persuasion (3)

CTAC 227 Interpersonal Communication (3)

CTAC 354 Organizational Communication (3)

CTAC 359 Small Group Communication (3)

CTAC 374 Intercultural Communication or CTAC 375 Interracial/Interethnic Communication (3)

Choose one course from the following:

CTAC 440 Survey of Public Address (3)

CTAC 460 Theories of Speech Criticism (3)

CTAC 475 Research in Speech Communication (3)

CTAC 485 Theories of Speech Communication Behavior (3)

20 hours (including hours satisfied in Basic Studies)

*Included in Basic Studies.

DRAMA/THEATRE FOR THE YOUNG MINOR

ELEMENTARY AND SPECIAL EDUCATION-ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in speech, certification code "BD." The certification test covering this field is #04, "Speech."

*One of:

CTAS 121 Fundamentals of Speech (2)

CTAS 124 Fundamentals of Speech (3)

CTAD 222 Drama and Play in Human Experience (3)

- CTAD 322 Theatre for the Young (3)
 CTAD 323 Improvising and Role-Play (3)
 CTAD 324 Oral Interpretation of Literature for
 the Young (3)

If CTAS 121 is in the program, choose 6 hours; if CTAS 124 is in the program, choose 5 hours; from the following:

- CTAD 326 Developmental Drama/Theatre with
 the Handicapped (2)
 CTAD 327 Plays for the Young (3)
 CTAD 429 History and Theory of Developmental
 Drama/Theatre (3)
 CTAD 504, CTAD 522, CTAD 523, CTAD 524,
 CTAD 525, CTAD 528, CTAD 565 (graduate
 courses open to qualified seniors)
 CTAA 168/268/368/468 Interpretation (1 each)
 CTAD 377/378/379 Special Topics (1/2/3)
 CTAD 477/478/479 Touring to Young Audiences
 (1/2/3)
 CTAD 497/498/499 Independent Study (1/2/3)
 **LITR 207 Introduction to Children's
 Literature (3)

- Any course in dramatic literature
 Any communication course
 Any theatre arts course

20 hours (including hours satisfied in Basic Studies)

*Included in Basic Studies for the elementary program and the special education programs.

**Included in Basic Studies for the elementary program.

COMPREHENSIVE MINOR IN COMMUNICATION AND THEATRE ARTS

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in speech, certification code "BD." The certification test covering this field is #04, "Speech."

One of:

- *CTAS 121 Fundamentals of Speech (2)
 *CTAS 124 Fundamentals of Speech (3)

Choose at least three credits in four of the six areas of concentration (communication, interpretation/performance studies, speech improvement, telecommunications and film, theatre arts, drama/theatre for the young).

6-9 hours additional hours from speech communication or theatre arts

0-4 hours in department courses outside of speech communication or theatre arts

20 hours (including hours satisfied in Basic Studies)

*May be satisfied in Basic Studies.

FUNDAMENTALS OF SPEECH COURSES

CTAS 121 Fundamentals of Speech. 2 hrs
 Theory and practice in the principles of effective speech composition and presentation. Not open to students with credit in CTAS 124.

CTAS 124 Fundamentals of Speech. 3 hrs
 More intensive theory and practice in the principles of effective speech composition. Not open to students with credit in CTAS 121.

CTAS 379 Special Topics. 3 hrs
 An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

COMMUNICATION COURSES

CTAC 177/178/179 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

CTAC 224 Public Speaking. 3 hrs
 The characteristics of various types of speeches and speech situations and practice in the preparation and delivery of speeches for various occasions.
Prereq: CTAS 121/124.

CTAC 225 Listening Behavior. 3 hrs
 The study of the behavior, processes, and theory of human listening; practice in improving listening skills.
Prereq: CTAS 121/124.

CTAC 226 Nonverbal Communication. 3 hrs
 An examination of nonverbal and situational behaviors, relationships, objects, and events surrounding speech communication acts.
Prereq: CTAS 121/124.

CTAC 227 Interpersonal Communication. 3 hrs
 Study and practice of the basic elements of interpersonal communication with emphasis on perception,

meanings, attention, listening, feedback, and communication barriers. Particular attention is given to improving interpersonal communication skills. This course may not substitute as the fundamentals of speech requirement in the basic studies.

Prereq: CTAS 121/124.

CTAC 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

CTAC 307 The Teaching of Speech. 3 hrs

Emphasizes the analysis and construction of courses of study, evaluation of textbooks and teaching materials, methods of directing co-curricular speech activities, and demonstrations of teaching methods. Required of students majoring in communication and theatre arts in the junior or senior high school teaching curriculum. Does not count on the major or minor. Not open to students on academic probation.

Prereq: Four courses in communication and theatre arts.

CTAC 350 Persuasion. 3 hrs

The study of the basic elements inherent in persuasion; the analysis of representative persuasive speeches; practice in securing the acceptance of ideas through psychological appeals as well as logical reasoning.

Prereq: CTAS 121/124.

CTAC 352 Communication in Negotiation. 3 hrs

Practical communication skills for negotiating a labor union collective bargaining agreement and effective grievance handling.

Prereq: CTAS 121/124, or department permission.

CTAC 354 Organizational Communication. 3 hrs

An investigation of information patterns and persuasion in the formal organization.

Prereq: CTAS 121/124.

CTAC 356 Argumentation and Debate. 3 hrs

Emphasizes the principles of logical reasoning and oral presentation of reasoned discourse in group situations. Exercise in debate and in general argumentative speaking.

Prereq: CTAS 121/124.

CTAC 357 Interviewing as Communication. 3 hrs

The principles and practices of the interview as they relate to communication elements; the interview pro-

cess, structure, functions, and techniques explored from both the perspective of the interviewer and the interviewee.

Prereq: CTAS 121/124, or department permission.

CTAC 359 Small Group Communication. 3 hrs

Emphasizes the principles and practice of discussion as employed in committees, panels, symposiums, and forums. Students will plan and participate in discussions of contemporary problems.

Prereq: CTAS 121/124.

CTAC 372 Assertive Communication. 3 hrs

Individualized approach to study and training in effective assertive communication for social, conversational, and career-oriented situations.

Prereq: CTAS 121/124, or department permission.

CTAC 373 Family Communication. 3 hrs

Descriptive and theoretical study of communication in families with emphasis on the influence of family communication on individuals.

Prereq: CTAS 121/124 and CTAC 227.

CTAC 374 Intercultural Communication. 3 hrs

Analysis of processes and problems of communication as affected by national cultures; effects of differences in verbal and nonverbal communication, values, meaning, perception, and thought.

Prereq: CTAS 121/124, or department permission.

CTAC 375 Interracial/Interethnic Communication.

3 hrs

The analysis of how ethnocentric attitudes toward perceived racial/ethnic minority group speakers/listeners influence interpersonal communication transactions.

Prereq: CTAS 121/124.

CTAC 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

CTAC 387/388/389 Cooperative Education. 1/2/3 hrs

One semester of supervised work in concentration area. An evaluation is required at the end of the employment period.

Prereq: Nine credit hours in concentration, approval by Cooperative Education Office, and department permission.

CTAC 440 Survey of Public Address. 3 hrs

An historical and critical study of the more important speakers and their speeches from classical Greek and Roman times to the present with reference to social and political movements in the world's history.

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

CTAC 460 Theories of Speech Criticism. 3 hrs

A study of the theoretical and critical works from various eras of western culture.

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

CTAC 475 Research in Speech Communication. 3 hrs

An examination of methods currently employed in speech communication, as well as a review of the many types of application now being made. Course includes analysis of speech communication behavior.

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

CTAC 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

CTAC 485 Theories of Speech Communication Behavior. 3 hrs

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

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

CTAC 487/488/489 Internship. 1/2/3 hrs

One semester of practical, on-the-job work experience and training (four hours per week minimum) at selected on-campus or off-campus facilities.

Prereq: Twenty semester hours of concentration courses and department permission.

CTAC 496 Senior Seminar. 2 hrs

A capstone course for communication majors. A comprehensive and unified study of all areas of communication. Combining knowledge and skills with preparation for professional careers and/or graduate study.

Prereq: Open only to department seniors or by department permission.

CTAC 497/498/499 Independent Study. 1/2/3 hrs

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

Prereq: Department permission.

DRAMA/THEATRE FOR THE YOUNG COURSES**CTAD 177/178/179 Special Topics. 1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CTAD 222 Drama and Play in Human Experience.**3 hrs**

A study of dramatic experience as intrinsic in human development. An introduction to spontaneous dramatic games and exercises as a way of sharpening imagination, deepening interpersonal relations, and strengthening individual identity. Integration of such experience in learning and growth is emphasized.

CTAD 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CTAD 322 Theatre for the Young. 3 hrs

An introductory study of the development, philosophy and techniques of theatre for the young.

CTAD 323 Improvising and Role-Play. 3 hrs

Exploration of spontaneous dramatic play through intensive exercise and dramatic games meant to generate greater individual freedom and self-discipline, as well as to expand resources and techniques for teaching and directing.

CTAD 324 Oral Interpretation of Literature for the Young. 3 hrs

Selection and evaluation of literature for oral interpretation with and for young people. Focus is on the use of narrative prose and folktales.

CTAD 326 Developmental Drama/Theatre with the Handicapped. 2 hrs

Study of principles, theories and practices of develop-

mental drama/theatre as related to handicapped persons. Application to educational, recreational and institutional settings stressed.

CTAD 327 Plays for the Young. 3 hrs

A study of dramatic literature for the young from developmental and artistic viewpoints in the total educational experience of children and adolescents.

CTAD 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CTAD 387/388/389 Cooperative Education. 1/2/3 hrs

One semester of supervised work in concentration area. An evaluation is required at the end of the employment period.

Prereq: Nine credit hours in concentration, approval by Cooperative Education Office, and department permission.

**CTAD 429 History and Theory of Developmental
Drama/Theatre. 3 hrs**

An introductory study of the history and theory of developmental drama/theatre. The current thinking of major practitioners in the field of developmental drama/theatre; current research that involves the development of new knowledge or the validation of existing knowledge relating to history and theory of developmental drama/theatre.

CTAD 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CTAD 487/488/489 Internship. 1/2/3 hrs

One semester of practical, on-the-job work experience and training (four hours per week minimum) at selected on-campus or off-campus facilities.

Prereq: Twenty semester hours of concentration courses and department permission.

CTAD 497/498/499 Independent Study. 1/2/3 hrs

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

Prereq: Department permission.

**INTERPRETATION/PERFORMANCE STUDIES
COURSES**

CTAO 102 Voice Development. 1 hr

A laboratory for developing strength and control of the speaking voice through physical and tonal exercises and choral speaking. Two regularly scheduled hours each week and additional sessions as arranged.

CTAO 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CTAO 202 Voice Development. 1 hr

Advanced laboratory exercises and specialized projects: Pronouncing foreign terms for professional speaking.

Prereq: CTAO 102 or department permission.

CTAO 205 Voice and Articulation. 3 hrs

An introductory course for improving personal speaking habits. Emphasis is placed on regular practice to develop relaxed tone support, efficient articulation, and vocal variety. Recording and listening laboratory hours arranged.

Prereq: CTAS 121/124, or department permission.

CTAO 210 Interpretative Reading. 3 hrs

The fundamentals of oral interpretation; developing poise and ease before an audience, a clear, forceful and flexible voice, and discrimination in interpreting thought to others. Selections will be prepared and presented in class.

Prereq: CTAS 121/124.

CTAO 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CTAO 301 Speech Science. 3 hrs

A survey of the physiological and psychological bases of speech and hearing. Emphasis is placed on understanding the physical characteristics of speech sounds and the human voice as they are used in effective oral communication.

Prereq: One of the following: CTAO 205, CTAO 210, CTAT 241, CTAR 158, or department permission.

CTAO 302 Voice Development. 1 hr
Advanced laboratory exercises and specialized projects: Energetic vocal skills for theatre/interpretation.
Prereq: CTAO 102 or department permission.

CTAO 311 Interpretation of Prose. 3 hrs
The application of the fundamentals of oral interpretation to the reading of prose with emphasis on the short story and excerpts from longer works of fiction. Special attention given to problems involved in the interpretation of prose.
Prereq: CTAO 210.

CTAO 314 Interpretation of Drama. 3 hrs
Specific problems involved in interpreting dramatic literature. Emphasis placed on selection of materials, cutting and arrangement of materials, dialogue, characterization, and character placement. Students will work individually and collectively in interpreting scenes from plays.
Prereq: CTAO 210 or department permission.

CTAO 377/378/379 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

CTAO 387/388/389 Cooperative Education. 1/2/3 hrs
One semester of supervised work in concentration area. An evaluation is required at the end of the employment period.
Prereq: Nine credit hours in concentration, approval by Cooperative Education Office, and department permission.

CTAO 400 Phonetics and Dialects of Spoken English. 3 hrs
A survey of the physiology and physics of speech sounds. Intensive study of the international phonetic alphabet in dialectology and speech improvement. Comparative study of phonemic systems and initial teaching alphabet.
Prereq: CTAO 301, CTAO 205, or department permission.

CTAO 402 Voice Development. 1 hr
Advanced laboratory exercises and specialized projects: Skills, theory, and individualized projects.
Prereq: CTAO 102 or department permission.

CTAO 404 Dynamic Speaking Skills. 3 hrs
Projects emphasizing intensive application of voice and articulation theory and professional diction standards for actors, broadcasters, educators, forensic speakers, interpreters, and other professional communicators. Laboratory hours arranged.
Prereq: Three courses in the department including either CTAO 102 or CTAO 205, or take CTAO 402 concurrently.

CTAO 405 Voice and Dialects. 3 hrs
Advanced projects in preparing oral presentations and characterizations in regional and foreign dialects.
Prereq: CTAO 102 or CTAO 402 or CTAO 205, or department permission.

CTAO 410 Oral Interpretation of Shakespeare. 3 hrs
Specific problems involved in the oral interpretation of Shakespeare. Emphasis placed on language style and characterization problems. Students work individually and collectively in orally interpreting selections from Shakespeare's works.
Prereq: CTAO 210 and two courses in literature, one of which should be either LITR 210 or LITR 103, or department permission.

CTAO 411 Advanced Problems in Interpretation. 3 hrs
The presentation of programs of some length and difficulty in prose, poetry, and drama. Emphasis on programming, styles of interpretation, choral reading, and experimental work. A public program will be presented by the class.
Prereq: Six hours of oral interpretation or department permission.

CTAO 412 Oral Interpretation of Poetry. 3 hrs
The application of the principles of oral interpretation to the reading of poetry, with emphasis on modern and contemporary poetry.
Prereq: CTAO 210.

CTAO 414 Development and Theory of Oral Interpretation. 3 hrs
The development of oral interpretation from ancient Greece to the present, including the study of modern theories in oral interpretation.
Prereq: Nine hours of oral interpretation or department permission.

CTAO 477/478/479 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other

departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CTAO 487/488/489 Internship. 1/2/3 hrs

One semester of practical, on-the-job work experience and training (four hours per week minimum) at selected on-campus or off-campus facilities.

Prereq: Twenty semester hours of concentration courses and department permission.

THEATRE ARTS COURSES

CTAR 106 Introduction to the Performing Arts. 3 hrs

A survey of the arts of dance, theatre, and music, developing an understanding and appreciation of representative works in the three fields. The place of these arts in contemporary society and their contribution to a richer life receive special emphasis. Attendance required at specific on-campus performances. Not open to those with credit in MUSC/DANC 106.

CTAR 126 The Age of Shakespeare. 3 hrs

An introduction to basic areas of Renaissance thought as background to at least three of Shakespeare's plays, which are considered from the theatrical point of view as well as philosophical and literary. Team taught by members of the English and Communication and Theatre Arts Departments. *This course satisfies one literature or one theatre arts requirement. Note: See Honors Humanities Courses, page 46.*

CTAR 150 Introduction to Theatre. 3 hrs

A lecture-demonstration course with the purpose of fostering appreciation of theatre through an understanding of its production components, its forms and styles, and its historical development. Attendance required at selected EMU theatre productions. Required of theatre arts majors and minors.

CTAR 151 African American Theatre: An Introduction. 3 hrs

An introductory survey of the roots, purposes, and contemporary manifestations of theatre and drama reflecting the African American experience. Emphasis will be placed on the reading, analysis, and discussion of representative African American plays.

CTAR 152 Technical Theatre: Scenery and Lighting. 2 hrs

The comprehensive study and application of design fundamentals and basic technology for theatrical scenery and lighting.

CTAR 153 Technical Theatre: Costume and Makeup. 2 hrs

The comprehensive study and application of design fundamentals and basic technology for theatrical costuming and makeup.

CTAR 155 Producing Theatre. 3 hrs

A comprehensive introduction to theatrical production organization: business management, direction, and technical production. Laboratory hours by appointment.

Prereq: CTAR 150 strongly recommended for majors and minors.

CTAR 157 BEGINNING ACTING 3 hrs

This course is designed for non-theatre majors desiring basic knowledge and practice of acting skills as related to the stage. Non-majors will gain experience in self-awareness, relationships, character analysis, improvisation, scene study, and acting exercises. Attention will be given to overcoming stage fright. For non-theatre majors only.

Prereq: None

CTAR 158 Fundamentals of Acting. 3 hrs

A study of the fundamental theories and techniques of acting. Major emphasis on theatre acting, but consideration given to radio and television acting. Laboratory hours by arrangement.

CTAR 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

CTAR 251 African American Theatre: Creative Problems. 3 hrs

A practical consideration of those creative aspects of the theatre production particular to African American theatre. Emphasis will be placed on the presentation of scenes from African American theatre.

CTAR 252 Stagecraft. 3 hrs

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

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

Prereq: CTAR 155 strongly recommended for department majors and minors.

CTAR 254 Stage Makeup. 1 hr
The theory and techniques of theatrical makeup. Laboratory hours to be arranged.

CTAR 258 Mime/Pantomime and Mask. 3 hrs
A performance-oriented survey of techniques, styles, history, and theory of the silent performing arts of mime/pantomime and mask. Physical preparation, preparation of production materials, scripting, and actual performance.

CTAR 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

CTAR 351 Scene Design. 3 hrs
The history of design in terms of stage scenery; an investigation of current trends, techniques, and media of scene design and the practical execution of models and sketches by the student.
Prereq: CTAR 152, CTAR 252, CTAR 155, or department permission.

CTAR 355 Play Direction. 3 hrs
An intensive study of the process of directing plays. Whenever possible, students in the course will direct a one-act play for public presentation. Laboratory hours by arrangement.
Prereq: CTAR 155 or department permission.

CTAR 358 Characterization. 3 hrs
The creation of character and characterization by the actor. Analysis, development, and performance of roles studied in depth.
Prereq: CTAR 158 or department permission.

CTAR 360 Dramatic Composition. 3 hrs
An examination of the elements of dramatic structure through the analysis and composition of works of varying scope. Emphasis on adult plays for the stage; the special problems of drama for children and for the various broadcast media also considered.
Prereq: CTAR 155 or department permission.

CTAR 361 Dramatic Writing. 2 hrs
Intensive concentration on the writing of a significant

example of adult or children's drama for the stage or the broadcast media.

Prereq: CTAR 360 or department permission.

CTAR 362 Stage Lighting. 2 hrs
Stage lighting; historical development, basic electrical theory, switchboards and lighting instruments, color theory, principles, and practices in stage lighting. Laboratory hours to be arranged.
Prereq: CTAR 152, CTAR 252, CTAR 155, or department permission.

CTAR 363 Stage Costume: History and Theory. 3 hrs
A survey of the principles and practices of stage costuming from antiquity to present.
Prereq: CTAR 155 or department permission.

CTAR 364 Stage Costume: Design and Construction. 3 hrs
The fundamentals of designing theatrical costumes and a study of specific construction problems found in the making of period costumes.
Prereq: CTAR 363 or department permission.

CTAR 377/378/379 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

CTAR 387/388/389 Cooperative Education. 1/2/3 hrs
One semester of supervised work in concentration area. An evaluation is required at the end of the employment period.
Prereq: Nine credit hours in concentration, approval by Cooperative Education Office, and department permission.

CTAR 450 History of the Theatre to 1642. 3 hrs
A history of the physical theatre and the written drama from antiquity to 1642. Emphasis on theatre architecture and stagecraft, including scenery, costumes, and lighting.
Prereq: Junior standing or department permission.

CTAR 451 History of the Theatre: 1642 to the Present. 3 hrs
History of the physical theatre and the written drama in the western world from the Commonwealth period in England to the present.
Prereq: Junior standing or department permission.

CTAR 452 Arts Management. 3 hrs

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

CTAR 453 Marketing the Arts. 3 hrs

Relates traditional marketing practices to arts administration and provides experience in applying marketing skills to the arts. The study of marketing in the arts and information relating to past market analysis; research and preparation of a specific market plan for an arts organization; presentation of market plan.

Prereq: MKTG 360.

CTAR 454 Law, Public Policy, and the Arts. 3 hrs

Examination of the impact of public policy and law on arts organizations and the individual artist. Particular attention is paid to tax policy, copyright, arts advocacy, and contract law.

Prereq: Twelve hours in arts management or department permission.

CTAR 456 Experimental Approaches to Directing. 1 hr

Study of nontraditional possibilities for using the dynamics of theatre to enhance a performance.

Prereq: One course in acting or department permission.

CTAR 457 Tryouts and Auditions. 1 hr

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

Prereq: One course in play direction or department permission.

CTAR 458 Problems in Modern Theatre. 3 hrs

The collaborative study and presentation of post-1850 theatrical styles and genres for actor, director, and designer. Students work in production teams to develop and present multiple solutions.

Prereq: 12 hours in theatre or department permission.

CTAR 459 Problems in Premodern Theatre. 3 hrs

The collaborative study and presentation of pre-1850 theatrical styles and genres for actor, director, and designer. Students work in production teams to develop and present multiple solutions.

Prereq: 12 hours in theatre or department permission.

CTAR 461 Musical Theatre Acting. 2 hrs

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

Prereq: Nine hours in theatre arts or department permission.

CTAR 462 Directors on Directing. 2 hrs

Study of selected noted stage directors past and present.

Prereq: Nine hours in theatre arts or department permission.

CTAR 463 The American Musical Stage: 1900 to 1940. 2 hrs

A survey of the early character and development in America of the Broadway musical, concentrating on operetta, the musical revue, and musical comedy.

Prereq: Junior standing or department permission.

CTAR 464 Style for the Actor 3 hrs

This course will address the challenge of matching the actor's personal methods with a wide range of stylistic demands that exist in the theatrical repertory. The student will discover that acting means translating the text into a series of actions and that *physical* actions take on a particular shape or *style* in accordance with the given circumstances of the text.

Prereq: CTAR 158 or CTAR 157.

CTAR 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

CTAR 487/488/489 Internship. 1/2/3 hrs

One semester of practical, on-the-job work experience and training (four hours per week minimum) at selected on-campus or off-campus facilities.

Prereq: Twenty semester hours of concentration courses and department permission.

CTAR 496 Senior Seminar. 2 hrs

A capstone course for theatre majors. A comprehensive and unified study of all areas of theatre. Combining knowledge and skills with preparation for professional careers and/or graduate study.

Prereq: Open only to department seniors or by department permission.

CTAR 497/498/499 Independent Study. 1/2/3 hrs

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

Prereq: Department permission.

TELECOMMUNICATIONS AND FILM COURSES**CTAT 130 Introduction to Telecommunications and Film. 3 hrs**

An introduction to mass media and telecommunication systems in the United States. Emphasis on development of telecommunications industries including radio-television-film, programming, new technology, regulation, and financial support.

Prereq: CTAS 121/124.

CTAT 131 Introduction to Audio Production and Direction. 2 hrs

For majors and minors only. Class meets for three hours per week, one hour lecture and two hours laboratory. The students will work with the audio facilities in Quirk Building including audio facilities in WQBR, Quirk TV studio, and the audio production booths. The course will be required of all telecommunications majors and minors. As an introductory course in audio production, CTAT 131 is essential to all other advanced production courses, including video and film. As such, CTAT 131 must be taken before CTAT 132 or other courses in the production curriculum. Laboratory fee.

CTAT 132 Introduction to Video Production and Direction. 2 hrs

For majors and minors only. Class meets three times per week. One hour will be devoted normally to lecture and discussion. The two remaining hours will be spent in the television studio working with production equipment under supervised conditions. This course is required for all majors and minors in Telecommunications and Film. CTAT 132 is designed as an introductory course in video production. Laboratory fee.

Prereq: CTAT 131.

CTAT 141 Introduction to Radio-TV-Film Production. 3 hrs

For nonmajors and nonminors. 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. Laboratory fee.

Prereq or coreq: CTAT 130.

CTAT 145 Introduction to Film Appreciation. 3 hrs

An introduction to understanding the moving image as a medium of artistic expression and persuasion. The course will consider the principal components of film/video language including photography, writing, performances,

editing, mise-en-scène, and major classification systems such as genres and auteurism. It will include an historical overview of the development of film/video industries, major theoretical approaches, and an analysis of the moving image's effects on audiences. Laboratory fee.

CTAT 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

CTAT 230 Mass Media in America. 3 hrs

A general survey of mass media with selected radio-television programs and films used to examine key concepts in production, criticism, history, and industry structure. May not be counted on major or minor in telecommunications and film.

CTAT 231 Audio Recording Techniques. 3 hrs

An introduction to the practical problems of recording music ensembles from soloists to symphony orchestras. A professional audio engineer will supervise on-site recording sessions and all postproduction work. Two regular lecture hours and two hours of laboratory per week. Fieldwork projects arranged. Laboratory fee.

Prereq: CTAT 130, CTAT 131, and CTAT 132; or department permission.

CTAT 236 History and Criticism of Radio and Television. 3 hrs

An historical survey of network radio and television entertainment and public affairs programming with an emphasis on how the networks' offerings were received by a select number of social and cultural critics of the two media.

Prereq: CTAT 130.

CTAT 241 Radio-Television-Film Announcing. 3 hrs

A study of the various types of radio, television, and film nondramatic speaking such as music, commercials, interviews, and documentaries. Practice and evaluation of announcing types and styles.

Prereq: CTAT 130 and CTAT 131 and CTAT 132, or department permission.

CTAT 245 A Survey of American Cinema, 1894-Present. 3 hrs

This course is a chronological survey of the development of American cinema with an emphasis on the roles played by technological innovations, corporate development, and government intervention on the emergence of a dominant mode of film production practice. Key films by important directors from the entire period will be

screened and discussed.

Prereq: CTAT 145 or department permission.

CTAT 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

CTAT 331 Fundamentals of Radio Production and Direction. 3 hrs

The fundamentals of preparation, production, direction, and evaluation of nondramatic radio programs.

Prereq: CTAT 130 and CTAT 131 and CTAT 132, or department permission.

CTAT 332 Fundamentals of Television Production and Direction. 3 hrs

The fundamentals of preparation, production, direction, and evaluation of nondramatic television programs. Emphasis is placed on basic techniques of studio and remote productions. Laboratory fee.

Prereq: CTAT 130 and CTAT 131 and CTAT 132, or department permission.

CTAT 333 Fundamentals of Film Production and Direction. 3 hrs

An introduction to the principles of film-video production. Course offers theory and practice of film-video continuity, master sequencing, narrative and nonnarrative editing. Three 16mm film or video projects will be required. Laboratory fees.

Prereq: CTAT 130 and CTAT 131 and CTAT 132, or department permission.

CTAT 334 Radio-Television News. 3 hrs

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

Prereq: CTAT 130, CTAT 131, and CTAT 132 for majors and minors, or JRNL 215 for majors/minors in journalism or public relations, or department permission.

CTAT 335 Studies in Film. 3 hrs

Students will examine non-Hollywood films including European, Asian, and Third World theatrical films or documentary, animated, and experimental films. The topics will be alternated over terms to allow an in-depth approach.

Prereq: CTAT 130 and CTAT 131 and CTAT 132, or department permission.

CTAT 336 Studies in Telecommunications. 3 hrs

A comparative study of broadcasting services in European, Soviet, and Third World nations, also international

shortwave, satellite interconnections, CATV, limited application video systems, and new technologies. Topics will be alternated over terms to allow an in-depth approach.

Prereq: CTAT 130 and CTAT 131 and CTAT 132, or department permission.

CTAT 341 Radio-Television-Film Dramatic Performance. 3 hrs

A study of types and styles of dramatic speaking for radio, television, and film. Practice in the basic techniques of acting for the three media.

Prereq: CTAT 130 and CTAT 131 and CTAT 132, or department permission. CTAO 210 or CTAR 158 recommended.

CTAT 344 Continuity Writing for Radio-Television-Film. 3 hrs

A study of the forms of nondramatic writing for radio, television, and film, including commercials, public service announcements, music continuity, and narrations.

Prereq: CTAT 130 and CTAT 131 and CTAT 132, or department permission.

CTAT 345 American Film Genres. 3 hrs

This course examines key American film genres both past and present to identify their unique narrative and stylistic properties and to show their important economic, social, psychological, and symbolic functions. Genres to be considered include westerns, musicals, horror films, science fiction films, the "woman's" film, detective films, African American films, and sequels.

Prereq: CTAT 145 or department permission.

CTAT 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

CTAT 387/388/389 Cooperative Education. 1/2/3 hrs

One semester of supervised work in concentration area. An evaluation is required at the end of the employment period.

Prereq: Nine credit hours in concentration, approval by Cooperative Education Office, and department permission.

CTAT 431 Advanced Radio Production and Direction. 3 hrs

A continuation of CTAT 331. Advanced theory and practical experience in production of longer, more complex dramatic and nondramatic material for radio.

Prereq: CTAT 331 or department permission.

CTAT 432 Advanced Television Production and Direction. 3 hrs

A continuation of CTAT 332. Principles, practices, and techniques of directing and producing dramatic material for television. Major television formats discussed and analyzed. Practical experience in depth provided for each student. Laboratory fee.

Prereq: CTAT 332 or department permission.

CTAT 433 Advanced Film Production and Direction. 3 hrs

Students make complete 16mm color films or videotapes participating in all stages of production from scripting, filming, and taping, to developing an original soundtrack and a final edited version. Laboratory fees.

Prereq: CTAT 333 and department permission.

CTAT 445 Film Theory and Criticism. 3 hrs

An intensive study of the key theories of film structure, historical development, and sociological function. Emphasis upon theories of editing, auteur criticism, genres, and textual analysis.

Prereq: CTAT 145 or LITR 245 or department permission.

CTAT 446 Contemporary Problems in Telecommunications. 3 hrs

A study of contemporary issues and problems affecting the telecommunications industries, including sociological and psychological influences, programming, new technology, regulation, and research.

Prereq: Twelve semester hours of radio-television courses or department permission.

CTAT 447 Radio-Television Station Management. 3 hrs

Study of station management in the areas of advertising, programming, personnel, applied research, and public relations.

Prereq: Twelve semester hours of radio-television courses or department permission.

CTAT 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

CTAT 487/488/489 Internship. 1/2/3 hrs

One semester of practical, on-the-job work experience and training (four hours per week minimum) at selected on-campus or off-campus facilities.

Prereq: Twenty semester hours of concentration courses and department permission.

CTAT 497/498/499 Independent Study. 1/2/3 hrs

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

Prereq: Department permission.

ACTIVITY COURSES**CTAA 165/265/365/465 Television Laboratory. 1 hr each**

Students who participate in co-instructional activities may, with the approval of the professor in charge 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: CTAT 130, CTAT 131, and CTAT 132; or department permission.

CTAA 166/266/366/466 Forensics. 1 hr each

Students who participate in co-instructional activities may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in one activity or in several. Admission to the activity does not ensure credit.

Prereq: Department permission.

CTAA 167/267/367/467 Theatre Practice. 1 hr each

Students participating in specific positions with major responsibility in productions of the EMU Theatre, the department's instructional activity program in theatre arts, by prior permission of the department may receive one hour of credit during a single semester. The specified positions and prerequisites are:

167—Heading a major technical crew for a faculty-directed production.

Prereq: CTAR 155, CTAR 152, or CTAR 252 plus previous experience on a similar crew for at least one EMU Theatre production.

267—Assistant directing and/or stage managing a faculty-directed production.

Prereq: CTAA 167 and CTAR 355.

367—Directing an Experimental Series production.

Prereq: CTAA 167 and CTAR 355.

467—Additional experience in the responsibilities listed for 367.

Prereq: CTAA 167, CTAA 267, or CTAA 367.

CTAA 168/268/368/468 Interpretation. 1 hr each

Students who participate in co-instructional activities may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in such activities and the credit may be earned in one activity or in several activities. Admission to the activity does not ensure credit. (Available with a focus on oral interpretation of literature for the young.)

Prereq: CTAO 210 or department permission.

CTAA 169/269/369/469 Radio Station WQBR. 1 hr each

Students who participate in co-instructional programs may, with the approval of the professor in charge 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: CTAT 130, CTAT 131, and CTAT 132; or department permission.

CTAA 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than one provided different topics are studied.

Prereq: Department permission.

CTAA 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than one provided different topics are studied.

Prereq: Department permission.

CTAA 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than one provided different topics are studied.

Prereq: Department permission.

CTAA 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than one provided different topics are studied.

Prereq: Department permission.

COMPUTER SCIENCE

George E. Haynam
Department Head
 511 Pray-Harroid
 487-1063

Professors: Ranjan Chaudhuri, George E. Haynam,
 Hartmut F.W. Höft, Kurt E. Lauckner, Mildred D.
 Lintner, William W. McMillan, Aby Tehranipour

Associate Professors: Andrew C. Dempster, Alan
 Heezen, John H. Remmers, Sushil K. Sachdev

Assistant Professors: John K. Cooper, Susan M.
 Haynes, Michael Zeiger

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

Laboratory Coordinators: P. Steven Dotson, Karen
 Ueberroth

The Computer Science department 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 nonteaching computer science major prepares graduates for careers in computer systems analysis, software development, and application programming. The nonteaching 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. Inservice employees in industrial or research information processing environments or in schools can take specific courses to improve their professional competency.

Degrees:

Bachelor of Science and Bachelor of Arts

Programs of Study

Majors:

Computer science
 Computer science for secondary education

Minors:

Computer science
 Computer science for secondary, K-12, and special
 education-secondary

Advising assistance may be obtained through the department office. An adviser list is posted, and the department secretary will direct students to appropriate faculty members.

Advising Coordinators:

Computer science (nonteaching): 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.

ACADEMIC MAJOR

COMPUTER SCIENCE MAJOR

	Sem hours
Major in computer science	36
1. Required courses	24
COSC 138 Computer Science I	3
COSC 238 Computer Science II	3
COSC 239 Assembly and Machine Language Programming	3
COSC 330 Discrete Mathematical Structures ..	3
COSC 334 Data Structures	3
COSC 337 Programming Languages	3
COSC 338 Computer Organization	3
COSC 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>	
COSC 430 Compiler Construction, COSC 431 Systems Programming, COSC 433 Computer Operating Systems, COSC 441 Computing Network Principles	
<i>Group B</i>	
COSC 432 Switching Theory, COSC 435 Introduction to Microprocessors, COSC 437 Microcomputer Graphics, COSC 442 Database Principles, COSC 443 Software Engineering Principles	
3. Additional required mathematics courses 17-19	
MATH 120 Calculus I	4
MATH 121 Calculus II	4
MATH 122 Elementary Linear Algebra	3
MATH 360 Statistical Methods or MATH 370 Probability and Statistics I	3-4
Choose one course from the following:	3-4
MATH 223 Multivariable Calculus, MATH 319 Mathematical Modeling, MATH 325 Differential Equations, MATH 411 Modern Algebra with Applications, MATH 418 Applied Linear Algebra, MATH 425 Mathematics for Scientists, MATH 436 Introduction to Numerical Analysis, MATH 471 Probability and Statistics II	

ACADEMIC MINOR

COMPUTER SCIENCE MINOR

Students on the nonteaching minor interested in computer science applications in business may substitute courses from the College of Business with permission of the advising coordinator in computer science.

Sem hours

Minor in computer science	21
1. Required courses	12
COSC 138 Computer Science I.....	3
COSC 238 Computer Science II	3
COSC 239 Assembly and Machine Language Programming	3
COSC 334 Data Structures	3
2. Restricted electives	9
Choose three courses from the following:	
COSC 330 Discrete Mathematical Structures;	
COSC 337 Programming Languages; COSC	
338 Computer Organization; COSC 365	
Foundations of Automata and Languages;	
COSC 430 Compiler Construction; COSC 431	
Systems Programming; COSC 432 Switching	
Theory; COSC 433 Computer Operating	
Systems; COSC 435 Introduction to	
Microprocessors; COSC 437 Microcomputer	
Graphics; COSC 441 Computing Network	
Principles, COSC 442 Database Principles,	
COSC 443 Software Engineering Principles	

TEACHING MAJOR

COMPUTER SCIENCE MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in computer science, certification code "NR," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #50, "Computer Science."

Basic Studies

I-B-1. ENGL 121 English Composition (3)
I-B-2. <i>Basic Studies requirement. See inside back cover</i>
I-B-3. <i>Basic Studies requirement. See inside back cover</i>
I-B-4. MATH 122 Elementary Linear Algebra (3)
I-B-5. COSC 136 Computers for the Nonspecialist (3)*
II-B-1. <i>Basic Studies requirement. See inside back cover</i>
II-B-2. <i>Basic Studies requirement. See inside back cover</i>
II-B-3. <i>Basic Studies requirement. See inside back cover</i>

III-B-1. <i>Basic Studies requirement. See inside back cover</i>
III-B-2. <i>Basic Studies requirement. See inside back cover</i>
III-B-3. <i>Basic Studies requirement. See inside back cover</i>
III-B-4. <i>Basic Studies requirement. See inside back cover</i>
IV-B-1. <i>Basic Studies requirement. See inside back cover</i>
IV-B-2. <i>Basic Studies requirement. See inside back cover</i>
IV-B-3. <i>Basic Studies requirement. See inside back cover</i>
IV-B-4. <i>Basic Studies requirement. See inside back cover</i>
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 49

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

COSC 138 Computer Science I (3)
COSC 238 Computer Science II (3)
COSC 239 Assembly and Machine Language Programming (3)
COSC 330 Discrete Mathematical Structures (3)
COSC 334 Data Structures (3)
COSC 336 Programming Languages for Educators (3)
COSC 340 Applications in Computer Science (3)
COSC 490 Seminar and Project Design for Educators (3)

One of:

HIST 290 Introduction to the History of Technology (3)
PLSC 382 Politics and the 21st Century (3)
ANTH 379 Special Topics: Contemporary Issues in Developing and Modern Technological Societies (3)
ECON 386 Technology and Economic Growth (3)
SOCL 462 Complex Organizations (3)
INDT 495 Technology, Values, and the Future (3)

Minor

Select a minor from the approved list (see p. 363).

Credit hours in minor:..... 20¹

Credit hours in major and related areas:..... 47

Professional Studies

100 clock hours of approved prestudent teaching field experiences (0)
EDTC 300 Introduction to Computer Applications in Education (1)
SPGN 300 Exceptional Children in the Regular Classroom (1)
EDPS 322 Human Development and Learning (4)

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

- CURR 305 Curriculum and Methods: Secondary (3)
- RDNG 311 Teaching Reading in the Secondary School (3)
- SOFD 328 Schools in a Multicultural Society (3)
- EDPS 340 Introduction to Assessment and Evaluation (3)
- EDMD 345 Media for the Classroom Teacher (1)
- COSC 346 Methods of Teaching Computer Science in the Secondary Schools (3)
- EDUC 492 Student Teaching (12)

Credit hours in Professional Studies:..... 34

Total credit hours required, with 20-hour minor: ... 130

**Course required for and applicable to major.*

**Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.*

TEACHING MINOR COMPUTER SCIENCE MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in computer science, certification code "NR." The certification test covering this field is #50, "Computer Science."

- *COSC 136 Computers for the Nonspecialist (3)
- *COSC 138 Computer Science I (3)
- COSC 238 Computer Science II (3)
- COSC 239 Assembly and Machine Language Programming (3)
- COSC 334 Data Structures (3)
- COSC 336 Programming Languages for Educators (3)
- COSC 340 Applications in Computer Science (3)
- COSC 346 Methods of Teaching Computer Science in the Secondary Schools (3)
- 24 hours (including hours satisfied in Basic Studies)

**May be satisfied in Basic Studies.*

COMPUTER SCIENCE COURSES

COSC 136 Computers for the Nonspecialist. 3 hrs
A survey of computer science for nonspecialists who wish to learn about the capabilities and applications of computers in our society. The student will learn to write programs in the BASIC language. Not open to computer science nonteaching majors.

COSC 137 Introduction to FORTRAN Programming.

3 hrs

An introductory course for persons wishing to learn programming and applications of computers. Using the FORTRAN language, students develop and run programs to solve a variety of problems. Credit will not be given for more than one of COSC 137 and COSC 237. Does not count toward computer science major or minor.

Prereq: One and a half years of high school algebra.

COSC 138 Computer Science I. 3 hrs

An introduction to computers, programming, algorithm development, and a block structured language such as Pascal. In particular, strategies for problem solving, problem analysis, algorithm representation, and algorithm verification are balanced with actual program development using top-down, stepwise refinement design and good documentation techniques. The first course in the computer science major and minor, but open to all students.

Prereq: High school algebra II or MATH 105.

COSC 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

COSC 237 Computer Programming and Numeric Methods. 3 hrs

An introductory programming course focusing on numerical algorithms fundamental to scientific computer work. Discussion of polynomial interpolation, numerical integration, solutions of systems of equations, and error analysis. Using the FORTRAN language, students develop and run programs to solve a variety of problems. Credit will not be given for more than one of COSC 137 and COSC 237. Does not count toward computer science major or minor.

Prereq or coreq: MATH 121.

COSC 238 Computer Science II. 3 hrs

The second course in an introductory sequence for the computer science major, minor, and others. Continues software engineering methodology through specification, design, coding, and program correctness. Nested procedures and functions, scope and recursion. Introduction to data structures such as stacks, queues, linear lists, trees, sets, and files. Analysis of sorting and searching algorithms.

Prereq: COSC 138.

COSC 239 Assembly and Machine Language Programming. 3 hrs

Computer structure, machine language, instruction execution, and digital representation of data. Computer systems organization and programs. Symbolic coding and assembly systems, macro definition and generation, program segmentation and linkage.

Prereq: COSC 137, COSC 138, COSC 237, or IS 219.

COSC 250 Programming for CAD/CAM. 3 hrs

An introduction to programming in the C language intended for CAD/CAM majors in the College of Technology. Meets for two hours per week of lecture/demonstration, integrated with two hours of supervised laboratory work, using an integrated programming environment running on MS-DOS. Additional unsupervised lab time will also be available. Covers the basics of C statements, data types, operators, functions, arrays, and character strings. Structures and files will be introduced.

Prereq: Any college-level course in programming and permission of the Industrial Technology department.

COSC 277/278/279 Special Topics. 1/2/3 hrs

A 200-level course in a specific area of computer science, to be determined by the field of specialization of the instructor and the interest of the students.

Prereq: Instructor consent.

COSC 330 Discrete Mathematical Structures. 3 hrs

Set algebra and algebraic structures. Elements of the theory of directed and undirected graphs. Boolean algebra and propositional logic. Applications to various areas of computer science.

Prereq: COSC 238, COSC 239, and MATH 122. COSC 239 may be taken concurrently.

COSC 334 Data Structures. 3 hrs

Linear lists, strings, arrays, and orthogonal lists. Representation of trees and graphs. Storage systems, struc-

tures, storage allocation, and collection. Symbol tables, searching, and sorting techniques. Formal specification of data structures and data management systems.

Prereq: COSC 238 and COSC 239.

COSC 336 Programming Languages for Educators. 3 hrs

Formal definition of programming languages; structure of simple statements; global properties of algorithmic languages; structure of list processing, string manipulation, data description, and simulation languages; run-time representation of program and data structures. Special emphasis will be placed on education oriented languages. Credit will not be given for both COSC 336 and COSC 337.

Prereq: COSC 238 or equivalent and COSC 239.

COSC 337 Programming Languages. 3 hrs

Formal definition of programming languages; structure of simple statements; global properties of algorithmic languages; structure of list processing, string manipulation, data description, and simulation languages; run-time representation of program and data structures. Credit will not be given for both COSC 336 Programming Languages for Educators and COSC 337 Programming Languages.

Prereq: COSC 238 and COSC 239.

COSC 338 Computer Organization. 3 hrs

Basic digital circuits, data representation and transfer, digital arithmetic. Digital storage and accessing, control functions, input-output facilities, systems organization, reliability, simulation techniques. Multiprogramming, multiprocessing, and real-time systems.

Prereq: COSC 238 and COSC 239.

COSC 340 Applications in Computer Science. 3 hrs

Information systems, simulation, graphics, audio communication, artificial intelligence, instruction and training, and communications. The student will write or use previously written programs in each of the above areas using microcomputers. These programs will use many languages and programs including LOGO, PASCAL, BASIC, electronic spreadsheet, and a database program.

Prereq: COSC 136, COSC 238, and junior standing.

COSC 346 Methods of Teaching Computer Science in the Secondary Schools. 3 hrs

Computer science programs in the high school, information, and materials needed to prepare students for

the teaching of computer science in these schools. Organization and content, methods of teaching and learning, security and maintenance of equipment, professional journals and magazines available for future growth, copying software and the legality of software duplication, dealing with diversity of abilities, problem solving skills, and strategies for debugging programs. This methods class does not count on the major or minor.

Prereq: COSC 336, CURR 305, and admission to the teacher education program.

COSC 350 C Programming in a UNIX Environment.

3 hrs

An intermediate course in computer programming, using the C programming language and emphasizing software development in a UNIX environment. Concepts of structured programming; operators and expressions; statements, functions, and program organization; pointers, arrays, and character strings; structured data types; input/output; command line arguments. Use of UNIX commands, editors, and other tools related to software development. Credit will not be given for more than one of COSC 451 and COSC 350. Does not count toward the Computer Science major or minor.

Prereq: COSC 239.

COSC 365 Foundations of Automata and Languages.

3 hrs

A rigorous treatment of finite state automata and the languages accepted by them: deterministic and nondeterministic automata, pushdown automata, regular and context-free languages, Turing machines. Applications to lexical analysis and parsing. Students will design automata and implement language processors.

Prereq: COSC 330 and COSC 334.

COSC 377/378/379 Special Topics.

1/2/3 hrs

Covers topics not considered in other courses when the immediate needs of the field, interests of the students, and expertise of the faculty coincide.

Prereq: COSC 238, COSC 239, and department permission.

COSC 388 Cooperative Education.

3 hrs

Four to six months of full-time employment at an industrial firm specially chosen to provide practical experience in computer science. The program consists of two work experiences (COSC 388 and COSC 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.

COSC 430 Compiler Construction.

3 hrs

Review of programming language structures, translation, loading, execution, and storage allocation. Compilation of simple statements. Organization and overall design of a compiler. Use of compiler writing languages.

Prereq: COSC 337 and COSC 365.

COSC 431 Systems Programming.

3 hrs

Batch-process systems programs, components, and operating characteristics. Implementation techniques for parallel processing and interrupt handling. Overall structure of multiprogramming systems. Addressing techniques, file system design, and management. Interprocess communication, design of system modules and interfaces.

Prereq: COSC 334, COSC 337, and COSC 338.

COSC 432 Switching Theory.

3 hrs

Switching algebra, gate network, and sequential circuit analysis and synthesis. Boolean algebra, sequential circuit state and combinational circuit minimization, hazards and races, elementary number systems and codes.

Prereq: COSC 330 and COSC 338.

COSC 433 Computer Operating Systems.

3 hrs

Computer operating systems functions and concepts. Processor allocation: multiprogramming and scheduling algorithms. Memory tasks and data management. The deadlock problem. Virtual memory, allocation strategies, and analysis of their algorithms. Design, implementation, and protection of I/O files. Survey of available computer operating systems.

Prereq: COSC 334 and COSC 338.

COSC 435 Introduction to Microprocessors.

3 hrs

The fundamentals of small system software development as it applies to microprocessors and minicomputers. Introduction to microprocessors and peripheral hardware; software and software development; applications. Students will have access to both microcomputers and a minicomputer to gain firsthand knowledge of this field.

Prereq: COSC 338 or department permission.

COSC 437 Microcomputer Graphics.

3 hrs

A course in computer graphics using microcomputers. Display technologies. Raster graphics, displaying graph-

ics primitives such as points, lines, curves, text, and scan conversion algorithms. Displaying graphs, functions, bar and pie charts, and applications. 2-D graphics including windowing, viewporting, window to viewport transformation, clipping algorithms, scaling, rotation, and translation transformations. Interactive graphics. 3-D graphics; including scaling, rotation, and translation transformations; parallel and perspective projections.
Prereq: COSC 334 and MATH 122.

COSC 441 Computing Network Principles. 3 hrs

The basic concepts of computer communication systems with particular emphasis on communication hardware and microcomputer networks. Students will be involved in the development and writing of software components of communications such as terminal emulators and file transfer packages. Basic communication theory and terminology, communication hardware devices, communication protocols, and microcomputer networks.
Prereq: COSC 334 and COSC 338. COSC 330 recommended.

COSC 442 Database Principles. 3 hrs

A technical review of the theory and principles of database design and organization. The concepts and structures necessary to design and implement a database management system. Network, hierarchical, and relational database models. Data normalization, data description languages, query languages, data integrity and security.
Prereq: COSC 365. COSC 337 recommended.

COSC 443 Software Engineering Principles. 3 hrs

The design and analysis of large and complex software systems. Students will study software life cycles, analyze the requirements, and conduct detailed design studies using modern design methodologies. The knowledge gained from data structures, programming languages, computing architectures, and other computer science areas will be integrated and extended to build realistic systems.
Prereq: COSC 337, COSC 338, and COSC 365.

COSC 450 UNIX for Programmers. 1 hr

A course on the use of the UNIX operating system, with emphasis on those features which make it an outstanding development environment. History and design philosophy; basic commands and use of the editors; file system; shell constructs such as I/O redirection, pipelines, command substitution, variable substitution, and background tasks; pattern matching programs 'grep,' 'awk,' 'sed,' shell programming; internal structure. Does not

count toward the computer science major or minor.
Prereq: Completion of at least one regular 300-level course in Computer Science.

COSC 451 Programming in C. 2 hrs

A course in the C language for those familiar with structured programming concepts, assembly language, and data structures. Syntax and semantics of expressions and statements; program organization; pointers and arrays; structures and unions; input/output; program structure; macro preprocessor; operating system environment; development tools such as 'lint' and 'make'; use of specialized program libraries such as the 'curses' screen control package. Does not count toward the computer science major or minor.
Prereq: COSC 334 (may be taken concurrently.)

COSC 452 Programming in Ada. 3 hrs

A course in the Department of Defense language Ada for those familiar with structured programming concepts and data structures. Topics covered will be the syntax and semantics of expressions and statements. Packages and procedures, typing, abstract data types, exception handling, concurrency, generics, and operator overloading. Procedures and packages will be written and tested using an Ada compiler. Does not count as a restricted elective.
Prereq: COSC 334 or IS 315.

COSC 480 Computer Science Practicum. 3 hrs

A capstone course for students majoring in computer science that will provide the opportunity to develop one or more large software systems utilizing the latest software design techniques. These techniques include requirement specifications, functional specifications, architectural design, performance measurement, and testing. A final written report will be required that includes both the design documents and a user's guide.
Prereq: Any 400 level course in computer science.

COSC 477/478/479 Special Topics. 1/2/3 hrs

Covers topics not considered in other courses when the immediate needs of the field, interests of the students, and expertise of the faculty coincide.
Prereq: Senior standing in computer science and department permission.

COSC 488 Cooperative Education. 3 hrs

Four to six months of full-time employment at an industrial firm specially chosen to provide practical experience in computer science. The program consists of two work experiences (COSC 388 and COSC 488) alternated

with full-time attendance at the University. Use on computer science major subject to department permission. Graded credit/no credit.

Prereq: COSC 388 and department permission.

COSC 490 Seminar and Project Design for Educators.

3 hrs

Major project design and more formalized structured programming. Each student will work on two original major programs, one of which will be a group project. The student will report on both projects (written and oral) and give a formal presentation of the individual project to the University community in the form of a public lecture.

Prereq: COSC 334, COSC 336, and senior standing.

COSC 493 Senior Project

1 hr

Intended for computer science majors in their senior year, this course assesses students' knowledge of the field's core subjects, surveys students to get reactions to and suggestions for the department's academic program, and provides guidance to students as they carry out a computing project and present it in a public forum as a poster presentation or talk. Credit/no credit.

Prereq: COSC 334, COSC 337, COSC 338, COSC 365, senior standing or department permission.

COSC 497/498/499 Independent Study.

1/2/3 hrs

A report or project on an approved subject in the field of computer science under the guidance of the staff of the Computer Science department.

Prereq: Undergraduate grade point average in computer science of 3.0 or above and department permission.

ECONOMICS

**Rauof Hanna, Interim
Department Head
703 Pray-Harroid
487-3395**

Professors: Young-Iob Chung, Kemper Moreland,
Donald W. Pearson, Michael G. Vogt, Bill M.
Woodland

Associate Professors: Dewan A. Abdullah, John A.
Edgren, Sharon Erenburg, Alfredo G. Esposto,
Deborah M. Figart, Raouf S. Hanna, Steven C.
Hayworth, James A. Thornton

Assistant Professors: David B. Crary, Eija Multasuo

The Economics department 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 Mathematics department. The department also participates in other University programs such as language and international trade, area studies offered in the History and Philosophy department, the minor in conservation and resource use in the Biology department, and the Women's Studies program.

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; the Rowan Award for an economics major with a superior academic record who is interested in a government service career; the Labor Studies Award for superior coursework, outstanding research effort, public service, and/or commitment to the Labor Studies program and its goals; and the Student Achievement Award for the highest grade point average in economics.

Also, the department sponsors Eta chapter of Omicron Delta Epsilon honor society in economics, established in 1975 to recognize students who demonstrate ability in the study of economics at an institute where sound economics programs are offered, and the Economics Club, for students interested in economics as a major or minor or complementary field to their studies either for further study in economics or for preparation for professional programs such as law and business administration.

Degrees:

Bachelor of Arts or Bachelor of Science in economics
Bachelor of Business Administration in economics
Bachelor of Arts in labor studies
Bachelor of Arts or Bachelor of Science in actuarial science and economics

Programs of Study

Majors:

Economics (with concentrations in business economics, economics of finance, labor economics, governmental economics, comparative economic systems, and theoretical and quantitative economics)
Actuarial Science and Economics (Joint program with the Mathematics department)
Economics for secondary education
Labor Studies

Minors:

Economics
Economics for secondary, K-12, and special education-secondary
Labor studies

Undergraduate students seeking advising should see the Coordinator of Undergraduate Advising for their initial visit. They will be assigned to an advisor by the coordinator.

Advising Coordinators:

BA/BS in actuarial science and economics: Bill Woodland
BA/BS in economics: Young-Iob Chung, John Edgren,
Deborah M. Figart, Kemper Moreland, Eija
Multasuo
BBA in economics: Bill Woodland
Labor studies: Donald W. Pearson

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.

ACADEMIC MAJORS

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 322) in addition to fulfilling the 24 semester hours in economics.

Assessment: As a condition of graduation, all majors are required to maintain and submit a portfolio reflection of their program of study. Contents may include annual progress reports, copies of term papers, opinion statements about the program, and quizzes. Details are available from the Coordinator of Advising.

Sem hours

Major in economics 24

1. Required courses 9

ECON 301 Intermediate Macroeconomic Analysis .. 3

ECON 302 Intermediate Microeconomic Analysis ... 3

*ECON 310 Economic Statistics or ECON 415

Introduction to Econometrics 3

**Students also may meet the statistics requirement by taking DS 265 Business Statistics I. If students elect DS 265, they are not eligible to take ECON 310 Economic Statistics; ECON 415 Introduction to Econometrics is recommended in this case.*

2. Restricted electives 15

Although any 15 semester hours of 300-level or above electives in economics will complete the requirements for the major, students may pursue one of the six recommended career course patterns: business economics, economics of finance, labor economics, governmental economics, comparative economic systems, and theoretical and quantitative economics listed under the economics major.

Student selecting this economics major are encouraged to include at least one 400-level course offered in the College of Business as an elective.

ACTUARIAL SCIENCE AND ECONOMICS MAJOR

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 US locations. The first of these covers calculus and linear algebra and the second covers mathematical statis-

tics. MATH 372 and 472 are designed to prepare students for these examinations.

Sem hours

Major in actuarial science and economics 60

1. Required courses 53

a. Basic studies 9

COSC 137 Introduction to FORTRAN Programming,

COSC 138 Computer Science I, or COSC 237

Computer Programming and Numeric Methods .. 3

ECON 201 Principles of Economics I 3

ECON 202 Principles of Economics II 3

b. Mathematics 29

MATH 120 Calculus I 4

MATH 121 Calculus II 4

MATH 122 Elementary Linear Algebra 3

MATH 223 Multivariable Calculus 4

MATH 370 Probability and Statistics I 4

MATH 372 Problems in Actuarial Studies I 2

MATH 436 Introduction to Numerical Analysis ... 3

MATH 471 Probability and Statistics II 3

MATH 472 Problems in Actuarial Studies II 2

c. Economics 15

ECON 301 Intermediate Macroeconomic Analysis .. 3

ECON 302 Intermediate Microeconomic Analysis ... 3

ECON 320 Labor Economics 3

ECON 340 Money and Banking 3

ECON 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

ECONOMICS MAJOR

The major in economics requires 30 semester hours of which 15 semester hours are elected from economics courses without restriction or as a concentration of courses in one of the following areas: business economics, economics of finance, labor economics, governmental economics, comparative economic systems, or theoretical and quantitative economics.

Sem hours

Major in economics 30

1. Required courses 15

ECON 201 Principles of Economics I 3

ECON 202 Principles of Economics II 3

ECON 301 Intermediate Macroeconomic Analysis 3

ECON 302 Intermediate Microeconomic Analysis ... 3

ECON 310 Economic Statistics or ECON 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.

Inquire at the Economics department regarding suggested concentrations, suggested courses within concentrations, and appropriate economics faculty advisers.

LABOR STUDIES MAJOR

This program is administered through the Economics department and leads to a Bachelor of Arts degree in labor studies. A minor also is available. Students should select courses in consultation with the director of labor studies and/or the specified advising coordinators.

	Sem hours
Major in labor studies	30

1. Required courses 9

- | | |
|--|---|
| ECON 310 Economic Statistics | 3 |
| ACC 240 Principles of Accounting I | 3 |
| ECON 320 Labor Economics | 3 |

2. Restricted electives 21

Choose seven courses from the following:

- ECON 321 Minority Workers in the Labor Market, ECON 322 American Labor Unions, ECON 323 Labor and Government, ECON 324 Unionism in the Public Sector, ECON 325 Collective Bargaining, ECON 328 Economics of Women, ECON 420 Comparative Labor Unionism

- CTAC 352 Communication in Negotiation
 HIST 463 United States Labor History
 LAW 403 Employment Law
 MGMT 384 Human Resource Management
 PLSC 335 Labor in American Politics
 PSY 351 Industrial Psychology
 SOCL 307 Industrial Sociology

ACADEMIC MINORS**ECONOMICS MINOR**

	Sem hours
Minor in economics	20

1. Required courses 6

- | | |
|---|---|
| ECON 201 Principles of Economics I | 3 |
| ECON 202 Principles of Economics II | 3 |

2. Electives 14

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

LABOR STUDIES MINOR

	Sem hours
Minor in labor studies	20

Electives 20

Choose 20 credits from the following:

- ECON 310 Economic Statistics, ECON 320 Labor Economics, ECON 321 Minority Workers in the Labor Market, ECON 322 American Labor Unions, ECON 323 Labor and Government, ECON 324 Unionism in the Public Sector, ECON 325 Collective Bargaining, ECON 328 Economics of Women, ECON 420 Comparative Labor Unionism

ACC 240 Principles of Accounting I

CTAC 352 Communication in Negotiation

HIST 463 United States Labor History

LAW 403 Employment Law

MGMT 384 Human Resource Management

PLSC 335 Labor in American Politics

PSY 351 Industrial Psychology

SOCL 307 Industrial Sociology

TEACHING MAJOR**ECONOMICS MAJOR****SECONDARY TEACHER CERTIFICATION**

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in economics, certification code "CA" and, depending on the minor selected, endorsement in geography ("CB"), history ("CC"), political science ("CD"), psychology ("CE"), sociology ("CF"), or social science ("CX"). The certification test covering this field is #07, "Economics."

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *Basic Studies requirement. See inside back cover*

I-B-4. *One of:^a*

MATH 119 Mathematical Analysis for Social Sciences II (3)

MATH 120 Calculus I (4)

I-B-5. *Basic Studies requirement. See inside back cover*

II-B-1. *Basic Studies requirement. See inside back cover*

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. *Basic Studies requirement. See inside back cover*

III-B-1. *Basic Studies requirement. See inside back cover*

III-B-2. HIST 102 Western Civilization, 1648 to World War I (3)

III-B-3. One of:

GEOG 107 Introduction to Geography (3)

GEOG 110 World Regions (3)

III-B-4. HIST 103 Twentieth Century Civilization (3)**IV-B-1. Basic Studies requirement. See inside back cover****IV-B-2. Basic Studies requirement. See inside back cover****IV-B-3. Basic Studies requirement. See inside back cover****IV-B-4. Basic Studies requirement. See inside back cover****Physical education, military science, or equivalent (2)***Credit hours in Basic Studies:..... 49***Teaching Major**

ECON 201 Principles of Economics I (3)

ECON 202 Principles of Economics II (3)

ECON 301 Intermediate Macroeconomic Analysis (3)

ECON 302 Intermediate Microeconomic Analysis (3)

One of:

ECON 310 Economic Statistics (3)

ECON 415 Introduction to Econometrics (3)

Fifteen hours of electives in economics

Minor

Minor in one of geography, history, political science, psychology, sociology, or social science

*Subtotal, Major and minor:..... 50¹***Professional Studies**

100 clock hours of approved prestudent teaching field experiences (0)

EDTC 300 Introduction to Computer Applications in Education (1)

SPGN 300 Exceptional Children in the Regular Classroom (1)

EDPS 322 Human Development and Learning (4)

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

CURR 305 Curriculum and Methods: Secondary (3)

RDNG 311 Teaching Reading in the Secondary School (3)

SOFD 328 Schools in a Multicultural Society (3)

EDPS 340 Introduction to Assessment and Evaluation (3)

EDMD 345 Media for the Classroom Teacher (1)

HIST 481 The Teaching of Social Studies (3)

EDUC 492 Student Teaching (12)

*Credit hours in Professional Studies:..... 34***Total credit hours required, with 20-hour minor:.... 133**¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.**TEACHING MINOR
ECONOMICS MINOR**SECONDARY, K-12, AND SPECIAL EDUCATION-SECONDARY
TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in economics, certification code "CA." The certification test covering this field is #07, "Economics."

*ECON 201 Principles of Economics I (3)

ECON 202 Principles of Economics II (3)

14 credits from any economics courses (ECON 301 and 302 highly recommended)

20 hours (including hours satisfied in Basic Studies)

Could be satisfied in Basic Studies in some programs.*ECONOMICS COURSES****ECON 100 Introduction to Economic Problems and Policies. 3 hrs**

A nontechnical introduction to basic problems facing the US economy and different opinions over economic policy choices. Analysis of the controversial role of government in a private market economy. Not recommended for business students.

ECON 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

*Prereq: Department permission.***ECON 200 The American Economy. 3 hrs**

Survey of the principles of economics; the basic knowledge of the functioning of the present-day American economy. Not open to students with ECON 201/ECON 202.

ECON 201 Principles of Economics I. 3 hrs

The first half of basic principles of economics. Emphasizes macroeconomic concepts of national income, fiscal and monetary policy, and problems of unemployment, inflation, and economic growth.

*Prereq: MATH 104 or high school algebra.***ECON 202 Principles of Economics II. 3 hrs**

Second half of an introduction to basic principles of eco-

nomics. Emphasizes microeconomic concepts of demand, supply, and problems relating to prices and resource allocation.

Prereq: ECON 201 or equivalent, and MATH 104 or high school algebra.

ECON 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ECON 300 Contemporary Economics. 3 hrs

Analysis of contemporary economic problems. Topics may change each semester as the interests and/or problems change. Students may elect this course several times as long as different topics are studied but it may be taken only twice for credit toward a major or minor in economics.

Prereq: One course in economics.

ECON 301 Intermediate Macroeconomic Analysis.

3 hrs

Examines macroeconomic theories of the determination of national income, employment, the price level, interest rates, and economic growth; and linkages between the domestic and international economies. Topics include unemployment, inflation, monetary and fiscal policy, and the policy positions of various schools of thought. Standard analytical tools, such as IS-LM and aggregate demand and supply are examined.

Prereq: ECON 201 and ECON 202 or equivalent, and MATH 119/120.

ECON 302 Intermediate Microeconomic Analysis.

3 hrs

Analyzes contemporary theories of consumer and firm behavior, prices, and resource allocation. Examines firm behavior for several market structures, and evaluates the efficiency and equity implications of market outcomes.

Prereq: ECON 201 and ECON 202 or equivalent, and MATH 119/120.

ECON 310 Economic Statistics. 3 hrs

Introduction to the statistical measurement and analysis of data with applications to economics. Elements of descriptive statistics, probability, random samples, point and interval estimation, hypothesis testing, and regression analysis are examined.

Prereq: MATH 119 or MATH 120.

ECON 320 Labor Economics. 3 hrs

Analysis of the theory of wage determination, with attention to labor supply and labor demand, human resource development, trade unions, and labor market institutions.

Prereq: ECON 201 and ECON 202 or equivalent.

ECON 321 Minority Workers in the Labor Market.

3 hrs

Special problems and unique employment situations of minority workers (racial and ethnic minorities, women, handicapped) involving historical and market influences, and employer, union, and government policies. Recent and proposed legislation affecting the labor force status of minorities.

Prereq: One course in economics.

ECON 322 American Labor Unions. 3 hrs

The nature, characteristics, and principles of American labor unionism; the government and structure of unions and their role in the economy.

Prereq: One course in economics.

ECON 323 Labor and Government. 3 hrs

The economic aspects of labor legislation and governmental administrative rulings affecting unions and union-employer relations.

Prereq: One course in economics.

ECON 324 Unionism in the Public Sector. 3 hrs

The origins, goals, and methods of union organization of public sector employees. Emphasis on teachers and other public employees at state and local levels.

Prereq: One course in economics.

ECON 325 Collective Bargaining. 3 hrs

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

Prereq: One course in economics.

ECON 327 Inequality and Economic Justice. 3 hrs

The distribution of wealth and income in the US; an economic analysis of income maintenance programs, including the US social security system.

Prereq: ECON 201 and ECON 202 or department permission.

ECON 328 Economics of Women. 3 hrs

The changing economic role of women in the labor force. Analysis of policies affecting earnings, employment, and

work and family issues in traditional and nontraditional occupations. Includes some international comparisons.
Prereq: One course in economics or junior standing.

ECON 329 Economics of Crime. 3 hrs

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

Prereq: ECON 202 or equivalent.

ECON 332 Urban Economics. 3 hrs

The level, distribution, stability, and growth of urban income and employment. Analysis of contemporary urban problems, such as inner-city poverty, housing-land use, transportation, and local public services with special reference to economic efficiency and programs.

Prereq: ECON 201 and ECON 202 or equivalent.

ECON 336 Economics of Environment and Natural Resources. 3 hrs

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

Prereq: ECON 202 or equivalent.

ECON 337 Energy Economics and Policies. 3 hrs

Introduction to the economics of energy in the US and world economies, including a critical analysis of the policies of the governments involved.

Prereq: ECON 202 or equivalent.

ECON 338 Land Economics. 3 hrs

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

Prereq: ECON 201 and ECON 202 or equivalent.

ECON 340 Money and Banking. 3 hrs

The nature and role of money and credit, the banking system and other financial institutions, and the relation of monetary policy to the level of economic activity.

Prereq: ECON 201 and ECON 202 or equivalent.

ECON 350 Government Finance. 3 hrs

An examination of theory, institutions, and problems of financing the public sector; the effects of expenditures, taxes and other revenue sources, borrowing, debt management, and grants-in-aid at all levels of government upon the distribution of national income and upon the allocation of resources.

Prereq: ECON 201 and ECON 202 or equivalent.

ECON 361 Corporation Finance. 3 hrs

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

Prereq: One course in economics.

ECON 370 Comparative Economic Systems. 3 hrs

Alternative approaches to organizing economic activity, emphasizing advantages and disadvantages as compared to the US economic system. Illustrations are taken from noncapitalist economies such as Cuba and China.

Prereq: One course in economics.

ECON 375 Economic History of the United States.

3 hrs

The economic development of the United States.

Prereq: One course in economics.

ECON 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ECON 385 Economic Development. 3 hrs

The causes, the consequences, and possible solutions of economic problems facing the developing countries of Latin America, Africa, and Asia. Emphasis on mass poverty, food shortages, overpopulation, unemployment, and unequal income distribution.

Prereq: One course in economics.

ECON 386 Technology and Economic Growth. 3 hrs

The nature of technology and its importance for contemporary economic growth. Includes technological change and the effects on society and the individual.

Prereq: One course in economics.

ECON 387 Cooperative Education. 3 hrs

Provides practical experience in the student's major field for four to six months of full-time employment at an individual employer. The program consists of one or two work experiences (ECON 387 and ECON 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. Credits count a maximum of three hours towards degree requirements in the labor studies program and none in the economics major or minor.

Prereq: Junior standing. Major in economics or labor studies. Department permission.

ECON 401 Computer Applications in Macroeconomics.**3 hrs**

Test of various hypotheses of consumption function, investment function, demand for money function, supply of money process, aggregate production function, and labor supply and demand functions. Problems of aggregation and structural vs. reduced form estimations.

Prereq: ECON 301 and ECON 310, or equivalent.

ECON 402 Computer Applications in Microeconomics.**3 hrs**

Applied linear and nonlinear models of the consumer and the firm. Estimates demand functions (for example housing demand and energy demand), cost functions, and production functions.

Prereq: ECON 302 and ECON 310, or equivalent.

ECON 405 Economic Analysis for Business.**3 hrs**

A review of the development of economic thought from the age of mercantilism to present times, with the particular emphasis on landmark contributions of writers such as Adam Smith, Karl Marx, Alfred Marshall, J. M. Keynes, and significant twentieth century economists.

Prereq: ECON 301 and ECON 302, or department permission.

ECON 406 History of Economic Thought.**3 hrs**

Introduction to the development of economic thought from the age of mercantilism to Keynes, with emphasis on the contributions of some of the major writers and schools of economic thought.

Prereq: ECON 201 and ECON 202.

ECON 407 Economic Analysis and Law.**3 hrs**

The application of economic analysis to the law, including property law, contract law, family law, torts, criminal law, constitutional law, antitrust, and environmental law.

Prereq: ECON 201 and ECON 202 or department permission.

ECON 415 Introduction to Econometrics.**3 hrs**

Introduction to the mathematical formulation of economic theories. The use of statistical procedures to measure the theoretical relationships and to verify or reject the theories. Quantitative predictions, measurements, and statistical test of the predictions.

Prereq: ECON 310 or MATH 370 or DS 265.

ECON 420 Comparative Labor Unionism.**3 hrs**

Comparative survey of labor union movements in various economies. Differences in theories behind the movement to organize the working class, and differences in

union movement evolution, giving ideological and functional perspective.

Prereq: ECON 201 and ECON 202 or department permission.

ECON 436 Health Economics.**3 hrs**

The production, distribution, supply, and utilization of health care resources, especially in the United States. Relevant tools of economic analysis and empirical studies, allocation of resources to the health care sector.

Prereq: ECON 201 and ECON 202 or equivalent.

ECON 440 Money, Credit, and Monetary Policy.**3 hrs**

An analytical study of the theories of money demand and money supply. Also studied are commercial banking and the operations and conduct of Federal Reserve monetary policy under alternative policy procedures and economic disturbances. The subject is viewed from both domestic and international perspectives.

Prereq: ECON 301 or ECON 340 or department permission.

ECON 445 Economic Fluctuations and Forecasting.**3 hrs**

Study of the history, nature, and causes of economic fluctuations. Also included are alternate approaches to economic forecasting used by business and government including econometric forecasting; and the role of monetary and fiscal policies, supply shocks, international factors, and structural change in generating economic fluctuations.

Prereq: ECON 201 and ECON 202 or equivalent. ECON 301 or ECON 341 strongly recommended.

ECON 455 Cost-Benefit Analysis.**3 hrs**

Cost-benefit analysis techniques and their application to evaluating economic efficiency of government expenditure programs. Determination and distribution of benefits and costs in specific public projects.

Prereq: ECON 201 and ECON 202.

ECON 460 Industrial Organization.**3 hrs**

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

Prereq: ECON 201 and ECON 202.

ECON 471 Case Studies of Developing Economies.**3 hrs**

A survey of economic problems in selected developing economies. Case studies of countries or regions among

the less developed economies. Cases may change from year to year.

Prereq: ECON 201 and ECON 202 or equivalent.

ECON 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ECON 480 International Economics. 3 hrs

Analysis of theory and economic problems of international trade factor movements, exchange mechanisms, balance of payments, regional economic integration, assistance agencies, and adjustments to changing conditions.

Prereq: ECON 201 and 202, or equivalent.

ECON 487 Cooperative Education. 3 hrs

Provides practical experience in the student's major field for four to six months of full-time employment at an individual employer. The program consists of one or two work experiences (ECON 387 and ECON 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. Credits count a maximum of three hours towards degree requirements in the labor studies program and none in the economics major or minor.

Prereq: ECON 387. Department permission.

ECON 491 Research Seminar in Economics. 3 hrs

Selected issues in economic methodology, research procedures, and techniques with the preparation of a major research paper and group analysis of its findings.

Prereq: Junior standing, economics major or minor.

ECON 497/498/499 Independent Study. 1/2/3 hrs

Advanced study on an individual research basis in areas not covered in formal course work. *Restricted to economics majors and minors.*

ENGLISH LANGUAGE AND LITERATURE

Marcia A. Dalbey
Department Head
 612 Pray-Harrold
 487-4220

Professors: James Angle, Helen Aristar-Dry, Phillip Arrington, Paul Bruss, Franklin Case, Gilbert Cross, Marcia Dalbey, James Devers, Jeffrey Duncan, Clayton Eshleman, Brenda Flanagan, David Geherin, Lucy Hayden, Thomas Hennings, Robert Holkeboer, Elizabeth Ingram, Jay Jernigan, Judith Johnson, Eunice Jordan, Janet Kauffman, Robert Kraft, Russell Larson, Sheila Most, Paul McGlynn, George Perkins, James Reynolds, Martin Shichtman, William Shuter, Lawrence Smith, Arie Staal, Patrick White

Associate Professors: Cheryl Cassidy, Keith Denning, Harry Eiss, Catherine Fleischer, Bernard Miller, Alexandra Norton, James Pinson, Daniel Seely, Ian Wojcik-Andrews

Assistant Professors: Nancy Allen, Elisabeth Daeumer, Craig Dionne, William Hauer, Laura George, James Harding, Lolita Hendrik, Kenneth Kidd, Melissa Motschall, Patrick Karle, Heather Neff, James Pinson, Carol Schlagheck, William Tucker, Ian Wojcik-Andrews

Emeritus Professors: Bernard Decker, Althea Helbig, Donald Lawniczack

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
 English and American language and literature for elementary education
 English and American language and literature for secondary education
 Language, journalism, telecommunications, and film
 Literature and drama/theatre for the young
 Literature and drama/theatre for the young for elementary education
 Literature, language, communications, and theatre arts
 Literature, language, communications, and theatre arts for elementary education
 Public relations

Minors:

Children's literature
 Children's literature for elementary education
 English language
 English language and literature
 English language and literature for elementary education
 English language and literature for secondary, K-12, and special education-secondary
 English linguistics
 Journalism
 Literature
 Writing

Advising is available from faculty advisers whose names and office hours are posted in the English department office.

Special requirements for students seeking admission to the written communication major include evidence that their GPA is at least 2.5 at the end of the sophomore year.

Students who score above 550 on the verbal part of the SAT or 25 on the English section of the ACT and whose high school GPA was 2.5 or above may choose to enroll in a basic language course in a foreign language (FRNH/GERN/SPNH 121, 122, 221, or 222) instead of ENGL 121 English Composition.

Graduate study leads to the master's degree in English. The MA degree is described in the Graduate Catalog.

ACADEMIC MAJORS

ENGLISH AND AMERICAN LANGUAGE AND LITERATURE MAJOR

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
I-B-2. *Basic Studies requirement. See inside back cover*
I-B-3. *Basic Studies requirement. See inside back cover*
I-B-4. *Basic Studies requirement. See inside back cover*
I-B-5. *Basic Studies requirement. See inside back cover*
II-B-1. *Basic Studies requirement. See inside back cover*
II-B-2. *Basic Studies requirement. See inside back cover*
II-B-3. *Basic Studies requirement. See inside back cover*
III-B-1. *Basic Studies requirement. See inside back cover*
III-B-2. *Basic Studies requirement. See inside back cover*
III-B-3. *Basic Studies requirement. See inside back cover*
III-B-4. *Basic Studies requirement. See inside back cover*
IV-B-1. *Basic Studies requirement. See inside back cover*
IV-B-2. *One of:*^a

*LITR 204 Native American Literature (3)

*LITR 260 African American Literature (3)

- IV-B-3.** *Basic Studies requirement. See inside back cover*
IV-B-4. *Basic Studies requirement. See inside back cover*
Physical education, military science, or equivalent (2)

Major (including Basic Studies) 36

See note "a" above for courses applicable to both Basic Studies and the major.

- LING 201 An Introduction to Linguistics (3)
 LITR 210 Introduction to Shakespeare (3)
 ENGL 227 Writing about Literature (3)
 ENGL 408 Writing for Writing Teachers (3)

One of:

- ENGL 328 Writing: Style and Language (3)
 ENGL 417 Writing about Controversies (3)

One of:

- LING 401 Introduction to Linguistic Science (3)
 LING 402 Modern English Grammar (3)
 LING 421 The History of the English
 Language (3)

One of:

- LITR 305 Shakespeare: The Major Comedies and
 Histories (3)
 LITR 340 The Rise of British Drama to 1642 (3)
 LITR 341 English Drama 1660-1779 (3)
 LITR 411 Medieval Epic and Romance (3)
 LITR 412 English Literature in the Middle
 Ages (3)
 LITR 413 The Poetry of Chaucer (3)

LITR 414 English Renaissance Prose and Poetry
 1500-1660 (3)

LITR 415 Literature of the Neo-Classical Period
 1660-1798 (3)

One of:

LITR 330 The Rise of the British Novel 1720-
 1832 (3)

LITR 331 The Development of the British Novel
 1832-1914 (3)

LITR 416 Romantic Rebellion in Britain 1798-
 1832 (3)

LITR 417 Victorian and Edwardian Literature
 1832-1914 (3)

One of:

LITR 333 Modern British and European Novel
 1914 to Present (3)

LITR 342 The Development of Modern Drama (3)

LITR 401 Modern British and American Poetry
 1914 to Present (3)

LITR 460 Recent Trends in British and American
 Literature (3)

One of:

LITR 328 The Rise of the American Novel to
 1920 (3)

LITR 332 The Modern American Novel 1920 to
 Present (3)

LITR 409 The Development of American
 Literature (3)

LITR 410 Modern American Literature (3)

One of:

Any course listed above but not taken

ENGL 324 Principles of Technical
 Communication (3)

ENGL 335 Imaginative Writing (3)

JRNL 215 Journalism (3)

LING 205 English Words (3)

LING 310 African American Language (3)

LING 340 Language and Culture (3)

^aCourse required for and applicable to major.

ENGLISH LANGUAGE MAJOR

Sem hours

Major in English Language 30-31

A. Concentration in English Language

1. **Required Courses** 19-21

ENGL 324 Principles of Technical
 Communication 3

ENGL 328 Writing: Style and Language 3

ENGL 417 Writing About Controversies 3

- LING 201 An Introduction to Linguistics 3
 LING 402 Modern English Grammar 3
 LING 205 English Words or LING 421 The History of the English Language 3
 ENGL 484 Seminar in Written Communications or LING 471 Independent Study in Linguistics 1-3
- 2. Restricted Electives 9-12**
 LING 310 Afro-American English, LING 340 Language and Culture, or any other LING course approved by the undergraduate advisor
 ENGL 225 Intermediate English Composition, ENGL 326 Research Writing, ENGL 387/487 Co-operative Education, ENGL 424 Technical Writing, ENGL 427 Technical Editing, ENGL 428 Writing Computer Documentation
 JRNL 215 Journalism, JRNL 306 Feature, Interpretive, and Editorial Writing, JRNL 307 Copy Editing, JRNL 314 Writing for Public Relations, JRNL 423 Magazine Article Writing, JRNL 453 Advanced Reporting

ENGLISH LINGUISTICS MAJOR

Sem hours

- Major in English linguistics 30**
1. Required courses 18
 LING 201 An Introduction to Linguistics 3
 LING 401 Introduction to Linguistic Science ... 3
 LING 402 Modern English Grammar 3
 LING 420 Introduction to Phonology 3
 LING 421 The History of the English Language .. 3
 LING 425 Introduction to Syntax 3
- 2. Electives 12**

The remaining twelve hours of study are to be selected by the candidates and their advisers. They may include courses from inside or outside the department. Suggested areas include anthropology, composition and rhetoric, 500-level linguistics courses, foreign languages, literature (particularly the early periods), math and computer science, philosophy, psychology, reading, sociology, speech and hearing science, communications, and TESOL.

LITERATURE MAJOR

Sem hours

- Major in literature 30**
1. Required basic literature courses 9
 a. Choose two courses from the following:
 LITR 100 The Reading of Literature, LITR 101

The Reading of Literature: Fiction, LITR 102
 The Reading of Literature: Poetry, LITR 103
 The Reading of Literature: Drama, LITR 204
 Native American Literature, LITR 251 The Bible as Literature, LITR 260 African American Literature

- b. LITR 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. LITR 305 Shakespeare: The Major Comedies and Histories, LITR 340 The Rise of British Drama to 1642, LITR 341 English Drama 1660-1779, LITR 411 Medieval Epic and Romance, LITR 412 English Literature in the Middle Ages, LITR 413 The Poetry of Chaucer, LITR 414 English Renaissance Prose and Poetry 1500-1660, LITR 415 Literature of the Neo-Classical Period 1660-1798
 b. LITR 330 The Rise of the British Novel 1720-1832, LITR 331 The Development of the British Novel 1832-1914, LITR 416 Romantic Rebellion in Britain 1798-1832, LITR 417 Victorian and Edwardian Literature 1832-1914
 c. LITR 333 Modern British and European Novel 1914 to Present, LITR 342 The Development of Modern Drama, LITR 401 Modern British and American Poetry 1914 to Present, LITR 460 Recent Trends in British and American Literature
 d. LITR 328 The Rise of the American Novel to 1920, LITR 332 The Modern American Novel 1920 to Present, LITR 409 The Development of American Literature, LITR 410 Modern American Literature
- 3. Electives 9**
 Choose from the restricted electives or from the following:
 LITR 300 Narrative in Literature and Film, LITR 440 Literary Types, LITR 443 Women in Literature, LITR 450 Major Authors

WRITTEN COMMUNICATION MAJOR

Students electing this major select one of the two areas of concentration: technical communications and imaginative writing. A 2.5 GPA is required for admission to each of the concentrations.

In the restricted electives for each concentration, students may take only the courses listed unless they obtain department permission for substitutions.

	Sem hours
Major in written communication	30
A. Concentration in technical communications	
1. Required courses	21
ENGL 324 Principles of Technical Communication ...	3
ENGL 328 Writing: Style and Language	3
ENGL 424 Technical Writing	3
ENGL 427 Technical Editing	3
ENGL 428 Writing Computer Documentation	3
ENGL 436 Electronic Publishing	3
ENGL 484 Seminar in Written Communication ...	3
2. Restricted electives	9
ENGL 225 Intermediate English Composition, ENGL 326 Research Writing, ENGL 387/487 Co-operative Education, ENGL 417 Writing About Controversies, ENGL 488/489/490 Internship in Technical Writing, ENGL 524 Advanced Technical Writing	
JRNL 215 Journalism, JRNL 306 Feature, Interpretive, and Editorial Writing, JRNL 314 Writing for Public Relations	
CTAC 227 Interpersonal Communication	
FA 165 Graphic Design for Nonmajors	
INDT 121 Graphic Communication, INDT 201 Microcomputer Applications, INDT 204 Photographic Communication, INDT 436 Electronic Publishing Technology	
COSC 138 Computer Science	
INDT 201 Microcomputer Applications or INTE 105 Computer Applications for Industry	
B. Concentration in imaginative writing	
1. Required courses	12
*ENGL 335 Imaginative Writing	3
*ENGL 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:	
ENGL 225 Intermediate English Composition, ENGL 326 Research Writing, ENGL 328 Writing: Style and Language, ENGL 417 Writing about Controversies, ENGL 422 Writer's Workshop: Fiction or Poetry,* ENGL 501 Writing and Rhetorical Theory I, ENGL 502 Writing and Rhetorical Theory II	
LING 402 Modern English Grammar, LING 421 The History of the English Language	
JRNL 215 Journalism, JRNL 306 Feature Writing, JRNL 423 Magazine Article Writing	

*Course may be repeated for additional credit if topic is different.

JOURNALISM MAJOR

Students will be required to complete 30 hours in professional journalism and writing courses (see below), plus a 20-hour minor in a specified field. Admission to the program will require a 2.5 grade point average. For journalism majors, JRNL 213 Introduction to the Print Media is a prerequisite for all courses in the major. JRNL 213 does not count toward the major.

	Sem hours
Major in journalism	30
1. Required courses	21
JRNL 215 Journalism, JRNL 306 Feature Writing, JRNL 307 Copy Editing, JRNL 313 History of American Journalism, JRNL 453 Advanced Reporting, JRNL 454 Contemporary Problems in Journalism, JRNL 455 Journalism and the Law	
2. Restricted electives	9
Choose three courses from the following:	
JRNL 305 Editorial, Column, and Review Writing; JRNL 311 Editing Procedures; JRNL 312 Introduction to Public Relations; JRNL 314 Writing for Public Relations; JRNL 423: Magazine Article Writing, JRNL 387/487 Cooperative Education; JRNL 488/489/490 Internship	
ENGL 324 Principles of Technical Communication, ENGL 328 Writing: Style and Language	
Students will be required to complete a 20-hour minor from one of these areas:	
Economics, English language and literature, foreign language (nine foreign language minors are available, in German, Spanish, and French, each with a minor option of language, language and literature, or literature), geography, history (several history minors are available; students wishing a history minor will select a minor approved by their journalism counselor), political science, sociology.	
Students are advised to choose free electives from the following list:	
LITR 210 Introduction to Shakespeare, LITR 332 The Modern American Novel 1920 to Present, LITR 410 Modern American Literature	
HIST 101 Western Civilization to 1648; HIST 102 Western Civilization, 1648 to World War I; HIST 103 Twentieth Century Civilization	
PHIL 110 Philosophies of Life, PHIL 130 Introduction to Logic	
PLSC 112 American Government (one other PLSC	

course from a list available from journalism advisers)

- ECON 201 Principles of Economics I
- ECON 202 Principles of Economics II
- COSC 136 Computers for the Nonspecialist
- ANTH 135 Introduction to Cultural Anthropology

If a journalism major chooses a minor in economics, English language and literature, history, or political science, those courses listed here which are part of that minor should be replaced with courses listed as restricted electives on the major. Courses taken to fulfill the basic studies requirements leave room for still other free electives.

Science, technical, business, or other minors will be encouraged for those students wishing to pursue interests or careers that might combine journalism with those specialties. Choice of those minors will be subject to approval by the journalism adviser.

Suggested electives:

- SOCL 105 Introductory Sociology
- CTAT 141 Introduction to Radio-TV-Film Production, CTAT 331 Fundamentals of Radio Production and Direction, CTAT 332 Fundamentals of Television Production and Direction, CTAT 336 Studies in Telecommunications

INTERDISCIPLINARY MAJOR IN PUBLIC RELATIONS

Admission to the program will require a 2.8 GPA, which must be maintained in the major as well as in the minor selected. Admission is granted by the English Language and Literature department. Courses from both the English and Communication and Theatre Arts departments are offered as requirements and restricted electives.

Sem hours

Interdisciplinary major in public relations 41-42

1. **Required fundamental courses** 17-18
 - JRNL 215 Journalism 3
 - JRNL 312 Introduction to Public Relations 3
 - JRNL 314 Writing for Public Relations 3
 - CTAS 121 or CTAS 124 Fundamentals of Speech .. 2-3
 - CTAT 141 Introduction to Radio-TV-Film Production 3
 - CTAC 224 Public Speaking or CTAC 350 Persuasion 3
2. **Required advanced courses** 12
 - JRNL 306 Feature Writing 3

- JRNL 408 Case Studies in Public Relations 3
- CTAT 334 Radio-Television News or CTAT 344 Continuity Writing for Radio-Television-Film 3
- CTAC 354 Organizational Communication or CTAC 357 Interviewing as Communication . 3
- 3. **Restricted electives** 12
 - JRNL 307 Copy Editing, JRNL 311 Editing Procedures, JRNL 423 Magazine Article Writing, JRNL 455 Journalism and the Law, *JRNL 387/487 Cooperative Education, *JRNL 488/489/490 Internship, ENGL 324 Principles of Technical Communication, CTAC 224 Public Speaking or CTAC 350 Persuasion (whichever is not chosen above), CTAC 227 Interpersonal Communication or CTAC 359 Small Group Communication, CTAT 334 Radio-Television News or CTAT 344 Continuity Writing for Radio-Television-Film (whichever is not chosen above), *CTAC 387/388/389 Cooperative Education, *CTAC 487/488/489 Internship

A maximum of six hours may be chosen from:

- FA 165 Graphic Design for Nonmajors, INDT 121 Graphic Communication, INDT 204 Photographic Communication, COSC 136 Computers for the Nonspecialist

**Where applicable to public relations*

Recommended minors:

Marketing or Management (College of Business), with MKTG 360 Principles of Marketing and MKTG 369 Advertising highly recommended, along with other courses such as statistics, marketing research, buyer behavior, promotional strategy).

English writing, sociology, psychology, or a minor chosen by student in specific field of interest.

INTERDISCIPLINARY MAJOR IN CHILDREN'S LITERATURE AND DRAMA/ THEATRE FOR THE YOUNG

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:

- LITR 100 The Reading of Literature, LITR 101 The Reading of Literature: Fiction, LITR 102 The Reading of Literature: Poetry, LITR 103 The Reading of Literature: Drama, LITR 204

Native American Literature, LITR 210
Introduction to Shakespeare, LITR 251 The
Bible as Literature, LITR 260 African American
Literature 6
ENGL 450 Children's Literature: Criticism and
Response 3

or

ENGL 451 Writing about Controversy in
Literature for the Young 3
LITR 207 Introduction to Children's Literature ... 3
LITR 350 3
CTAS 121 or CTAS 124 Fundamentals of Speech .. 2-3
CTAD 222 Drama and Play in Human Experience ... 3
CTAD 323 Improvising and Role-Play 3
CTAD 324 Oral Interpretation of Literature for
the Young 3

2. Restricted electives 9-10

Choose nine to 10 credits from the following:

LITR 204 Native American Literature, LITR 210
Introduction to Shakespeare, LITR 251 The
Bible as Literature, LITR 351 World Mythology,
LITR 352 Folk Literature: Ballads and Folk
Tales, LITR 401 Modern British and American
Poetry 1914 to Present, ENGL 451 Writing
about Controversy in Literature for the Young
CTAA 168/268/368/468 Interpretation, CTAO 210
Interpretative Reading, CTAD 322 Theatre for
the Young, CTAD 327 Plays for the Young,
CTAD 497/498/499 Independent Study, RDNG
506 Storytelling

ACADEMIC MINORS

ENGLISH AND AMERICAN LANGUAGE

AND LITERATURE MINOR

**Minor in English and American Language and
Literature 24**

1. Required courses 9

Choose two courses from the following: 6

LITR 100 The Reading of Literature, LITR 101
The Reading of Literature: Fiction, LITR 102
The Reading of Literature: Poetry, LITR 103
The Reading of Literature: Drama, LITR 204
Native American Literature, LITR 251 The
Bible as Literature, LITR 260 African American
Literature

LITR 210 Introduction to Shakespeare 3

2. Restricted electives 12

Choose one course from the following: 3

ENGL 225 Intermediate English Composition,
ENGL 324 Principles of Technical
Communication, ENGL 326 Research Writing,
ENGL 328 Writing: Style and Language, ENGL
335 Imaginative Writing, ENGL 417 Writing
about Controversies, ENGL 422 Writer's
Workshop: Fiction or Poetry

Choose one course from the following: 3

JRNL 215 Journalism, JRNL 306 Feature
Writing, JRNL 307 Copy Editing, JRNL 314
Writing for Public Relations

Choose one course from the following: 3

LING 201 An Introduction to Linguistics, LING
402 Modern English Grammar, LING 421 The
History of the English Language

Any 300- or 400-level LITR course for which prerequisites
have been met, except LITR 351 and LITR 352 3

3. Elective 3

Choose from courses in literature, composition,
or English language except ENGL 120, LITR
207, LITR 352, ENGL 451.

ENGLISH LANGUAGE MINOR

Sem hours

Minor in English Language 21

A. Concentration in English Language

1. Required Courses 12

ENGL 324 Principles of Technical Communication ... 3

ENGL 328 Writing: Style and Language or ENGL
417 Writing about Controversies 3

LING 201 An Introduction to Linguistics 3

LING 205 English Words or LING 402 Modern
English Grammar or LING 421 The History of
the English Language 3

3. Restricted Electives 9

LING 310 Afro-American English, LING 340
Language and Culture, LING 471 Independent
Study in Linguistics, or any other LING course
approved by the undergraduate advisor

ENGL 225 Intermediate English Composition,
ENGL 326 Research Writing, ENGL 387/487
Co-operative Education, ENGL 424 Technical
Writing, ENGL 427 Technical Editing, ENGL
428 Writing Computer Documentation, ENGL
484 Seminar in Written Communications

JRNL 215 Journalism, JRNL 306 Feature,
Interpretive, and Editorial Writing, JRNL 307
Copy Editing, JRNL 314 Writing for Public
Relations, JRNL 423 Magazine Article Writing,
JRNL 453 Advanced Reporting

LITERATURE MINOR

	Sem hours
Minor in literature	21-24
1. Required courses	9
Choose two courses from the following:	6
LITR 100 The Reading of Literature, LITR 101 The Reading of Literature: Fiction, LITR 102 The Reading of Literature: Poetry, LITR 103 The Reading of Literature: Drama, LITR 204 Native American Literature, LITR 251 The Bible as Literature, LITR 260 African American Literature	
LITR 210 Introduction to Shakespeare	3
2. Restricted electives	6
Choose one course from the following:	3
LITR 305 Shakespeare: The Major Comedies and Histories, LITR 330 The Rise of the British Novel 1720-1832, LITR 331 The Development of the British Novel 1832-1914, LITR 340 The Rise of British Drama to 1642, LITR 341 English Drama 1660-1779, LITR 411 Medieval Epic and Romance, LITR 412 English Literature in the Middle Ages, LITR 413 The Poetry of Chaucer, LITR 414 English Renaissance Prose and Poetry 1500-1660, LITR 415 Literature of the Neo-Classical Period 1660-1798, LITR 416 Romantic Rebellion in Britain 1798-1832, LITR 417 Victorian and Edwardian Literature 1832-1914	
Choose one course from the following:	3
LITR 328 The Rise of the American Novel to 1920, LITR 332 The Modern American Novel 1920 to Present, LITR 333 Modern British and European Novel 1914 to Present, LITR 342 The Development of Modern Drama, LITR 401 Modern British and American Poetry 1914 to Present, LITR 410 Modern American Literature, LITR 460 Recent Trends in British and American Literature	
3. Free electives	6-9
Choose from courses in literature, except the following:	
LITR 207 Introduction to Children's Literature, LITR 352 Folk Literature: Ballads and Folk Tales.	
No more than nine semester hours of 100- and 200-level literature courses may count toward this minor.	

JOURNALISM MINOR

	Sem hours
Minor in journalism	21
1. Required courses	15
JRNL 215 Journalism, JRNL 306 Feature Writing, JRNL 307 Copy Editing, JRNL 313 History of American Journalism, JRNL 454 Contemporary Problems in Journalism.	
2. Restricted electives	6
Choose six credits from the following:	
ENGL 324 Principles of Technical Communication, ENGL 328 Writing: Style and Language, ENGL 424 Technical Writing	
JRNL 305 Editorial, Column, and Review Writing; JRNL 311 Editing Procedures; JRNL 312 Introduction to Public Relations; JRNL 423 Magazine Article Writing; JRNL 453 Advanced Reporting	
CTAT 141 Introduction to Radio-TV-Film Production; CTAT 334 Radio-Television News; CTAT 344 Continuity Writing for Radio- Television-Film	
FA 165 Graphic Design for Nonmajors	
INDT 121 Graphic Communication, INDT 204 Photographic Communication	

ENGLISH LINGUISTICS MINOR

	Sem hours
Minor in English linguistics	21
1. Required courses	6
LING 201 An Introduction to Linguistics and LING 401 Introduction to Linguistic Science.	
2. Restricted electives	15
Any LING course not taken in 1. above, LITR 412 English Literature in the Middle Ages, LITR 413 The Poetry of Chaucer	

WRITING MINOR

	Sem hours
Minor in writing	21
1. Required courses	9
ENGL 328 Writing: Style and Language	3
ENGL 324 Principles of Technical Communications or ENGL 326 Research Writing or ENGL 335 Imaginative Writing ..	3
ENGL 417 Writing About Controversies or ENGL 422 Writer's Workshop: Fiction or Poetry, or ENGL 424 Technical Writing	3
2. Restricted electives	12

Choose twelve credits from the following:

Any course listed as a requirement above including repeats of ENGL 335 Imaginative Writing or ENGL 422 Writer's Workshop: Fiction or Poetry if the topics are different, and ENGL 225 Intermediate English Composition, ENGL 323 Writing in the professional World, ENGL 427 Technical Editing, ENGL 428 Writing Computer Documentation, JRNL: 215 Journalism, JRNL 306 Feature Writing, JRNL 423 Magazine Article Writing, CTAT 344 Radio-Television News, CTAC 360 Dramatic Composition, CTAC 361 Dramatic Writing

TEACHING MAJORS

ENGLISH AND AMERICAN LANGUAGE AND LITERATURE MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in English, certification code "BA," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #02, "English."

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
- I-B-2. *Basic Studies requirement. See inside back cover*
- I-B-3. *Basic Studies requirement. See inside back cover*
- I-B-4. *Basic Studies requirement. See inside back cover*
- I-B-5. *Basic Studies requirement. See inside back cover*
- II-B-1. *Basic Studies requirement. See inside back cover*
- II-B-2. *Basic Studies requirement. See inside back cover*
- II-B-3. *Basic Studies requirement. See inside back cover*
- III-B-1. *Basic Studies requirement. See inside back cover*
- III-B-2. *Basic Studies requirement. See inside back cover*
- III-B-3. *Basic Studies requirement. See inside back cover*
- III-B-4. *Basic Studies requirement. See inside back cover*
- IV-B-1. *Basic Studies requirement. See inside back cover*
- IV-B-2. *One of:*

*LITR 204 Native American Literature (3)

*LITR 260 African American Literature (3)

- IV-B-3. *Basic Studies requirement. See inside back cover*
 - IV-B-4. *Basic Studies requirement. See inside back cover*
- Physical education, military science, or equivalent (2)**

Credit hours in Basic Studies:..... 49

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

LING 201 An Introduction to Linguistics (3)

LITR 210 Introduction to Shakespeare (3)

ENGL 227 Writing about Literature (3)

ENGL 408 Writing for Writing Teachers (3)

One of:

ENGL 328 Writing: Style and Language (3)

ENGL 417 Writing about Controversies (3)

One of:

LING 401 Introduction to Linguistic Science (3)

LING 402 Modern English Grammar (3)

LING 421 The History of the English Language (3)

One of:

LITR 305 Shakespeare: The Major Comedies and Histories (3)

LITR 340 The Rise of British Drama to 1642 (3)

LITR 341 English Drama 1660-1779 (3)

LITR 411 Medieval Epic and Romance (3)

LITR 412 English Literature in the Middle Ages (3)

LITR 413 The Poetry of Chaucer (3)

LITR 414 English Renaissance Prose and Poetry 1500-1660 (3)

LITR 415 Literature of the Neo-Classical Period 1660-1798 (3)

One of:

LITR 330 The Rise of the British Novel 1720-1832 (3)

LITR 331 The Development of the British Novel 1832-1914 (3)

LITR 416 Romantic Rebellion in Britain 1798-1832 (3)

LITR 417 Victorian and Edwardian Literature 1832-1914 (3)

One of:

LITR 333 Modern British and European Novel 1914 to Present (3)

LITR 342 The Development of Modern Drama (3)

LITR 401 Modern British and American Poetry 1914 to Present (3)

LITR 460 Recent Trends in British and American Literature (3)

One of:

LITR 328 The Rise of the American Novel to 1920 (3)

LITR 332 The Modern American Novel 1920 to Present (3)

LITR 409 The Development of American Literature (3)

LITR 410 Modern American Literature (3)

One of:

Any course listed above but not taken

ENGL 324 Principles of Technical Communication (3)

ENGL 335 Imaginative Writing (3)

JRNL 215 Journalism (3)

LING 205 English Words (3)

LING 310 African American Language (3)

LING 340 Language and Culture (3)

Minor

Select a minor from the approved list (see p. 363)

Subtotal, Major and minor: 53¹

Professional Studies

100 clock hours of approved prestudent teaching field experiences (0)

EDTC 300 Introduction to Computer Applications in Education (1)

SPGN 300 Exceptional Children in the Regular Classroom (1)

EDPS 322 Human Development and Learning (4)

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

CURR 305 Curriculum and Methods: Secondary (3)

ENGL 308 Teaching English in the Secondary Schools (3)

RDNG 311 Teaching Reading in the Secondary School (3)

SOFD 328 Schools in a Multicultural Society (3)

EDPS 340 Introduction to Assessment and Evaluation (3)

EDMD 345 Media for the Classroom Teacher (1)

EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: .. 136

⁰Course required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

ENGLISH AND AMERICAN LANGUAGE AND LITERATURE MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in English, certification code "BA." The certification test covering this field is #02, "English."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary English program above, plus the requirements under IV-B-2 in that program's Basic Studies requirements. Approved minors are those for the elementary program as given on page 362.

33 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

TEACHING MINORS ENGLISH AND AMERICAN LANGUAGE AND LITERATURE MINOR

ELEMENTARY, SECONDARY, K-12, SPECIAL EDUCATION-ELEMENTARY, AND SPECIAL EDUCATION-SECONDARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in English, certification code "BA." The certification test covering this field is #02, "English."

Two of:

*LITR 100 The Reading of Literature (3)

*LITR 101 The Reading of Literature: Fiction (3)

*LITR 102 The Reading of Literature: Poetry (3)

*LITR 103 The Reading of Literature: Drama (3)

LITR 251 The Bible as Literature (3)

*#LITR 260 African American Literature (3)

LITR 210 Introduction to Shakespeare (3)

Any 300- or 400-level LITR course for which the prerequisites have been met, except LITR 351 and LITR 352 (3)

One of:

*ENGL 225 Intermediate English Composition (3)

ENGL 324 Principles of Technical Communication (3)

ENGL 326 Research Writing (3)

ENGL 328 Writing: Style and Language (3)

(Prereq: an advanced writing course or permission)

ENGL 335 Imaginative Writing (3)
 ENGL 417 Writing about Controversies (3)
 (Prereq: two writing courses at 200-level or above
 or permission)

ENGL 422 Writer's Workshop: Fiction or
 Poetry (3)
 (Prereq: ENGL 324 or permission)

Not more than one of:

JRNL 216 Journalism (3)
 JRNL 306 Feature Writing (3)
 (Prereq: JRNL 215)
 JRNL 307 Copy Editing (3)
 (Prereq: JRNL 215 and JRNL 306)
 JRNL 314 Writing for Public Relations (3)
 (Prereq: JRNL 215 and either CTAS 121 or CTAS
 124)

One of:

LING 201 An Introduction to Linguistics (3)
 LING 402 Modern English Grammar (3)
 LING 421 The History of the English
 Language (3) (Prereq: LING 201 or LING 401)

Two courses in literature, composition, or English
 language except ENGL 120, LITR 207, LITR 352,
 ENGL 451. Students in elementary programs may
 take LITR 207.

24 hours (including hours satisfied in Basic Studies)

*May be satisfied in Basic Studies in some programs.

#Satisfies cross-cultural/international studies requirement.

CHILDREN'S LITERATURE

ELEMENTARY AND SPECIAL EDUCATION-ELEMENTARY
 TEACHER CERTIFICATION

Note: Successful completion of this minor, in the
 context of other program requirements, qualifies the
 student for recommendation for endorsement in English,
 certification code "BA." The certification test for "En-
 glish" is #02, "English." However, the student is advised
 that there is no test in children's literature and that the
 test in English covers material not included in this cur-
 riculum.

*LITR 207 Introduction to Children's
 Literature (3)

ENGL 450 Children's Literature: Criticism and
 Response (3)

or

ENGL 451 Writing About Controversy in
 Literature for the Young (3)

Two of:

**LITR 100 The Reading of Literature (3)
 **LITR 101 The Reading of Literature: Fiction (3)

**LITR 102 The Reading of Literature: Poetry (3)
 **LITR 103 The Reading of Literature: Drama (3)
 LITR 251 The Bible as Literature (3)
 **LITR 260 African American Literature (3)

Three of:

**LITR 204 Native American Literature (3)
 LITR 210 Introduction to Shakespeare (3)
 LITR 251 The Bible as Literature (3)
 LITR 351 World Mythology (3)
 LITR 352 Folk Literature: Ballads and Folk
 Tales (3)
 ENGL 451 Writing about Controversy in
 Literature for the Young (3)

21 hours (including hours satisfied in Basic Studies)

*In Basic Studies for elementary program.

**In Basic Studies for both elementary and special education programs.

#Satisfies cross-cultural/international studies requirement.

COMPOSITION COURSES

ENGL 120 Basic English Composition. 3 hrs
 An introductory course on the composing process, with
 emphasis on writing short expository essays that follow
 the conventions for paragraphing, syntax, diction, and
 punctuation in standard American English. Required of
 students whose SAT verbal scores are below 400 or whose
 ACT English scores are below 17, as space permits. These
 students must take ENGL 120 during their first semes-
 ter at Eastern as a prerequisite for ENGL 121. *ENGL
 120 does not apply on the basic studies requirements.*

ENGL 121 English Composition. 3 hrs
 The fundamental skills of reading, reasoning, and writing
 with emphasis upon the reading and analysis of prose se-
 lections and upon basic writing matters, such as thesis,
 organization, support and development, paragraphing,
 sentence structure, word choice, punctuation, and docu-
 mentation. Frequent papers and conferences.

ENGL 177/178/179 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other
 departmental offerings. Students may elect more than
 once provided different topics are studied.
Prereq: Department permission.

ENGL 225 Intermediate English Composition. 3 hrs
 A course that explores the principles and strategies of effec-
 tive writing with emphasis on argument and persuasion.
Prereq: ENGL 121 and sophomore standing.

ENGL 227 Writing about Literature. 3 hrs

An intermediate writing course that introduces students to a variety of critical approaches to literature and that teaches reading and writing as interrelated activities.

Prereq: ENGL 121 and two courses in literature. Major or minor in the English department or department permission.

ENGL 277/278/279 Special Topics. 1/2/3 hrs

An examination of topics in English not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: ENGL 121.

ENGL 308 Teaching English in the Secondary**Schools. 3 hrs**

For secondary English education majors with focus on appropriate methods and materials for teaching language arts in grades 7-12. Special attention will be given to lesson planning, evaluation techniques, and classroom management. Does not count toward majors or minors.

Prereq: Taken the term before student teaching. Not open to students on academic probation. Must have at least a 2.75 GPA in major.

ENGL 324 Principles of Technical Communication.**3 hrs**

A course for juniors and seniors who wish to study the style and focus of communication that is particularly appropriate to the fields of science and technology.

Prereq: English 121 and Junior standing. Not open to students with credit in ENGL 323.

ENGL 326 Research Writing. 3 hrs

A course designed to explore the strategies, format, and styles of writing appropriate for academic research with emphasis on the student's own field of study.

Prereq: ENGL 121 and junior standing.

ENGL 328 Writing: Style and Language. 3 hrs

An advanced writing course focusing on the interrelationships among purpose, audience, style, the social and political nature of language, and electronic writing.

Prereq: JRNL 215, or ENGL 225, or ENGL 324, or ENGL 326.

ENGL 335 Imaginative Writing. 3 hrs

The study and practice of the techniques of imaginative writing, including poetry and prose fiction. The elements of narration, including description, character develop-

ment, plot structure, and dialogue will be emphasized. Course may be repeated for additional credit if topic is different.

Prereq: One advanced literature course (200 level or above), or department permission.

ENGL 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ENGL 387 Cooperative Education. 3 hrs

Employment for pay in a business or industry chosen to provide practical experience in the use of English skills. Work experiences generally are alternated with full-time attendance at the University.

Prereq: Junior standing. Admittance by application only.

ENGL 408 Writing for Writing Teachers. 3 hrs

A writing course for students preparing to teach English in secondary schools. Students develop their skills as writers and learn how to teach writing. Special focus on recent composition research, theory, and practices, and on strategies, materials, and evaluation techniques.

Prereq: Two writing courses at 200-level or above.

ENGL 417 Writing about Controversies. 3 hrs

The reading, analysis, and writing of argumentative essays on different types of controversies, with emphasis on how to use various types of arguments and appeals for different readers and on the different forms of written arguments.

Prereq: ENGL 121 and two writing courses at the 200-level or above, or department permission.

ENGL 422 Writer's Workshop: Fiction or Poetry. 3 hrs

A seminar workshop for the student who wants more experience in imaginative writing. The class schedule will specify fiction or poetry for each particular workshop. This course may be repeated for additional credit if topic is different.

Prereq: ENGL 335 and two literature courses at the 200 level or above, or department permission.

ENGL 424 Technical Writing. 3 hrs

An advanced workshop that prepares students to communicate, particularly to write, on the job.

Prereq: ENGL 324 or department permission.

ENGL 427 Technical Editing. 3 hrs
Editing of technical material for publication. Principles of style, format, graphics layout, and publication management.

Prereq: ENGL 424, or department permission.

ENGL 428 Writing Computer Documentation. 3 hrs
An advanced writing course that introduces students to the principles of designing, preparing, and testing documents common in the computer industry, particularly software documentation for users.

Prereq: CSC 136 and ENGL 324, or department permission.

ENGL 450 Children's Literature: Criticism and Response. 3 hrs

Practical criticism of children's literature, prose, and poetry, designed to help students develop critical judgment and a clear prose style. Applies toward the minor in children's literature and the interdisciplinary major in children's literature and drama/theatre for the young.

Prereq: LITR 207.

ENGL 451 Writing about Controversy in Literature for the Young. 3 hrs

This course will deal with strategies for the collection, organization, and presentation of materials dealing with controversial issues in literature for young adults.

Prereq: ENGL 121 and LITR 207, or department permission.

ENGL 477/478/479 Special Topics. 1/2/3 hrs

An examination of topics in English not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: ENGL 121 and one writing course at 200-level or above, or department permission.

ENGL 484 Seminar in Written Communications. 3 hrs

A seminar requiring students to assess their progress in the major and to consider how their beliefs and practices concerning written communications relate to larger social and rhetorical considerations. Portfolio

Prereq: ENGL 328 and ENGL 424.

ENGL 487 Cooperative Education. 3 hrs

Employment for pay in a business or industry chosen to provide practical experience in the use of English skills. Work experiences generally are alternated with full-time attendance at the University.

Prereq: Senior standing. Admittance by application only.

ENGL 488/489/490 Internship. 1/2/3 hrs

Optional, practical on-the-job work experience for recommended students electing an opportunity provided by the department or finding an appropriate outside opportunity subsequently approved by the intern supervisor; paid or nonpaid. One hour credit for 10-15 hours per week; two hours for 16-25 hours; three hours for 26 and above.

Prereq: Junior or senior standing and recommendation of technical writing professor. ENGL 324; cumulative 3.0 GPA.

ENGL 497/498/499 Independent Study. 1/2/3 hrs

An intensive study of a topic not offered in the regular curriculum, the particular topic to be defined (and credit hours set) by the teacher and student, subject to approval by the Curriculum Committee. Restricted to students taking majors or minors in the English Language and Literature department.

Prereq: Nine hours in the appropriate major or minor.

ENGLISH LANGUAGE AND LINGUISTICS COURSES

LING 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

LING 201 An Introduction to Linguistics. 3 hrs

An introduction to phonology, morphology, syntax, the lexicon, semantics, sociolinguistics, psycholinguistics, and other concerns.

Prereq: Sophomore standing.

LING 205 English Words. 3 hrs

Principles of sound, form, and meaning relationships facilitate the student's mastery of word structure, spelling, use, and comprehension in a language science approach to the analysis of native English words and the foreign vocabulary which is frequently used in English speech and writing. Addresses linguistic, social, historical, and other factors in the development of English, fostering greater linguistic sophistication and appreciation for the richness of the English language.

LING 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

LING 310 African American Language. 3 hrs

A survey of the history of African American language from African origins to the present day. Details of the structure (i.e. sounds, words, sentence, and discourse patterns) of African American English and its functions in American culture, from everyday language use to its employment in literature and other verbal arts. Special attention is paid to issues resulting from contact between different language varieties and the pervasiveness of linguistic diversity in the US and around the world.

Prereq: LING 201, or LNGE 223, or AAS 101.

LING 322 Languages of the World. 3 hrs

A study of the relation of language to social behavior and modes of thought in unilingual and multilingual communities.

LING 340 Language and Culture. 3 hrs

A survey of the variety of languages and language groups of the world. Topics covered include: origins of human language, language relationships, the ways language changes and why, unusual writing systems, and linguistic exotica.

Prereq: ANTH 135 or LING 201 or LNGE 223.

LING 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

LING 401 Introduction to Linguistic Science. 3 hrs

An introduction to linguistic theory and analytical procedures. Students will apply theoretical principles to problems of phonological and syntactic analysis.

Prereq: LING 201 or LNGE 223.

LING 402 Modern English Grammar. 3 hrs

An introduction to the grammar of modern English: problems in the description and analysis of English grammar.

Prereq: Junior standing.

LING 415 Women and Language 3 hrs

This course analyzes the way that gender is reflected in language structure and linguistic behavior, in both English and other languages. It will consider such topics as gender-related vocabulary and morphology, gender differences in discourse styles, and the question of whether gender-related language differences have neu-

rological correlates or are exclusively social in origin.

Prereq: Junior standing or department permission.

LING 420 Introduction to Phonology. 3 hrs

An introduction to the basic principles of modern phonology, beginning with a review of phonetics.

Prereq: LING 401.

LING 421 The History of the English Language. 3 hrs

A study of the development of the language from its earliest stages to the present with attention to social influences as well as matters of sound, word formation, and sentence structure.

Prereq: LING 201 or LING 401.

LING 425 Introduction to Syntax. 3 hrs

The development of a base in syntactic theory, learning both the mechanisms of a transformational grammar and the argumentation used in syntactic analysis.

Prereq: LING 401.

LING 426 Topics in Linguistics. 3 hrs

Advanced study in specific areas of linguistics for which the department does not regularly offer a course. The area to be studied will vary and will be determined by the field of specialization of the staff members and by student interest. This course may be taken more than once, providing the topics are different.

Prereq: LING 401.

LING 434 The Linguistic Analysis of Literature 3 hrs

LING 434 will analyze the linguistic structure which underlie such aspects of literary interpretation as point of view shift, foregrounding, and presupposition.

Prereq's: LING 201, or LING 401.

LING 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

LING 497/498/499 Independent Study. 1/2/3 hrs

Study of topics not offered in the regular curriculum, the particular topic to be defined (and credit hours set) by the instructor and student, subject to approval by the Curriculum Committee. Restricted to students taking majors or minors in the English Language and Literature department.

Prereq: Nine hours in the appropriate major or minor.

JOURNALISM AND PUBLIC RELATIONS COURSES

JRNL 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

JRNL 213 Introduction to the Print Media. 3 hrs

An exploration into the multiple effects of print media on American popular culture and vice versa. Understanding the business of news, features, editorials, comics, and other media formats. Tracking the development of contemporary media research. Learning to become critical consumers of print media. Student media research.

JRNL 215 Journalism. 3 hrs

An introduction to newspaper reporting. Learning to gather information and to write in an approved journalistic style. Courses offer practical instruction and working exercises in interviewing, news story development, lead writing, and editing skills. Substantial use of computer lab.

Prereq: Sophomore standing.

JRNL 277/278/279 Special Topics. 1/2/3 hrs

An examination of topics in journalism not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Sophomore standing.

JRNL 305 Editorial, Column, and Review Writing.

3 hrs

Writing of interpretive articles, editorials, reviews, and columns. Aimed at developing the student's critical faculties, it includes the study of public opinion and the efforts to change it, the rhetorical principles of argumentation and persuasion, and the aesthetic principles guiding criticism in the arts.

Prereq: JRNL 215

JRNL 306 Feature Writing. 3 hrs

Writing of feature and interpretive articles and editorials designed for newspapers or magazines. Emphasis on research, interviewing, and logical presentation of informative material. Writing assignments and analysis of writing in the mass media.

Prereq: JRNL 215.

JRNL 307 Copy Editing. 3 hrs

Practical application of professional techniques for editing copy for newspapers, magazines, and books, including basic headline writing, use of pictures, and understanding the laws of libel and copyright and the rights of privacy.

Prereq: JRNL 215 and JRNL 306.

JRNL 311 Editing Procedures. 3 hrs

Presentation of the written word on the printed page relative to the use of photographs and other illustrations; copy fitting, printers' markings, visual concepts; typographical selection; page makeup; working with graphic artist and printer.

Prereq: JRNL 215.

JRNL 312 Introduction to Public Relations. 3 hrs

Definition, historic aspects, evolution, and ethics of public relations; the practical use of public relations by corporations, not-for-profit organizations, businesses, institutions, and government; correlation of written, oral, and visual skills.

Prereq: JRNL 215, and CTAS 121/124.

JRNL 313 History of American Journalism. 3 hrs

A survey of the historical evolution of journalism in the United States, its involvement in the social, economic, and political development of the national life and its influences on the decision-making process through its effect on public officials.

Prereq: Sophomore standing.

JRNL 314 Writing for Public Relations. 3 hrs

Practical experience in writing press releases, broadcast announcements, speeches, and scripts to present a project or product; preparing brochures, newsletters, annual reports, memos, and proposals; implementing public relations campaigns.

Prereq: JRNL 312.

JRNL 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

JRNL 387 Cooperative Education. 3 hrs

Employment for pay in the print media, public relations, or publishing fields to provide practical experience for skills learned in the classroom. Work experiences gen-

erally are alternated with full-time attendance at the University.

Prereq: Junior or senior standing; admittance by application to the Cooperative Education office and recommendation approved by a journalism professor.

JRNL 408 Case Studies in Public Relations. 3 hrs

Solving problems and managing controversy in the day-to-day pursuit of public relations; legal considerations; crisis communication; professionalism and public responsibility in public relations.

Prereq: JRNL 312 and JRNL 314.

JRNL 423 Magazine Article Writing. 3 hrs

A writing course to develop skills in investigating and writing nonfiction articles longer and more complex than feature or background articles in daily newspapers. Emphasis on individual completion of articles of professional quality.

Prereq: ENGL 328 or JRNL 306 or department permission.

JRNL 453 Advanced Reporting. 3 hrs

Writing of news stories dealing with such topics as courts, politics, government, finance, labor, education, etc. Emphasis on study and research to provide articles of depth.

Prereq: JRNL 215.

JRNL 454 Contemporary Problems in Journalism.

3 hrs

Emphasis on student investigation, reporting, and writing on selected problems such as free press vs. fair trial, media accessibility, and the people's right to know.

Prereq: Junior standing.

JRNL 455 Journalism and the Law. 3 hrs

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

Prereq: JRNL 454.

JRNL 477/478/479 Special Topics. 1/2/3 hrs

An examination of topics in journalism not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Junior standing and department permission.

JRNL 487 Cooperative Education. 3 hrs

Employment for pay in the print media, public relations,

or publishing fields to provide practical experience for skills learned in the classroom. Work experiences generally are alternated with full-time attendance in the classroom.

Prereq: Junior or senior standing; admittance by application to the Cooperative Education office and recommendation approved by a journalism professor.

JRNL 488/489/490 Internship. 1/2/3 hrs

Optional, practical on-the-job work experience for recommended students electing an opportunity provided by the department or finding an appropriate outside opportunity subsequently approved by the intern supervisor; paid or nonpaid. 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.

JRNL 497/498/499 Independent Study. 1/2/3 hrs

Study of topics not offered in the regular curriculum, the particular topic to be defined (and credit hours set) by the instructor and student, subject to approval by the Curriculum Committee. Restricted to students taking majors or minors in the English Language and Literature department.

Prereq: Nine hours in the appropriate major or minor.

LITERATURE COURSES

Area IV basic studies requirements may be fulfilled with the following courses: LITR 100, 101, 102, 103, 204, 260.

LITR 100 The Reading of Literature. 3 hrs

An introduction to the techniques of critical reading with equal emphasis on prose fiction, poetry, and drama. Development of a fundamental understanding and enjoyment of reading.

LITR 101 The Reading of Literature: Fiction. 3 hrs

Reading and critical analysis of prose fiction intended to deepen the student's understanding and enjoyment of prose fiction.

LITR 102 The Reading of Literature: Poetry. 3 hrs

Reading and critical analysis of poetry intended to deepen the student's understanding and enjoyment of poetry.

LITR 103 The Reading of Literature: Drama. 3 hrs
Reading and critical analysis of drama intended to deepen the student's understanding and enjoyment of drama.

LITR 106 Rome and America. 6 hrs
A comparison of the people and culture of ancient Rome and modern America, considering individual hopes and ideals, religious beliefs, and ideas about death, government, morality, love, and sex. Team taught by a member of the English department and a classicist. *These courses must be taken concurrently and satisfy two literature requirements.* Note: See Honors Humanities Courses, page 46.

LITR/HIST 107 Society in Crisis: 1848 and 1968. 6 hrs
A comparison and contrast of the social crises that culminated in two revolutionary aftermaths (1848 in Europe and 1968 in the United States and Europe), focusing on alienation, women, the rise of nationalism and ethnic consciousness, and the revolutionary outlook and its ultimate frustration. Team taught by members of the History and English departments. *These courses must be taken concurrently and satisfy one history requirement and one literature requirement.* Note: See Honors Humanities Courses, page 46.

LITR 122 American Studies: Success and the Pursuit of Happiness in 19th Century America. 3 hrs
An examination of the widespread 19th-century belief that worldly success produces happiness and an exploration of the proper relationship of knowledge and power, history and progress, wealth and happiness. Readings include such authors as Benjamin Franklin, H.D. Thoreau, William James, Mark Twain, and Horatio Alger. Team taught by members of the English and Philosophy Departments. *This course satisfies one philosophy or one literature requirement.* Note: See Honors Humanities Courses, page 46.

LITR 124 The Age of Wagner. 3 hrs
An exploration of the personal, intellectual, and artistic influences on Wagner's life and work and a consideration of artists influenced by Wagner. Team taught by members of the English and Philosophy Departments. *This course satisfies one philosophy or one literature requirement.* Note: See Honors Humanities Courses, page 46.

LITR 126 The Age of Shakespeare. 3 hrs
An introduction to basic areas of Renaissance thought as background to at least three of Shakespeare's plays, which are considered from theatrical as well as philosophical and literary points of view. Team taught by members of the English and Communication and Theatre Arts Departments. *This course satisfies one literature or one theatre arts requirement.* Note: See Honors Humanities Courses, page 46.

LITR 128 Russia in the Age of Tolstoy and Dostoevsky. 3 hrs
An introduction to the rise of the revolutionary movement in Russia in the half century preceding World War I due to developments in peasant, urban, and aristocratic life. Students examine selected works of literature and some art and music. Team taught by members of the English and History Departments. *This course satisfies one literature or one history requirement.* Note: See Honors Humanities Courses, page 46.

LITR 150 Humanity and Technology. 3 hrs
A brief study of distinctive and influential perceptions of the impact of technology on human values just after the first Industrial Revolution, with critical emphasis on problems concerning the use of special, refined technologies. Primary readings from Thoreau, Mark Twain, Henry Adams, Aldous Huxley, Lewis Mumford, and Garrett Hardin. *This course satisfies one philosophy or one literature requirement.* Note: See Honors Humanities Courses, page 46.

LITR 152 From the Gay Nineties to the Crash. 3 hrs
A series of biographical portraits providing an intensive look at profound cultural changes of the era 1890 to 1930, in both Europe and the United States. Team taught by members of the History and English Departments. *This course satisfies one history or one literature requirement.* Note: See Honors Humanities Courses, page 46.

LITR 155 Narrative in Literature and Film. 3 hrs
An introduction to cinematic concepts and terminology, focusing primarily on narrative techniques in literature and parallel devices in film. Readings include several prose forms and a text dealing with the theory of film. Team taught by members of the English and Philosophy Departments. *This course satisfies one literature or one philosophy requirement. Students may not earn credit in both this course and LITR 300.* Note: See Honors Humanities Courses, page 46.

LITR 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

LITR 181 The Legacy of Greece. 3 hrs

An introduction to Greek epic, drama, poetry, history, and philosophy, illustrating the influence of the Greek tradition on western civilization. The literature is read in English translation. Representative examples of Greek architecture and sculpture also are examined. Team taught by a classicist and/or a member of the English Department. *This course satisfies one literature requirement. Note: See Honors Humanities Courses, page 46.*

LITR 201 Introduction to Science Fiction. 3 hrs

An introduction to science fiction as a medium for speculating on science and technology, politics, social systems, education, and the nature of being human. *Does not satisfy the basic studies literature requirement.*

Prereq: One literature course or department permission.

LITR 204 Native American Literature. 3 hrs

Study of the written and oral literature of the Native Americans, with emphasis upon the authored poetry, fiction, autobiography, and essay of the twentieth century.

Prereq: One literature course or department permission.

LITR 207 Introduction to Children's Literature. 3 hrs

A concentrated reading course designed to impart the knowledge necessary for an appreciation and understanding of children's literature and its use in the schools. In addition to reading the classics and the critically acclaimed works of both fiction and nonfiction by modern writers, students will study poetry, folklore, and mythology and examine the relationship between illustration and text. Does not count toward a major or minor in curricula for teachers in junior and senior high school.

Prereq: Sophomore standing.

LITR 210 Introduction to Shakespeare. 3 hrs

An introduction to at least five of Shakespeare's plays with emphasis upon the tragedies.

Prereq: One literature course or department permission.

LITR 245 Introduction to Film. 3 hrs

An introduction to the historical development of film as an art form with attention to cinematography, editing, scenarios, lighting, acting, and directing styles. Students cannot earn credit in both CTAT 145 and LITR 245.

Prereq: One course in literature or department permission, CTAS 121/124.

LITR 251 The Bible as Literature. 3 hrs

Introduction to the literary study of the Bible. The Old Testament is represented chiefly by specimens of narrative and prophetic writings; the New Testament by selected incidents, parables, and sayings from the life of Jesus as portrayed in the synoptic gospels. Discussion of Biblical influences upon English and American literature.

Prereq: One course in literature.

LITR 260 African American Literature. 3 hrs

Representative American literature by black writers with emphasis upon the 20th century. Readings in poetry, fiction, drama, autobiography, and the essay.

Prereq: One course in literature.

LITR 277/278/279 Special Topics. 1/2/3 hrs

An examination of topics in literature not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: One literature course or department permission.

LITR 300 Narrative in Literature and Film. 3 hrs

A study of the aesthetic parallels in narrative technique between certain prose forms (novel, novella, romance, satire) and film as a means of enhancing verbal and visual literacy. Not open to those with credit in LITR/PHIL 155.

Prereq: Two courses in literature.

LITR 305 Shakespeare: The Major Comedies and Histories. 3 hrs

A study of at least eight of the principal comedies and histories.

Prereq: Two literature courses or department permission.

LITR 328 The Rise of the American Novel to 1920.

3 hrs

A critical reading of the American novel from C.B. Brown and J.F. Cooper through World War I. A study of the development of the novel in America from its earliest appearance to its critical maturity.

Prereq: Two literature courses or department permission.

LITR 330 The Rise of the British Novel 1720-1832.**3 hrs**

The British novel from Defoe through Scott, including such figures as Richardson, Fielding, Sterne, Smollett, and Austen and such forms as the picaresque novel, the Gothic novel, the novel of sentiment, and the novel of manners.

Prereq: Two literature courses or department permission.

LITR 331 The Development of the British Novel 1832-1914.**3 hrs**

A critical reading of Victorian and Edwardian fiction by such authors as Dickens, the Brontës, Thackeray, Trollope, Eliot, Meredith, Hardy, Moore, Wells, and Conrad.

Prereq: Two literature courses or department permission.

LITR 332 The Modern American Novel 1920 to**Present.****3 hrs**

A critical reading of significant American novels since World War I as represented by Hemingway, Fitzgerald, Faulkner, Bellow, Ellison, and others.

Prereq: Two literature courses or department permission.

LITR 333 Modern British and European Novel 1914 to Present.**3 hrs**

A study of modern British and European novels significant to our own times by such writers as Joyce, Proust, Lawrence, Forster, Wolfe, Kafka, Camus, Golding, Fowles, Robbe-Grillet, Handke, Calvino, Grass.

Prereq: Two literature courses or department permission.

LITR 340 The Rise of British Drama to 1642.**3 hrs**

A study of British drama from the mystery plays, morality plays, and interludes to the revenge tragedies of Kyd, Marlowe, and Webster and the comedies of Jonson and Massinger.

Prereq: Two literature courses or department permission.

LITR 341 English Drama 1660-1779.**3 hrs**

A study of the significant plays from the restoration of Charles II to the closing years of the 18th century.

Prereq: Two literature courses or department permission.

LITR 342 The Development of Modern Drama.**3 hrs**

A study of modern drama from Robertson and Ibsen to the theater of the absurd of Pinter and Beckett, including such figures as Pirandello, Chekhov, Shaw, O'Neill, Williams, and Miller.

Prereq: Two courses in literature or department permission.

LITR 351 World Mythology.**3 hrs**

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

Prereq: Two courses in literature.

LITR 352 Folk Literature: Ballads and Folk Tales.**3 hrs**

A reading course in the traditional ballads and folk tales of Europe and North America with emphasis on those which appear in children's literature. *Applies toward minor in children's literature only*, but may be taken as a free elective.

Prereq: Two courses in literature.

LITR 377/378/379 Special Topics.**1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

LITR 401 Modern British and American Poetry 1914 to Present.**3 hrs**

A study of the verse of such major modern British and American poets as Yeats, Auden, Eliot, Pound, Cummings, Stevens, Williams, Thomas, Ashbery, Plath.

Prereq: Three courses in literature or department permission.

LITR 409 The Development of American Literature.**3 hrs**

A study of American literature from colonial times to 1890, including such writers as Bradstreet, Franklin, Hawthorne, Melville, Thoreau, Emerson, Whitman, Dickinson, Twain, and James.

Prereq: Three courses in literature or department permission.

LITR 410 Modern American Literature.**3 hrs**

A study of American literature from 1890 to the present, including such writers as Crane, Frost, Cather, Eliot, O'Neill, Fitzgerald, Faulkner, Hemingway, Bellow, Baldwin, O'Connor, and Updike.

Prereq: Three courses in literature or department permission.

LITR 411 Medieval Epic and Romance.**3 hrs**

A critical reading of medieval French, German, and

English epics and romances (and their sources) in translation. The treatment will be both historical and comparative.

Prereq: Two courses in literature.

LITR 412 English Literature in the Middle Ages. 3 hrs

A survey of Old and Middle English literature from Beowulf to Malory, tracing the themes, genres, and literary techniques of early English literature.

Prereq: Three courses in literature or department permission.

LITR 413 The Poetry of Chaucer. 3 hrs

An introduction to the major works of Chaucer: a close reading of representative poetry.

Prereq: Three courses in literature or department permission.

LITR 414 English Renaissance Prose and Poetry 1500-1660. 3 hrs

Major authors from the age of Shakespeare to the close of the Renaissance, including the humanists, lyric poets, Spenser, Bacon, Donne and the metaphysicals, and Milton.

Prereq: Three courses in literature or department permission.

LITR 415 Literature of the Neo-Classical Period 1660-1798. 3 hrs

A study of English literature from the Restoration of Charles II through the second half of the 18th century: Dryden, Swift, Pope, Johnson, Goldsmith, Gray, Collins, and others.

Prereq: Three courses in literature or department permission.

LITR 416 Romantic Rebellion in Britain 1798-1832. 3 hrs

A study of the shift in literary emphasis in Britain from reason to the emotions, imagination, and individualism in the works of Wordsworth, Coleridge, Lamb, DeQuincey, Hazlitt, Byron, Shelley, Keats.

Prereq: Three courses in literature or department permission.

LITR 417 Victorian and Edwardian Literature 1832-1914. 3 hrs

A study of prose and poetry of such authors as Carlyle, Mill, Tennyson, Browning, Ruskin, Arnold, Hopkins, Swinburne, Hardy, Pater, Wilde, Kipling, and others.

Prereq: Three courses in literature or department permission.

LITR 440 Literary Types. 3 hrs

A study of the characteristics of a particular literary genre, independent of chronology, theme, or author.

Prereq: Three courses in literature or department permission.

LITR 443 Women in Literature. 3 hrs

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

Prereq: Two courses in literature.

LITR 450 Major Authors. 3 hrs

An intensive study of a major literary figure or a group of related authors. The particular author to be taught in a given semester will be announced in the class schedule bulletin.

Prereq: Three courses in literature or department permission.

LITR 460 Recent Trends in British and American Literature. 3 hrs

A study of innovations in recent British and American poetry, fiction, or drama. The particular focus of the course to be taught in a given semester will be announced in the class schedule bulletin.

Prereq: Three courses in literature or department permission.

LITR 477/478/479 Special Topics. 1/2/3 hrs

An examination of topics in literature not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Three courses in literature or department permission.

LITR 497/498/499 Independent Study. 1/2/3 hrs

Study of topics not offered in the regular curriculum, the particular topic to be defined (and credit hours set) by the teacher and student, subject to approval by the Curriculum Committee. Restricted to students taking majors or minors in the English Language and Literature department.

Prereq: Nine hours in the appropriate major or minor.

FOREIGN LANGUAGES AND BILINGUAL STUDIES

Steven D. Kirby
Department Head
 219 Alexander
 487-0130

Professors: JoAnn Aebersold, Ronald C. Cere, William J. Cline, E. Catherine Day, J. Sanford Dugan, James P. Holoka, John R. Hubbard, Steven D. Kirby, Benjamin W. Palmer, John Pisoni, Anne G. Nerenz, Sharon Robertson, Reynaldo Ruiz

Associate Professors: Ana Maria McCoy, Elisabeth Morgan, Thomas Vosteen

Assistant Professors: Thomas Cullen, Glenn Deckert, Alfonso Illingworth-Rico, Geneviève Peden, Motoko Tabuse

Director, bilingual bicultural teacher education program: Phyllis Clemens-Noda

The Foreign Languages and Bilingual Studies department offers a variety of traditional and innovative majors and minors in French, German, Japanese, Spanish, and English as a second language; a group minor in bilingual-bicultural teacher education leading to either elementary or secondary certification; a group minor in teaching English to speakers of other languages; a group major in language and international trade; and a group major in language, journalism, telecommunications, and film.

Students in the language and international trade program with concentrations in business French, German, and Spanish are eligible to take examinations administered by Eastern Michigan University leading to certification in their fields.

Degrees:

Bachelor of Arts and Bachelor of Science
 Programs of Study

Majors:

Language and world business
 French for business
 French for secondary education
 French language and literature
 French language and literature for elementary education
 German for business
 German for secondary education
 German language and literature
 German language and literature for elementary education
 Japanese language and culture teaching for elementary education

Japanese language and culture teaching for K-12 education

Spanish for business

Spanish for elementary education

Spanish for secondary education

Language and international trade

Minors:

Bilingual bicultural teacher education (Spanish-English) for elementary education

Bilingual bicultural teacher education (Spanish-English) for secondary, K-12, and special education-secondary

Classical Studies

English as a second language for nonnative speakers of English

French language and literature

French language

French language for secondary, K-12, and special education-secondary

French literature

French for business

German language and literature

German language

German language for secondary, K-12, and special education-secondary

German literature

German for business

Japanese language

Spanish language

Spanish language for secondary, K-12, and special education-secondary

Spanish literature

Spanish culture

Spanish for business

Teaching English to speakers of other languages

Concentration:

English as a second language for nonnative speakers of English

A placement test is given at the beginning of the fall and winter terms, and is required of all students of foreign language unless they are taking their first course in a foreign language or have completed their last course in that language at EMU. It is also recommended for students whose last course in a language was completed more than one year before. Further details on testing are available in the department office. Students should consult advising coordinators in interpreting test results and creating a schedule.

Any course for which a student registers prior to receiving placement test results must be considered pro-

visional. 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 MA degrees are described in the Graduate Catalog.

English as a second language

English as a second language (ESLN) courses are taught in the Foreign Languages and Bilingual Studies department. These courses carry academic credit; up to 20 hours of ESLN credits may be used as elective credits required for graduation.

Three levels of ESLN instruction are offered: intermediate, advanced, and academic support, in both fall and winter terms. Only advanced and academic support levels are offered in the combined spring-summer term.

Admission status is based on the first English proficiency score that students send to the University. If a later test results in a higher score, it also should be sent to the Admissions Office. All scores must arrive two weeks before the first day of the term.

Students admitted with an official (not institutional) score of 80 or above on the Michigan English Language Assessment Battery (MELAB) or of 500 or above on the Test of English as a Foreign Language (TOEFL) will not be required to take any ESLN 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 ESLN) 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 ESLN 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 ESLN courses in which they receive a "C-" or below. Students starting below the 400 level must continue to enroll in ESLN courses until two 400-level courses are taken. When students have successfully completed ESLN 412 and 414 or 416, their admission status is changed from conditional to regular. See page 9 under Admission Policies for information regarding conditional admission status.

As of Fall 1990, ESLN 412 Academic ESL Writing (for international students) is considered the equivalent of ENGL 121 English Composition. ESLN 412 will therefore fulfill the Basic Studies requirement for English.

Failure to enroll in the required ESLN 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 ESLN.

Advising Coordinators:

Bilingual bicultural teacher education (Spanish): Ana Maria McCoy

English as a second language: Elisabeth Morgan

French: Benjamin W. Palmer

German: Sharon Robertson

Japanese language and culture teaching: Motoko Tabuse

TESOL: E. Catherine Day

Language and international trade: John R. Hubbard

Spanish: Ronald C. Cere

Language and world business: John R. Hubbard

ACADEMIC MAJORS

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 322 for details.)

GROUP MAJOR IN LANGUAGE AND INTERNATIONAL TRADE

The major in language and international trade is designed to integrate the study of modern foreign languages and cultures with preparation in the field of international business. The major objective of the program is to provide students with skills, knowledge, and understanding needed to function in a foreign environment and in professional dealings with business people and clients who speak foreign languages. Students completing this group major have met the major and minor requirements for graduation. No outside minor is needed.

Qualified students in French, German, Japanese, and Spanish have the option of participating in a cooperative work exchange in an area of the world where French, German, Japanese, or Spanish is spoken. Students may take examinations leading to foreign certifi-

cation 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.

MKTG 460 International Marketing 3

ECON 370 Comparative Economic Systems or ECON

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:

FRNH/GERN/JPNE/SPNH 361 French/German/
Japanese/Spanish for International Trade;
FRNH/GERN/JPNE/SPNH 446, 447 Business
French/German/Japanese/Spanish I and II

One additional language course at the 300 or 400 level and one additional language course at the 400 level. Students with prior language study or knowledge will be placed at an appropriate level in consultation with an advising coordinator.

• Geography/history courses 6

GEOG/HIST 316 History and Geography of
Modern Europe, GEOG/HIST 317 History and
Geography of Spanish America, or GEOG/HIST
326 History and Geography of Modern Asia

These credit hours may be used as electives in history and geography.

• Political science courses 3

Choose one course from the following:

PLSC 211 Introduction to Comparative
Government, PLSC 212 Introduction to
International Politics, PLSC 341 International
Law, PLSC 342 International Organizations,
PLSC 354 Government and Politics of Canada,
PLSC 367 Contemporary Political Systems of
Latin America, PLSC 412 Comparative Legal
Systems

2. **Field experience** 3
 FLAN 489 Internship or FLAN 387/487
 Cooperative Education

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
 FRNH/GERN/SPNH 343 Composition 3
 FRNH/GERN/SPNH 344 Conversation 3
 FRNH/GERN/SPNH 443 Advanced Grammar
 and Composition 3
 FRNH/GERN/SPNH 444 Advanced Conversation .. 3
 Students with advanced language proficiency will
 select appropriate courses in consultation with
 the advising coordinator

2. **Restricted electives** 8
 Choose eight credits in the language studied at any level
Journalism component 18-21

1. **Required courses** 12
 JRNL 215 News Writing and Reporting 3
 JRNL 306 Feature Writing 3
 JRNL 307 Copy Editing 3
 JRNL 453 Advanced Reporting 3

2. **Restricted electives** 6-9
 Choose six to nine credits from the following:

JRNL 311 Editing Procedures, JRNL 313 History
 of American Journalism, JRNL 314 Writing for
 Public Relations, JRNL 423 Magazine Article
 Writing, JRNL 454 Contemporary Problems in
 Journalism

ENGL 324 Principles of Technical
 Communication, ENGL 417 Writing about
 Controversies, ENGL 422 Writer's Workshop:
 Fiction or Poetry

Telecommunications and film component 20-21

1. **Required courses** 15
 CTAT 130 Introduction to Telecommunications
 and Film 3
 CTAT 334 Radio-Television News 3
 CTAT 336 Studies in Telecommunications 3
 CTAC 374 Intercultural Communication 3

- CTAT 479 Special Topics: Seminar in
 International Telecommunications Issues 3
 2. **Restricted electives** 5-6
 Choose five to six credits from the following:

CTAT 145 Introduction to Film Appreciation,
 CTAA 165 Television Laboratory, CTAA 169
 Radio Station WQBR, CTAC 227 Interpersonal
 Communication, CTAT 236 History and
 Criticism of Radio and Television, CTAT 241
 Radio-Television-Film Announcing, CTAT 331
 Fundamentals of Radio Production and
 Direction, CTAT 332 Fundamentals of
 Television Production and Direction, CTAT 335
 Studies in Film, CTAT 344 Continuity Writing
 for Radio-Television-Film, CTAC 354
 Organizational Communication, CTAC 359
 Small Group Communication

FRENCH MAJOR

It is recommended that students specializing in French or planning to continue with graduate work carry their undergraduate study beyond the minimum requirements listed below. Many graduate schools require additional course work in literature.

Sem hours

Major in French 30

1. **Required courses** 18
 FRNH 341 Survey of French Literature 3
 FRNH 342 Survey of French Literature 3
 FRNH 343 French Composition 3
 FRNH 344 French Conversation 3
 FRNH 443 Advanced French Grammar and
 Composition 3
 FRNH 444 Advanced French Conversation 3

2. **Restricted electives** 12
 Choose six credits at the 400 level; choose an
 additional six credits in French at any level.

FRENCH FOR BUSINESS MAJOR

Students majoring or minoring in business French are eligible to take examinations leading to the "Diplôme Supérieur de Français des Affaires" or the "Certificat Pratique de Français Commercial et Economique" granted by the Chamber of Commerce and Industry of Paris and recognized by the French National Ministry of Education. These tests are administered by Eastern Michigan University.

	Sem hours
Major in business French	30
1. Required courses	24
FRNH 341 Survey of French Literature	3
FRNH 342 Survey of French Literature	3
FRNH 343 French Composition	3
FRNH 344 French Conversation	3
FRNH 443 Advanced French Grammar and Composition	3
FRNH 444 Advanced French Conversation	3
FRNH 446 Business French I	3
FRNH 447 Business French II	3
2. Restricted electives	6
Choose six credits in French at any level	

GERMAN LANGUAGE AND LITERATURE MAJOR

	Sem hours
Major in German language and literature	30
1. Required courses	18
GERN 341 Survey of German Literature	3
GERN 342 Survey of German Literature	3
GERN 343 German Composition	3
GERN 344 German Conversation	3
GERN 443 German Syntax and Advanced Composition	3
GERN 444 Advanced German Conversation ...	3
2. Restricted electives	12
Choose six credits in German at the 400 level; choose six credits in German at any level.	

GERMAN FOR BUSINESS MAJOR

Students in business German will be eligible to take examinations recognized by the German-American Chamber of Commerce, the Carl Duisberg Society and the Goethe Institute. All examinations are administered by EMU.

	Sem hours
Major in business German	30
1. Required courses	24
GERN 341 Survey of German Literature	3
GERN 342 Survey of German Literature	3
GERN 361 German for International Trade	3
GERN 443 German Syntax and Advanced Composition	3
GERN 446 Business German I	3
GERN 447 Business German II	3
Additional German courses at the 400 level	6
2. Restricted electives	6
Choose six credits in German at any level.	

SPANISH MAJOR

The courses listed below meet the minimum requirements only; it is recommended that students specializing in Spanish or planning to continue with graduate work carry their undergraduate study beyond the minimum. Many graduate schools require additional course work in literature.

	Sem hours
Major in Spanish	30
1. Required courses	12
SPNH 343 Spanish Grammar and Composition	3
SPNH 344 Spanish Conversation and Composition	3
SPNH 443 Advanced Spanish Grammar and Composition	3
SPNH 444 Advanced Spanish Conversation and Composition	3
2. Restricted electives	18
Choose 12 credits in Spanish at the 300 level or above; choose six credits at any level in consultation with the advising coordinator.	

SPANISH FOR BUSINESS MAJOR

Students with concentrations in business Spanish may take examinations leading to the "Diploma de Español Comercial" and the "Certificado de Español Comercial Básico" granted by the Chamber of Commerce of Madrid in cooperation with the Official School of Languages of Madrid.

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

	Sem hours
Major in business Spanish	30
1. Required courses	24
SPNH 301 The Cultures of Spain	3
SPNH 302 The Cultures of Spanish America ...	3
SPNH 342 Survey of Spanish Literature	3
SPNH 352 Survey of Spanish American Literature	3
SPNH 361 Spanish for International Trade	3
SPNH 443 Advanced Spanish Grammar and Composition or SPNH 456 Scientific and Technical Spanish I	3
SPNH 446-447 Business Spanish	6
2. Restricted electives	6
Choose six credits in Spanish at any level in consultation with the advising coordinator	

ACADEMIC MINORS

CLASSICAL STUDIES MINOR

	Sem hours
Minor in Classical Studies	23-25
1. Required courses	12
FA 340 History of Classical Art	3
HIST 323 Greek History	3
HIST 324 Roman History	3
PHIL 230 History of Philosophy: Ancient	3
2. Restricted electives*	11-13
Choose one of the following groups:	
Group A (Greek Language)	13
GREK 121 Beginning Ancient Greek I	5
GREK 122 Beginning Ancient Greek II	5
FLAN 499 Independent Study	3
Group B (Latin Language)	13
LATN 121 Beginning Latin I	5
LATN 122 Beginning Latin II	5
FLAN 499 Independent Study	3
Group C (Classical Culture and Heritage)	11-12
Two of:	6
CLAS/LITR 106 Rome and America (3)	
CLAS/LITR 181 The Legacy of Greece (3)	
LNGE 134 Etymology (3)	
Two of:	5-6
LING 205 English Words (3)	
CLAS 301 Mythology (3)	
HIST 302 Near Eastern and Western Religions (3)	
HIST 327 Europe in the Making, 500-1300(3)	
HIST 330 Europe in the Renaissance and Reformation (3)	
LITR 351 World Mythology (3)	
HIST 511 Studies in Ancient History (2)	

*Certain independent study and special topic courses may be counted as restricted electives with the approval of the advising coordinator.

GROUP MINOR IN TEACHING ENGLISH AS A SECOND LANGUAGE

	Sem hours
Group minor in Teaching English as a Second Language	24
1. Required courses	15
LNGE 223 Introduction to Language	3
CTAC 374 Intercultural Communication	3
TSLN 410 TESOL Methods	3
TSLN 420 Materials and Tests for TESOL	3

- LNGE 425 Second Language Acquisition
- 2. Restricted electives**
- Choose at least one course from each group:
Undergraduate linguistics majors in the English department may not count Group 1 courses toward this minor. They must take 2 courses from either Group 2 or 3, and one course from the remaining group.

Group 1

- LING 401 Introduction to Linguistic Science ... 3
LING 402 Modern English Grammar

Group 2

- CTAC 225 Listening Behavior
- CTAC 226 Nonverbal Communication
- PSY 304 Learning
- CTAD 323 Improvising and Role-Play
- ENGL 328 Writing: Style and Language
- SPSI 337 Language Acquisition
- CTAC 359 Small Group Communication

Group 3

- SOCL 214 Racial and Cultural Minorities
- SOCL 310 Contemporary American Class Structure
- (Only international students may use this course)
- ANTH/LING 340 Language and Culture
- Prereq. or Coreq.:* One year of university foreign language study.

ENGLISH AS A FOREIGN LANGUAGE FOR NONNATIVE SPEAKERS OF ENGLISH MINOR

This minor is limited to international students who are nonnative speakers of English and conditionally admitted to the University on the basis of English language proficiency. It is administered jointly by the Foreign Languages and Bilingual Studies and the English Language and Literature departments.

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 ESLN 412 Academic ESL Writing and ESLN 414 Academic ESL Reading and/or ESLN 416 Academic ESL Speaking and Listening. These students must choose 6 credit hours from the restricted electives or other courses with the permission of the adviser.

Sem hours

Minor in English as a foreign language for nonnative speakers of English 23-24

1. **Required courses** 21
 - ESLN 310, 312 Advanced ESL Grammar and Writing 3
 - ESLN 314, 316 Advanced ESL Reading, Speaking, and Listening 3
 - ESLN 412 Academic ESL Writing 3
 - ESLN 414 Academic ESL Reading 3
 - ESLN 416 Academic ESL Speaking and Listening 3
 - ENGL 225 Intermediate English Composition or other approved English writing course (written permission required) 3
 - ENGL 326 Research Writing 3

2. **Restricted elective** 3

Choose one course from the following:

LING 201 An Introduction to Linguistics, LING 402 Modern English Grammar, or other English language or linguistics course (written permission required)

CTAC 224 Public Speaking, CTAC 350 Persuasion, CTAC 356 Argumentation and Debate, CTAC 359 Small Group Communication, or other speech communication course (written permission required)

Other advanced (speech) courses not including theatre arts courses, with written permission from the ESLN coordinator

FRENCH LANGUAGE AND LITERATURE MINOR

Sem hours

Minor in French language and literature 20

1. **Required courses** 12
 - FRNH 341 Survey of French Literature 3
 - FRNH 342 Survey of French Literature 3
 - FRNH 343 French Composition 3
 - FRNH 344 French Conversation 3
 2. **Restricted electives** 8
- Choose eight credits in French at any level

FRENCH LANGUAGE MINOR

Sem hours

Minor in French language 20

1. **Required courses** 12
 - FRNH 343 French Composition 3
 - FRNH 344 French Conversation 3

- FRNH 443 Advanced French Grammar and Composition 3
 - FRNH 444 Advanced French Conversation 3
2. **Restricted electives** 8
- Choose eight credits in French at any level

FRENCH LITERATURE MINOR

Sem hours

Minor in French literature 20

1. **Required courses** 12
 - FRNH 341 Survey of French Literature 3
 - FRNH 342 Survey of French Literature 3
 - Courses in French literature at the 400 level ... 6
 2. **Restricted electives** 8
- Choose eight credits in French at any level

BUSINESS FRENCH MINOR

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
 - FRNH 343 French Composition 3
 - FRNH 344 French Conversation 3
 - FRNH 443 Advanced French Grammar and Composition 3
 - FRNH 444 Advanced French Conversation 3
 - FRNH 446 Business French I 3
 - FRNH 447 Business French II 3
 2. **Restricted electives** 2
- Choose two credits in French at any level

GERMAN LANGUAGE AND LITERATURE MINOR

Sem hours

Minor in German language and literature 20

1. **Required courses** 12
 - GERN 341 Survey of German Literature 3
 - GERN 342 Survey of German Literature 3
 - GERN 343 German Composition 3
 - GERN 344 German Conversation 3
 2. **Restricted electives** 8
- Choose eight credits in German at any level

GERMAN LANGUAGE MINOR

Sem hours

Minor in German language 20

1. **Required courses** 12
 - GERN 343 German Composition 3
 - GERN 344 German Conversation 3
 - GERN 443 German Syntax and Advanced
Composition 3
 - GERN 444 Advanced German Conversation 3
2. **Restricted electives** 8
Choose eight credits in German at any level

GERMAN LITERATURE MINOR

Sem hours

- Minor in German literature** 20
1. **Required courses** 12
 - GERN 341 Survey of German Literature 3
 - GERN 342 Survey of German Literature 3
 - Courses in German literature at the 400 level. 6
 2. **Restricted electives** 8
Choose eight credits in German at any level

BUSINESS GERMAN MINOR

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
 - GERN 341 Survey of German Literature or GERN
342 Survey of German Literature 3
 - GERN 361 German for International Trade..... 3
 - GERN 443 German Syntax and Advanced
Composition 3
 - GERN 446 Business German I or GERN 447
Business German II 3
 2. **Restricted electives** 8
Choose eight credits in German at any level

JAPANESE LANGUAGE MINOR

Sem hours

- Minor in Japanese language** 20
1. **Required courses** 12
 - JPNE 344 Japanese Conversation and
Composition 3
 - JPNE 345 Japanese Conversation and
Composition 3
 - JPNE 361 Japanese for International Trade 3
 - JPNE 444 Advanced Japanese Conversation ... 3
 2. **Restricted electives** 8
Choose eight credits in Japanese at any level in
consultation with the advising coordinator

SPANISH LANGUAGE MINOR

Sem hours

- Minor in Spanish language** 20
1. **Required courses** 12
 - SPNH 343 Spanish Conversation and
Composition 3
 - SPNH 344 Spanish Conversation and
Composition 3
 - Choose either of the following options 6
 - a. SPNH 443 Advanced Spanish Grammar and
Composition and SPNH 444 Advanced Spanish
Conversation and Composition, or
 - b. Additional courses in Spanish at the 300 level
or above
 2. **Restricted electives** 8
Choose eight credits in Spanish at any level in
consultation with the advising coordinator

SPANISH LITERATURE MINOR

Sem hours

- Minor in Spanish literature** 20
1. **Required courses** 12
 - SPNH 341 Survey of Spanish Literature, SPNH
342 Survey of Spanish Literature, SPNH 351
Survey of Spanish American Literature, SPNH
352 Survey of Spanish American Literature 6
 - Choose six credits in Spanish at the 300 level or
above (students on teaching curricula should
include SPNH 343 Spanish Grammar and
Composition, SPNH 344 Spanish Conversation
and Composition) 6
 2. **Restricted electives** 8
Choose eight credits in Spanish at any level in
consultation with the advising coordinator.

SPANISH CULTURE MINOR

Sem hours

- Minor in Spanish culture** 20
1. **Required courses** 12
 - SPNH 301 The Cultures of Spain 3
 - SPNH 302 The Cultures of Spanish America ... 3
 - Choose six credits in Spanish at the 300 level or
above (students on teaching curricula should
include SPNH 343 Spanish Grammar and
Composition, SPNH 344 Spanish Conversation
and Composition) 6
 2. **Restricted electives** 8
Choose eight credits in Spanish at any level in
consultation with the advising coordinator

BUSINESS SPANISH MINOR

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
SPNH 301 The Cultures of Spain or SPNH 302 The Cultures of Spanish America	3
SPNH 342 Survey of Spanish Literature or SPNH 352 Survey of Spanish American Literature	3
SPNH 361 Spanish for International Trade	3
SPNH 446 Business Spanish	3
2. Restricted electives	8
Choose eight credits in Spanish at any level in consultation with the advising coordinator.	

TEACHING MAJORS

FRENCH MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in French, certification code "FA," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #23, "French."

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
- I-B-2.** *Basic Studies requirement. See inside back cover*
- I-B-3.** FRNH 234 Intermediate French Conversation, Composition, and Grammar (3)*
- I-B-4.** *Basic Studies requirement. See inside back cover*
- I-B-5.** *Basic Studies requirement. See inside back cover*
- II-B-1.** *Basic Studies requirement. See inside back cover*
- II-B-2.** *Basic Studies requirement. See inside back cover*
- II-B-3.** *Basic Studies requirement. See inside back cover*
- III-B-1.** *Basic Studies requirement. See inside back cover*
- III-B-2.** *Basic Studies requirement. See inside back cover*
- III-B-3.** *Basic Studies requirement. See inside back cover*
- III-B-4.** *Basic Studies requirement. See inside back cover*
- IV-B-1.** FRNH 341 Survey of French Literature (3)*
- IV-B-2.** FRNH 342 Survey of French Literature (3)*
- IV-B-3.** *Basic Studies requirement. See inside back cover*
- IV-B-4.** *Basic Studies requirement. See inside back cover*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 49

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

- FRNH 343 French Composition (3)
- FRNH 344 French Conversation (3)
- FRNH 443 Advanced French Grammar and Composition (3)
- FRNH 444 Advanced French Conversation (3)
- Six credits in French at the 400-level
- Six credits in French at any level

Minor

A minor from the approved list (see p. 363)

Subtotal, Major and minor:..... 44¹

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
- EDTC 300 Introduction to Computer Applications in Education (1)
- SPGN 300 Exceptional Children in the Regular Classroom (1)
- EDPS 322 Human Development and Learning (4)

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

- CURR 305 Curriculum and Methods: Secondary (3)
- RDNG 311 Teaching Reading in the Secondary School (3)
- SOFD 328 Schools in a Multicultural Society (3)
- EDPS 340 Introduction to Assessment and Evaluation (3)
- EDMD 345 Media for the Classroom Teacher (1)
- FLAN 411 Theory and Methods of Modern Language Teaching (3)
- EDUC 492 Student Teaching (12)

Credit hours in Professional Studies:..... 34

Total credit hours required, with 20-hour minor:
127

*Course required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

FRENCH MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in French, certification code "FA." The certification test covering this field is #23, "French."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary French program, plus the requirements under I-B-3, IV-B-1, and IV-B-2 in that program's Basic Studies requirements. Approved minors are those for the elementary program as given on page 362.

24 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

GERMAN LANGUAGE AND LITERATURE MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in German, certification code "FB." The certification test covering this field is #24, "German."

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
- I-B-2. *Basic Studies requirement. See inside back cover*
- I-B-3. GERN 233 Intermediate German Conversation, Composition, and Grammar or GERN 234 Intermediate German Conversation, Composition, and Grammar (3)^a
- I-B-4. *Basic Studies requirement. See inside back cover*
- I-B-5. *Basic Studies requirement. See inside back cover*
- II-B-1. *Basic Studies requirement. See inside back cover*
- II-B-2. *Basic Studies requirement. See inside back cover*
- II-B-3. *Basic Studies requirement. See inside back cover*
- III-B-1. *Basic Studies requirement. See inside back cover*
- III-B-2. *Basic Studies requirement. See inside back cover*
- III-B-3. *Basic Studies requirement. See inside back cover*
- III-B-4. *Basic Studies requirement. See inside back cover*
- IV-B-1. GERN 341 Survey of German Literature (3)^a
- IV-B-2. GERN 342 Survey of German Literature (3)^a
- IV-B-3. *Basic Studies requirement. See inside back cover*
- IV-B-4. *Basic Studies requirement. See inside back cover*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 49

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

- GERN 343 German Composition (3)
- GERN 344 German Conversation (3)
- GERN 443 German Syntax and Advanced Composition (3)
- GERN 444 Advanced German Conversation (3)
- Six credits in German at the 400-level (3)
- Six credits in German at any level (3)

Minor

A minor from the approved list (see p. 363)

Subtotal, Major and minor:..... 44¹

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
- EDTC 300 Introduction to Computer Applications in Education (1)
- SPGN 300 Exceptional Children in the Regular Classroom (1)
- EDPS 322 Human Development and Learning (4)

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

- CURR 305 Curriculum and Methods: Secondary (3)
- RDNG 311 Teaching Reading in the Secondary School (3)
- SOFD 328 Schools in a Multicultural Society (3)
- EDPS 340 Introduction to Assessment and Evaluation (3)
- EDMD 345 Media for the Classroom Teacher (1)
- FLAN 411 Theory and Methods of Modern Language Teaching (3)
- EDUC 492 Student Teaching (12)

Credit hours in Professional Studies:..... 34

Total credit hours required, with 20-hour minor: 127

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

GERMAN LANGUAGE AND LITERATURE MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in German, certification code "FB." The certification test covering this field is #24, "German."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary German program, plus the requirements under I-B-3, IV-B-1, and IV-B-2 in that program's Basic Studies requirements. Approved minors are those for the elementary program as given on page 362.

24 hours, not including the minor and not counting course work that may be satisfied through Basic Studies.

JAPANESE LANGUAGE AND CULTURE TEACHING MAJOR

K-12 TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in Japanese, certification code "FL." The certification test covering this field has not yet been developed.

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
- I-B-2. *Basic Studies requirement. See inside back cover*
- I-B-3. JPNE 211 Intermediate Japanese (5)^a
- I-B-4. *Basic Studies requirement. See inside back cover*
- I-B-5. *Basic Studies requirement. See inside back cover*
- II-B-1. *Basic Studies requirement. See inside back cover*
- II-B-2. *Basic Studies requirement. See inside back cover*
- II-B-3. *Basic Studies requirement. See inside back cover*
- III-B-1. *Basic Studies requirement. See inside back cover*
- III-B-2. *One of:*^b
 - HIST 103 Twentieth Century Civilization (3)
 - HIST 106 Asian and African Civilizations (3)
- III-B-3. GEOG 110 World Regions (3)^b
- ANTH 135 Introduction to Cultural Anthropology (3)^b
- A course in economics (3)^b
- III-B-4. *Basic Studies requirement. See inside back cover*
- IV-B-3. *Basic Studies requirement. See inside back cover*
- IV-B-1. *Basic Studies requirement. See inside back cover*
- IV-B-2. *Basic Studies requirement. See inside back cover*
- IV-B-4. *Basic Studies requirement. See inside back cover*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 57

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

- LNGE 223 Introduction to Language (3)
- JPNE 212 Intermediate Japanese (3)
- JPNE 344 Japanese Conversation (3)
- JPNE 361 Japanese for International Trade (3)
- JPNE 444 Advanced Japanese Conversation (3)
- HIST 326 History and Geography of Modern Asia (3)
- GEOG 326 History and Geography of Modern Asia (3)
- JPNE 494 Seminar in Japanese Studies (3)
- ANTH 245 Culture of Japan (3)

One of:

- ANTH 340 Language and Culture (3) (*Note: has prerequisites of ANTH 135 or LING 201*)
- CTAC 374 Intercultural Communication (3)

One of:

- ECON 370 Comparative Economic Systems (3)
(*Note: has prerequisite of a course in economics; see general education*)
- ECON 480 International Economics (3) (*Note: has prerequisites of ECON 201 and 202; one course in economics provided for in general education*)

One of:

- PLSC 374 Asian Political Systems (3)
- PLSC 412 Comparative Legal Systems (3)

A minor from the approved list (see p. 230)

Subtotal, Major and minor:..... 58¹

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
- EDTC 300 Introduction to Computer Applications in Education (1)
- SPGN 300 Exceptional Children in the Regular Classroom (1)
- EDPS 322 Human Development and Learning (4)

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

- CURR 305 Curriculum and Methods: Secondary (3)
- RDNG 311 Teaching Reading in the Secondary School (3)
- SOFD 328 Schools in a Multicultural Society (3)

- EDPS 340 Introduction to Assessment and Evaluation (3)
 EDMD 345 Media for the Classroom Teacher (1)
 FLAN 411 Theory and Methods of Modern Language Teaching (3)
 EDUC 496 Student Teaching (6)
 EDUC 497 Student Teaching (6)

Credit hours in Professional Studies:..... 34

Total credit hours required:..... 149

^aCourse required for and applicable to major.

^bPrerequisite for another course in program.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

JAPANESE LANGUAGE AND CULTURE TEACHING MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in Japanese language and culture, certification code "FL."

The curriculum for this major is that which is listed under "Teaching Major" in the K-12 Japanese language and culture teaching program, plus the requirements under I-B-3, III-B-2, and III-B-3 in that program's Basic Studies requirements. Approved minors are those for the elementary program as given on page 230.

54 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

SPANISH MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in Spanish, certification code "FF," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #28, "Spanish."

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
I-B-2. *Basic Studies requirement. See inside back cover*
I-B-3. SPNH 201 Intermediate Spanish or SPNH 202 Intermediate Spanish (3)^a

- I-B-4.** *Basic Studies requirement. See inside back cover*
I-B-5. *Basic Studies requirement. See inside back cover*
II-B-1. *Basic Studies requirement. See inside back cover*
II-B-2. *Basic Studies requirement. See inside back cover*
II-B-3. *Basic Studies requirement. See inside back cover*
III-B-1. *Basic Studies requirement. See inside back cover*
III-B-2. *Basic Studies requirement. See inside back cover*
III-B-3. *Basic Studies requirement. See inside back cover*
III-B-4. *Basic Studies requirement. See inside back cover*
IV-B-1 and IV-B-2. *Either:*^a

SPNH 221 Intermediate Spanish Reading and
 SPNH 222 Intermediate Spanish Reading (6)

or

SPNH 341 Survey of Spanish Literature and
 SPNH 342 Survey of Spanish Literature (6)

- IV-B-3.** *Basic Studies requirement. See inside back cover*
IV-B-4. *Basic Studies requirement. See inside back cover*
 Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 49

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

SPNH 343 Spanish Grammar and
 Composition (3)

SPNH 344 Spanish Conversation and
 Composition (3)

SPNH 443 Advanced Spanish Grammar and
 Composition (3)

SPNH 444 Advanced Spanish Conversation and
 Composition (3)

Twelve credits in Spanish at the 300-level or above
 Six credits in Spanish at any level, in consultation
 with an adviser

Minor

A minor from the approved list (see p. 363)

Subtotal, Major and minor:..... 50¹

Professional Studies

100 clock hours of approved prestudent teaching
 field experiences (0)

EDTC 300 Introduction to Computer Applications
 in Education (1)

SPGN 300 Exceptional Children in the Regular
 Classroom (1)

EDPS 322 Human Development and Learning (4)

The following courses require formal admission

to the teacher education program:

- CURR 305 Curriculum and Methods:
Secondary (3)
RDNG 311 Teaching Reading in the Secondary
School (3)
SOFD 328 Schools in a Multicultural Society (3)
EDPS 340 Introduction to Assessment and
Evaluation (3)
EDMD 345 Media for the Classroom Teacher (1)
FLAN 411 Theory and Methods of Modern
Language Teaching (3)
EDUC 492 Student Teaching (12)

Credit hours in Professional Studies:..... 34

**Total credit hours required, with 20-hour minor:
133**

**Course required for and applicable to major.*

*†Could be less, depending on the minor and the possible application of
Basic Studies courses to the minor.*

SPANISH**ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in Spanish, certification code "FF." The certification test covering this field is #28, "Spanish."

The curriculum for this major is that which is listed under "Major" in the secondary Spanish program, plus the requirements under I-B-3, IV-B-1, and IV-B-2 in that program's Basic Studies requirements. Approved minors are those for the elementary program as given on page 362.

30 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

TEACHING MINORS**FRENCH LANGUAGE MINOR****SECONDARY, K-12, AND SPECIAL EDUCATION-SECONDARY
TEACHER CERTIFICATION**

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in French, certification code "FA." The certification test covering this field is #23, "French."

- FRNH 343 French Composition (3)

- FRNH 344 French Conversation (3)
FRNH 443 Advanced French Grammar and
Composition (3)
FRNH 444 Advanced French Conversation (3)
8 credits in French at any level.

20 hours

GERMAN LANGUAGE MINOR**SECONDARY, K-12, AND SPECIAL EDUCATION-SECONDARY
TEACHER CERTIFICATION**

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in German, certification code "FB." The certification test covering this field is #24, "German."

- GERN 343 German Composition (3)
GERN 344 German Conversation (3)
GERN 443 German Syntax and Advanced
Composition (3)
GERN 444 Advanced German Conversation (3)
8 credits in German at any level.

20 hours

**BILINGUAL-BICULTURAL EDUCATION
SPANISH-ENGLISH MINOR****ELEMENTARY, SECONDARY, K-12, SPECIAL EDUCATION-
ELEMENTARY, AND SPECIAL EDUCATION-SECONDARY TEACHER
CERTIFICATION**

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in bilingual Spanish, certification code "YF." The certification test covering this field is #70, "Bilingual Spanish."

- Language proficiency in both Spanish and English
as determined by examination
FLAN 421 History and Theory of Bilingual
Education (3)
FLAN 422 Teaching Hispanic Culture and
Language (3)
TSLN 410 TESOL Methods (3)
SPNH 471 Culture and Literature of the Hispanic
Groups in the United States (3)
SPNH 482 Language of the Hispanic Groups in
the United States (3)

Nine hours from:

- ANTH 233 Peoples and Cultures of Mexico (3)
FLAN 215 The Culture of the Latino Groups in
the United States (3)
LNGE 223 Introduction to Language (3)

LING 201 An Introduction to Linguistics (3)
 LING 401 Introduction to Linguistic Science (3)
 LING 402 Modern English Grammar (3)
 GEOG 321 Geography of Latin America (3)
 HIST 457 History of Mexico (3)
 PSY 340 Psychological Perspectives on Prejudice
 and Discrimination (3)
 SOCL 214 Racial and Cultural Minorities (3)
 SPNH 443 Advanced Spanish Grammar and
 Composition (3)
 SPNH 444 Advanced Spanish Conversation and
 Composition (3)
 Four semester hours of student teaching must be
 with English-speaking pupils and four
 semester hours of student teaching must be in
 bilingual education.

24 hours

SPANISH LANGUAGE MINOR

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

Successful completion of this minor, in the context
 of other program requirements, qualifies the student
 for recommendation for endorsement in Spanish, certi-
 fication code "FF." The certification test covering this
 field is #28, "Spanish."

SPNH 343 Spanish Grammar and
 Composition (3)
 SPNH 344 Spanish Conversation and
 Composition (3)

One of:

Either SPNH 443 Advanced Spanish Grammar
 and Composition (3) and SPNH 444 Advanced
 Spanish Conversation and Composition (3)
 or additional courses (6 hours) in Spanish at the
 300 level or above.

Eight credits in Spanish at any level in
 consultation with the advising coordinator.

20 hours

FRENCH COURSES

FRNH 121 Beginning French. 5 hrs
 Introductory course including practice in listening,
 speaking, reading, and writing in French. Sessions in
 the language laboratory are part of regular assignments.
 Satisfies basic studies foreign language composition re-
 quirement, Area I.

FRNH 122 Beginning French. 5 hrs
 Introductory course including practice in listening,
 speaking, reading, and writing in French. Sessions in
 the language laboratory are part of regular assignments.
 Satisfies basic studies foreign language composition re-
 quirement, Area I.
*Prereq: FRNH 121 or equivalent. Placement exam re-
 quired.*

FRNH 177/178/179 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other
 departmental offerings. Students may elect more than
 once provided different topics are studied.
Prereq: Department permission.

FRNH 221 Intermediate French (Reading). 3 hrs
 Rapid reading of large quantities of French. Materials
 include readings in literature and civilization. Students
 who plan to continue in French should take this course
 concurrently with FRNH 233. Satisfies basic studies
 intermediate or advanced foreign language literature
 requirement, Area IV.
*Prereq: FRNH 122 or equivalent. Placement exam re-
 quired.*

FRNH 222 Intermediate French (Reading). 3 hrs
 Rapid reading of large quantities of French. Materials
 include readings in literature and civilization. Students
 who plan to continue in French should take this course
 concurrently with FRNH 234. Satisfies basic studies
 intermediate or advanced foreign language literature
 requirement, Area IV.
*Prereq: FRNH 221 or equivalent. Placement exam re-
 quired.*

**FRNH 233 Intermediate French Conversation, Com-
 position, and Grammar.** 3 hrs
 A review of grammar; practice in writing and speaking.
 Sessions in the language laboratory are available. Stu-
 dents who plan to continue in French should take this
 course concurrently with FRNH 221. Does not satisfy
 basic studies literature requirement. Satisfies basic
 studies foreign language composition requirement, Area
 I.
*Prereq: FRNH 122 or equivalent. Placement exam re-
 quired.*

**FRNH 234 Intermediate French Conversation, Com-
 position, and Grammar.** 3 hrs
 A review of grammar; practice in writing and speaking.

Sessions in the language laboratory are available. Students who plan to continue in French should take this course concurrently with FRNH 222. Does not satisfy basic studies literature requirement. Satisfies basic studies foreign language composition requirement, Area I.

Prereq: FRNH 233 or equivalent. Placement exam required.

FRNH 277/278/279 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

FRNH 341 Survey of French Literature. 3 hrs

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: FRNH 222 or department permission.

FRNH 342 Survey of French Literature. 3 hrs

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: FRNH 222 or department permission.

FRNH 343 French Composition. 3 hrs

Review and drill of intermediate and advanced linguistic patterns in French. Written compositions.

Prereq: FRNH 234 or department permission.

FRNH 344 French Conversation. 3 hrs

Additional classwork in conversation: improving pronunciation and acquiring a larger active vocabulary for daily life.

Prereq: FRNH 234 or department permission.

FRNH 361 French for International Trade. 3 hrs

This course is intended for students who already have a solid intermediate-level command of French and who wish to acquire minimum professional competence in the French language as it is used in the world of international business. It includes practice in various forms of business communication, both oral and written.

Prereq: FRNH 343 or department permission.

FRNH 377/378/379 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

FRNH 388 Internship. 1 hr

Provides an opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisors. Credit/no credit.

Prereq: Department permission.

FRNH 431 Studies in French Theatre. 3 hrs

A study of selected French drama. Specific topic (themes, authors, genres, periods) will vary depending on the instructor's field of specialization and student interest. The course may be repeated for credit with department permission. *In French.*

Prereq: FRNH 341, 342 or department permission.

FRNH 432 Studies in French Poetry. 3 hrs

A study of selected French poetry. Specific topic (themes, authors, genres, periods) will vary depending on the instructor's field of specialization and student interest. The course may be repeated for credit with department permission. *In French.*

Prereq: FRNH 341, 342 or department permission.

FRNH 433 Studies in French Prose. 3 hrs

A study of selected French prose. Specific topic (themes, authors, genres, periods) will vary depending on the instructor's field of specialization and student interest. The course may be repeated for credit with department permission.

Prereq: FRNH 341, 342 or department permission.

FRNH 443 Advanced French Grammar and Composition. 3 hrs

Review and practice of advanced syntactical patterns. Practice in composition. *Taught in French.*

Prereq: FRNH 343.

FRNH 444 Advanced French Conversation. 3 hrs

This course aims to develop advanced fluency. Group discussions are based on the reading of periodical literature. May be repeated for credit.

Prereq: FRNH 343 and FRNH 344, or department permission.

FRNH 446 Business French I. 3 hrs

Study of principles and practices of business communication in France with emphasis on business correspondence and translation. Introduction to the French economy including business law, industry, business, and services. *In French.*

Prereq: FRNH 361 or department permission.

FRNH 447 Business French II. 3 hrs

Further study of business practices, business law, and the French economy. Emphasis on business correspondence and translation and on French ties with the European economic community, the US, the East, developing countries, and francophone countries. Prepares student for language proficiency examinations (CCIP diplomas).

Prereq: FRNH 446 or department permission.

FRNH 451 Readings in French. 1 hr

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: FRNH 341, 342 or department permission.

FRNH 452 Readings in French. 2 hrs

Special projects in directed readings for majors and minors who have completed the available offerings in French or who, because of most unusual circumstances, are granted department approval to substitute one or both of these for the regular courses.

Prereq: FRNH 341, 342 or department permission.

FRNH 456 Scientific and Technical French. 3 hrs

In-depth study of French scientific and technical vocabulary and terminology needed for Franco-American business interaction in three scientific and technical fields. Topics covered may include food industry, automobile, mass transportation, and energy. *In French.*

Prereq: Any two 300-level French courses or department permission.

FRNH 457 Scientific and Technical French. 3 hrs

Study of French scientific and technical vocabulary and terminology in three scientific and technical fields not covered in FRNH 456. Topics may include electronics, computers, glass, or robotics. *In French.*

Prereq: Any two 300-level French courses or department permission.

FRNH 466 French Speaking Cultures of the World.

3 hrs

Survey of the more than two dozen different cultures of the world that make up "la Francophonie". Language and cultural variations that one must know in order to understand and to communicate successfully with people in those cultures. *In French.*

Prereq: FRNH 343 and FRNH 344.

FRNH 467 French Culture and Civilization. 3 hrs

A study of the main events of the 20th century. The major historical and societal movements will be covered. *In French.*

Prereq: FRNH 343 or department permission.

FRNH 476 20th Century French Civilization. 3 hrs

A study of French history and civilization. All major pre World War I historical periods and cultural movements will be covered. *In French.*

Prereq: FRNH 343 or department permission.

FRNH 477/478/479 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

FRNH 488/489 Internship. 2/3 hrs

Provides an opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisors. *In French.*

Prereq: Department permission.

FRNH 490 Intensive French Abroad. 3 hrs

An intensive spring/summer course offered in a French-speaking environment. Instruction at many different levels. May be counted for equivalent hours on 100-200 levels. *May be repeated for credit.*

FRNH 497/498/499 Independent Study. 1/2/3 hrs

Advanced study on an individual research basis in areas not covered in formal course work.

Prereq: Department permission.

GERMAN COURSES

GERN 121 Beginning German. 5 hrs

Instruction includes pronunciation, aural-oral pattern practice, the fundamentals of grammar, written exercise, reading. Laboratory attendance is required. Satisfies Area I 3.c of basic studies requirements.

GERN 122 Beginning German. 5 hrs

The goals of the two-course Beginning German sequence are the development of oral and written communication through the use of verbal and nonverbal symbols. The emphasis is on communicative competence (both spoken and written) through the mastery of vocabulary and grammar appropriate to given communicational situations. Besides gaining communicative skills in German, the student can expect to gain some familiarity with modern German culture. Satisfies Area I 3.c of the basic studies requirements.

Prereq: GERN 121 or equivalent. Placement examination required.

GERN 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GERN 221 Intermediate German Reading. 3 hrs

This course consists of readings in German literature and civilization. Students who plan to continue in German should take GERN 233, 234 concurrently with GERN 221, 222. Satisfies Area IV of basic studies requirements.

Prereq: GERN 122 or equivalent. Placement examination required.

GERN 222 Intermediate German Reading. 3 hrs

This course consists of readings in German literature and civilization. Students who plan to continue in German should take GERN 233, 234 concurrently with GERN 221, 222. Satisfies Area IV of basic studies requirements.

Prereq: GERN 122 or equivalent. Placement examination required.

GERN 233 Intermediate German Conversation, Composition, and Grammar. 3 hrs

This course requires the student to practice spoken and authentically correct language in the social-cultural situations that occur in German-speaking Europe.

Prereq: GERN 122 or equivalent.

GERN 234 Intermediate German Conversation, Composition, and Grammar. 3 hrs

This course requires the student to practice spoken and authentically correct language in the social-cultural situations that occur in German-speaking Europe.

Prereq: GERN 233 or equivalent.

GERN 277/278/279 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

GERN 341 Survey of German Literature. 3 hrs

This is an introduction to literary criticism as applied to German literature. Extensive readings of materials in German literature and culture. It covers an introduction to literature analysis and major writers and trends in modern German poetry and short stories, and is a prerequisite for all later courses in literature. Students must have sufficient comprehension to follow lectures in German.

Prereq: GERN 222 or department permission.

GERN 342 Survey of German Literature. 3 hrs

This is the second part of the introductory survey course in German Literature. It continues the introduction to literary criticism begun in GERN 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: GERN 222 and GERN 341, or department permission.

GERN 343 German Composition. 3 hrs

Writing for a variety of purposes and a systematic grammar review. Frequent written assignments. Taught in German.

Prereq: GERN 234 or department permission.

GERN 344 German Conversation. 3 hrs

Builds on the foundation in speaking skills acquired in GERN 233, 234. Emphasizes vocabulary and idiom building and improvement in basic sentence structure.

Readings, slides, tapes, films, and other aids stimulate discussion. Meets three times per week.

Prereq: GERN 234 or department permission.

GERN 361 German for International Trade. 3 hrs

Develops working knowledge of commercial material including economics and business in multinational setting. Cross-cultural references provide opportunity for comparative and contrastive analysis of American and German cultural patterns in a business setting.

Prereq: GERN 343 or department permission.

GERN 377/378/379 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

GERN 388 Internship. 1 hr

An opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisors. Credit/no credit.

Prereq: Department permission.

GERN 425 German Literature from the Middle Ages to the Baroque. 3 hrs

Readings from the period are discussed in class meetings and taken as topics for student essays and reports. The literature is considered in the broad context of culture. *In German.*

Prereq: GERN 341, 342 or department permission.

GERN 426 German Literature from 1750-1850. 3 hrs

The literature of Germany from the preclassical period through Romanticism is discussed in class meetings and treated in student essays and reports. Perspectives of the other arts and of political and social developments enable the student to appreciate the literature in the context of European civilization. *Taught in German.*

Prereq: GERN 341, 342 or department permission.

GERN 427 German Literature from 1850-1945. 3 hrs

Selections from the literature of Poetic Realism, Biedermeier, Naturalism, Neo-Romanticism, and Expressionism, viewed against the background of political and cultural history. Classroom discussion and student reports.

Prereq: GERN 341, 342 or department permission.

GERN 428 German Literature from 1945 to the Present. 3 hrs

Those works that have shaped and are shaping current German literary and cultural life. Classroom discussion, papers, and reports. *In German.*

Prereq: GERN 341, 342 or department permission.

GERN 443 German Syntax and Advanced Composition. 3 hrs

Builds on the foundation in written expression acquired in GERN 343. Intensive vocabulary and idiom writing; treatment of the more complex structural features of German and stylistics. Frequent assignments increase the student's ability to write for a variety of purposes.

Prereq: GERN 343 and GERN 344, or department permission.

GERN 444 Advanced German Conversation. 3 hrs

Development of advanced conversational fluency. A variety of media are employed to increase the student's facility in oral comprehension and to stimulate conversational exchange among the class members.

Prereq: GERN 343 and GERN 344, or department permission.

GERN 446 Business German I. 3 hrs

The idiom and terminology of the German economy and economic geography. Emphasis on business communication in German.

Prereq: Three years of college German or the equivalent, or department permission.

GERN 447 Business German II. 3 hrs

The idiom and terminology of the German economy and economic geography. Emphasis on business communication in German.

Prereq: GERN 446 Business German I or department permission.

GERN 451/452 Readings in German. 1/2 hrs

Special projects in directed reading for majors and minors who have completed the available offerings in German or who, because of most unusual circumstances, are granted department approval to substitute this for the regular courses.

Prereq: Department permission.

GERN 456 Technical German I. 3 hrs

Specialized vocabulary and jargon used in selected fields of technology. Basic technical concepts and terminology

that students may encounter in German industry. Development of oral and reading facility as well as accurate translation of technical documents. Selected aspects of electronics, wood and metalworking, metallurgy, brake systems, computers, robotics, and auto production. Content areas will occasionally be changed and updated in order to keep pace with changed student needs and changes in technology.

Prereq: GERN 343 or department permission.

GERN 457 Technical German II. 3 hrs

Specialized vocabulary and jargon used in selected fields of technology. Basic technical concepts and terminology that students may encounter in German industry. Development of oral and reading facility as well as accurate translation of technical documents. Selected aspects of internal combustion engines, fuel systems, and the petroleum industry. Content areas will occasionally be changed and updated in order to keep pace with changed student needs and changes in technology.

Prereq: GERN 456 or department permission.

GERN 466 German for International Affairs. 3 hrs

The study and functional use of German terminology for international affairs with emphasis on improving cross-cultural communication skills. The principles of German government (with references to Austria and Switzerland) and the implications for Germany's international relations and trade with the United States. In German.

Prereq: GERN 343 and GERN 344.

GERN 477/478/479 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

GERN 488/489 Internship. 2/3 hrs

An opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisors. Credit/no credit.

Prereq: Department permission.

GERN 490 Intensive German in Europe. 3 hrs

An intensive summer course offered in Europe. Instruction at many different levels available. May be counted for equivalent hours on 100-400 levels. *May be repeated for credit.*

GERN 497/498/499 Independent Study. 1/2/3 hrs

Advanced study on an individual research basis in areas not covered in formal course work.

Prereq: Department permission.

JAPANESE COURSES

JPNE 121 Beginning Japanese. 5 hrs

Practice in elementary conversation with special attention to reading and writing the two Japanese syllabaries and basic ideographs. Laboratory attendance required. Satisfies Area I 3.c of the basic studies requirements.

JPNE 122 Beginning Japanese. 5 hrs

Instruction includes practice in elementary conversation with special attention to reading and writing the two Japanese syllabaries and basic ideographs. Laboratory attendance required. Satisfies Area I 3.c of the basic studies requirements.

Prereq: JPNE 121 or equivalent.

JPNE 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

JPNE 211 Intermediate Japanese. 5 hrs

Practice in intermediate Japanese conversation, with heavy emphasis on reading and writing common ideographs in nontechnical text. Laboratory attendance required. Satisfies Area I 3.c of the basic studies requirements.

Prereq: JPNE 122 or equivalent.

JPNE 212 Intermediate Japanese. 5 hrs

Instruction includes practice in intermediate Japanese conversation, with heavy emphasis on reading and writing common ideographs in nontechnical text. Laboratory attendance required. Satisfies Area I 3.c of the basic studies requirements.

Prereq: JPNE 211 or equivalent.

JPNE 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

JPNE 344 Japanese Conversation. 3 hrs
Emphasizes acquisition of an active vocabulary for daily life and greater oral facility. Intensive study of casual or familiar levels of speech as well as polite forms and honorifics. *About 80 percent in Japanese.*
Prereq: JPNE 212 or department permission.

JPNE 345 Japanese Composition. 3 hrs
Writing for a variety of purposes and a review of kanji (ideographs) and grammar constitute the core of the course. Frequent written assignments.
Prereq: JPNE 344 or department permission.

JPNE 361 Japanese for International Trade. 3 hrs
Introduction to Japanese business culture and business communication in Japanese. The course provides opportunity for comparative analysis of American and Japanese cultural patterns in business settings. *About 50 percent in Japanese.*
Prereq: JPNE 345 or department permission.

JPNE 377/378/379 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

JPNE 444 Advanced Japanese Conversation. 3 hrs
The course aims to develop advanced conversational fluency. Students are expected to participate actively in group discussion. Instruction includes extensive vocabulary building for discussing a variety of subjects. *In Japanese.*
Prereq: JPNE 345 or department permission.

JPNE 446 Business Japanese I. 3 hrs
The course aims to increase proficiency in business communication in Japanese and to develop knowledge of Japanese economy, industry, and foreign trade. Extensive work on the vocabulary and idiom of Japanese economy and business. *In Japanese.*
Prereq: JPNE 361 and JPNE 444, or department permission.

JPNE 447 Business Japanese II. 3 hrs
The course provides an overview of the system of organization, managerial style, and personnel relations of the Japanese company. Study of business communication focuses on business correspondence and translation. *In Japanese.*
Prereq: JPNE 446 or department permission.

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

JPNE 494 Seminar in Japanese Studies. 3 hrs
Required of students majoring in teaching Japanese language and culture. Extensive study and discussion of issues related to Japanese society and to political and economic systems. Students are required to apply Japanese language skills in research, presentations, and papers. *About 50 percent in Japanese.*
Prereq: JPNE 361 or department permission.

SPANISH COURSES

SPNH 121 Beginning Spanish. 5 hrs
Basic principles of grammar. Practice in elementary conversation, pronunciation, composition, and reading. One-half hour per day in the laboratory required. Satisfies the basic studies foreign language composition requirement, Area I.

SPNH 122 Beginning Spanish. 5 hrs
Basic principles of grammar. Practice in elementary conversation, pronunciation, composition, and reading. One-half hour per day in the laboratory required. Satisfies the basic studies foreign language composition requirement, Area I.
Prereq: SPNH 121 or equivalent. Placement exam required.

SPNH 134 Spanish for the Bilingual. 5 hrs
Basic grammar and composition for students with an oral command of Spanish. Conducted in Spanish. Prepares the student for entry into more advanced Spanish classes.
Prereq: Native command of oral Spanish and department permission.

SPNH 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

SPNH 201 Intermediate Spanish. 3 hrs
A review of Spanish grammar, frequent simple written compositions, and extensive oral work. Meets three

times per week and students will spend two half-hour periods per week in the laboratory. In Spanish. Satisfies the basic studies foreign language composition requirement, Area I. Does not satisfy the basic studies literature requirement.

Prereq: SPNH 122 or equivalent. Placement exam required.

SPNH 202 Intermediate Spanish. 3 hrs

A review of Spanish grammar, frequent simple written compositions, and extensive oral work. Meets three times per week and students will spend two half-hour periods per week in the laboratory. In Spanish. Satisfies the basic studies foreign language composition requirement, Area I. Does not satisfy the basic studies literature requirement.

Prereq: SPNH 201 or equivalent.

SPNH 221 Intermediate Spanish Reading. 3 hrs

An introduction to literary criticism as applied to Hispanic literature. Extensive reading of materials in Hispanic literature and culture. In Spanish. Satisfies Area IV of the basic studies requirements.

Prereq: SPNH 202 or department permission.

SPNH 222 Intermediate Spanish Reading. 3 hrs

An introduction to literary criticism as applied to Hispanic literature. Extensive reading of materials in Hispanic literature and culture. In Spanish. Satisfies Area IV of the basic studies requirements.

Prereq: SPNH 221 or department permission. Placement exam required.

SPNH 277/278/279 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

SPNH 301 The Cultures of Spain. 3 hrs

A panoramic view of the peoples of Spain, their cultures, environment, and way of life. In Spanish.

Prereq: SPNH 202 and SPNH 222, or department permission.

SPNH 302 The Cultures of Spanish America. 3 hrs

A panoramic view of the cultures, the peoples, and the environment of Spanish America. In Spanish.

Prereq: SPNH 202 and SPNH 222, or department permission.

SPNH 341 Survey of Spanish Literature. 3 hrs

This survey course covers the major authors and literary movements from the beginning of Peninsular Spanish literature to the end of the 17th century. In Spanish. Satisfies the basic studies literature requirement, Area IV.

Prereq: SPNH 222 or department permission.

SPNH 342 Survey of Spanish Literature. 8 hrs

This survey course covers the major authors and literary movements in Peninsular Spanish literature from 1700 to the present. In Spanish. Satisfies the basic studies literature requirement, Area IV.

Prereq: SPNH 222 or department permission.

SPNH 343 Spanish Grammar and Composition. 3 hrs

A systematic review of Spanish grammar and practice in composition. Frequent written assignments.

Prereq: SPNH 202 and SPNH 222, or department permission.

SPNH 344 Spanish Conversation and Composition.

3 hrs

Improved pronunciation, the acquisition of an active vocabulary for daily life, frequent written compositions, and the development of greater oral facility. Meets three times per week and students spend three half-hour periods in the laboratory each week.

Prereq: SPNH 202 and SPNH 222, or department permission.

SPNH 351 Survey of Spanish American Literature.

3 hrs

This course deals with the major writers of Spanish America from the colonial period through modernism. In Spanish.

Prereq: SPNH 222 or department permission.

SPNH 352 Survey of Spanish American Literature.

3 hrs

This course deals with the major writers of Spanish America from postmodernism to the present. In Spanish.

Prereq: SPNH 222 or department permission.

SPNH 361 Spanish for International Trade. 3 hrs

This course is intended for students who already have a solid intermediate level command of Spanish and who wish to acquire minimum professional competence in

the Spanish language as it is used in the world of international business. It includes practice in various forms of business communication, both written and oral.

Prereq: SPNH 343 or department permission.

SPNH 377/378/379 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

SPNH 388 Internship. 1 hr

Provides an opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisors. Credit/no credit.

Prereq: Department permission.

SPNH 443 Advanced Spanish Grammar and Composition. 3 hrs

A review of selected points of Spanish grammar and extensive practice in writing Spanish.

Prereq: SPNH 343 and SPNH 344, or department permission.

SPNH 444 Advanced Spanish Conversation and Composition. 3 hrs

Improved pronunciation, greater oral facility, and frequent written compositions. Meets three times per week and students spend three half-hour periods in the laboratory each week. May be repeated for supplementary credit.

Prereq: SPNH 343 and SPNH 344, or department permission.

SPNH 445 Spanish-American Prose. 3 hrs

A study of selected topics in Spanish-American literature. May be repeated for credit if the material of the course is in another area. *In Spanish.*

Prereq: SPNH 352 or department permission.

SPNH 446 Business Spanish. 3 hrs

Required of students majoring in business Spanish. Practice with Spanish commercial correspondence, translation of Spanish business documents, and reading of foreign periodical publications on economics and international trade. An overview of international economic organizations and trade agreements related to

Spanish-speaking countries and a review of existing bibliography on commercial Spanish.

Prereq: SPNH 361 or department permission.

SPNH 447 Business Spanish. 3 hrs

Required of students majoring in business Spanish. Practice with Spanish commercial correspondence, translation of Spanish business documents, and reading of foreign periodical publications on economics and international trade. An overview of international economic organizations and trade agreements related to Spanish-speaking countries and a review of existing bibliography on commercial Spanish.

Prereq: SPNH 361 or department permission.

SPNH 448 Modern Drama. 3 hrs

The development of modern Spanish drama and its various types. Works of the principal dramatists of the 19th and 20th centuries. *In Spanish.*

Prereq: SPNH 342 or department permission.

SPNH 449 Romanticism. 3 hrs

A study of the major works of Hispanic Romanticism. *In Spanish.*

Prereq: SPNH 342 or department permission.

SPNH 450 Spanish-American Theatre. 3 hrs

A study of the theatre in Spanish America from its beginning to the present. *In Spanish.*

Prereq: SPNH 352 or department permission.

SPNH 451/452/453 Readings in Spanish. 1/2/3 hrs

Special projects in directed readings for majors or minors who have completed the available offerings in Spanish or who, because of unusual circumstances, are granted departmental approval to substitute this for regular courses.

Prereq: Department permission.

SPNH 454 Modernism in Spanish America. 3 hrs

A survey of the literary movement known as "modernismo" in the literature of Spanish America. *In Spanish.*

Prereq: SPNH 352 or department permission.

SPNH 455 The Generation of 1898. 3 hrs

A study of the works of the main authors of the generation of 1898, from Unamuno to Ortega y Gasset. *In Spanish.*

Prereq: SPNH 342 or department permission.

SPNH 456 Scientific and Technical Spanish I. 3 hrs
Study of the fundamental Spanish terminology required for scientific and technical contexts, including basic vocabulary for mathematics, geometry, and physics. In-depth study of at least one scientific or technical field (e.g., automobile industry, automated processes). Students will explore the vocabulary and resources in their chosen fields.

Prereq: SPNH 343 or department permission.

SPNH 457 Scientific and Technical Spanish II. 3 hrs
Study of the fundamental Spanish terminology required for scientific and technical contexts, including basic vocabulary for computers, chemistry, and biology. In-depth study of at least one scientific or technical field (e.g., data processing, nutrition). Students will explore the vocabulary and resources in their chosen fields.

Prereq: SPNH 456 or department permission.

SPNH 463 Don Quixote. 3 hrs
The universal qualities of both the book and its author, as well as their relation to Spanish life and literature of the period. *In Spanish.*

Prereq: SPNH 341 or department permission.

SPNH 464 Drama of the Golden Age. 3 hrs
The drama of the 16th and 17th centuries. Works of the major authors will be read and discussed. *In Spanish.*

Prereq: SPNH 341 or department permission.

SPNH 465 Modern Novel. 3 hrs
Study of the development of the modern novel in Spain during the 19th and 20th centuries. Representative novels will be read and discussed in Spanish.

Prereq: SPNH 342 or department permission.

SPNH 466 Spanish for International Affairs. 3 hrs
The political structures, issues, and realities of Spain, Mexico, and a representative sample of Spanish-speaking countries (may vary from semester to semester) and their relationship to international affairs and business, particularly with the US. *In Spanish.*

Prereq: SPNH 343, SPNH 344, SPNH 301, SPNH 302, or department permission.

SPNH 471 Culture and Literature of the Hispanic Groups in the United States. 3 hrs
A study of the cultures of the major Hispanic groups in the US. The study of representative literary works is intended to lead to an increased appreciation of the cul-

tural roots and current life styles of these groups. *In Spanish.* A minimum of 24 hours of field experience required.

SPNH 477/478/479 Special Topics. 1/2/3 hrs
These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

SPNH 482 Language of the Hispanic Groups in the United States. 3 hrs

A survey of present-day social and regional variations in the Spanish spoken in the US and the historical background of these variations. *In Spanish.* A minimum of 24 hours of field experience are required.

Prereq: An introductory course in linguistics or department permission.

SPNH 488/489 Internship. 2/3 hrs
Provides an opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisors. Credit/no credit.

Prereq: Department permission.

SPNH 490 Intensive Spanish. 6 hrs
An intensive summer course offered in Mexico. Instruction on a small-group (four to five students) basis, with many different instructional levels available. Students advance according to individual progress. Students live with Mexican families. May be counted for equivalent hours in Spanish on 100-400 levels. *May be repeated for credit.*

SPNH 497/498/499 Independent Study. 1/2/3 hrs
Advanced study on an individual research basis in areas not covered in formal course work.

Prereq: Department permission.

GENERAL LANGUAGE AND BILINGUAL-BICULTURAL EDUCATION COURSES

FLAN 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

FLAN 215 The Culture of the Latino Groups in the United States. 3 hrs

A study of contemporary life of the principal Latino groups in the United States. Since their language and literature reflect a unique sociocultural 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.

FLAN 277/278/279 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

FLAN 377/378/379 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

FLAN 387 Cooperative Education. 3 hrs

Four to six months of full-time employment in a position designed to give practical experience in a field related to the student's foreign language major. The program ordinarily consists of two work experiences (FLAN 387 and FLAN 487) alternated with full-time attendance at the University. Credit/no credit.

Prereq: Junior standing; admission to the program by application only.

FLAN 388 Internship. 1 hr

An opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisors. Credit/no credit.

Prereq: Department permission.

FLAN 411 Theory and Methods of Modern Language Teaching. 3 hrs

The history, theory, and techniques of modern language teaching. *Not counted in the language area of the degree requirements, nor toward a major in any modern language. Should be taken during the fall semester prior to student teaching. Not open to students on academic probation.*

Prereq: Junior standing, FRNH/SPNH/GERN 343 or department permission.

FLAN 412 Methods of Teaching Modern Language in Elementary Grades. 3 hrs

The technique and materials of teaching foreign language in the elementary grades. *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, FRNH/SPNH/GERN 343 or department permission.

FLAN 421 History and Theory of Bilingual Education. 3 hrs

Sociolinguistic and psycholinguistic aspects of bilingualism, language acquisition and cognitive development in the bilingual child, different instructional models for bilingual education programs, and school and community relations. A minimum of 24 hours of field experience required. Not open to students on academic probation.

FLAN 422 Teaching Hispanic Culture and Language. 3 hrs

The techniques and materials for teaching the language and culture of Hispanic groups within the bilingual classroom. Techniques and materials for teaching other subject matter areas in Spanish. A minimum of 24 hours of field experience in a bilingual classroom required. Not open to students on academic probation.

FLAN 423 Bilingual Multicultural Methods K-12. 3 hrs

Identification and study of methods appropriate for the diverse ethnolinguistic groups comprising the school community. Focus on appropriate strategies with an impact on learning styles, achievement, and school socialization of ethnolinguistic and national origin minority school children and youth. Not open to students on academic probation.

Prereq: Junior standing or department permission.

FLAN 477/478/479 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

FLAN 487 Cooperative Education. 3 hrs
Four to six months of full-time employment in a position designed to give practical experience in a field related to the student's foreign language major. The program ordinarily consists of two work experiences (FLAN 387 and FLAN 487) alternated with full-time attendance at the University. Credit/no credit.
Prereq: FLAN 387; admission to the program by application only.

FLAN 488/489 Internship. 2/3 hrs
An opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisors. Credit/no credit.
Prereq: Department permission.

FLAN 490 Internship. 3 hrs
An opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisors. Credit/no credit.
Prereq: Department permission.

FLAN 497/498/499 Independent Study. 1/2/3 hrs
Advanced study on an individual basis in areas not covered in formal course work.
Prereq: Department permission.

CLASSICAL LANGUAGES COURSES

GREK 121 Beginning Ancient Greek I. 5 hrs
For students with a strong interest in archaic and classical Greek culture. Acquaints students with sufficient ancient Greek grammar, vocabulary, and syntax to facilitate the reading of the masterpieces of Greek literature. Satisfies Area I 3.c of the basic studies requirements.

GREK 122 Beginning Ancient Greek II. 5 hrs
For students with a strong interest in archaic and classical Greek culture. Acquaints students with sufficient ancient Greek grammar, vocabulary, and syntax to facilitate the reading of the masterpieces of Greek literature. Satisfies Area I 3.c of the basic studies requirements.
Prereq: GREK 121.

GREK 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

GREK 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

GREK 377/378/379 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

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

LATN 121 Beginning Latin I. 5 hrs
A course to bring students to the level of facility necessary to read ancient authors with enjoyment and understanding. Satisfies Area I 3.c of the basic studies requirements.

LATN 122 Beginning Latin II. 5 hrs
A course to bring students to the level of facility necessary to read ancient authors with enjoyment and understanding. Satisfies Area I 3.c of the basic studies requirements.
Prereq: LATN 121.

LATN 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

LATN 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

LATN 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

LATN 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

COURSES IN ENGLISH FOR FOREIGN STUDENTS

ESLN 110 Beginning ESL Grammar. 3 hrs

The basic components of the simple sentence are taught. There is a special emphasis on basic verb tenses, question and negative forms.

Prereq: Department permission or placement.

ESLN 112 Beginning ESL Writing. 3 hrs

This course includes grammar manipulation of simple sentences while introducing paragraph organization and form.

Prereq: Department permission or placement.

ESLN 114 Beginning ESL Reading. 3 hrs

Basic vocabulary is developed while comprehension skills of recognizing main idea, supporting detail, exemplification, and narration of materials in simplified English are studied.

Prereq: Department permission or placement.

ESLN 116 Beginning ESL Speaking and Listening.

3 hrs

This course promotes and practices production and comprehension of conversational and survival levels of communication.

Prereq: Department permission or placement.

ESLN 118 Beginning ESL Laboratory. 1 hr

Individual and/or group lab sessions.

Prereq: Department permission or placement.

ESLN 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ESLN 210 Intermediate ESL Grammar. 3 hrs

Basic sentence components emphasizing verb tenses and usage. Some work on complex sentence structures.

Prereq: Department permission or placement.

ESLN 212 Intermediate ESL Writing. 3 hrs

Expanding paragraph constructions while developing unity, cohesion, and transition.

Prereq: Department permission or placement.

ESLN 214 Intermediate ESL Reading. 3 hrs

Continued development of techniques to build vocabulary and reading skills. Materials emphasize informational reading.

Prereq: Department permission or placement.

ESLN 216 Intermediate ESL Speaking and Listening. 3 hrs

Continued development of conversational skills, both speaking and listening. Delivery of short speeches and the development of listening for details.

Prereq: Department permission or placement.

ESLN 218 Intermediate ESL Laboratory. 2 hrs

Individual and/or group lab sessions.

Prereq: Department permission or placement.

ESLN 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ESLN 310 Advanced ESL Grammar. 3 hrs

The formation and manipulation of clauses in complex sentences and the sequence of verb tenses across clauses. A review of verb tenses and problematic grammar points.

Prereq: ESLN 210, department permission, or placement.

ESLN 312 Advanced ESL Writing. 3 hrs

Development of knowledge of organization patterns used in writing both paragraphs and compositions. The principal parts of a composition, writing devices used to achieve coherence.

Prereq: ESLN 212, department permission, or placement.

ESLN 314 Advanced ESL Reading. 3 hrs

Practice in comprehending and analyzing unsimplified texts of greater length and linguistic complexity in a variety of fields.

Prereq: ESLN 214, department permission, or placement.

ESLN 316 Advanced ESL Speaking and Listening.**3 hrs**

Continued development of conversational, speaking, and listening skills. Production and comprehension of short discourses on personal and nonpersonal topics.

Prereq: ESLN 216, department permission, or placement.

ESLN 318 Advanced ESL Laboratory.**1 hr**

Individual and/or group lab sessions.

Prereq: Department permission or placement.

ESLN 377/378/379 Special Topics.**1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ESLN 412 Academic ESL Writing.**3 hrs**

A review of the components of compositions; practice in composition skills and researching, outlining, formatting, and writing a short research paper. Fulfills Area I. 1. of the basic studies requirements, a course in written composition.

Prereq: ESLN 312, department permission, or placement.

ESLN 414 Academic ESL Reading.**3 hrs**

Reading in specialized fields at professional levels. Practice in outlining, summarizing, and synthesizing ideas from different sources.

Prereq: ESLN 314, department permission, or placement.

ESLN 416 Academic ESL Speaking and Listening.**3 hrs**

Strategies for and practice in comprehending lectures, taking notes, and effectively participating in informal and formal classroom speaking activities.

Prereq: ESLN 316, department permission, or placement.

ESLN 420 Review of English as a Second Language.**3 hrs**

For nonnative 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.

ESLN 456 English for Special Purposes: Science and Technology.**3 hrs**

Development of English speaking, listening, reading,

and writing skills for international students who plan to major in scientific and/or technical fields. Students will read and summarize articles in their fields, practice reporting technical information, formally and informally, listen and take notes on technical lectures, and develop skills needed in reading technical books.

Prereq: ESLN 310, 312, 314, 316, or department permission.

ESLN 477/478/479 Special Topics.**1/2/3 hrs**

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

CLASSICS COURSES**CLAS 104 Quest for Power: Famous Figures in History.****3 hrs**

An examination of the lives and times of selected leaders from the ancient and modern worlds. Examples of figures to be covered are Pericles, Nero, Napoleon I, and Adolf Hitler. Major literary monuments of the periods will be examined as well. Team taught by a member of the History Department and a classicist. *This course satisfies one literature or one history requirement. Note: See Honors Humanities Courses, page 46.*

CLAS 106 Rome and America.**6 hrs**

An investigation into problems and pressures comparing the people and culture of ancient Rome and modern America, considering individual hopes and ideals, religious beliefs, and ideas about death, government, morality, love, and sex. Team taught by a member of the English Department and a classicist. *These courses must be taken concurrently and satisfy two literature requirements. Note: See Honors Humanities Courses, page 46.*

CLAS 177/178/179 Special Topics.**1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CLAS 181 The Legacy of Greece.**3 hrs**

An introduction to Greek epic, drama, poetry, history, and philosophy, illustrating the influence of the Greek tradition on western civilization. The literature is read

in English translation. Representative examples of Greek architecture and sculpture also are examined. Team taught by a classicist and/or a member of the English Department. *This course satisfies one literature requirement. Note: See Honors Humanities Courses, page 46.*

CLAS 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

CLAS 301 Mythology. 3 hrs
The general field of classical mythology and the psychology underlying it. The poet's and artist's selection and use of the classic myths from early until modern times; an interpretation of mythological allusions in literature.

CLAS 377/378/379 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

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

LANGUAGE COURSES

LNGE 134 Etymology. 3 hrs
Greek and Latin words and roots that are current in English forms are studied in order to enlarge the vocabulary and to produce a more discriminating use of words.

LNGE 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

LNGE 223 Introduction to Language. 3 hrs
The basic principles of linguistic structure as they apply to the western European languages taught in the department.

LNGE 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

LNGE 377/378/379 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

LNGE 425 Second Language Acquisition. 3 hrs
Examines the nature of learning a second language simultaneously with or subsequent to one's first language. Linguistic, cognitive, affective, cultural, and social factors influencing the acquisition of another language will be explored. Focus will be on birth through teen years with particular attention paid to language used in English-medium elementary and secondary schools.
Prereq: LNGE 223.

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

TESOL COURSES

TSLN 410 TESOL Methods. 3 hrs
Various methods and techniques used to teach language components (grammar, vocabulary, pronunciation) and language skills (reading, writing, listening, and speaking) are examined with regard to the theories on which they are based. Practice in developing and implementing balanced and effective language lesson plans is provided.
Prereq: One year college-level foreign language and an introduction to language course, or department permission.

TSLN 420 Materials and Tests for TESOL. 3 hrs
Review of existing materials and tests used with limited English proficient students in public schools. Practice in adapting and developing materials for varying audiences in the public schools. Practice administering ESL tests used in public schools.
Prereq: TSLN 410 or concurrent enrollment, or department permission.

TSLN 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GEOGRAPHY AND GEOLOGY

Andrew A. Nazzaro
Department Head
 203 Strong Hall
 487-0218

Professors: Gabriel Cherem, Eugene Jaworski, Horace A. MacMahan, Jr., Robert B. Mancell, James R. McDonald, Marshall S. McLennan, Andrew A. Nazzaro, Carl F. Ojala, C. Nicholas Raphael, Robert M. Ward

Associate Professors: Michael Kasenow, Theodore Ligibel, Norman Tyler

Assistant Professors: Michael Bradley, Allen Cichanski, Steven LoDuca, Yichun Xie

The department's programs are designed to enhance student understanding and skills through courses having both theoretical and applied content. Where appropriate, students are directed to field and laboratory courses, important elements in all department programs. Internship and cooperative education opportunities are also encouraged.

The geology program includes a field camp in Colorado. To support and encourage computer literacy in the department's multiple disciplines, there is a modest Geographic Information Systems and Computer Mapping Laboratory. Among the programs listed below, the department of Geography and Geology collaborates with other departments on the area studies, public administration, travel and tourism, and urban and regional planning programs. The department also provides teacher preparation courses to serve College of Education students.

Department faculty regularly participate in the University Honors Program. Department students often contribute original work to the Undergraduate Symposium. *The Geographical Bulletin*, the journal associated with Gamma Theta Upsilon (national professional geography organization), is edited in the department.

Four student groups are associated with Geography and Geology: the GEO Club, Preservation Eastern, the Planning Awareness Club of Eastern (PLACE), and the Travel and Tourism Student Association.

Degrees:

Bachelor of Science and Bachelor of Arts
 Programs of Study

Majors:

Earth science
 Earth science for elementary education

Earth science for secondary education
 Geography
 Geography for elementary education
 Geography for secondary education
 Geology
 Geology with concentration in hydrogeology
 Geology for elementary education
 Geology for secondary education
 Travel and tourism
 Urban and regional planning

Minors:

Cartography and remote sensing
 Coastal environments
 Earth science
 Earth science for elementary education
 Earth science for secondary, K-12, and special education-secondary
 Environmental Analysis
 Geography
 Geography for elementary education
 Geography for secondary, K-12, and special education-secondary
 Geology
 Geology for elementary education
 Historic preservation
 Travel and tourism
 Urban and regional planning

Advising coordinators:

Coastal environments: C. Nicholas Raphael
 Earth science: Michael Bradley, Horace MacMahan, Carl Ojala
 Geography: James R. McDonald, Andrew A. Nazzaro
 Geology: Michael Bradley, Allen Cichanski, Michael Kasenow, Steven LoDuca
 Geology with concentration in hydrogeology: Michael Kasenow
 Historic preservation: Ted Ligibel, Marshall McLennan
 Urban and regional planning: Norman Tyler
 Travel & tourism: Gabriel Cherem, Robert Mancell
 Cartography & remote sensing: Eugene Jaworski

Graduate study leads to the master's degree in either geography or historic preservation planning. A nondegree certification program of study (five courses) in historic preservation also is offered. The MA and MS degrees and certification are described in the Graduate Catalog.

ACADEMIC MAJORS

EARTH SCIENCE MAJOR

The earth science major informs about the planet Earth from the multiple perspectives of the atmosphere, the earth's surface, the oceans, and the interior structure of the planet. This includes study of weather and climate; the natural processes like wind, water, and ice which shape the surface; plate tectonics and associated volcanism and earthquakes; and the impact of the planet's oceans.

	Sem hours
Major in earth science	32
1. Required courses	27-30
ASTR 205 Principles of Astronomy	4
GESC 108 Earth Science	4
GESC 114 National Parks and Monuments	2
GESC 309 Plate Tectonics	3
GESC 320 The Oceans	3
GESC 324 Weather	3
GEOL 120 The Fossil Record or GEOL 161 Historical Geology	3-4
GEOL 228 Mineralogy or GEOL 229 Rocks of Michigan	2-3
GEOL 325 Geomorphology or GEOL 331 Paleontology	3-4
2. Restricted electives	2-5
Choose two to five hours from the following:	
ASTR 204 Astronomical Investigations, GESC 208 Natural Environmental Hazards, GESC 227 Topographic Maps, GESC 250 Introduction to Coastal Processes, GESC 325 Severe and Unusual Weather, GESC 327 Soil Science, GESC 424 Climatology	
GEOL 160 Physical Geology, GEOL 228 or GEOL 229 (the one not taken above), GEOL 325 or GEOL 331 (the one not taken above), GEOL 370 Glacial Geology	

GEOGRAPHY MAJOR

The geography major includes the study of physical landscapes, their origins and the processes that alter them; the imprint of human activity on the earth's surface; the complex relationships among places; and the application of technology to human resource identification, conservation, and management.

	Sem hours
Major in geography	30
1. Required courses	27-28
GESC 108 Earth Science	4

GEOG 110 World Regions	3
GEOG 235 Economic Geography	3
<i>Technique courses</i>	6
Choose two courses from the following:	
GEOG 300 Location and Site Analysis, GESC 401 Cartography, GESC 303 Field Geography, GESC 305 Aerial Photograph Interpretation, GESC 470 Quantitative Methods in Geography and Geology	
<i>Physical courses</i>	2-3
Choose one course from the following:	
GESC 320 The Oceans, GESC 324 Weather, GEOL 325 Geomorphology, GESC 327 Soil Science, GEOL 448 Hydrogeology	
<i>Systematic courses</i>	6
Choose two courses from the following:	
GEOG 310 Energy Awareness, GEOG 332 Urban Geography, GEOG 360 Cultural Geography, GEOG 361 Geography of Population, GEOG 431 Historical Geography of the United States, GEOG 438 Industrial Location and Development	
<i>Regional courses</i>	3
Choose one course from the following:	
GEOG 314 Geography of Russia and Neighboring States, GEOG 318 Geography of Asia, GEOG 319 Geography of Europe, GEOG 320 Geography of the United States and Canada, GEOG 321 Geography of Latin America, GEOG 322 Geography of Africa, GEOG 323 Geography of Australia and Pacific Islands, GEOG 328 Geography of Canada	
2. Restricted electives	2-3
Choose elective credits in consultation with geography adviser.	

GEOLOGY MAJOR

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
Major in geology	30
1. Required courses	28-31
GEOL 160 Physical Geology	4
GEOL 161 Historical Geology	4
GEOL 228 Mineralogy	4
GEOL 326 Structural Geology	3
GEOL 329 Petrology	4
GEOL 330 Sedimentology and Stratigraphy	4
*Field Geology	5-8
2. Electives	0-2

*Students on a Bachelor of Arts curriculum may substitute GEOL 331 Paleontology and three semester hours of electives for field geology, with the total required for the major to remain at 30 semester hours.

GEOLOGY MAJOR

HYDROGEOLOGY CONCENTRATION

The hydrogeology concentration prepares students for graduate study or employment in the hydrogeology industry. It focuses on those aspects of geology and related sciences that pertain to the occurrence, movement, supply, and quality of water. The program is designed to provide a strong technical base. Students will be educated in skills which are required to gather and process data with particular attention to water-related problems.

Sem hours

Major in geology with concentration in hydrogeology	40
1. Required courses	40
GEOL 160 Physical Geology	4
GEOL 161 Historical Geology	4
GEOL 200 Introduction to Hydrology	3
GEOL 228 Mineralogy	4
GEOL 325 Geomorphology	3
GEOL 326 Structural Geology	3
GEOL 329 Petrology	4
GEOL 330 Sedimentology and Stratigraphy	4
GEOL 355 Field Geology I	2
GEOL 356 Field Geology II	3
GEOL 448 Hydrogeology	3
*Field Hydrogeology	3

*The hydrogeology field course may be selected from a number of universities with approval from a geology adviser.

An approved internship through cooperative education is strongly recommended.

Recommended supporting courses

CHEM 119 Fundamentals of Chemistry, CHEM 120 Fundamentals of Organic and Biochemistry, INDT 201 Microcomputer Applications in Technology, CNST 206 Surveying, IS 215 End-User Computing, PHY 221 Mechanics, Sound, and Heat, PHY 222 Electricity and Light, GESC 227 Topographic Maps, MATH 170 Elementary Statistics, GESC 324 Weather, GESC 327 Soil Science, GEOL 370 Glacial Geology, ENGL 324 Principles of Technical Communication, ENGL 326 Research Writing, BOTN 450 Aquatic Tracheophyta.

Recommended minors

Chemistry
Botany
Environmental Analysis
Mathematics
Physics

TRAVEL AND TOURISM MAJOR

The travel and tourism major responds to continuing needs for strong liberal arts programs with directed career opportunities. Careful attention is given to course offerings that provide graduates with distinct possibilities for enhancing the travel and tourism profession. Students who successfully complete the curriculum will have: a) increased awareness of the world, particularly in those regions where travel and tourism are commonly associated; b) increased understanding of business, especially from a marketing perspective; and c) increased written and oral skills in English or a foreign language.

The travel and tourism major leading to either a Bachelor of Arts or Bachelor of Science degree consists of: 1) an equal number of required credit hours (21 each) in geography and business courses; 2) electives chosen from a selection of courses from the colleges of Arts and Sciences and Business; and 3) a choice from one of two communications skills options—either a general concentration with courses emphasizing writing and speaking skills, or a foreign language and area studies concentration.

Sem hours

Major in travel and tourism	75-76
1. Required courses	42
GEOG 110 World Regions	3
GEOG 112 Introduction to Travel and Tourism	3
GEOG 212 Geography of Travel and Tourism ..	3
GEOG 312 Travel Business Applications	3
GEOG 320 Geography of the United States and Canada	3
GEOG 441 Transportation Geography and Planning	3
GEOG 445 Cultural Tourism Resources	3
ACC 240 Principles of Accounting I	3
MGMT 386 Organizational Behavior and Theory ..	3
MGMT 202 Business Communications	3
MKTG 261 Contemporary Selling	3
MKTG 360 Principles of Marketing	3
MKTG 365 Buyer Behavior	3
MKTG 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):

- ANTH 135 Introduction to Cultural Anthropology,
 ANTH 233 Peoples and Cultures of Mexico,
 GEOG 321 Geography of Latin America, ANTH
 236 Peoples and Cultures of Africa or GEOG
 322 Geography of Africa, ANTH 248 Peoples
 and Cultures of the Pacific or GEOG 323
 Geography of Australia and Pacific Islands
 GEOG 113 Foundations of Guest Service, GEOG
 115 Observing the Human Landscape, GEOG
 313 Geography of Michigan, GEOG 315 Travel
 and Tourism: The European Scene, GEOG 318
 Geography of Asia, GEOG 319 Geography of
 Europe, GEOG 333 Settlement Geography,
 GEOG 344 Recreation Geography, GEOG 345
 Geography of Resorts, GEOG 360 Cultural
 Geography, GEOG 387 and/or GEOG 487
 Cooperative Education, GEOG 435 History of
 Urban Form and Function, GEOG 436 Tourism
 and Socioeconomic Development, GEOG 446
 Heritage Interpretation and Tourism, GEOG
 478 Special Topics, GEOG 488 Internship
 GESC 114 National Parks and Monuments
 FA 429 History of American Architecture
 MGMT 402 Business Report Writing
 LAW 293 Legal Environment of Business, LAW
 393 Law of Business Enterprises
 MKTG 368 Marketing Strategy, MKTG 460
 International Marketing, MKTG 473
 Marketing and Product Innovation, MKTG 474
 Promotional Strategy

3. Concentrations 18

Choose either Option A: General or Option B: Foreign language and area studies

Option A: General

Required

- JRNL 215 News Writing and Reporting 3
 CTAC 374 Intercultural Communication 3

Choose two of the following:

- JRNL 306 Feature Writing, JRNL 312
 Introduction to Public Relations, ENGL 324
 Principles of Technical Communication

Choose two of the following:

- CTAC 224 Public Speaking, CTAC 227
 Interpersonal Communication, CTAC 357
 Interviewing as Communication

Option B: Foreign language and area studies

Before choosing Option B, students must have completed FRNH/GERN/SPNH 121, 122; 221, 222; and 233, 234 or equivalencies approved by the Foreign Languages and Bilingual Studies Department.

- GEOG/HIST 316 History and Geography of Modern Europe or GEOG/HIST 317 History and Geography of Spanish America 6
 FRNH/GERN/SPNH 343 and 344 Composition and Conversation 6
 FRNH/GERN/SPNH 341 and 342 Survey of Literature or FRNH/GERN/SPNH 361 Language for International Trade and FRNH/GERN/SPNH 446 Business French, Spanish, and German 6

URBAN AND REGIONAL PLANNING MAJOR

This interdisciplinary major studies the current situation in urban and regional planning, including land use, zoning, problems of urban growth, and local decision-making. The program is designed to prepare students for positions in public planning agencies, private planning firms, or other positions where planning skills are needed and relevant. Courses provide necessary skills to develop zoning ordinances, analyze site plans, critique general development plans, administer local planning regulations, as well as prepare and review grant applications, environmental impact statements and policy planning programs.

Incorporated in the major are courses from several other departments, particularly in the areas of biological science, public policy and government, and real estate management. Courses recommended to fulfill basic studies requirements include BIOL 105 Biology and the Human Species, MATH 105 College Algebra, SOCL 105 Introductory Sociology, GESC 108 Earth Science, ECON 201-202 Principles of Economics I-II, PLSC 202 State and Local Government, and ENGL 225 Intermediate English Composition.

Sem hours**Major in urban and regional planning** 36

- 1. Required courses** 25
 RES 210 Real Estate Principles and Practices. 3
 GEOG 215 Introduction to Urban and Regional Planning 3
 GEOG 306 Comprehensive Planning and Zoning .. 3
 GESC 401 Cartography 3
 GEOG 410 Site Planning Studio 4

GEOG 435 History of Urban Form and Function ..	3
GESC 476 Introduction to Geographic Information Systems	3
GESC 495 Environmental Assessment and Planning	3

2. Restricted electives 11

Choose 11 credits from the following in consultation with the advising coordinator:

DS 265 Business Statistics I	
PLSC 270 Public Administration	
GEOG 300 Location and Site Analysis, GEOG 332 Urban Geography, GEOG 407 Housing and Residential Development, GEOG 441 Transportation Geography and Planning	
GESC 303 Field Geography, GESC 305 Aerial Photograph Interpretation, GESC 475 Computer Mapping, GESC 479 Special Topics: Planning Law, GESC 387/487 Cooperative Education, GESC 488/489/490 Internship	
GHPR 335 Historic Preservation	

ACADEMIC MINORS

CARTOGRAPHY AND REMOTE SENSING MINOR

Cartography (map-making) is an ancient science designed to depict the earth's features and human activities. Today maps are made with several significant functions in mind—to understand spatial phenomena, to store information, and to analyze areal relationships.

Remote sensing uses space-age technology to sense, record, and transmit information about the biosphere and atmosphere. Satellite imagery is an important element in collecting remote sensing data. Remote sensing information is often used in constructing modern maps, whether by hand or through the use of computer mapping and geographic information systems software.

The goal of the minor is to provide an employment track for undergraduates to entry level positions as cartographers and remote sensing technicians. The minor provides balanced training between traditional cartographic work and computer maps. Emphasis is on map properties, spatial concepts, mapping techniques, drafting skills, graphic storage, and display of data. A strongly recommended aspect of this training is the internship or cooperative education experience at nearby private and public agencies.

Sem hours

Minor in cartography and remote sensing	20
1. Required courses	15

GESC 305 Aerial Photograph Interpretation ...	3
GESC 401 Cartography	3
GESC 402 Advanced Cartography	3
GESC 475 Computer Mapping	3
GESC 485 Introduction to Remote Sensing	3

2. Restricted electives 5

Choose five credits from the following:

GESC 227 Topographic Maps, GEOL 355 Field Geology I, GESC 387/487 Cooperative Education, GESC 488/489/490 Internship	
MATH 105 College Algebra, MATH 107 Plane Trigonometry	
FA 165 Graphic Design for Nonmajors	
INDT 121 Graphic Communication	
CNST 206 Surveying, INTE 231 Industrial Computer Graphics	
IS 215 End-User Computing or COSC 137 Introduction to FORTRAN Programming, IS 417 Systems Analysis and Design	

COASTAL ENVIRONMENTS MINOR

Sem hours

Minor in coastal environments	22
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1. Required courses 16

GESC 108 Earth Science or GEOL 160 Physical Geology	4
GESC 250 Introduction to Coastal Processes ...	3
GESC 320 The Oceans	3
GESC 350 Biogeography	3
GESC 450 Lake and Coastal Management	3

2. Restricted electives 6

Choose six credits from the following:

GEOG 215 Introduction to Urban and Regional Planning, GESC 208 Natural Environmental Hazards, GESC 305 Aerial Photograph Interpretation, GEOL 325 Geomorphology, GEOL 330 Sedimentology and Stratigraphy, GESC 495 Environmental Assessment and Planning	
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(Students, in consultation with the minor adviser, may choose other electives not listed above.)

EARTH SCIENCE MINOR

Sem hours

Minor in earth science	21
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1. Required courses 18

GESC 108 Earth Science	4
GESC 320 The Oceans	3
GESC 324 Weather	3
GEOL 229 Rocks of Michigan	2

- ASTR 203 Exploration of the Universe 3
2. **Restricted electives** 3
- Choose one course from the following:
- GEOL 161 Historical Geology, GEOL 228 Mineralogy, GEOL 325 Geomorphology, GEOL 331 Paleontology, GEOL 370 Glacial Geology
- (Students, in consultation with the minor adviser, may choose other electives not listed above.)

ENVIRONMENTAL ANALYSIS MINOR

Sem hours

- Minor in environmental analysis** 24
1. **Required courses** 24
- GEOG 215 Introduction to Urban and Regional Planning 3
- GESC 250 Introduction to Coastal Processes or GESC 485 Introduction to Remote Sensing.. 3
- GESC 305 Aerial Photograph Interpretation ... 3
- GESC 470 Quantitative Methods in Geography and Geology 3
- GESC 475 Computer Mapping 3
- GESC 495 Environmental Assessment and Planning 3
- GEOL 459 Groundwater Modeling 3
- GEOL 460 Contaminant Hydrology 3
2. **Recommended supporting courses**
- CHEM 121 General Chemistry I and CHEM 122 General Chemistry I Laboratory
- MATH 170 Elementary Statistics
- CNST 206 Surveying
- PHY 221 Mechanics, Sound, and Heat and PHY 222 Electricity and Light
- GESC 227 Topographic Maps
- ENGL 324 Principles of Technical Communication
- GESC 324 Weather
- GESC 327 Soil Science
- GEOL 370 Glacial Geology
- GESC 424 Climatology
- BIOL 435 Wetland Ecosystems
- BOTN 450 Aquatic Tracheophyta
- Students considering graduate study should elect the following:
- CHEM 123 General Chemistry II
- CHEM 124 General Chemistry II Laboratory
- PHY 221 Mechanics, Sound, and Heat and PHY 222 Electricity and Light
- MATH 120 Calculus I
- MATH 121 Calculus II

GEOGRAPHY MINOR

Sem hours

- Minor in geography** 20
1. **Required courses** 7
- GESC 108 Earth Science 4
- GEOG 110 World Regions 3
2. **Restricted electives** 13
- Choose 13 credits in consultation with a geography adviser.

GEOLOGY MINOR

Sem hours

- Minor in geology** 21
1. **Required courses** 19
- GEOL 160 Physical Geology 4
- GEOL 161 Historical Geology 4
- GEOL 228 Mineralogy 4
- GEOL 326 Structural Geology 3
- GEOL 329 Petrology 4
2. **Restricted electives** 2
- Choose two credits in consultation with a geology adviser.

HISTORIC PRESERVATION MINOR

Sem hours

- Minor in historic preservation** 24-26
1. **Required courses** 20
- GEOG 115 Observing the Human Landscape .. 2
- GEOG 332 Urban Geography 3
- GEOG 333 Settlement Geography 3
- GHPR 335 Historic Preservation 3
- *HIST 123 The United States to 1877 3
- *HIST 124 The United States, 1877 to the Present ... 3
- FA 429 History of American Architecture 3

*American history majors will substitute electives for HIST 123, HIST 124

2. **Restricted electives** 4-6
- Choose two courses from the following:
- ANTH 135 Introduction to Cultural Anthropology,
- ANTH 150 Introductory Archeology
- ECON 338 Land Economics
- GEOG 215 Introduction to Urban and Regional Planning, GEOG 235 Economic Geography, GEOG 300 Location and Site Analysis, GEOG 313 Geography of Michigan, GEOG 344 Recreation Geography, GEOG 345 Geography of Resorts, GEOG 360 Cultural Geography, GEOG 423 Principles of City and Regional Planning, GESC 401 Cartography

- IDE 311 History of Interiors: Ancient-1800, IDE 321 History of Interiors: 1800-Present
 HIST 305 Indians of the United States, HIST 313 Michigan History, HIST 362 United States Urban History
 INED 105 History of Industrial Technology
 CNST 201 Construction Systems, CNST 228 Construction Drawing
 PSY 350 Environmental Psychology
 RES 210 Real Estate Principles and Practices, RES 310 Real Estate Finance
 SOCL 306 The Urban Community

(Students, in consultation with the program advisers, may choose other electives not listed above.)

TRAVEL AND TOURISM MINOR

Sem hours

- Minor in travel and tourism** 20-21
- Required courses** 18
 - GEOG 110 World Regions 3
 - GEOG 112 Introduction to Travel and Tourism 3
 - GEOG 113 Foundations of Guest Service 3
 - GEOG 212 Geography of Travel and Tourism .. 3
 - GEOG 312 Travel Business Applications 3
 - GEOG 445 Cultural Tourism Resources 3
 - One course from the following:** 2-3
 - GEOG 315 Travel and Tourism: The European Scene, GEOG 345 Geography of Resorts, GEOG 436 Tourism and Socioeconomic Development, GEOG 446 Heritage Interpretation and Tourism

URBAN AND REGIONAL PLANNING MINOR

Sem hours

- Minor in urban and regional planning** 20
- Required courses** 13
 - GEOG 215 Introduction to Urban and Regional Planning 3
 - GEOG 306 Comprehensive Planning and Zoning .. 3
 - GEOG 410 Site Planning Studio 4
 - GEOG 435 History of Urban Form and Function .. 3
 - Restricted electives** 7
- Choose at least 7 credits from the following in consultation with the advising coordinator:
- RES 210 Real Estate Principles and Practices
 - DS 265 Business Statistics I
 - PLSC 270 Public Administration
 - GEOG 300 Location and Site Analysis, GEOG 332

- Urban Geography, GEOG 407 Housing and Residential Development, GEOG 441 Transportation Geography and Planning
- GESC 303 Field Geography, GESC 305 Aerial Photograph Interpretation, GESC 401 Cartography, GESC 475 Computer Mapping, GESC 476 Introduction to Geographic Information Systems, GESC 479 Special Topics: Planning Law, GESC 387/487 Cooperative Education, GESC 488/489/490 Internship, GESC 495 Environmental Assessment and Planning
- GHPR 335 Historic Preservation

TEACHING MAJORS EARTH SCIENCE MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in earth science/geology, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science." The program includes a structured general science minor. The student following this program is also qualified for recommendation for endorsement in science, certification code "DX." The certification test covering this field is #16, "Science."

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
- I-B-2.** *Basic Studies requirement. See inside back cover*
- I-B-3.** *Basic Studies requirement. See inside back cover*
- I-B-4.** *Basic Studies requirement. See inside back cover*
- I-B-5.** *Basic Studies requirement. See inside back cover*
- II-B-1.** CHEM 121 General Chemistry I (3)^a
- CHEM 122 General Chemistry I Laboratory(1)^a
- II-B-2.** *Basic Studies requirement. See inside back cover*
- II-B-3.** PHY 221 Mechanics, Sound, and Heat (4)^a
- III-B-1.** *Basic Studies requirement. See inside back cover*
- III-B-2.** *Basic Studies requirement. See inside back cover*
- III-B-3.** *Basic Studies requirement. See inside back cover*
- III-B-4.** *Basic Studies requirement. See inside back cover*
- IV-B-1.** *Basic Studies requirement. See inside back cover*
- IV-B-2.** *Basic Studies requirement. See inside back cover*
- IV-B-3.** *Basic Studies requirement. See inside back cover*
- IV-B-4.** *Basic Studies requirement. See inside back cover*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 50

Teaching Major/Minor

See note "a" above for courses applicable to both Basic Studies and the major/minor.

- ASTR 205 Principles of Astronomy (4)
- BIOL 105 Biology and the Human Species (4)
- GESC 108 Earth Science (4)
- GESC 114 National Parks and Monuments (2)
- GESC 309 Plate Tectonics (3)
- GESC 320 The Oceans (3)
- GESC 324 Weather (3)
- MATH 105 College Algebra (3)
- MATH 107 Plane Trigonometry (2)

One of:

- GEOL 228 Mineralogy (4)
- GEOL 229 Rocks of Michigan (2)

One of:

- GEOL 120 The Fossil Record (3)
- GEOL 161 Historical Geology (4)

One of:

- GEOL 325 Geomorphology (3)
- GEOL 331 Paleontology (4)
- Seven hours of approved electives in biology, chemistry, mathematics, or physics.

Enough additional hours from the following group to complete 48 hours in teaching-major requirements.

- ASTR 204 Astronomical Investigations (1)
- GESC 208 Natural Environmental Hazards (3)
- GESC 227 Topographic Maps (2)
- GESC 250 Introduction to Coastal Processes (3)
- GESC 325 Severe and Unusual Weather (3)
- GESC 327 Soil Science (3)
- GESC 424 Climatology (3)
- GEOL 160 Physical Geology (4)
- GEOL 228 or GEOL 229 (the one not taken above) (2-4)
- GEOL 331 or GEOL 325 (the one not taken above) (3-4)
- GEOL 370 Glacial Geology (3)

Subtotal, Major/Minor and related areas: 48

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
- EDTC 300 Introduction to Computer Applications in Education (1)
- SPGN 300 Exceptional Children in the Regular Classroom (1)
- EDPS 322 Human Development and Learning (4)

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

- CURR 305 Curriculum and Methods: Secondary (3)
- RDNG 311 Teaching Reading in the Secondary School (3)
- SOFD 328 Schools in a Multicultural Society (3)
- EDPS 340 Introduction to Assessment and Evaluation (3)
- EDMD 345 Media for the Classroom Teacher (1)
- GESC 347 Teaching Earth Science and Physical Geography (3)
- EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required: 132

**Course required for and applicable to major.*

EARTH SCIENCE MAJOR**ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science." The student is also qualified for recommendation for endorsement in science, certification code "DX." The certification test covering this field is #16, "Science."

The curriculum for this major is that which is listed under "Teaching Major/Minor" in the secondary earth science program*, plus the requirements under II-B-1 and II-B-3 in that program's Basic Studies requirements. The program includes a structured general science minor. *Students may take GESC 202 instead of GESC 108.

56 hours, not including course work that may be satisfied through Basic Studies.

GEOGRAPHY MAJOR**SECONDARY TEACHER CERTIFICATION**

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in geography, certification code "CB" and, depending on the minor selected, endorsement in economics ("CA"), history ("CC"), political science ("CD"), psychology ("CE"), sociology ("CF"), or social science ("CX"). The certification test covering this field is #08, "Geography."

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
I-B-2. *Basic Studies requirement. See inside back cover*
I-B-3. *Basic Studies requirement. See inside back cover*
I-B-4. *Basic Studies requirement. See inside back cover*
I-B-5. *Basic Studies requirement. See inside back cover*
II-B-1. *Basic Studies requirement. See inside back cover*
II-B-2. *Basic Studies requirement. See inside back cover*
II-B-3. GESC 108 Earth Science (4)^a
III-B-1. *Basic Studies requirement. See inside back cover*
III-B-2. HIST 102 Western Civilization, 1648 to World War I (3)
III-B-3. GEOG 110 World Regions (3)^b
III-B-4. HIST 103 Twentieth Century Civilization (3)
IV-B-1. *Basic Studies requirement. See inside back cover*
IV-B-2. *Basic Studies requirement. See inside back cover*
IV-B-3. *Basic Studies requirement. See inside back cover*
IV-B-4. *Basic Studies requirement. See inside back cover*
Physical education, military science, or equivalent (2)
 A course in economics, if not included in the minor (3)

Credit hours in Basic Studies: 52

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

GEOG 235 Economic Geography (3)

Two of:

- GEOG 300 Location and Site Analysis (3)
 GESC 401 Cartography (3)
 GESC 303 Field Geography (3)
 GESC 305 Aerial Photograph Interpretation (3)
 GESC 470 Quantitative Methods in Geography and Geology (3)

One of:

- GESC 320 The Oceans (3)
 GESC 324 Weather (3)
 GEOL 325 Geomorphology (3)
 GESC 327 Soil Science (3)
 GEOL 448 Hydrogeology (3)

Two of:

- GEOG 310 Energy Awareness (3)
 GEOG 332 Urban Geography (3)
 GEOG 360 Cultural Geography (3)
 GEOG 361 Geography of Population (3)
 GEOG 431 Historical Geography of the United States (3)
 GEOG 438 Industrial Location and Development (3)

One of:

- GEOG 314 Geography of Russia and Neighboring States (3)
 GEOG 318 Geography of Asia (3)
 GEOG 319 Geography of Europe (3)
 GEOG 320 Geography of the United States and Canada (3)
 GEOG 321 Geography of Latin America (3)
 GEOG 322 Geography of Africa (3)
 GEOG 323 Geography of Australia and Pacific Islands (3)
 GEOG 328 Geography of Canada (2)

Two hours of electives chosen in consultation with an adviser.

Minor

A minor in one of economics, history, political science, psychology, sociology, or social science

Subtotal, Major and minor: 42¹

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
 EDTC 300 Introduction to Computer Applications in Education (1)
 SPGN 300 Exceptional Children in the Regular Classroom (1)
 EDPS 322 Human Development and Learning (4)

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

- CURR 305 Curriculum and Methods: Secondary (3)
 RDNG 311 Teaching Reading in the Secondary School (3)
 SOFD 328 Schools in a Multicultural Society (3)
 EDPS 340 Introduction to Assessment and Evaluation (3)
 EDMD 345 Media for the Classroom Teacher (1)
 HIST 481 The Teaching of Social Studies (3)
 EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor:
 128

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

GEOGRAPHY MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in geography, certification code "CB." The certification test covering this field is #08, "Geography."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary geography program*, plus the requirements under II-B-3, III-B-2, III-B-3, and III-B-4 in that program's Basic Studies requirements. Approved minors are history, political science, sociology, and social science group for elementary teachers. *Students are recommended to take GESC 202 instead of GESC 108.

28-29, hours, not including the minor and not including course work that may be satisfied through Basic Studies.

* Students are recommended to take GESC 202 instead of GESC 108.

GEOLOGY MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science."

- GEOL 160 Physical Geology (4)
- GEOL 161 Historical Geology (4)
- GEOL 228 Mineralogy (4)
- GEOL 326 Structural Geology (3)
- GEOL 329 Petrology (4)
- GEOL 330 Sedimentology and Stratigraphy (4)

5-8 hours from field geology

Additional electives in geology to total 30 hours

Approved minors are those for the elementary program as given on page 362.

30 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

TEACHING MINORS

EARTH SCIENCE MINOR

ELEMENTARY, SECONDARY, K-12, SPECIAL EDUCATION-ELEMENTARY, AND SPECIAL EDUCATION-SECONDARY TEACHER CERTIFICATION

Successful completion of this minor, in the context

of other program requirements, qualifies the student for recommendation for endorsement in geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science."

- *GESC 108 Earth Science (4)
- GESC 309 Plate Tectonics (3)
- GESC 320 The Oceans (3)
- GESC 324 Weather (3)
- GEOL 229 Rocks of Michigan (2)
- #ASTR 203 Exploration of the Universe (3)

One of:

- GEOL 161 Historical Geology (4) (Prereq: GEOL 160 or permission)
- GEOL 228 Mineralogy (4) (Prereq: CHEM 121)
- GEOL 325 Geomorphology (3)
- GEOL 331 Paleontology (4) (Prereq: GEOL 161 or BIOL 105 or permission)
- GEOL 370 Glacial Geology (3) (Prereq: GEOL 161, 330 or permission)

Others, chosen in consultation with advising coordinator

20-21 hours (including hours satisfied in Basic Studies)

*Elementary education focused students are recommended to take GESC 202 instead of GESC 108.

#Could be satisfied in Basic Studies in some programs.

GEOGRAPHY MINOR

ELEMENTARY, SECONDARY, K-12, SPECIAL EDUCATION-ELEMENTARY, AND SPECIAL EDUCATION-SECONDARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in geography, certification code "CB." The certification test covering this field is #08, "Geography."

- *#GESC 108 Earth Science (4)

Elementary education focused students are recommended to take GESC 202 instead of GESC 108.

- ***GEOG 110 World Regions (3)

13 hours chosen in consultation with the advising coordinator to include five hours from:

- GEOG 313 Geography of Michigan (2)
- GEOG 314 Geography of Russia and Neighboring States (3)
- GEOG 318 Geography of Asia (3)
- GEOG 319 Geography of Europe (3)
- GEOG 320 Geography of the United States and Canada (3)

GEOG 321 Geography of Latin America (3)

GEOG 322 Geography of Africa (3)

GEOG 328 Geography of Canada (2)

20-21 hours (including hours satisfied in Basic Studies)

**Included in Basic Studies for some programs.*

***Included in Basic Studies for elementary program.*

**May be included in Basic Studies in special education programs.*

GEOLOGY MINOR

ELEMENTARY, SECONDARY, K-12, SPECIAL EDUCATION-ELEMENTARY, AND SPECIAL EDUCATION-SECONDARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science."

GEOL 160 Physical Geology (4)

GEOL 161 Historical Geology (4)

GEOL 228 Mineralogy (4)

GEOL 326 Structural Geology (3)

GEOL 329 Petrology (4)

Four credits chosen in consultation with advising coordinator.

21 hours

GEOGRAPHY AND EARTH SCIENCE COURSES

GESC 108 Earth Science. 4 hrs

Selected topics and concepts from geology, physical geography, meteorology, and oceanography provide the basis for understanding current environmental problems and for perceiving fundamental options as humans increase pressure on the world's resources and ecosystems. A requirement for both the major and minor in geography. Not open to students who have credit in GESC 202 Science for Elementary Teachers. Lecture: three hours per week. Laboratory: one two-hour period per week.

GESC 114 National Parks and Monuments. 2 hrs

An analysis of the geology, vegetation, and wildlife that led to the designation of certain US lands as national parks, monuments, and recreational areas. The environmental impact of people on the ecology of these areas resulting from population pressures of camping, trail use, fire, tourist services, and recreational facilities; NPS conservation policies that govern preservation of our heritage. Illustrated lectures and demonstrations.

GESC 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GESC 202 Science for Elementary Teachers. 3 hrs

Lectures and laboratory deal with earth science concepts and teaching methodology. Nationally used elementary science curriculums acquaint the student with techniques of teaching basic earth science concepts. Emphasis on student-centered, process-oriented approaches widely used in elementary classrooms. Not open to students with credit in GESC 108. Lecture: two hours per week. Laboratory: one two-hour period per week.

GESC 208 Natural Environmental Hazards. 3 hrs

Analysis of devastating earthquakes, volcanic eruptions, floods, violent storms, freezes, and other environmental catastrophes, emphasizing their causes and human adjustments to these events.

GESC 227 Topographic Maps. 2 hrs

Interpretation of distances, slopes and terrain features as shown on topographic contour maps. Preparation of contour maps from numerical data and of topographic profiles from contour maps; the correlation of landforms and landform patterns with the geologic materials and processes responsible for them.

Prereq: GESC 108.

GESC 250 Introduction to Coastal Processes. 3 hrs

Description and analysis of the physical and biogeographical processes of ocean and lake coasts. Distribution and origins of 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: GESC 108 or BIOL 105 or department permission.

GESC 277/278/279 Special Topics. 1/2/3 hrs

An experimental course for subject matter not provided in other department offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are studied.

Prereq: Department permission.

GESC 303 Field Geography. 3 hrs

Techniques in the observation and analysis of geographic features in the field. Emphasizes individual and group problem formulation, problem solving of geographic questions by using the scientific method, and combining traditional field exploration with the use of library aids.

GESC 305 Aerial Photograph Interpretation. 3 hrs

Analysis of black and white and color infrared photographs for land use planning, environmental assessment, geology, and resource management. Weekly lab exercises. Optional field trip.

Prereq: GESC 108 and algebra/trigonometry, or department permission.

GESC 309 Plate Tectonics. 3 hrs

An introduction to plate tectonics—i.e., continental drift and seafloor 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: GESC 108 or GEOL 160 or GESC 202 or department permission.

GESC 320 The Oceans. 3 hrs

A study of the world's oceans, including coasts, waves, currents, tides, sediments, marine geology, properties of sea water, the energy balance, oceanographic research techniques, and marine resources, stressing physical oceanography.

Prereq: GESC 108 or GEOL 160 or GESC 202 or department permission.

GESC 324 Weather. 3 hrs

Introduction to the properties and processes that create weather, including an analysis of conditions aloft, the formation of storms, and methods and problems of weather forecasting.

Prereq: GESC 108 or department permission.

GESC 327 Soil Science. 3 hrs

The mineralogical, physical, chemical, and engineering properties of soils as related to soil formation, groundwater movement, soil erosion, plant-soil relationships, and land development capability. Field trips and exercises required. Fall semester only.

Prereq: GESC 108 or GEOL 160 or department permission.

GESC 334 Weather and Climate Investigations. 1 hr

A laboratory course for weather and climate students; includes the techniques utilized and concepts involved in the fields of weather and climate. Two hours of laboratory per week.

Prereq: GESC 324 or GESC 424; may be taken concurrently.

GESC 347 Teaching Earth Science and Physical**Geography. 3 hrs**

The techniques of teaching laboratory-centered earth science and physical geography courses, emphasizing inquiry teaching and questioning techniques. Practical experience is obtained by teaching actual earth science and physical geography classes. A requirement for teacher certification in earth science, geology, and geography. Not open to students on academic probation.

Prereq: GESC 108 or equivalent and junior standing or department permission.

GESC 350 Biogeography. 3 hrs

Analysis of the distribution, geologic setting, and ecological function of inland freshwater lakes and Great Lakes coasts. Emphasis on sediment, vegetation, wildlife, waterfowl and fisheries resources.

Prereq: GESC 108 or BIOL 224; GESC 250 recommended.

GESC 377/378/379 Special Topics. 1/2/3 hrs

An experimental course for subject matter not provided in other department offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are studied.

Prereq: Department permission.

GESC 387 Cooperative Education. 3 hrs

Four to six months of full-time employment at a firm or agency chosen for imparting a practical educational experience in earth science or land use planning. The program consists of two work experiences (GESC 387 and GESC 487) alternated with full-time University attendance. A written report is required at the end of each employment period. Graded on a credit/no credit basis.

Prereq: Completion of sophomore year, earth science or urban and regional planning major. Admittance by application only.

GESC 401 Cartography. 3 hrs

A lecture-laboratory course in the techniques of map making and visual representation of geographic information. The study and construction of several map projections, the evaluation of maps, and the use of map-drawing instruments. One hour lecture and four hours laboratory per week.

GESC 402 Advanced Cartography. 3 hrs

A continuation of GESC 401. 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: GESC 401 or department permission.

GESC 424 Climatology. 3 hrs

An analysis of the world's climate types, including characteristics, classification, controls, and their effects on world soils and natural vegetation.

Prereq: GESC 324.

GESC 425 Severe & Unusual Weather 3 hrs

Analysis of cyclones, blizzards, thunderstorms, tornadoes, hurricanes and other catastrophic weather phenomena. Their environmental impact and prediction.

Prereq: GESC 424.

GESC 450 Lake and Coastal Management. 3 hrs

An analysis of modern coastal management problems of inland lakes and Great Lakes coasts. Selected topics include beach erosion, dredging, loss of wetlands, wildlife habitat degradation, and impact of shoreland development.

Prereq: GESC 250 or GESC 350 or department permission.

GESC 470 Quantitative Methods in Geography and Geology. 3 hrs

Introduction to current techniques and methods applicable to geographic and geologic problems. A laboratory course emphasizing statistical analyses and computer applications.

Prereq: Geography, geology, or earth science major, junior standing, or department permission.

GESC 475 Computer Mapping. 3 hrs

A laboratory course introducing interactive operation of microcomputers to produce maps on line printers and plotters. Students learn to develop and apply computer mapping graphics, databases, digitized data, and a

simple geographic information system. Two hours instruction and two hours laboratory each week.

Prereq: A course in computer programming (FORTRAN) or cartography is recommended.

GESC 476 Introduction to Geographic Information Systems. 3 hrs

Introduction to basic Geographic Information Systems (GIS) concepts, geographic referencing, and to available software programs. Includes theory on map projections, mapping techniques, data collection and compilation, and data analysis. Microcomputer oriented.

Prereq: GESC 401 or GESC 475 or department permission.

GESC 477/478/479 Special Topics. 1/2/3 hrs

An experimental course for subject matter not provided in other department offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are studied.

Prereq: Department permission.

GESC 485 Introduction to Remote Sensing. 3 hrs

Introduction to remote sensing techniques and types of imagery, including multispectral, thermal, and radar images. Emphasis on image enhancement and interpretation in regard to land use planning and resource management.

Prereq: GESC 305 or department permission.

GESC 487 Cooperative Education. 3 hrs

Four to six months of full-time employment at a firm or agency chosen for imparting a practical educational experience in earth science or land use planning. The program consists of two work experiences (GESC 387 and GESC 487) alternated with full-time University attendance. A written report is required at the end of each employment period. Graded on a credit/no credit basis.

Prereq: Completion of sophomore year, earth science or urban and regional planning major. Admittance by application only.

GESC 488/489/490 Internship. 4/5/6 hrs

Supervised internship in some aspect of earth science or land use that is of mutual interest to the qualified student and the place the student will work. This experience is designed to integrate academic training with practical application. May be taken only once for credit.

Prereq: Department permission and placement.

GESC 495 Environmental Assessment and Planning.

3 hrs

An examination of the program elements of environmental impact statements. Geobased data sources are explored and analyzed. Impact statements are prepared by the class and existing impact statements are evaluated.

Prereq: GEOG 215 or BIOL 224.

GESC 497/498/499 Independent Study. 1/2/3 hrs

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

Prereq: Department permission.

GEOLOGY COURSES**GEOL 120 The Fossil Record.** 3 hrs

The origin, development, and succession of life on earth. Systematic study of the evolution of life through time. An introduction to the record of life on earth for the nonscience major.

GEOL 160 Physical Geology. 4 hrs

Geological concepts, processes, materials, and surface features of the physical earth; internal features such as heat and volcanism, earthquakes and deformation, and plate tectonics; and external processes that have shaped the landscape. Lecture: three hours per week. Laboratory: one two-hour period per week. Required for the geology major.

GEOL 161 Historical Geology. 4 hrs

The origin, development, and succession of earth materials, surface, and life forms, culminating in one present scene and organic population. Field trips and reports may be required. Required for the geology major and minor. Lectures: three hours per week. Laboratory: one two-hour period per week.

Prereq: GEOL 160 or department permission.

GEOL 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GEOL 200 Introduction to Hydrology. 3 hrs

Study of physical, chemical and biological elements of rivers, lakes, wetlands, and groundwater, and the eco-

nomie, social, political, and legal issues currently associated with these systems. Required for the hydrogeology major.

Prereq: GESC 108 or GEOL 160 or GESC 202 or department permission.

GEOL 228 Mineralogy. 4 hrs

A study of the crystallography, crystal chemistry, and identification of the most important rock forming and economic minerals of the crust of the earth. Lecture: three hours weekly. Laboratory: two hours weekly.

Prereq: CHEM 121.

GEOL 229 Rocks of Michigan. 2 hrs

The identification and classification of rocks with special emphasis on characteristics used in the field.

Prereq: GESC 108 or GEOL 160.

GEOL 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GEOL 325 Geomorphology. 3 hrs

A detailed study of surface features and the degradational, aggradational, and structural processes by which they are formed. Worldwide examples are used extensively.

Prereq: GESC 108 or GEOL 160 and GEOL 161 or department permission.

GEOL 326 Structural Geology. 3 hrs

Introduction to the terminology, relationship, and deformation of rocks with examples from specific areas. Laboratory problems are directed toward understanding of geological structures in three dimensions and their representation, interpretation, projection, and illustration as applied to economic problems. Lecture: two hours weekly. Laboratory: two hours weekly.

Prereq: GESC 108 or GEOL 160.

GEOL 329 Petrology. 4 hrs

The origin, occurrence, association, chemical relationships, and distribution of igneous, sedimentary, and metamorphic rocks. Laboratory: two hours weekly. Not open to students with credit in GEOL 229. Winter term only.

Prereq: GEOL 228.

GEOL 330 Sedimentology and Stratigraphy. 4 hrs

The properties, description, and classification of sedimentary rocks; processes and environments of sediment deposition; principles and techniques of stratigraphy. Field trips and reports required.

Prereq: GEOL 120 or GEOL 161 or ZOO 222.

GEOL 331 Paleontology. 4 hrs

Origin and development of life on earth and the environments in which animal assemblages lived. Study of the principles involved in the interpretation of fossils. Systematic study of the features of the organisms most important in the fossil record. Lecture: three hours per week; laboratory: one two-hour period per week.

Prereq: GEOL 161 or BIOL 105 or department permission.

GEOL 334 Geology of Construction. 3 hrs

Geologic features of near-surface soil and bedrock materials; how the materials and their chemical and physical properties are related to construction. Exploration and exploitation of the materials associated with ground water supply and disposal, aggregates and construction problems of dams, reservoirs, excavations, foundations, highways, and beach control structures.

Prereq: GESC 108 or GEOL 160 or department permission.

GEOL 355 Field Geology I. 2 hrs

Theory and practice of precision mapping using tape, alidade, plane table, and stadia rod in local area. With GEOL 356 Field Geology II, satisfies the field requirement for major in geology. May include field study in a quarry.

Prereq: GESC 229, GEOL 160, and GEOL 326.

GEOL 356 Field Geology II. 3 hrs

Instruction and practice in pace-traverse mapping, measurement of stratigraphic sections, and a mapping of areal geology and geologic structure in the Rocky Mountain west. With GEOL 355, satisfies field requirement for geology major.

Prereq: GEOL 326, GEOL 329, GEOL 330, and GEOL 355; or department permission.

GEOL 370 Glacial Geology. 3 hrs

A study of the glacial geomorphology and stratigraphy of the Pleistocene drift with emphasis on the character of the drift, sheets, their soils and lithology, and the techniques of study as applied to the Wisconsin Stage in the

state of Michigan. Comparisons drawn with the movements and deposits of modern glaciers; Paleoclimatic cycles of Precambrian and Paleozoic glacial ages and theories stressed. Field trips and reports required.

Prereq: GESC 108 or GEOL 160, GEOL 161, GEOL 330 or department permission.

GEOL 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GEOL 387 Cooperative Education. 3 hrs

Four to six months of full-time employment at a firm or agency, chosen for imparting a practical educational experience in geology. The program consists of two work experiences (GEOL 387/487) alternated with full-time University attendance. A written report is required at the end of each employment period. Graded on a credit/no credit basis.

Prereq: Completion of sophomore year, geology major.

Admittance by application only.

GEOL 428 Optical Mineralogy. 4 hrs

Study of the optical properties of crystalline matter with petrographic microscope used to identify nonopaque and some opaque minerals, using crushed fragments and some thin-sections.

Prereq: GEOL 228 and PHY 224.

GEOL 430 Petroleum Geology. 3 hrs

A study of the origin, migration and accumulation of oil and natural gas. Exploration techniques in the use of structural geology, sedimentology, and stratigraphy. The various drilling coring methods, drilling equipment, and the procedures of drilling. Field trips to active drilling and/or producing areas and reports are required. Studies of specific oil and gas fields will be assigned.

Prereq: GEOL 161, GEOL 326, GEOL 330 or department permission.

GEOL 439 Economic Geology. 3 hrs

A study of the geochemical behavior of metallic elements; the origin, processes, controls, and classification of ore deposits; and fossil fuels. The occurrence and distribution of metallic and nonmetallic deposits.

Prereq: GEOL 228.

GEOL 448 Hydrogeology. 3 hrs
Subsurface water occurrence, distribution, relationships to surface water and precipitation; subsurface flow, especially as related to well water production; tests of aquifers; well drilling and installation; ground water exploration and recharge; legal problems.
Prereq: GESC 108 or GEOL 160, algebraic ability, and junior standing.

GEOL 459 Groundwater Modeling. 3 hrs
Study of groundwater flow and contaminant transport rates using analytical, numerical, and statistical models.
Prereq: GESC 475 and GEOL 448.

GEOL 460 Contaminant Hydrology. 3 hrs
Study of hydrochemistry, pollution pathways, and transport of contaminants.
Prereq: BOTN 221, CHEM 121-122, and GEOL 448.

GEOL 470 Quantitative Methods in Geography and Geology. 3 hrs
Introduction to current techniques and methods applicable to geographic and geologic problems. A laboratory course emphasizing statistical analyses and computer applications.
Prereq: Geography, geology, or earth science major, junior standing, or department permission.

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

GEOL 487 Cooperative Education. 3 hrs
Four to six months of full-time employment at a firm or agency, chosen for imparting a practical educational experience in geology. The program consists of two work experiences (GEOL 387/487) alternated with full-time University attendance. A written report is required at the end of each employment period. Graded on a credit/no credit basis.
Prereq: Completion of sophomore year, geology major. Admittance by application only.

GEOL 488/489/490 Internship. 4/5/6 hrs
Supervised internship in some aspect of geology that is of mutual interest to the qualified student and the place the student will work. This experience is designed to

integrate academic training with practical application. May be taken only once for credit.
Prereq: Department permission and placement.

GEOL 497/498/499 Independent Study. 1/2/3 hrs
Advanced study on individual basis in areas in which the department does not offer a formal course. Normally restricted to proficient students in the senior year under the general conditions prescribed for honors courses.
Prereq: Department permission.

GEOGRAPHY COURSES IN SOCIAL SCIENCE

GEOG 100 Future Worlds. 3 hrs
Introduces the student to reasons for studying the future from a geographical perspective, methods used in futuristics, the state of future shock today, the consequences of a shrinking world, and growing interdependence. Possible worlds that may exist in the year 2000 and beyond.

GEOG 107 Introduction to Geography. 3 hrs
A survey of the major concepts and subfields in modern geography. Physical, cultural, economic, political, and social geography are among the major areas explored.

GEOG 110 World Regions. 3 hrs
Geographic evaluation of the human imprint on the world, focusing on how peoples of various societies have approached the problems of living in their natural environments and with each other. A requirement for both the major and minor in geography.

GEOG 111 Regions and Resources. 3 hrs
A comparative analysis of the economic resources of major regions of the world. The relationships among countries, corporations, and multiple levels of technology are examined.
Prereq: GEOG 110.

GEOG 112 Introduction to Travel and Tourism. 3 hrs
An introduction to the travel and tourism industry, including traditional and emerging careers; the ethical, behavioral, and logistical aspects of the travel experience; traveler needs and motivations; futuristic travel directions; and travel-related organizations.

GEOG 113 Foundations of Guest Service. 3 hrs
Analysis of guest-host service concepts and interactions in the travel and tourism industry, emphasizing the req-

uisite attitudes and role of the professional host. The course will improve student motivation and skills toward providing positive guest experiences.

Prereq: GEOG 112 or department permission.

GEOG 115 Observing the Human Landscape. 2 hrs

A geography course for students of any curriculum designed to enlighten travel experiences by developing observational awareness and perceptual appreciation of human landscapes and by enhancing sensitivity to the personality of places.

GEOG 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GEOG 212 Geography of Travel and Tourism. 3 hrs

A review of the philosophy, historical development, and geographical distribution of travel and tourism. The economic, social, and environmental impacts of these activities; case studies illustrating their significance from all regions of the world.

Prereq: GEOG 110 or GEOG 112 or department permission. (May be taken concurrently.)

GEOG 215 Introduction to Urban and Regional Planning. 3 hrs

A general introduction to concepts and techniques of urban and regional planning. An overview of land use planning and ordinances, site analysis and planning, and preparation of general development plans. Discussion of urban and regional planning as a career, in both public agencies and private firms.

Prereq: Not open to freshmen.

GEOG 235 Economic Geography. 3 hrs

Systematic treatment of economic activities in selected world locations. Areal factors included in the evaluation, production, and distribution of goods and services.

GEOG 240 Geographic Perspectives on Third World Development. 3 hrs

A course designed to study the geographic nature of critical development issues. Explores both positive and negative consequences of world interdependence and the global economy.

Prereq: GEOG 110 or department permission.

GEOG 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GEOG 300 Location and Site Analysis. 3 hrs

Practical and theoretical application of models that explain the location of human activities on earth.

Prereq: GEOG 235 recommended.

GEOG 306 Comprehensive Planning and Zoning. 3 hrs

A course studying issues of comprehensive planning, zoning, and land use regulation. Topics include preparation of a General Development Plan, current and recent zoning issues, land use legislation, and the drafting and use of state and local zoning ordinances. A base course for Urban and Regional Planning students as well as a valuable perspective to anyone interested in rural, urban, or regional development issues.

Prereq: GEOG 215.

GEOG 310 Energy Awareness. 3 hrs

A study of production, transportation, and consumption of energy, including analysis of historic, modern, and future energy sources and the environmental effects of their development. GEOG 110 or GESC 108 recommended.

GEOG 312 Travel Business Applications. 3 hrs

A survey of the operational procedures common to travel business ventures. Students will learn information-gathering techniques, the use of reference materials, the design of itineraries, reservations, and ticketing procedures, sales techniques, presentation and proposal preparation, and the emerging technologies available to travel planners.

Prereq: GEOG 110 and GEOG 112.

GEOG 313 Geography of Michigan. 2 hrs

Detailed analysis of the natural setting, population and settlement characteristics, industry, recreation, and agriculture in the state.

Prereq: GEOG 110 or GESC 108.

GEOG 314 Geography of Russia and Neighboring States. 3 hrs

A systematic and regional study of physical, cultural, and economic factors in Russia and other states of the former Soviet Union. Distribution of natural resources,

population and ethnic questions, environmental problems, and political evolution will be emphasized.
Prereq: GEOG 110 or GESC 108.

GEOG 315 Travel and Tourism: The European Scene.
3 hrs

Consideration of Europe as the most significant continent for modern tourism. Emphasis is on the natural, cultural, and historical factors which form the foundation of this industry; and on the major economic, social, and environmental impacts which can be attributed to tourism.

Prereq: GEOG 112 and GEOG 212.

GEOG 316 History and Geography of Modern Europe.
3 hrs

An interdisciplinary geographical-historical study of modern Europe with the geographical component emphasizing information of an urban, demographic, occupational, and environmental nature and the historical component stressing major political, social, and cultural developments. Must be taken concurrently with HIST 316.

Prereq: GEOG 110 and one of HIST 101/102/103.

GEOG 317 History and Geography of Spanish America.
3 hrs

An interdisciplinary presentation of the history and geography of Spanish America with emphasis on political, cultural, and socioeconomic 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 HIST 317.

Prereq: GEOG 110 and one of HIST 101/102/103.

GEOG 318 Geography of Asia.
3 hrs

A regional treatment of natural setting, distribution of the people, important occupations, and problems of future development in each of several regions.

Prereq: GEOG 110 or GESC 108.

GEOG 319 Geography of Europe.
3 hrs

Systematic treatment of the natural setting, cultural patterns, economic activities, and developmental problems of the continent; selected significant regions analyzed in detail.

Prereq: GEOG 110 or GESC 108.

GEOG 320 Geography of the United States and Canada.
3 hrs

A regional treatment of natural setting, distribution of the people, important occupations, and problems of future development in each of several regions.

Prereq: GEOG 110 or GESC 108.

GEOG 321 Geography of Latin America.
3 hrs

A regional treatment of natural setting, distribution of the people, important occupations, and problems of future development in each of several regions.

Prereq: GEOG 110 or GESC 108.

GEOG 322 Geography of Africa.
3 hrs

A human ecological treatment of the African continent, involving resource identification and use as well as the varied nature of evolving human landscapes.

Prereq: GEOG 110 or GESC 108.

GEOG 323 Geography of Australia and Pacific Islands.
3 hrs

The natural setting, distribution of the people, important occupations, and problems of future development in each of several regions.

Prereq: GEOG 110 or GESC 108.

GEOG 326 History and Geography of Modern Asia.
3 hrs

An interdisciplinary geographical-historical study of modern Asia. The geography component emphasizes urban, demographic, occupational, and environmental trends and developments; the history component stresses major political and social developments and international relations. A requirement for majors in the Japanese program in language and international trade. Must be taken concurrently with HIST 326.

Prereq: GEOG 110 and either HIST 103 or HIST 106.

GEOG 328 Geography of Canada.
2 hrs

A detailed regional treatment of natural setting, distribution of the people, important occupations, and problems of future development in each part of Canada.

Prereq: GEOG 110 or GESC 108.

GEOG 332 Urban Geography.
3 hrs

A study of geographic principles related to distribution, function, structure, and regional setting of urban centers.

Prereq: GEOG 110.

GEOG 333 Settlement Geography. 3 hrs
Cultural, functional, and ecological factors underlying human settlement patterns.

Prereq: GEOG 110 or GESC 108 or GEOG 115.

GEOG 340 Medical Geography. 3 hrs
An inquiry into ecosystemic relationships between human health and conditions of the environment, both natural and cultural. The application of geographic concepts and techniques to interregional and intercultural health and health care problems.

Prereq: GEOG 110 or department permission.

GEOG 343 Geography of Sport. 3 hrs
A study of the geographic dimensions of sport, emphasizing such topics as origin, diffusion, and distribution of American sports and athletes, sports regions, and regional recruiting patterns.

GEOG 344 Recreation Geography. 3 hrs
A study of the relationship between human recreation activities and the environment. The environment as a recreation resource; recreation travel patterns; types of recreational facilities; impact of leisure activities upon the environment; recreational surveys and planning.
Recommended: GESC 114 or GEOG 215 or GEOG 115 or GEOG 360 or BIOL 224.

GEOG 345 Geography of Resorts. 2 hrs
Historical and systematic study of resorting and the resort as a functionally specialized settlement type; major resort areas of the world.
Prereq: GEOG 110 and GEOG 212 or department permission.

GEOG 348 Teaching Social Studies in Elementary Schools. 3 hrs
Survey of the social studies and evaluation of methods commonly used in the teaching of social studies in the elementary grades, with special emphasis on inquiry. Types of activities most effective in the presentation of materials and the use of visual aids are featured. A study of maps and globes, controversial issues, social values, environmental education, consumer education, global education, and ethnic groups is included. Not open to students on academic probation.
Prereq: One course in geography.

GEOG 360 Cultural Geography. 3 hrs
Human landscape patterns; emphasis upon the pro-

cesses concerned with their origins, locations, and persistence.

Prereq: GEOG 110 or department permission.

GEOG 361 Geography of Population. 3 hrs
An analytical study of population characteristics and growth, world patterns of fertility, mortality, and migration. Major attention is given to human population problems, including ecology, resources depletion, and impacts of urbanization.

Prereq: GEOG 110 or department permission.

GEOG 377/378/379 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GEOG 387 Cooperative Education. 3 hrs
Four to six months of full-time employment at a firm or agency, chosen for imparting a practical educational experience in geography. The program consists of two work experiences (GEOG 387/487) alternated with full-time University attendance. A written report is required at the end of each employment period. Graded on a credit/no credit basis.

Prereq: Completion of sophomore year, geography major. Admittance by application only.

GEOG 407 Housing and Residential Development. 3 hrs

A course for students interested in planning, administrative, and sociological aspects of housing, emphasizing the important role of housing in American society. Issues covered include housing programs, neighborhood development activities, construction and rehabilitation of residential units, and planning techniques and regulations for residential areas. Information is presented through lectures and readings; students will also work on a preliminary site layout of a housing development.
Prereq: GEOG 215.

GEOG 409 Professional Practice for Planners. 3 hrs
A senior-level course for urban and regional planning majors and minors, intended to be taken concurrently with GEOG 410. A seminar format is used to present a series of topics relating to professional practice in planning. Readings, case studies, simulations, and guest speakers are used to expose students to professional activities, including public hearings, dealing with com-

munity controversies, and professional-level communication techniques. Topics also deal with issues of professional ethics and certification.

Prereq: GEOG 215 and senior standing, or department permission.

GEOG 410 Site Planning Studio. 3 hrs

A studio course in urban planning, gives hands-on experience in developing a site plan. Using an actual site and client, a project will be taken through the various stages of plan development. Activities include program analysis, data collection, development of alternative solutions, and selection and presentation of a final site plan.

Prereq: GEOG 215 and GEOG 306.

GEOG 423 Principles of City and Regional Planning. 3 hrs

Theory and practice of planning in the urban and regional contexts, with emphasis on the United States. Planning process at local, state, and regional levels.

Prereq: GEOG 332 or department permission.

GEOG 431 Historical Geography of the United States. 3 hrs

The sequence of human occupancy of the United States from pre-European times to the present. Temporal and spatial evolution of cultural landscapes.

Prereq: GEOG 320 or department permission.

GEOG 432 Political Geography. 3 hrs

A study of the theory and concepts of political geography, using contemporary examples. Size, location, resources, boundaries, population, and level of technology within and outside the political framework.

Prereq: GEOG 110 or department permission.

GEOG 433 Political Geography of the United States. 3 hrs

A study of the variety and diversity of geographic forms of political behavior, organization, and structure in the United States.

Prereq: GEOG 110 or department permission.

GEOG 434 The Geopolitical World. 3 hrs

Views of political space by world and regional states; strategies and capabilities for employing national power to carry out geopolitical goals.

Prereq: GEOG 110 or department permission.

GEOG 435 History of Urban Form and Function. 3 hrs
Analysis of the history of urban planning in selected regions of the world and in North American cities. Discussions of the current urban situation, and various urban planning theories.

Prereq: GEOG 332 or department permission.

GEOG 436 Tourism and Socioeconomic Development. 3 hrs

For students majoring in travel and tourism. Socioeconomic impacts of tourism, national, and international development strategies.

Prereq: GEOG 110 and GEOG 112.

GEOG 438 Industrial Location and Development. 3 hrs

Basic principles of industrial development including industrial location theory, industrial site strategy, corporate facilities planning, and community industrial development programming. Strengths and weaknesses of Michigan for economic expansion. Case studies and practical applications.

Prereq: GEOG 300 or department permission.

GEOG 440 World Food Systems. 3 hrs

An analysis of world agricultural technologies and patterns. The interrelationships among ecosystems, economic development, and political decision making in a variety of world settings.

Prereq: GEOG 235 or department permission.

GEOG 441 Transportation Geography and Planning. 3 hrs

Historical evolution and worldwide distribution of major transportation systems. Technological and social implications will be considered, with particular attention to travel and tourism.

Prereq: GEOG 235 or department permission.

GEOG 444 Census Applications to Spatial Analysis. 3 hrs

Utilization of census materials as data resources and tools with application to spatial analysis and social service problems. Designed to prepare students to intelligently assemble, organize, analyze, and utilize US census data.

GEOG 445 Cultural Tourism Resources. 3 hrs

Survey of the relationships between cultural heritage resources and tourism. The tourism potentials of cultural centers and museums, archeological sites, folk

crafts and foodways, regional cultural mannerisms, ethnic landscapes, architecturally significant buildings, historic cities and towns, and other types of historic landscapes will be covered.

Prereq: GEOG 115 or 212 or GEOG 360 or GHPR 335.

GEOG 446 Heritage Interpretation and Tourism. 3 hrs
Evolution of the private sector tour-guiding and the public sector heritage interpretation concepts. Practice in the application of interpretive technique to cultural and natural tourism resources. Strategies for the integrative use of interpretive methods, including tours, demonstrations, talks, person-to-person experiences, publications, exhibits, signage, and audiovisuals.

Prereq: GEOG 445 or department permission.

GEOG 477/478/479 Special Topics. 1/2/3 hrs
An experimental course for subject matter not provided in other department offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are studied.

Prereq: Department permission.

GEOG 487 Cooperative Education. 3 hrs
Four to six months of full-time employment at a firm or agency chosen for imparting a practical educational experience in geography. The program consists of two work experiences (GEOG 387/487) alternated with full-time attendance at the University. A written report is required at the end of each employment period. Graded on a credit/no credit basis.

Prereq: GEOG 387. Completion of junior year. geography major. Admittance by application only.

GEOG 488/489/490 Internship. 4/5/6 hrs
Supervised internship in some aspect of geography that is of mutual interest to the qualified student and the place the student will work. Designed to integrate academic training with practical application. May be taken only once for credit.

Prereq: Department permission and placement.

GEOG 497/498/499 Independent Study. 1/2/3 hrs
Advanced study on individual basis in areas in which the department does not offer a formal course. Normally restricted to proficient students in the senior year under the general conditions prescribed for honors courses.

Prereq: Department permission.

HISTORIC PRESERVATION

GHPR 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GHPR 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GHPR 336 Historic Preservation. 3 hrs
Introduction to general concepts and goals of historic preservation. The built environment as a cultural heritage resource; objectives of cultural surveys and inventories; methods of preservation, conservation, planning, and interpretation.

Prereq: GEOG 115 recommended.

GHPR 377/378/379 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GHPR 387 Cooperative Education. 3 hrs
Four to six months of full-time employment at a firm or agency, chosen for imparting a practical educational experience in historic preservation, historic administration or heritage interpretation. The program consists of two work experiences (GHPR 387/487) alternated with full-time University attendance. A written report is required at the end of each employment period. Graded on a credit/no credit basis.

Prereq: Completion of sophomore year, historic preservation or selected minor. Admittance by application only.

GHPR 436 Historic Preservation Field Project. 3 hrs
Specially arranged supervised field experiences and application of theoretical viewpoints to field problems in historic preservation.

Prereq: Department permission.

GHPR 437 Historic Preservation Field Project. 6 hrs
Specially arranged supervised field experiences and application of theoretical viewpoints to field problems in historic preservation.

Prereq: Department permission.

GHPR 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GHPR 487 Cooperative Education. 3 hrs

Four to six months of full-time employment at a firm or agency, chosen for imparting a practical educational experience in historic preservation, historic administration, or heritage interpretation. The program consists of two work experiences (GHPR 387/487) alternated with full-time attendance at the University. A written report is required at the end of each employment period. Graded on a credit/no credit basis.

Prereq: Completion of junior year, historic preservation or related minor.

GHPR 488/489/490 Internship. 4/5/6 hrs

Supervised internship in some aspect of historic preservation, historic administration or heritage interpretation that is of mutual interest to the qualified student and the place the student will work. This experience is designed to integrate academic training with practical application. May be taken only once for credit.

Prereq: Department permission and placement.

GHPR 497/498/499 Independent Study. 1/2/3 hrs

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

Prereq: Department permission.

HISTORY AND PHILOSOPHY

Margot I. Duley
Department Head
 701 Pray-Harrold
 487-1018

HISTORY SECTION

Professors: Richard H. Abbott, Lee R. Boyer, George H. Cassar, Margot I. Duley, Della M. Flusche, Richard D. Goff, Daryl M. Hafter, Michael W. Homel, H. Roger King, Walter G. Moss, Lester B. Scherer, Janice J. Terry, Jiu-Hwa L. Upshur, JoEllen Vinyard, James C. Waltz

Associate Professors: Robert M. Citino, Roger D. Long

Assistant Professors: Ronald Delph, Mark Higbee, Pamela Graves, Philip Schmitz

Emeritus Professor: W. Donald Briggs

Instructor: Joseph Engwenyu

PHILOSOPHY SECTION

Professors: Michael T. Carlsen-Jones, Thomas H. Franks, Sidney Gendin, Howard F. Kamler, William A. Miller

Associate Professors: Margaret Crouch, Kate Mehuron, Michael Reed

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 postgraduate study in the humanities or social studies, or in such applied fields as law, religion, and business. Additional educational opportunities are offered regularly through overseas travel-study programs and other off-campus enrichment experiences.

The department also participates in offering honors courses, programs in public law and government, public administration, language and international trade, African American studies, technology and society, and women's studies.

Degrees:

Bachelor of Arts and Bachelor of Science

Programs of Study

Majors:

Area studies (Africa, Asia-Far East, Latin America, Middle East and North Africa, Soviet Union)

History

History for elementary education

History for secondary education

Philosophy

Social science

Social science for secondary education (major-minor combined)

Minors:

Area studies (Africa, Asia-Far East, Latin America, Middle East and North Africa, Soviet Union)

History

History for elementary education

History for secondary, K-12, and special education—secondary

Philosophy

Religious studies

Social science group minor (not for teacher education)

Graduate programs under the auspices of the department are the Master of Arts in history, the MA program in social science, the MA program in liberal studies with a concentration in social science and American culture, and the Graduate Certificate in state and local history. See the Graduate Catalog for program descriptions.

Advising

Advising is available in the History and Philosophy department for all areas of study listed above, with the exception of programs in elementary education which are the responsibility of the Teacher Education department. In the History and Philosophy department, advising appointments should be made through the department secretary (487-1018).

History, social science, area studies: Richard Goff

History, social science, area studies, religion: Lester Scherer

Philosophy: to be announced

ACADEMIC MAJORS (HISTORY)

AREA STUDIES MAJORS

The interdisciplinary area studies majors help students understand the background and specific problems of a world cultural or geopolitical area: Africa, Asia-Far East, Latin America, Middle East and North Africa, or the Soviet Union. Courses drawn from several departments supply information on the area's economy, geography, history, politics, society, and general cultural background. The program also provides a foundation for graduate work with an area of specialization or preparation for careers in government service or private business. Students who enter the program choose either a

30 semester hour major or a 20 semester hour minor in area studies.

Each of the above majors and minors list required and/or elective courses. Students also can utilize the individual directed (independent) study courses available through some departments for one, two, or three semester hours of credit to be applied as elective credit in the major area. Majors are required to minor in one of the following: anthropology (except Soviet Union), economics, geography, history, political science, or sociology; except that Latin American majors may instead elect a minor in Spanish culture, Spanish language, or Spanish literature.

AFRICA

	Sem hours
Area studies major: Africa	30
1. Required basic courses	9
ECON 201 Principles of Economics I	3
ECON 202 Principles of Economics II	3
GEOG 110 World Regions	3
2. Required area courses	15
ANTH 236 Peoples and Cultures of Africa	3
ECON 385 Economic Development	3
GEOG 322 Geography of Africa	3
HIST 347 Sub-Saharan Africa to 1885	3
PLSC 372 Government and Politics of Sub-Saharan Africa	3
3. Area electives	6
<i>Choose six credits from the following:</i>	
ANTH 135 Introduction to Cultural Anthropology, ANTH/SOCL 336 Social and Cultural Change, ANTH 339 Economic Anthropology	
ECON 370 Comparative Economic Systems	
FA 222 African and African American Art	
GEOG 240 Geographic Perspectives on Third World Development	
GEOG 518 Problems of Sub-Saharan Africa	
HIST 342 North Africa, 1798 to Present, HIST 348 Twentieth Century Africa	

ASIA-FAR EAST

	Sem hours
Area studies major: Asia-Far East	30
1. Required basic courses	9
ECON 201 Principles of Economics I	3
ECON 202 Principles of Economics II	3
GEOG 110 World Regions	3
2. Required area courses	14

ECON 385 Economic Development	3
GEOG 318 Geography of Asia	3
*HIST 441 The Far East to 1800 or	
*HIST 442 Modern China	3
HIST 555 Studies in Far Eastern History	2
PLSC 374 Asian Political Systems	3

3. Area electives

Choose seven credits from the following:

ANTH 135 Introduction to Cultural Anthropology, ANTH/SOCL 336 Social and Cultural Change	
FA 421 History of Oriental Art	
GEOG 240 Geographic Perspectives on Third World Development	
GEOG/HIST 326 History and Geography of Modern Asia	
HIST 301 The Religions of South and East Asia, *HIST 441 The Far East to 1800, or *HIST 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
ECON 201 Principles of Economics I	3
ECON 202 Principles of Economics II	3
GEOG 110 World Regions	3
2. Required area courses	15
*ANTH 233 Peoples and Cultures of Mexico ...	3
ECON 385 Economic Development	3
GEOG 321 Geography of Latin America	3
*HIST 355 Latin America: Colonial Period, *HIST 356 Latin America: National Period, or *HIST 457 History of Mexico	3
PLSC 367 Contemporary Political Systems of Latin America	3
3. Area electives	6

Choose six credits from the following:

ANTH 135 Introduction to Cultural Anthropology, *ANTH 233 Peoples and Cultures of Mexico, ANTH/SOCL 335 The Study of Nonprimitive Societies, ANTH/SOCL 336 Social and Cultural Change	
ECON 370 Comparative Economic Systems	
GEOG 240 Geographic Perspectives on Third	

World Development, GEOG/HIST 317 History and Geography of Spanish America, GEOG 512 Middle America and the Caribbean World, GEOG 513 South American Lands

*HIST 355 Latin America: Colonial Period, *HIST 356 Latin America: National Period, *HIST 457 History of Mexico, HIST 560 Studies in Latin American History

SPNH 302 The Cultures of Spanish America, SPNH 351 Survey of Spanish American Literature, SPNH 352 Survey of Spanish American Literature, SPNH 445 Spanish-American Prose, SPNH 454 Modernism in Spanish America

*One of these courses must be taken to fulfill area requirements. The others may be taken as area electives.

MIDDLE EAST AND NORTH AFRICA

Sem hours

Area studies major: Middle East and North Africa
30

- 1. Required basic courses** 9
ECON 201 Principles of Economics I 3
ECON 202 Principles of Economics II 3
GEOG 110 World Regions 3
- 2. Required area courses** 9
ECON 385 Economic Development 3
*HIST 341 The Middle East, 1798 to Present or
*HIST 342 North Africa, 1798 to Present 3
PLSC 371 Government and Politics of the Middle East 3
- 3. Area electives** 12

Choose 12 credits from the following:

ANTH 135 Introduction to Cultural Anthropology,
ANTH 236 Peoples and Cultures of Africa,
ANTH/SOCL 336 Social and Cultural Change
ECON 585 Economic Growth and Development
GEOG 240 Geographic Perspectives on Third World Development, GEOG 322 Geography of Africa
HIST 302 Near Eastern and Western Religions,
*HIST 341 The Middle East, 1798 to Present,
*HIST 342 North Africa, 1798 to Present, HIST 543 Nationalism and Modernization in the Middle East and North Africa
LITR 351 World Mythology

*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
ECON 201 Principles of Economics I 3
ECON 202 Principles of Economics II 3
GEOG 110 World Regions 3
- 2. Required area courses** 12
GEOG 314 Geography of Russia and Neighboring States 3
HIST 344 Russia since 1855 3
HIST 547 Nineteenth Century Ideological Background of the Russian Revolution 3
PLSC 361 Soviet Succession Politics 3
- 3. Area electives** 6

Choose nine credits from the following:

ECON 370 Comparative Economic Systems
GEOG/HIST 316 History and Geography of Modern Europe
GEOG 516 Problems in Soviet Geography
HIST 332 Modern Europe 1815-1919, HIST 333 Europe since 1919, HIST 343 Russia to 1855, HIST 550 Twentieth Century Russia
PLSC 462 Russian Foreign Relations

HISTORY MAJOR

Sem hours

History major 30

- 1. Required courses** 9
HIST 101 Western Civilization to 1648; or HIST 102 Western Civilization, 1648 to World War I; or HIST 103 Twentieth Century Civilization 3
HIST 123 The United States to 1877 or HIST 124 The United States, 1877 to the Present 3
HIST 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 (includes HIST 303)
B. Europe
C. Africa, Asia, History of Religions (HIST 301, 302), Latin America

- 3. Unrestricted electives** 6
HIST 100 The Comparative Study of Religion and HIST 481 The Teaching of Social Studies may not be counted towards the major.

SOCIAL SCIENCE MAJOR

The social science major requires a total of 36 semester hours, including electives, chosen from history, anthropology, sociology, economics, geography, and political science.

The major must include at least eight semester hours each in three of the areas of concentration 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
HIST 101 Western Civilization to 1648; HIST 102 Western Civilization, 1648 to World War I; HIST 103 Twentieth Century Civilization; HIST 106 Asian and African Civilizations	
c. One world history course at the 300-level or above	2-3
2. United States history	8-9
a. HIST 123 The United States to 1877	3
b. HIST 124 The United States, 1877 to the Present	3
c. One United States or Canadian history course at the 300-level or above	2-3
3. Anthropology	8-9
a. ANTH 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. SOCL 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. ECON 201 Principles of Economics I and ECON 202 Principles of Economics II	6
b. An economics course at the 300-level or above ..	2-3
6. Geography	8-9
a. GEOG 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

PLSC 112 American Government or PLSC 113
American Government Honors

b. A political science course at the 300-level or
above

c. Any other political science course

Electives

Choose courses from any of the above fields to
complete the required 36 hours, except HIST
100 and HIST 481.

ACADEMIC MINORS (HISTORY)

AREA STUDIES MINOR

	Sem hours
Area studies minor: Africa	20
1. Required area courses (as listed for the major) ...	15
2. Area electives (as listed for the major)	5

	Sem hours
Area studies minor: Asia-Far East	20
1. Required area courses (as listed for the major) ...	14
2. Area electives (as listed for the major)	6

	Sem hours
Area studies minor: Latin America	20
1. Required area courses (as listed for the major) ...	15
2. Area electives (as listed for the major)	5

	Sem hours
Area studies minor: Middle East and North Africa .	20
1. Required area courses (as listed for the major) ...	9
2. Area electives (as listed for the major)	11

	Sem hours
Area studies minor: Soviet Union	20
1. Required area courses (as listed for the major) ...	12
2. Area electives (as listed for the major)	8

HISTORY MINOR

	Sem hours
Minor in history	20-21
1. Required courses	6
HIST 101 Western Civilization to 1648; HIST 102 Western Civilization, 1648 to World War I; or HIST 103 Twentieth Century Civilization ...	3
HIST 123 The United States to 1877 or HIST 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.

HIST 100 The Comparative Study of Religion and HIST 481 The Teaching of Social Studies may not be counted toward the minor.

RELIGIOUS STUDIES MINOR

	Sem hours
Minor in religious studies	20-21
1. Required course	3
HIST 100 The Comparative Study of Religion . 3	
2. Restricted electives*	12
<i>Choose four courses from the following:</i>	
PHIL 215 Philosophy of Religion	
ANTH 338 Anthropology of Religion	
HIST 301 The Religions of South and East Asia,	
HIST 302 Near Eastern and Western Religions,	
HIST 303 History of American Religion	
LITR 251 The Bible as Literature	
PSY 225 Psychology of Religion	
SOCL 320 Sociology of Religion	
3. Electives*	5-6

Choose two additional courses from the restricted electives list or from the following:

- PHIL 220 Ethics, PHIL 260 Existentialism
- ANTH 135 Introduction to Cultural Anthropology
- CLAS 301 Mythology
- FA 107 Art History Survey I, FA 340 History of Classical Art, FA 341 History of Renaissance Art
- HIST 327 Europe in the Making, 500-1300; HIST 330 Europe in the Renaissance and Reformation
- LITR 351 World Mythology, LITR 409 The Development of American Literature, LITR 414 English Renaissance Prose and Poetry 1500-1660

(No more than three of the seven courses in the minor may be chosen from a single area—fine arts, literature, and history.)

**Certain independent study courses and special topics courses may be counted as restricted electives or electives with the approval of the advising coordinator of religious studies.*

SOCIAL SCIENCE GROUP MINOR (NON-TEACHING)

The social science minor requires a total of 24 semester hours 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.

Of the 24 semester hours, at least 8 must be at the 300-level or above.

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
<i>Areas of concentration (choose two)</i>	
1. World history	8-9
a, b. Choose two of the following:	6
HIST 101 Western Civilization to 1648; HIST 102 Western Civilization, 1648 to World War I; HIST 103 Twentieth Century Civilization; HIST 106 Asian and African Civilizations	
c. One world history course at the 300-level or above	2-3
2. United States history	8-9
a. HIST 123 The United States to 1877	3
b. HIST 124 The United States, 1877 to the Present	3
c. One United States or Canadian history course at the 300-level or above	2-3
3. Anthropology	8-9
a. ANTH 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. SOCL 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. ECON 201 Principles of Economics I and ECON 202 Principles of Economics II	6
b. An economics course at the 300-level or above .. 2-3	
6. Geography	8-9
a. GEOG 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
- PLSC 112 American Government or PLSC 113
American Government Honors
- b. A political science course at the 300-level or
above 3
- c. Any other political science course 2-3

Electives

Choose courses from any of the above fields to complete the required 36 hours, except HIST 100 and HIST 481.

TEACHING MAJORS**HISTORY MAJOR****SECONDARY TEACHER CERTIFICATION**

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in history, certification code "CC" and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), political science ("CD"), psychology ("CE"), sociology ("CF"), or social science ("CX"). The certification test covering this field is #09, "History."

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
- I-B-2. *Basic Studies requirement. See inside back cover*
- I-B-3. *Basic Studies requirement. See inside back cover*
- I-B-4. *Basic Studies requirement. See inside back cover*
- I-B-5. *Basic Studies requirement. See inside back cover*
- II-B-1. *Basic Studies requirement. See inside back cover*
- II-B-2. *Basic Studies requirement. See inside back cover*
- II-B-3. *Basic Studies requirement. See inside back cover*
- III-B-1. *Basic Studies requirement. See inside back cover*
- III-B-2. HIST 102 Western Civilization, 1648 to World War I (3)*
- III-B-3. *One of:*
- GEOG 107 Introduction to Geography (3)
- GEOG 110 World Regions (3)
- III-B-4. HIST 103 Twentieth Century Civilization (3)*
- IV-B-1. *Basic Studies requirement. See inside back cover*
- IV-B-2. *Basic Studies requirement. See inside back cover*
- IV-B-3. *Basic Studies requirement. See inside back cover*
- IV-B-4. *Basic Studies requirement. See inside back cover*
- Physical education, military science, or equivalent (2)**

Credit hours in Basic Studies: 52

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

One of:

- HIST 123 The United States to 1877 (3)
- HIST 124 The United States, 1877 to the Present (3)
- HIST 300 Historical Research and Writing (3)
- Choose six hours of history courses 300-level or above in two of the following areas and three hours in the remaining area:
- United States and Canada
- Europe
- Latin America, Africa, Asia, History of Religions (HIST 301, 302)

One further course in history; not including HIST 100 or HIST 481. Major should include at least eight hours of US history, including HIST 123 or HIST 124 or both.

Minor

A minor in economics, geography, political science, psychology, or sociology.

Subtotal, Major and minor: 50

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
- EDTC 300 Introduction to Computer Applications in Education (1)
- SPGN 300 Exceptional Children in the Regular Classroom (1)
- EDPS 322 Human Development and Learning (4)
- The following courses require formal admission to the teacher education program:**
- CURR 305 Curriculum and Methods: Secondary (3)
- RDNG 311 Teaching Reading in the Secondary School (3)
- SOFD 328 Schools in a Multicultural Society (3)
- EDPS 340 Introduction to Assessment and Evaluation (3)
- EDMD 345 Media for the Classroom Teacher (1)
- HIST 481 The Teaching of Social Studies (3)
- EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: 133

*Course applicable to major.

†Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

HISTORY MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in history, certification code "CC." The certification test covering this field is #09, "History."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary history program, plus the III-B-2, III-B-3, and III-B-4 in that program's Basic Studies requirements. Approved minors are geography, political science, sociology, and social science group for elementary teachers.

30 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

SOCIAL SCIENCE CURRICULUM

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in social science, certification code "CX," and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), history ("CC"), political science ("CD"), psychology ("CE"), or sociology ("CF"). The certification test covering this field is #06, "Social Studies."

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 - I-B-2. *Basic Studies requirement. See inside back cover*
 - I-B-3. *Basic Studies requirement. See inside back cover*
 - I-B-4. SOCL 250 Social Statistics I (3)^a
 - I-B-5. *Basic Studies requirement. See inside back cover*
 - II-B-1. *Basic Studies requirement. See inside back cover.*
(GESC 108 Earth Science recommended)
 - II-B-2. *Basic Studies requirement. See inside back cover*
 - II-B-3. *Basic Studies requirement. See inside back cover*
 - III-B-1. *Basic Studies requirement. See inside back cover^a*
 - III-B-2. HIST 102 Western Civilization, 1648 to World War I (3)^a
 - III-B-3. SOCL 105 Introductory Sociology (3)^a
 - III-B-4. HIST 103 Twentieth Century Civilization (3)^a
 - IV-B-1. *Basic Studies requirement. See inside back cover*
 - IV-B-2. *Basic Studies requirement. See inside back cover*
 - IV-B-3. *Basic Studies requirement. See inside back cover*
 - IV-B-4. *Basic Studies requirement. See inside back cover*
- Physical education, military science, or equivalent (2)**

Credit hours in Basic Studies:..... 51
(including 15 hrs required in the major/minor)

Teaching Major/Minor

See note "a" above for courses applicable to both Basic Studies and the major/minor.

Required courses

- ECON 201 Principles of Economics I (3)
- ECON 202 Principles of Economics II (3)
- GEOG 107 Introduction to Geography (3)
- GEOG 110 World Regions (3)
- HIST 106 Asian and African Civilizations (3)
- HIST 123 The United States to 1877 (3)
- HIST 124 The United States, 1877 to the Present (3)
- PLSC 301 The American Legal System (3)
- SOCL/ANTH 214 Racial and Cultural Minorities or SOCL 344 Sociology of Sex Roles (3)
- HIST 300 Historical Research and Writing or any other 300-level course designated as writing intensive by the History and Philosophy department (3)

Restricted electives

Choose three courses, to include at least one 300-level course, from the following:

- AAS 101 Introduction to African American Studies (3)
- ANTH 205 Minority Women in the United States (3)
- ANTH 233 Peoples and Cultures of Mexico (3)
- ANTH 236 Peoples and Cultures of Africa (3)
- ANTH 237 Indians of North America (3)
- ANTH 245 Culture of Japan (3)
- ANTH 355 Anthropology of Women (3)
- ECON 321 Minority Workers in the Labor Market (3)
- ECON 328 Economics of Women (3)
- GEOG 313 Geography of Michigan (2)
- GEOG 313 Geography of The United States and Canada (3)
- HIST 305 Indians of the United States (3)
- HIST 315 History of Black Americans (3)
- HIST 336 History of Women in the United States and Great Britain, 1800 to the Present (3)
- HIST 341 The Middle East, 1798 to Present (3)
- HIST 342 North Africa, 1798 to Present (3)
- HIST 348 Twentieth Century Africa (3)
- HIST 356 Latin America: National Period (3)
- HIST 375 Modern India (3)
- PLSC 212 International Politics (3)

SOCL 205 Minority Women in the United States (3)

*WMST 200 Introduction to Women's Studies (3)

Subtotal, Major and Minor:..... 38-39
(plus 15 hrs from the Basic Studies list)

Professional Studies

100 clock hours of approved prestudent teaching field experiences (0)

EDTC 300 Introduction to Computer Applications in Education (1)

SPGN 300 Exceptional Children in the Regular Classroom (1)

EDPS 322 Human Development and Learning (4)

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

CURR 305 Curriculum and Methods: Secondary (3)

RDNG 311 Teaching Reading in the Secondary School (3)

SOFD 328 Schools in a Multicultural Society (3)

EDPS 340 Introduction to Assessment and Evaluation (3)

EDMD 345 Media for the Classroom Teacher (1)

HIST 481 The Teaching of Social Studies (3)

EDUC 492 Student Teaching (12)

Credit hours in Professional Studies:..... 34

Total credit hours required:..... 123

**Course required for and applicable to major/minor.*

TEACHING MINORS

HISTORY MINOR

ELEMENTARY, SECONDARY, K-12, SPECIAL EDUCATION-ELEMENTARY, AND SPECIAL EDUCATION-SECONDARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in history, certification code "CC." The certification test covering this field is #09, "History."

One of:

*HIST 101 Western Civilization to 1648 (3)

*HIST 102 Western Civilization, 1648 to World War I (3)

*HIST 103 Twentieth Century Civilization (3)

One of:

*HIST 123 The United States to 1877 (3)

*HIST 124 The United States, 1877 to the Present (3)

Choose six hours of courses at the 300-level or above in one of the following areas and three hours in each of the other two areas:

United States and Canada

Europe

Africa, Asia, History of Religions (HIST 301, 302), Latin America

Two hours of unrestricted elective(s)

No more than three 100-level courses may be counted toward the minor. HIST 100 and HIST 481 may not be counted. Secondary education certification requires at least eight hours of United States history.

20 hours (including hours satisfied in Basic Studies)

* May be satisfied in Basic Studies requirements.

HISTORY COURSES BASIC COURSES

HIST 100 The Comparative Study of Religion. 3 hrs
An introduction to the systematic study of religious experience and expression; organized around representative motifs, phenomena, and institutions, and illustrated with relevant examples from the various historical religious traditions. (Satisfies basic studies philosophy/religion requirement. Does not satisfy basic studies history requirement. Does not count for social science major or minor, or history major or minor.)

HIST 101 Western Civilization to 1648. 3 hrs
A topical survey of western civilization from its Greco-Roman origins to the 17th century. Cultural development and institutional growth are emphasized. Greco-Roman contributions, the Judeo-Christian heritage, Byzantine and Islamic cultures, European expansion and militarism, the Renaissance, and the Reformation are among the major topics considered.

HIST 102 Western Civilization, 1648 to World War I. 3 hrs

A topical survey of western civilization from the 17th century to World War I. Cultural development and institutional growth are emphasized. The Baroque era, Enlightenment, political and industrial revolutions, nationalism, and imperialism are among major topics considered.

HIST 103 Twentieth Century Civilization. 3 hrs

An examination of the international developments of the 20th century, with particular emphasis on the interactions between the West and other world cultures.

HIST 106 Asian and African Civilizations. 3 hrs

The civilizations of the Moslem world, Africa, India, and East Asia in historical perspective. Philosophical outlook, cultural development, and technological advances are emphasized with attention also being given to social and economic changes in the period since 1500.

HIST 300 Historical Research and Writing. 3 hrs

Practice and development of the historian's skills by means of frequent written student exercises. Students will examine and criticize their own and one another's work. Required of history majors.

UNITED STATES AND CANADA**HIST/LITR 107 Society in Crisis: 1848 and 1968. 6 hrs**

A comparison and contrast of the social crises that culminated in two revolutionary aftermaths (1848 in Europe and 1968 in the United States and Europe), focusing on alienation, women, the rise of nationalism and ethnic consciousness, and the revolutionary outlook and its ultimate frustration. Team taught by members of the History and English Departments. *These courses must be taken concurrently and satisfy one history requirement and one literature requirement. Note: See Honors Humanities Courses, page 46.*

HIST 123 The United States to 1877. 3 hrs

A study of United States history through the Reconstruction following the Civil War.

HIST 124 The United States, 1877 to the Present. 3 hrs

A study of United States history from the end of Reconstruction to the present.

HIST 152 From the Gay Nineties to the Crash. 3 hrs

A series of biographical portraits providing an intensive look at the profound cultural changes of the era 1890 to 1930, in both Europe and the United States. Team taught by members of the History and English Departments. *This course satisfies one history or one literature requirement. Note: See Honors Humanities Courses, page 46.*

HIST 303 History of American Religion. 3 hrs

A survey of religious institutions and ideas in relation to American culture from colonial times to the present. *Prereq: One course in American history.*

HIST 305 Indians of the United States. 3 hrs

An ethnohistory of Indian peoples and nations of the United States from their origins to the present. *Prereq: One course in history or department permission.*

HIST 313 Michigan History. 3 hrs

A survey of major economic, social, and political developments in Michigan from prehistoric times to the present. Emphasizes the period prior to the 20th century.

HIST 315 History of Black Americans. 3 hrs

A history of Americans of African ancestry from colonial times to the present. Emphasizes slavery, the post-Civil War South, northward migration and urban settlement, and philosophies of racial progress. *Prereq: One course in American history.*

HIST 325 The Family in History. 3 hrs

A history of the family in a selected geographical area (for example, the United States or Europe), exploring the interaction between the family and broader cultural and economic forces over time, and examining in historical perspective the various stages of life, such as childhood, adolescence, courtship, marriage, and old age.

HIST 336 History of Women in the United States and Great Britain, 1800 to the Present. 3 hrs

A comparative study of the history of women in the United States and Great Britain. Examines the ideology of the nature and role of women, the history of women's lives, the impact of industrialization, and the feminist movements of the 19th and 20th centuries. *Prereq: One course in history or department permission.*

HIST 350 History of Canada. 3 hrs

A survey of the development of Canada from prehistoric times to the present with an emphasis on social and economic topics.

HIST 362 United States Urban History. 3 hrs

The development of United States cities from the commercial town of colonial times to the industrial metropolis of today. Emphasizes urban economic activities, boss and reform politics, immigrant and racial minorities, and city and suburban expansion. *Prereq: Junior standing or HIST 123 or HIST 124.*

HIST 364 United States Military History. 3 hrs

A study of the origins and developments of military institutions, traditions, and practices in the United States from the colonial period to the present, with attention given to the interrelationship between military history and political, social, and economic conditions in the United States and the world. A requirement for cadets in ROTC programs.

Prereq: One course in history.

HIST 365 The Old South. 3 hrs

The South from the colonial foundations to the formation of the Confederacy in 1861.

Prereq: HIST 123 and junior standing.

HIST 380 American Colonies to Independence. 3 hrs

A study of the European prelude to colonization; the founding of the colonies, and their political, economic, and social development; the deterioration of the relationship between Great Britain and the American colonies after 1763.

Prereq: HIST 123 or equivalent.

HIST 383 The Age of Jackson. 3 hrs

A study of the United States from the end of the War of 1812 through the Mexican War, with the major emphasis on the transportation revolution, sectionalism, the second American party system, Manifest Destiny, and the social movements of the era.

HIST 385 Civil War and Reconstruction. 3 hrs

A study of the United States from the Mexican War through the era of Reconstruction. Examines the sectional tensions leading to the Civil War; the political, social, military, and economic aspects of the war; the problems of reconstruction and the rise of the solid South.

Prereq: Junior standing.

HIST 414 The Automobile Industry and Modern America. 3 hrs

An examination of the European and American origins of the automobile industry, the emergence of Michigan's dominant position in the industry, and the social, economic, and general cultural influence that the automobile and the industry have exerted on 20th-century America.

HIST 424 The United States from 1917 to 1941. 3 hrs

A study of United States history from World War I through US 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: HIST 124.

HIST 425 The United States from 1941 to 1963. 3 hrs

A study of United States history from entry into World War II to the death of President John F. Kennedy. The course covers national government and politics, foreign policy, and social history of the American people. World War II diplomacy and home front; Cold War; Truman, Eisenhower, and Kennedy administrations; Red Scare; civil rights; suburbanization; mass culture; and other postwar social and cultural trends receive special attention.

Prereq: HIST 124.

HIST 426 The United States from 1963 to the Present. 3 hrs

A study of United States history from the presidency of Lyndon B. Johnson to the present. The course covers national government and politics, foreign policy, and social history of the American people. The Great Society; Vietnam War; protest movements of the 1960s; Nixon administration and Watergate; economic, social, and cultural trends of the 1970s and 1980s; the conservative resurgence; and the Reagan Revolution and its aftermath are among topics that receive special attention.

Prereq: HIST 124.

HIST 461 Foreign Relations of the United States. 3 hrs

A survey of the foreign relations of the United States emphasizing the diplomacy of the period after the Civil War.

HIST 463 United States Labor History. 3 hrs

A history of workers in the United States from colonial times to the present with special emphasis on developments occurring between 1820 and 1940. Considers working-class life and culture, labor unions, government-labor relations, and the impact of economic change.

Prereq: One course in history.

HIST 464 The Old West, 1540-1890. 3 hrs

A study of Spanish settlement, the fur trade, great explorations, settlement and expansion, transportation and mining frontiers, the cattle industry and cowboy culture, and the impact on the Indians.

Prereq: One course in history.

HIST 465 United States Constitutional History. 3 hrs
A history of the development of the American Constitution from English and American colonial origins to the present.

Prereq: HIST 123 or HIST 124 or department permission.

HIST 468 The American Mind to the Civil War. 3 hrs
Ideas and culture in America during the 17th, 18th, and early 19th centuries. Includes such subjects as Puritanism, the Enlightenment, and Romanticism/Transcendentalism, together with their general cultural implications.

Prereq: HIST 123 and junior standing.

HIST 469 The American Mind since the Civil War.
3 hrs

Ideas and culture in America during the late 19th and 20th centuries. Includes such subjects as pragmatism, social Darwinism, nationalism and internationalism, and liberal and conservative thought together with their general cultural implications.

Prereq: One course in history and junior standing.

HIST 482 The Age of Washington and Jefferson. 3 hrs
The formation of the new nation during the War for Independence, the creation of the Constitution, the Federalist era, the Republican administration through Madison's term in office, the War of 1812, and postwar diplomacy.

Prereq: HIST 123 or equivalent.

HIST 486 The United States as an Emerging World Power. 3 hrs

The passing of the frontier after the Civil War, the Industrial Revolution, the big city and its problems, Populist revolt and Progressive reform, Imperialism, and World War I.

Prereq: HIST 123 or HIST 124 or equivalent.

EUROPEAN HISTORY

HIST 104 Quest for Power: Famous Figures in History. 3 hrs

An examination of the lives and times of selected leaders from the ancient and modern worlds. Examples of figures to be covered are Pericles, Nero, Napoleon I, and Adolf Hitler. Major literary monuments of the periods will be examined as well. Team taught by a member of the History Department and a Classicist. *This course satisfies one literature or one history requirement. Note: See Honors Humanities Courses, page 46.*

HIST 127 The Splendid Centuries of Austria. 3 hrs
A survey of the art, music, and literature of Austria from the 17th to early 20th century in its intellectual, political, and social setting. Baroque and Rococo art, and Classical and Romantic music and literature are considered. Extensive use is made of recordings and slides. Team taught by a member of one of the fine arts Departments and a member of the History Department. *This course satisfies one fine arts or one history requirement. Note: See Honors Humanities Courses, page 46.*

HIST 128 Russia in the Age of Tolstoy and Dostoevsky.
3 hrs

An introduction to the rise of the revolutionary movement in Russia in the half century preceding World War I due to developments in peasant, urban, and aristocratic life. Students examine selected works of literature and some art and music. Team taught by members of the English and History Departments. *This course satisfies one literature or one history requirement. Note: See Honors Humanities Courses, page 46.*

HIST 151 Reason and Revolution. 3 hrs
An examination of the transition in political history, philosophy, art, literature, and music from Puritan England and Louis XIV's France to Napoleon. Team taught by members of the Art and History departments. *This course satisfies one art or one history requirement. Note: See Honors Humanities Courses, page 46.*

HIST 290 Introduction to the History of Technology.
3 hrs

An introduction to western technology from medieval times to the present. Examines the process of technical change, the nature of technological systems, the diffusion of technological improvements, and the role of technology in broader historical movements.

HIST 309 France to 1789. 3 hrs
A study of the main currents in early modern times with special emphasis on the impact of the Protestant Revolt and the Renaissance on French society, the rise of absolutism, and the political and intellectual background of the French Revolution.

HIST 310 France since 1789. 3 hrs
An examination of the major trends in French history since the start of the Revolution. Stresses cultural, social, economic, intellectual, and political trends, and treats the ways in which France has been a seedbed for new movements in Europe.
Prereq: HIST 102 or HIST 332.

HIST 316 History and Geography of Modern Europe.**3 hrs**

An interdisciplinary and geographical-historical study of modern Europe with the geographical component emphasizing information of an urban, demographic, occupational, and environmental nature, and with the history component stressing major political, social, and cultural developments. A requirement for majors in language and international trade. Must be taken concurrently with GEOG 316.

Prereq: GEOG 110 and either HIST 101, HIST 102, or HIST 103.

HIST 323 Greek History.**3 hrs**

Examines the Greeks' achievements from the Bronze Age to the Roman conquest, focusing on the period after 800 B.C. Emphasizes political, social, and economic developments; also considers literary, intellectual, and artistic accomplishments.

Prereq: One course in history or department permission.

HIST 324 Roman History.**3 hrs**

Examines the Romans' achievements from earliest times to the German conquest, focusing on the period 500 BC-AD 500. Emphasizes political, social, and economic developments; also considers literary, intellectual, and artistic accomplishments.

Prereq: One course in history or department permission.

HIST 327 Europe in the Making, 500-1300.**3 hrs**

Examines the combination of classical, Christian, and barbarian elements to form a dynamic civilization in a previously 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.

HIST 330 Europe in the Renaissance and Reformation.**3 hrs**

A survey of the political, cultural, religious, and economic history of Europe from the Italian Renaissance to the Peace of Westphalia.

HIST 332 Modern Europe 1815-1919.**3 hrs**

A study of the development and conflicts of the national states of Europe from the Congress of Vienna to the Treaty of Versailles.

HIST 333 Europe since 1919.**3 hrs**

A history of Europe since Versailles with emphasis upon the Communist, Fascist, and Nazi revolutions and their

impact on the world, the origins and outbreak of the Second World War and the post-1945 era.

Prereq: Junior standing or department permission.

HIST 335 History of Women in Europe.**3 hrs**

A study of the history of women and views of women in western society from the 18th century to the present. Emphasizes the struggles, setbacks, and achievements of the women's movements in the context of modern European history.

Prereq: One course in history.

HIST 338 German History since 1815.**3 hrs**

Considers unification and Empire, World War I, the Weimar Republic, the rise of National Socialism, World War II, and postwar Germany.

Prereq: Junior or department permission.

HIST 343 Russia to 1855.**3 hrs**

A survey of political, economic, and cultural trends in the history of Russia from Rurik to the death of Tsar Nicholas I, with special emphasis on the growth of tsarist absolutism.

Prereq: Junior standing or department permission.

HIST 344 Russia since 1855.**3 hrs**

A survey of the political, economic, and diplomatic history of imperial Russia and the Soviet Union from the great reforms of the 1860s to the present.

Prereq: Junior standing or department permission.

HIST 411 England to 1689.**3 hrs**

The general history of England to the Revolution of 1688, with emphasis on its cultural and constitutional contributions to the modern world.

HIST 412 England 1689 to Present.**3 hrs**

England in the period of imperial expansion, its industrial and social revolutions and its transition into a modern socially-minded nation. A continuation of HIST 411.

HIST 427 Europe from Absolutism to Revolution, 1648-1815.**3 hrs**

A political, social, and cultural study of Europe from the Peace of Westphalia through the Napoleonic Era. Emphasizes the development of absolutism in France, constitutionalism in England, the Enlightenment, and the French Revolution.

HIST 435 Italy since 1815. 3 hrs

The political, social, and economic development of Italy from the Congress of Vienna to the present. Emphasizes the unification movement, domestic and foreign problems of the 19th and 20th centuries, World War I and its effects, Mussolini and Fascism, World War II, and the new liberal republic.

Prereq: Junior standing or department permission.

HIST 456 Europe since 1945. 3 hrs

Study of the political, economic, social, and diplomatic history of Europe since the end of World War II, with emphasis on the Cold War, economic recovery and decline, the European integration movement, solidarity and dissension within the communist bloc, stability and unrest within the democracies, and the impact of US-Soviet detente.

Prereq: Junior standing or department permission.

HIST 471 Social and Intellectual History of Nineteenth Century Europe. 3 hrs

A detailed study of the original concepts of Europe's 19th-century intellectuals whose works were of major influence in the 19th and 20th centuries.

Prereq: Junior standing or department permission.

**AFRICA, ASIA, HISTORY OF RELIGIONS,
LATIN AMERICA**

HIST 301 The Religions of South and East Asia. 3 hrs

A survey of the religious traditions of India, Ceylon, Burma, Thailand, China, Tibet, and Japan, showing the interaction of folk religion with the developing concepts and institutions of Hinduism, Buddhism, Confucianism, Taoism, and Shinto.

Prereq: HIST 100 or HIST 106.

HIST 302 Near Eastern and Western Religions. 3 hrs

A survey of the historical evolution of the several religions originating in western Asia, concentrating especially on the development and interaction of Judaism, Christianity, and Islam.

Prereq: HIST 100 or HIST 101.

HIST 317 History and Geography of Spanish America. 3 hrs

An interdisciplinary geographical-historical study of Spanish America, emphasizing political, cultural, and socioeconomic forces from the conquest to the present. 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 GEOG 317.

Prereq: GEOG 110 and either HIST 101, HIST 102, or HIST 103.

HIST 326 History and Geography of Modern Asia. 3 hrs

An interdisciplinary geographical-historical study of modern Asia. The geography component emphasizes urban, demographic, occupational, and environmental trends and developments; the history component stresses major political and social developments and international relations. A requirement for majors in the Japanese program in language and international trade. Must be taken concurrently with GEOG 326.

Prereq: GEOG 110 and either HIST 103 or HIST 106.

HIST 341 The Middle East, 1798 to Present. 3 hrs

A survey of the political, economic, and social history of the Middle East including Turkey and Iran with emphasis on the growth of independence movements within the area.

Prereq: Junior standing or department permission.

HIST 342 North Africa, 1798 to Present. 3 hrs

A survey of the political, economic, and social history of North Africa, Egypt, and the Sudan, emphasizing the internal movements for independence from colonial powers.

Prereq: Junior standing or department permission.

HIST 347 Sub-Saharan Africa to 1885. 3 hrs

The historical evolution of sub-Saharan African civilizations including their origins, interrelations, and responses to European colonialism.

Prereq: Junior standing or department permission.

HIST 348 Twentieth Century Africa. 3 hrs

A detailed examination of black Africa's response to the historical experience of European colonialism, along with the evolution of those responses, forms, and patterns applicable not only to Africa, but also to the entire nonwestern world.

HIST 355 Latin America: Colonial Period. 3 hrs

Surveys the history of Spanish America and Portuguese America from the conquest to the independence era; stressing political, social, and economic aspects.

Prereq: Junior standing or department permission.

HIST 356 Latin America: National Period. 3 hrs

Surveys the history of Latin America from the independence era to the present, stressing political, social, intellectual, and economic topics.

Prereq: Junior standing or department permission.

HIST 375 Modern India. 3 hrs

The development and maturing of British rule in India against the background of Indian culture. Examines the rise and development of Indian nationalism, the struggle for independence, and the problems faced by India since 1947.

Prereq: Junior standing or department permission.

HIST 441 The Far East to 1800. 3 hrs

A study of the history of China, Korea, and Japan from ancient times to the beginning of the 19th century, stressing political, cultural, and social developments and the dominant role of China.

Prereq: One history course.

HIST 442 Modern China. 3 hrs

China from 1800 to the present: traditional Confucian China in crisis, impact of the West, reform, and revolution. Republican China, the Communist revolution, China since 1949.

Prereq: One history course.

HIST 443 Modern Japan. 3 hrs

Japan from 1800 to the present: collapse of the shogunate, 19th century reforms, rise of the empire to great power status, defeat in World War II, postwar changes. Political, economic and cultural developments are considered.

Prereq: Junior standing or department permission.

HIST 457 History of Mexico. 3 hrs

An introduction to Mexican history from the Amerindian period through the recent past. Examines political, social, economic, and cultural developments in the area comprising the present day nation as well as those areas in North America once included in Mexico.

Prereq: Junior standing.

COOPERATIVE EDUCATION**HIST 387/487 Cooperative Education. 3 hrs each**

Four to six months of full-time employment in a business or industry chosen to provide practical experience in the student's major field. The program consists of one

or two such work experiences alternated with full-time attendance at the University.

Prereq: Junior standing. History or social science major. Admittance to program by application only. Department approval.

INDEPENDENT STUDY**HIST 497/498/499 Independent Study. 1/2/3 hrs**

Study on an individual basis in areas in which the department does not currently offer formal courses. These courses are restricted to highly proficient students. Students are limited to a maximum of three semester hours of independent study in history during any semester or session.

Prereq: Department permission.

SPECIAL TOPICS**HIST 177/178/179 Special Topics. 1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

HIST 277/278/279 Special Topics. 1/2/3 hrs

An exploration of historical subject matter not provided in other departmental offerings. Content will change from semester to semester; up to three different topics may be offered in any one semester. Students may not count more than six hours of special topics courses as credit toward the major or minor.

Prereq: One course in history or department permission.

HIST 377/378/379 Special Topics. 1/2/3 hrs

An exploration of historical subject matter not provided in other departmental offerings. Content will change from semester to semester; up to three different topics may be offered in any one semester. Students may not count more than six hours of special topics courses as credit toward the major or minor.

Prereq: One course in history or department permission.

HIST 477/478/479 Special Topics. 1/2/3 hrs

An exploration of historical subject matter not provided in other departmental offerings. Content will change from semester to semester; up to three different topics may be offered in any one semester. Students may not count more than six hours of special topics courses as credit toward the major or minor.

Prereq: One course in history or department permission.

TEACHING METHODS COURSES

GEOG 348 Teaching Social Studies in Elementary Schools. 3 hrs
(See Geography and Geology Department)

HIST 481 The Teaching of Social Studies. 3 hrs
For intending teachers in junior and senior high schools. Examines the nature of the subjects included in social science in the public schools and the problems related to the teaching of history and other social studies. Not open to students on academic probation.

ACADEMIC MAJOR (PHILOSOPHY) PHILOSOPHY MAJOR

The Philosophy Major provides basic knowledge in the general field of philosophy and strikes a balance between topical philosophical groups. The Program supplements those in many other disciplines, such as teaching literature, the performing arts, and the sciences. A Philosophy Major also prepares students for graduate work in Philosophy, Law, Theology, literature, political science, and other related liberal arts subjects. It is a non-teaching major.

Sem hours

Philosophy Major	33
1. Required Courses	12
PHIL 130 Introduction to Logic or PHIL 281 Symbolic Logic	3
PHIL 230 History of Philosophy: Ancient	3
PHIL 231 History of Philosophy: Modern	3
PHIL 232 History of Philosophy : 19th Century ...	3

2. Electives	21
Choose four courses at the 300- or 400-level	12
Choose 9 credits from other philosophy courses	9

Note: Only one in the following pair of courses may be counted toward the major:

PHIL 100 Introduction to Philosophy or PHIL 110
Philosophies of Life

ACADEMIC MINOR (PHILOSOPHY) PHILOSOPHY MINOR

Sem Hours

Minor in Philosophy	24
1. Required Courses	9
PHIL 230 History of Philosophy: Ancient	3
PHIL 231 History of Philosophy: Modern	3
PHIL 232 History of Philosophy : 19th Century	3
2. Electives	15
Choose two courses at the 300 or 400 level	6
Choose 9 credits from other philosophy courses	9

Note: Only one in each of the following pairs of courses counts toward the minor:

- A. PHIL 100 Introduction to Philosophy or PHIL 110 Philosophies of Life
B. PHIL 120 Introduction to Critical Reasoning or PHIL 130 Introduction to Logic

PHILOSOPHY COURSES

I. BASIC STUDIES COURSES

PHIL 100 Introduction to Philosophy. 3 hrs
An introduction to philosophy by the study of important philosophical thinkers, problems, and methodologies.

PHIL 110 Philosophies of Life. 3 hrs
An introduction to differing accounts of what constitutes a meaningful life and how an individual can attain it. Representative topics include the notions of pleasure, love, empathy, and power as discussed by such writers as Plato, Epicurus, Nietzsche, Lao Tse, and Buddha.

PHIL 120 Introduction to Critical Reasoning. 3 hrs
An introduction to the techniques of identifying and evaluating arguments. The emphasis will be on the enhancement of reasoning skills through the study of arguments in their natural setting in newspapers, political speeches, advertising, etc. The course also may include such related topics as fallacies, inductive reasoning, and the logic of explanation in the social sciences.

PHIL 130 Introduction to Logic. 3 hrs
An introduction to the analysis of arguments using the theory and techniques of formal logic. The theory underlies most formal systems, including computer applications. Students learn such concepts as deduction and induction and how to prove that arguments are valid or invalid.

PHIL 212 Philosophy of Art. 3 hrs

Can "art" be defined? Do artists owe a responsibility to society? Should works of art be primarily analyzed as "significant form" or as an expression of the artist's personality? Can we isolate a uniquely "aesthetic" attitude? Through considering such questions, the course introduces the student to philosophical reasoning and analysis.

PHIL 215 Philosophy of Religion. 3 hrs

A philosophical study of the nature, goals, and proper function of religion. Some possible topics are traditional arguments for the existence of God, grounds for disbelief in God, immortality, religious experience, the nature of religious language, the relation of science to religion, the role of faith and revelation, the connection between religion and ethics.

PHIL 220 Ethics. 3 hrs

An introduction to the major problems of ethical theory such as the nature of value, the justification of ethical decisions, the idea of obligation, and the application of ethical theory to specific ethical problems, which may concern both personal relationships and important public issues—e.g., abortion, euthanasia, medical experimentation, privacy, and surveillance.

PHIL 221 Business Ethics. 3 hrs

An examination of the relationships between contemporary business values and traditional ethical values. Students will investigate various ethical theories and critically examine by means of case studies controversial current business issues.

PHIL 222 Professional Ethics. 3 hrs

An analysis of professionalism and the relationships between contemporary professional values and traditional ethical values. Students will investigate various ethical theories and analyze current ethical issues in various professions by means of controversial case studies. Issues will come from such areas as accounting, architecture, clinical psychology, computer technology, engineering, journalism, law, medicine, ministry, nursing, pharmacology, physical therapy, politics, public administration, real estate, social work, teaching, veterinary medicine, and more.

PHIL 225 Political Philosophy. 3 hrs

Examines the philosophical bases of political ideology and theory through analysis of a variety of political theories, their component parts, and their basic assumptions.

Examples may be taken from the works of such writers as Plato, Aristotle, Hobbes, Locke, Rousseau, Mussolini, Marx, and Thoreau.

PHIL/WMST 226 Philosophy of Women. 3 hrs

A consideration of philosophical issues concerning the nature and status of women. Readings from both traditional and contemporary sources. Topics may include scientific and religious views, the ideal society and women's place in it, varieties of feminism, views on sexuality, family and reproduction, and work and the economy.

II. OTHER COURSES**PHIL 122 American Studies: Success and the Pursuit of Happiness in 19th Century America.** 3 hrs

An examination of the widespread 19th-century belief that worldly success produces happiness and an exploration of the proper relationship of knowledge and power, history and progress, wealth and happiness. Readings include such authors as Benjamin Franklin, H.D. Thoreau, William James, Mark Twain, and Horatio Alger. Team taught by faculty in English and Philosophy. *This course satisfies one philosophy or one literature requirement.* Note: See Honors Humanities Courses, page 46.

PHIL 124 The Age of Wagner. 3 hrs

An exploration of the personal, intellectual, and artistic influences on Wagner's life and work and a consideration of artists influenced by Wagner. Team taught by faculty in English and Philosophy. *This course satisfies one philosophy or one literature requirement.* Note: See Honors Humanities Courses, page 46.

PHIL 150 Humanity and Technology. 3 hrs

A brief study of distinctive and influential perceptions of the impact of technology on human values just after the first Industrial Revolution, with critical emphasis on problems concerning the use of special, refined technologies. Primary readings from Thoreau, Mark Twain, Henry Adams, Aldous Huxley, Lewis Mumford, and Garrett Hardin. *This course satisfies one philosophy or one literature requirement.* Note: See Honors Humanities Courses, page 46.

PHIL 151 Reason and Revolution. 3 hrs

An examination of the transition in political history, philosophy, art, literature, and music from Puritan En-

gland and Louis XIV's France to Napoleon. Team taught by faculty in Art and Philosophy. *This course satisfies one art or one history requirement. Note: See Honors Humanities Courses, page 46.*

PHIL 165 Narrative in Literature and Film. 3 hrs
An introduction to cinematic concepts and terminology, focusing primarily on narrative techniques in literature and parallel devices in film. Readings include several prose forms and a text dealing with the theory of film. Team taught by faculty in English and Philosophy. *This course satisfies one literature or one philosophy requirement. Students may not earn credit in both this course and LITR 300. Note: See Honors Humanities Courses, page 81.*

PHIL 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

PHIL 230 History of Philosophy: Ancient. 3 hrs
A study of important philosophical developments in western thought from the pre-Socratics through Aristotle. Covers the pre-Socratics, Socrates, Plato, and Aristotle.
Prereq: One course in philosophy other than PHIL 120 or PHIL 130.

PHIL 231 History of Philosophy: Modern. 3 hrs
A continuation of PHIL 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 PHIL 120 or PHIL 130.

PHIL 232 Nineteenth Century Philosophy. 3 hrs
An introduction to the major philosophical themes of the 19th century that dominate 20th century European thought. These themes include the collapse of German Idealism and Romanticism, the death of God, the nature of historical process, evolutionary theory, and the implications of these themes for the concept of human freedom.
Prereq: One course in philosophy other than PHIL 120 or PHIL 130. Recommended: PHIL 230 or PHIL 231.

PHIL 260 Existentialism. 3 hrs
An examination of contemporary existentialist thought about the nature of reality and human existence as reflected in the works of such philosophers 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 PHIL 120 or PHIL 130. Recommended: PHIL 231.

PHIL 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

PHIL 281 Symbolic Logic. 3 hrs
An introduction to the notation and proof procedures of symbolic logic with emphasis upon the clarification and development of the notion of a formal language.

PHIL 310 Aesthetics. 3 hrs
A study of philosophical issues relating to works of art and other aesthetic objects. Possible topics include the nature of aesthetic attitude, evaluation, aesthetic meaning and truth, expression in art, the nature of a work of art and basic value of art, the kinds of concepts used to talk about the arts.
Prereq: One course in philosophy other than PHIL 120 or PHIL 130.

PHIL 325 Theory of Knowledge. 3 hrs
An investigation of the nature, scope, and limits of knowledge. Some possible topics are the connection between belief and knowledge, knowledge of other people's minds, the reliability of memory, the possibility of certainty in knowledge, theories of truth.
Prereq: One course in philosophy other than PHIL 120 or PHIL 130. Recommended: PHIL 230 or PHIL 231.

PHIL 340 American Philosophy 3 hrs
An examination of the philosophical tradition in the United States through a study of such movements as idealism, transcendentalism, realism, and pragmatism; from Jonathan Edwards to the present day.
Prereq: One course in philosophy other than PHIL 120 or PHIL 130.

PHIL 365 Philosophy of Law. 3 hrs

A consideration of philosophical questions about the law such as: What sorts of behavior should be illegal? What is punishment supposed to accomplish? When are we justified in punishing a person? How do judges arrive at decisions? Are there really legal principles that cover all the hard cases judges must deal with or do they use their own personal moral values? What is a legal system and how does it differ from a moral code?

Prereq: One course in philosophy other than PHIL 120 or PHIL 130, or department permission.

PHIL 370 Philosophy and Narrative. 3 hrs

This course will focus on philosophical issues relevant to one or more of the following topic areas: philosophical issues in literature and film, theories of drama and performance, the politics of narrative, and recent hermeneutical theory. May be repeated for credit with department permission.

Prereq: One course in philosophy other than PHIL 120 or PHIL 130. *Recommended:* PHIL 232, PHIL 260 or PHIL 390.

PHIL 375 Metaphysics. 3 hrs

A study of questions concerning basic structure and ultimate nature of reality. Possible topics include universals and particulars, space and time, determinism and freedom, the self, materialism, idealism, substance and process.

Prereq: One course in philosophy other than PHIL 120 or PHIL 130.

PHIL 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

PHIL 380 Philosophy of Science. 3 hrs

A systematic examination of the main philosophical problems raised by the results and methods of the physical and social sciences. Topics include the problem of meaning, measurement, the interpretation of probability statements, the justification of induction, the concept of cause, the laws of nature, description and explanation, determinism and indeterminism.

Prereq: One course in philosophy other than PHIL 120 or PHIL 130. *Recommended:* PHIL 325.

PHIL 390 Phenomenology. 3 hrs

The course attempts to trace the history and development of the phenomenological movement from its origins in the 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 PHIL 120 or PHIL 130. *Recommended:* PHIL 231 or PHIL 260.

PHIL /WMST 428 Topics in Gender and Philosophy.**3 hrs**

An examination of gender and its relationship to other issues from a philosophical perspective. Possible topics include rationality, sexuality, aesthetics, ethics, and political theory.

Prereq: Two courses in philosophy other than PHIL 120 or PHIL 130.

PHIL 442 Philosophy of Mind. 3 hrs

A philosophical study of the nature of mind. Examines the logical relations among mental concepts such as consciousness, choice, intention, emotion, feeling, the unconscious; also treats human action and the possibility and meaning of an adequate explanation of psychological phenomena.

Prereq: Two courses in philosophy other than PHIL 120 or PHIL 130.

PHIL 460 Philosophy of Language. 3 hrs

An examination of the philosophically important aspects of language. Possible topics include theories of meaning, analysis of referring and predication, the relation between language and reality, analysis of vagueness and metaphor, the role of language in philosophical method, the relation between language and necessary truth.

Prereq: Two courses in philosophy.

PHIL 470 Contemporary European Philosophy. 3 hrs

An exploration of recent developments in European thought. Possible topics include post-structuralist evaluations of western institutions and ideas, post-Marxist critical theory, the hermeneutic effort to establish interpretation as the basis of philosophical understanding, and the effect of deconstructive thought on philosophy and literature.

Prereq: Two courses in philosophy other than PHIL 120

or PHIL 130. Recommended: PHIL 232, PHIL 260, or PHIL 390.

**PHIL 471 Contemporary British and American
Philosophy. 3 hrs**

An examination of some of the major philosophical developments in England and the United States since approximately 1900. Considers logical atomism, logical positivism, pragmatism, and ordinary language philosophy as reflected in the works of such philosophers as Russell, Carnap, Ayer, James, Dewey, Ryle, Austin, and Quine.

Prereq: Two courses in philosophy other than PHIL 120 or PHIL 130. *Recommended:* PHIL 231.

PHIL 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

PHIL 497/498/499 Independent Study. 1/2/3 hrs

Advanced study on an individual basis in areas in which the department does not offer a formal course. 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: Gisela Ahlbrandt, Larry L. Badii, Robert G. Bartle, Donald A. Buckeye, Timothy B. Carroll, Rita Chattopadhyay, Shenghui Chu, Christopher J. Gardiner, John L. Ginther, Geraldine Green, Christopher E. Hee, Paul E. Howard, K.G. Janardan, Don R. Lick, Richard W. Marshall, James H. Northey, Walter Parry, Jayakumar Ramanathan, Joanne S. Rankin, Ken Shiskowski, Nelly S. Ullman, Bette Warren

Associate Professors: David Folk, David C. Johnson, Mohammad Rafiq, Kim L. Rescorla, Carla Tayeh

Assistant Professors: Mahmoud Al-Khafaji, Joanne Caniglia, Lora Durham, Jiuqiang Liu, James R. Walter, Mary Yorke

Developmental Mathematics Program: Irene Duranczyk, Jill McClain, William Scheffler, Jo Warner

The program in mathematics is designed to give majors certain basic courses, and to ensure a broad background, yet allow enough electives for students to adapt programs to any of the following areas of mathematics: junior and senior high school teaching, statistics, engineering, the physical sciences, or graduate work in pure or applied mathematics.

Degrees:

Bachelor of Science and Bachelor of Arts

Programs of Study

Majors:

- Mathematics
- Mathematics with concentration in statistics
- Mathematics for the Elementary Teaching Certificate
- Mathematics for secondary education

Minors:

- Mathematics
- Mathematics for secondary, K-12, and special education-secondary
- Mathematics with concentration in statistics
- Mathematics for the Elementary Teaching Certificate

Joint Program with Economics:

Actuarial science and economics

Advising for students desiring to pursue a major in mathematics is available from the undergraduate advising coordinators. These students are listed initially as "mathematics intent." To be accepted into one of the

Mathematics department programs, the student should go to the appropriate advising coordinator and pick up a form for student program identification. Academic Advising will update the student's computer record code to indicate the program into which the student has been accepted. Other students needing general program advising should contact the appropriate undergraduate advising coordinator or the department secretary, who will direct students to appropriate faculty members.

Without department permission, no student may receive credit in courses MATH 104, 105, 107, 112, or 119 after credit for MATH 120 has been earned.

Students majoring in mathematics must complete at least nine semester hours and minors must complete at least six semester hours from courses numbered 300 or above.

Placement into mathematics classes

Students without credit in an EMU mathematics course, or equivalent transfer credit, will need to obtain placement into an appropriate mathematics course. Those with no declared major should go to Academic Advising; others go to the Mathematics department. *For some mathematics classes, evidence that the official prerequisites have been satisfied must be presented to the instructor on the first day of class. Students without such evidence will not be permitted to remain in the class. Details will be found in the Class Schedule for that semester.*

Advising Coordinators:

Mathematics: Richard W. Marshall

Secondary mathematics education: Richard W. Marshall

Elementary mathematics education: John L. Ginther, Donald A. Buckeye

Actuarial examinations: Nelly S. Ullman, Bette Warren

Actuarial science and economics: Nelly Ullman and Bette Warren (mathematics), Young-Iob Chung (economics)

Graduate study leads to the master's degree in mathematics. The MA degree is described in the Graduate Catalog. For information, contact the graduate advising coordinator, Ken Shiskowski.

ACADEMIC MAJORS

Students interested in lucrative careers in business and industry are advised to take the Actuarial Examinations, Part I after completing MATH 223 Multivariable Calculus and Part II after completing MATH 471 Probability and Statistics II. These are the first two

of a series of examinations sponsored by the Society of Actuaries.

MATHEMATICS MAJOR

Sem hours

Major in mathematics 34

In addition to the 34 semester hour requirement, nonteaching majors must take MATH 211 Discrete Mathematics or COSC 330 Discrete Mathematical Structures, as well as COSC 137 Introduction to FORTRAN Programming, COSC 138 Computer Science I, or COSC 237 Computer Programming and Numeric Methods, or an equivalent course as determined by the mathematics advising coordinator.

1. **Required courses** 22
 - MATH 120 Calculus I 4
 - MATH 121 Calculus II 4
 - MATH 122 Elementary Linear Algebra 3
 - MATH 223 Multivariable Calculus 4
 - MATH 370 Probability and Statistics I 4
 - MATH 411 Modern Algebra with Applications or MATH 416 Linear Algebra or MATH 420 Introduction to Analysis 3
2. **Restricted electives** 12

Choose 12 credits from the following:

MATH 307 Elementary Number Theory, MATH 319 Mathematical Modeling, MATH 325 Differential Equations, MATH 341 College Geometry or MATH 342 Elementary Space-Time Geometry, MATH 372 Problems in Actuarial Studies I, MATH 406 Introduction to Computability, MATH 411 Modern Algebra with Applications, MATH 416 Linear Algebra, MATH 418 Applied Linear Algebra, MATH 419 Advanced Mathematical Modeling, MATH 420 Introduction to Analysis, MATH 424 Introduction to Complex Variables, MATH 425 Mathematics for Scientists, MATH 426 Differential Equations II, MATH 436 Introduction to Numerical Analysis, MATH 460 Applied Survey Sampling, MATH 461 Linear Regression Analysis, MATH 462 Design and Analysis of Experiments, MATH 471 Probability and Statistics II, MATH 472 Problems in Actuarial Studies II, MATH 474 Applied Statistics

3. Recommended courses for double majors

Students electing a double major with mathematics—business, the social sciences, biological, or physical science—should consult an advising coordinator to choose appropriate courses. MATH 411 Modern Algebra

with Applications, MATH 416 Linear Algebra, and MATH 420 Introduction to Analysis are strongly recommended for double majors and those preparing for graduate work.

Biology: MATH 418 Applied Linear Algebra, MATH 471 Probability and Statistics II

Business: MATH 325 Differential Equations, MATH 418 Applied Linear Algebra, MATH 436 Introduction to Numerical Analysis, MATH 471 Probability and Statistics II

Chemistry: MATH 325 Differential Equations, MATH 418 Applied Linear Algebra, MATH 425 Mathematics for Scientists, MATH 436 Introduction to Numerical Analysis

Economics: MATH 325 Differential Equations, MATH 418 Applied Linear Algebra

Physics: MATH 325 Differential Equations, MATH 416 Linear Algebra, MATH 418 Applied Linear Algebra, MATH 425 Mathematics for Scientists, MATH 436 Introduction to Numerical Analysis

Psychology: MATH 418 Applied Linear Algebra, MATH 471 Probability and Statistics II

MATHEMATICS WITH CONCENTRATION IN STATISTICS MAJOR

Sem hours

Major in mathematics with concentration in statistics 37

1. **Required Courses** 28
 - MATH 120 Calculus I 4
 - MATH 121 Calculus II 4
 - MATH 122 Elementary Linear Algebra 3
 - MATH 223 Multivariable Calculus 4
 - MATH 370 Probability and Statistics I 4
 - MATH 461 Linear Regression Analysis 3
 - MATH 462 Design and Analysis of Experiments .. 3
 - MATH 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:

Applied statistics electives:

MATH 460 Applied Survey Sampling 3

MATH 474 Applied Statistics 3

Mathematics Electives:

MATH 416 Linear Algebra 3

MATH 418 Applied Linear Algebra 3

MATH 420 Introduction to Analysis 3

MATH 472 Problems in Actuarial Studies II.... 2

3. **Additional Requirement** 3
 COSC 137 Introduction to FORTRAN Programming or COSC 138 Computer Science I or COSC 237 Computer Programming and Numeric Methods

ACTUARIAL SCIENCE AND ECONOMICS MAJOR

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 US locations. The first of these covers calculus and linear algebra and the second covers mathematical statistics. MATH 372 and 472 are designed to prepare students for these examinations.

Sem hours

- Major in actuarial science and economics** 60
1. **Required courses** 53
- a. Basic studies*..... 9
 COSC 137 Introduction to FORTRAN Programming, COSC 138 Computer Science I, or COSC 237 Computer Programming and Numeric Methods..... 3
 ECON 201-202 Principles of Economics I-II..... 6
- b. Mathematics* 29
 MATH 120 Calculus I 4
 MATH 121 Calculus II 4
 MATH 122 Elementary Linear Algebra 3
 MATH 223 Multivariable Calculus 4
 MATH 370 Probability and Statistics I 4
 MATH 372 Problems in Actuarial Studies I 2
 MATH 436 Introduction to Numerical Analysis 3
 MATH 471 Probability and Statistics II 7
 MATH 472 Problems in Actuarial Studies II 4
- c. Economics* 15
 ECON 301 Intermediate Macroeconomic Analysis .. 3
 ECON 302 Intermediate Microeconomic Analysis ... 3
 ECON 320 Labor Economics 3
 ECON 340 Money and Banking 3
 ECON 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
No minor is required with this program.

ACADEMIC MINORS MATHEMATICS MINOR

Sem hours

- Minor in mathematics** 20
1. **Required courses** 14-15
 MATH 120 Calculus I 4
 MATH 121 Calculus II 4
 MATH 122 Elementary Linear Algebra 3
 MATH 211 Discrete Mathematics or **MATH 360 Statistical Methods or **MATH 370 Probability and Statistics I 3-4
2. **Restricted electives** 5-6
 Choose five to six credits from the following*:
 MATH 223 Multivariable Calculus, MATH 307 Elementary Number Theory, MATH 319 Mathematical Modeling, MATH 325 Differential Equations, MATH 341 College Geometry or MATH 342 Elementary Space-Time Geometry, **MATH 360 Statistical Methods or **MATH 370 Probability and Statistics I, MATH 372 Problems in Actuarial Studies I, MATH 406 Introduction to Computability, MATH 411 Modern Algebra with Applications, MATH 416 Linear Algebra, MATH 418 Applied Linear Algebra, MATH 419 Advanced Mathematical Modeling, MATH 420 Introduction to Analysis, MATH 424 Introduction to Complex Variables, MATH 425 Mathematics for Scientists, MATH 426 Differential Equations II, MATH 436 Introduction to Numerical Analysis, MATH 460 Applied Survey Sampling, MATH 461 Linear Regression Analysis, MATH 462 Design and Analysis of Experiments, MATH 471 Probability and Statistics II
3. **Additional Requirement** 3
 COSC 137 Introduction to FORTRAN Programming or COSC 138 Computer Science I or COSC 237 Computer Programming and Numeric Methods

*Students minoring in mathematics must complete at least six hours at EMU from courses numbered 300 or above.

**It is not permitted to count both MATH 360 and MATH 370 on the minor.

MATHEMATICS WITH CONCENTRATION IN STATISTICS MINOR

	Sem hours
Minor in mathematics with concentration in statistics	23
1. Required courses	14
MATH 120 Calculus I	4
MATH 121 Calculus II	4
MATH 122 Elementary Linear Algebra	3
MATH 360 Statistical Methods or MATH 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>	
MATH 460 Applied Survey Sampling	3
MATH 461 Linear Regression Analysis	3
MATH 462 Design and Analysis of Experiments ..	3
MATH 471 Probability and Statistics II	3
MATH 474 Applied Statistics	3
<i>Mathematics electives:</i>	
MATH 211 Discrete Mathematics	3
MATH 223 Multivariable Calculus	4
3. Additional Requirement	3
COSC 137 Introduction to FORTRAN Programming or COSC 138 Computer Science I or COSC 237 Computer Programming and Numeric Methods	

TEACHING MAJORS MATHEMATICS MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in mathematics, certification code "EX," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #22, "Mathematics."

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
- I-B-2. *Basic Studies requirement. See inside back cover*
- I-B-3. *Basic Studies requirement. See inside back cover*
- I-B-4. MATH 120 Calculus I (4)^a
- I-B-5. *One of:*^a
 - COSC 137 Introduction to FORTRAN Program-
ming (3)

- COSC 138 Computer Science I (3)
- COSC 237 Computer Programming and Numeric
Methods (3)

- II-B-1. *Basic Studies requirement. See inside back cover*
- II-B-2. *Basic Studies requirement. See inside back cover*
- II-B-3. *Basic Studies requirement. See inside back cover*
- III-B-1. *Basic Studies requirement. See inside back cover*
- III-B-2. *Basic Studies requirement. See inside back cover*
- III-B-3. *Basic Studies requirement. See inside back cover*
- III-B-4. *Basic Studies requirement. See inside back cover*
- IV-B-1. *Basic Studies requirement. See inside back cover*
- IV-B-2. *Basic Studies requirement. See inside back cover*
- IV-B-3. *Basic Studies requirement. See inside back cover*
- IV-B-4. *Basic Studies requirement. See inside back cover*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 50

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

- MATH 121 Calculus II (4)
- MATH 122 Elementary Linear Algebra (3)
- MATH 211 Discrete Mathematics (3)
- MATH 223 Multivariable Calculus (4)

One of:

- MATH 341 College Geometry (3)
- MATH 342 Elementary Space-Time Geometry (2)
- MATH 370 Probability and Statistics I (4) (MATH
360 may be used with permission)
- MATH 411 Modern Algebra with Applications (3)

Six or seven credits from the following list. Credits in mathematics, including MATH 120 but not MATH 306, must total at least 34 hours.

- MATH 307 Elementary Number Theory (3)
- MATH 319 Mathematical Modeling (3)
- MATH 325 Differential Equations (3)
- MATH 341 College Geometry (3)
- MATH 342 Elementary Space-Time Geometry (2)
- MATH 372 Problems in Actuarial Studies I (3)
- MATH 400 History and Development of
Mathematics (3)
- MATH 416 Linear Algebra (3)
- MATH 420 Introduction to Analysis (3)
- MATH 424 Introduction to Complex Variables (3)
- MATH 425 Mathematics for Scientists (3)
- MATH 471 Probability and Statistics II (3)

Minor

A minor from the approved list (see p. 363)

Subtotal, Major and minor: 50¹

Professional Studies

100 clock hours of approved prestudent teaching field experiences (0)

EDTC 300 Introduction to Computer Applications in Education (1)

SPGN 300 Exceptional Children in the Regular Classroom (1)

EDPS 322 Human Development and Learning (4)

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

CURR 305 Curriculum and Methods: Secondary (3)

MATH 306 Teaching of High School Mathematics (3)

RDNG 311 Teaching Reading in the Secondary School (3)

SOFD 328 Schools in a Multicultural Society (3)

EDPS 340 Introduction to Assessment and Evaluation (3)

EDMD 345 Media for the Classroom Teacher (1)

EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: . 134

¹*Course required for and applicable to major.*

²*Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.*

MATHEMATICS FOR THE ELEMENTARY TEACHING CERTIFICATE MAJOR

ELEMENTARY AND SPECIAL EDUCATION-ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in mathematics, certification code "EX." The certification test covering this field is #22, "Mathematics."

MATH 108 Mathematics for Elementary Teachers I (3)

*MATH 109 Mathematics for Elementary Teachers II (3)

MATH 120 Calculus I (4)

MATH 240 Geometry for Elementary Teachers (3)
MATH 301 Advanced Topics in Elementary Mathematics (3)

MATH 403 Current Research in Elementary School Mathematics (3)

11 hours from:

One of:

*COSC 136 Computers for the Nonspecialist (3)

*COSC 137 Introduction to FORTRAN Programming (3)

*COSC 237 Computer Programming and Numeric Methods (3)

MATH 105 College Algebra (3)

MATH 107 Plane Trigonometry (2)

MATH 118 Mathematical Analysis for Social Sciences I (3)

MATH 119 Mathematical Analysis for Social Sciences II (3)

MATH 121 Calculus II (4)

MATH 122 Elementary Linear Algebra (3)

MATH 210 Algebra for Elementary Teachers (3)

MATH 223 Multivariable Calculus (4)

MATH 319 Mathematical Modeling (3)

MATH 370 Probability and Statistics I (4)

Any other mathematics or computer science courses approved by the advising coordinator

*MATH 381 The Teaching of Mathematics K-6 (3)

Approved minors are those for the elementary program as given on page 362.

21 hours, not including the minor and not including requirements that may be satisfied through Basic Studies () or the professional studies (*).*

³*Satisfied in Basic Studies.*

⁴*Satisfied in professional studies.*

TEACHING MINORS MATHEMATICS MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in mathematics, certification code "EX." The certification test covering this field is #22, "Mathematics."

MATH 120 Calculus I (4)

MATH 121 Calculus II (4)

MATH 122 Elementary Linear Algebra (3)

One of:

- *MATH 360 Statistical Methods (3)
- MATH 370 Probability and Statistics I (4)

One of:

- *MATH 341 College Geometry (3)
- MATH 342 Elementary Space-Time Geometry (2)

One of:

- MATH 304 Middle School Mathematics Methods and Content (3)
- MATH 306 Teaching of High School Mathematics (3)

One of:

- *COSC 137 Introduction to FORTRAN Programming (3)
- *COSC 138 Computer Science I (3)
- *COSC 237 Computer Programming and Numeric Methods (3)

Sufficient credits from the following list to total 23 hours (not including MATH 304, MATH 306, or the COSC elective). Students minoring in mathematics must complete at least six hours at EMU from courses numbered 300 or above:

- MATH 211 Discrete Mathematics (3)
- MATH 223 Multivariable Calculus (4)
- MATH 307 Elementary Number Theory (3)
- MATH 319 Mathematical Modeling (3)
- MATH 325 Differential Equations (3)
- MATH 341 College Geometry (3)
- MATH 342 Elementary Space-Time Geometry (2)
- MATH 360 Statistical Methods (3) (if MATH 370 not taken)
- MATH 370 Probability and Statistics I (4) (if MATH 360 not taken)
- MATH 400 History and Development of Mathematics (3)
- MATH 411 Modern Algebra with Applications (3)
- MATH 416 Linear Algebra (3)
- MATH 420 Introduction to Analysis (3)
- MATH 424 Introduction to Complex Variables (3)

21 hours (including hours satisfied in Basic Studies)

*Could be satisfied in Basic Studies.

MATHEMATICS FOR THE ELEMENTARY TEACHING CERTIFICATE MINOR

ELEMENTARY AND SPECIAL EDUCATION-ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student

for recommendation for endorsement in mathematics, certification code "EX." The certification test covering this field is #22, "Mathematics."

MATH 108 Mathematics for Elementary Teachers I (3)

*MATH 109 Mathematics for Elementary Teachers II (3)

MATH 240 Geometry for Elementary Teachers (3)

MATH 301 Advanced Topics in Elementary Mathematics (3)

MATH 210 Algebra for Elementary Teachers (3)

and 5 hours of electives chosen in consultation with the advising coordinator for elementary mathematics education.

*MATH 381 The Teaching of Mathematics K-6 (3)

One of:

*COSC 137 Introduction to FORTRAN Programming (3)

*COSC 138 Computer Science I (3)

*COSC 237 Computer Programming and Numeric Methods (3)

26 hours (including hours satisfied in Basic Studies and professional studies)

*Satisfied in Basic Studies.

*Satisfied in professional studies.

MATHEMATICS COURSES

Placement into mathematics classes

Students without credit in an EMU mathematics course, or equivalent transfer credit, will need to obtain placement into an appropriate mathematics course. Those with no declared major should go to Academic Advising; others go to the Mathematics department. *For some mathematics classes, evidence that the official prerequisites have been satisfied must be presented to the instructor on the first day of class. Students without such evidence will not be permitted to remain in the class. Details will be found in the Class Schedule for that semester.*

MATH 097 Precollege Mathematics: Arithmetic. 5 hrs

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 MATH 098 will cover the same material as MATH 099. *Credit for this course will not count toward any degree program.*

Prereq: Program placement.

MATH 098 Precollege Mathematics: Beginning Algebra. 5 hrs

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 MATH 097 will cover the same material as MATH 099. *Credit for this course will not count toward any degree program.*

Prereq: At least "C" in MATH 097, or placement.

MATH 099 Precollege Mathematics. 5 hrs

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.

MATH 104 Intermediate Algebra. 3 hrs

A review of elementary algebra and a continuation into the study of functions, graphs and quadratic equations.

Prereq: At least "C" in MATH 098, or placement.

MATH 105 College Algebra. 3 hrs

Properties of the real numbers; equations and inequalities; functions; sequences; mathematical induction; polynomial, rational, exponential and logarithmic functions; introduction to probability.

Prereq: At least a "C" in MATH 104 ("B" or better strongly recommended), or placement.

MATH 107 Plane Trigonometry. 2 hrs

An elementary course in plane trigonometry. Students who have good records in high school courses including trigonometric identities, trigonometric equations, and oblique triangles should not take the course.

Prereq: At least a "C" in MATH 104 or placement.

MATH 108 Mathematics for Elementary Teachers I.

3 hrs

The first of a two-course sequence which examines topics in the elementary school mathematics curriculum from an advanced standpoint, with an emphasis on concepts and problem solving. Topics include number theory, real number systems and its properties, algebra concepts, and functions. *Required of all students in elemen-*

tary and later elementary curriculums. Open only to prospective elementary teachers.

Prereq: At least "C" in MATH 098, or placement.

MATH 109 Mathematics for Elementary Teachers II.

3 hrs

The second of a two-course sequence which examines topics in the elementary school mathematics curriculum from an advanced standpoint, with an emphasis on concepts and problem solving. Topics include: elementary probability including both experimental and theoretical; elementary statistics including exploratory data analysis, descriptive statistics, and an introduction to inferential statistics; informal geometry including symmetry, similarity and congruence, and measurement. *Required of all students in elementary and later elementary curriculums. Open only to prospective elementary teachers.*

Prereq: MATH 108.

MATH 112 Topics in Precalculus Mathematics. 4 hrs

Provides a thorough preparation for calculus for students who are insufficiently prepared in college algebra and trigonometry, or who need to review these subjects. Emphasis will be on topics from college algebra and trigonometry that are used in calculus.

Prereq: MATH 105 and MATH 107, or placement.

MATH 118 Mathematical Analysis for Social Sciences

I.

3 hrs

Solutions of linear equations and inequalities, vectors and matrices, linear programming, sets, probability. Emphasis on applications.

Prereq: At least "C" in MATH 098, or MATH 104, or placement.

MATH 119 Mathematical Analysis for Social Sciences

II.

3 hrs

Functions, differentiation of algebraic functions, optimization, exponential and logarithmic functions and their derivatives, an introduction to the definite integral. Emphasis on problem setup and interpretation and applications.

Prereq: At least a "C" in MATH 104 ("B" or better strongly recommended), or MATH 105, or placement.

MATH 120 Calculus I.

4 hrs

Calculus of functions of a single variable; differential calculus, including limits, derivatives, techniques of differentiation, the Mean Value Theorem and applications

of differentiation to graphing, optimization, rates. Integral calculus, including indefinite integrals, the definite integral, the Fundamental Theorem of Integral Calculus, and applications of integration to area and volume.
Prereq: At least a "C" in MATH 105 and at least a "C" in MATH 107 ("B" or better strongly recommended in both), or at least a "C" in MATH 112, or placement.

MATH 121 Calculus II. 4 hrs
 Calculus of functions of a single variable continued; additional applications of definite integration to moments, centroids, arc length, surface area, and work. Transcendental functions, infinite series, methods of integration, review of conic sections.
Prereq: At least a "C" in MATH 120.

MATH 122 Elementary Linear Algebra. 3 hrs
 Vectors and matrices, operations on matrices, determinants, systems of linear equations, linear independence, linear transformations, applications.
Prereq: At least a "C" in MATH 105 ("B" or better strongly recommended), or placement.

MATH 130 Calculus Laboratory I. 1 hr
 Computer laboratory class designed to reinforce the major concepts of first-semester calculus.
Prereq: Concurrent registration in MATH 120.

MATH 131 Calculus Laboratory II. 1 hr
 Computer laboratory class designed to reinforce the major concepts of second-semester calculus.
Prereq: Concurrent registration in MATH 121.

MATH 150 Mathematical Reasoning. 3 hrs
 An introduction to contemporary mathematical thinking for the nonspecialist, 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: At least "C" in MATH 098, or MATH 104, or placement.

MATH 170 Elementary Statistics. 3 hrs
 An introduction to standard methods in statistics, emphasizing the rationale behind them and their application to problems in a variety of fields. Data summary and representation, measures of center and dispersion, correlation and regression, basic probability, point and interval estimation, and hypothesis testing.
Prereq: At least a "C" in MATH 098, or placement.

MATH 177/178/179 Special Topics. 1/2/3 hrs
 These special topics courses will be used to teach some aspects of mathematics at an elementary level that would not be regularly offered. This course does not count on a regular major or minor in mathematics.
Prereq: Department permission.

MATH 210 Algebra for Elementary Teachers. 3 hrs
 Field properties, complex numbers, number sentences, introduction to coordinate geometry, nature of proof, and concept of limit. Open only to prospective elementary teachers.
Prereq: MATH 108.

MATH 211 Discrete Mathematics. 3 hrs
 Logic, proofs, mathematical induction, sets, relations, equivalence and order relations, graphs, trees, functions, binary operations, semigroups, groups, rings, fields, finite combinatorics, pigeonhole principle, permutations, combinations, discrete probabilities.
Prereq: MATH 121 and MATH 122.

MATH 223 Multivariable Calculus. 4 hrs
 Vector products, lines, and planes in three-dimensional space, quadric surfaces, cylindrical and spherical coordinates. Differential calculus of vector functions of a single variable: velocity and acceleration vectors, curvature. Partial differentiation, gradient, chain rule, directional derivatives, tangent planes, application to optimization. Multiple integration, change of coordinates, applications. Taylor's Theorem for Functions of Several Variables, line and surface integrals, Stokes' Theorem, Gauss' Theorem.
Prereq: At least a "C" in MATH 121, and MATH 122.

MATH 233 Calculus Laboratory III. 1 hr
 Computer laboratory class designed to reinforce the major concepts of third-semester calculus.
Prereq: Concurrent registration in MATH 223.

MATH 240 Geometry for Elementary Teachers. 3 hrs
 Informal geometry of the plane and space, congruence and measurement, elementary theorems and proof, and plane coordinate geometry. Open only to prospective elementary teachers.
Prereq: MATH 108.

MATH 277/278/279 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other departmental offerings. Students may elect more than

once provided different topics are studied.

Prereq: Department permission.

MATH 301 Advanced Topics in Elementary Mathematics. 3 hrs

Acquaints prospective elementary teachers with new topics in the elementary mathematics curriculum such as algebraic systems, conic sections, trigonometry, statistical procedures, and topics in number theory.

Prereq: MATH 109 or MATH 210 or MATH 240.

MATH 304 Middle School Mathematics Methods and Content. 3 hrs

Consideration of the mathematics program in middle school and junior high school, its organization and content, methods of teaching and learning. Not open to freshmen, sophomores, or students on academic probation.

Prereq: MATH 240 or MATH 120.

MATH 306 Teaching of High School Mathematics. 3 hrs

Consideration of the mathematics program in the high school, its organization and content, methods of teaching and learning. Does not count on the major or minor. Not open to freshmen, sophomores, or students on academic probation.

Prereq: MATH 120.

MATH 307 Elementary Number Theory. 3 hrs

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: MATH 211.

MATH 319 Mathematical Modeling. 3 hrs

The modeling process; model building and evaluation, techniques of modeling; model fitting and models requiring optimization; empirical model construction—experimental models, dimensional analysis, simulation models, dynamic models; use of derivatives in the modeling process, single and multivariable dynamic models.

Prereq: MATH 120 and MATH 122.

MATH 325 Differential Equations. 3 hrs

First and second order differential equations with applications, linear differential equations, power series solutions, Laplace transforms.

Prereq: MATH 121 and MATH 122.

MATH 341 College Geometry. 3 hrs

An introduction to several geometries such as affine, projective, space-time, and non-Euclidean.

Prereq: MATH 120 and MATH 122.

MATH 342 Elementary Space-Time Geometry. 2 hrs

In-depth study of a geometry other than Euclidean. Both synthetic and analytic treatment of Special Relativity.

Prereq: MATH 121.

MATH 360 Statistical Methods. 3 hrs

A comprehensive overview of statistical methods and analysis with applications. Topics include descriptive statistics, probability theory, random variables and probability distributions, sampling distributions, estimation and testing hypotheses, correlation and regression, introduction to computer-assisted statistical analysis. A statistical software package (SAS) is used.

Prereq: MATH 121.

MATH 370 Probability and Statistics I. 4 hrs

Basic concepts of probability; expectation, variance, covariance distribution functions and their application to statistical tests of hypothesis; bivariate, marginal, and conditional distributions; treatment of experimental data. Applications to problems in science and/or social science are emphasized.

Prereq: MATH 223.

MATH 372 Problems in Actuarial Studies I. 2 hrs

Applications of mathematics to actuarial science. Particular attention paid to subject matter not covered in the regular mathematics curriculum and to special techniques of problem solving appropriate to actuarial science. (This course can be useful in preparing for the Actuarial Examination, Part I—General Mathematics.)

Prereq: MATH 223; a minimum GPA in mathematics of 3.4 is strongly recommended.

MATH 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

MATH 381 The Teaching of Mathematics K-6. 3 hrs

Learning to teach children in the elementary grades (K-6) the understanding processes of mathematics. Attention is focused on learning-teaching situations and effective use of learning aids. Required of all students on

early elementary and later elementary curriculums. Not open to students on academic probation.

Prereq: MATH 108 and junior standing.

MATH 382 Calculators and Microcomputers in Elementary Mathematics Education. 3 hrs

A survey of the uses of calculators and microcomputers, with specific emphasis on their use in the elementary classroom. Emphasis will be placed on problem-solving. A calculator will be required.

Prereq: MATH 210.

MATH 387 Cooperative Education. 3 hrs

Four to six months of full-time employment at an industrial firm specially chosen to provide practical experience in mathematics. The program consists of two work experiences (MATH 387 and MATH 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, MATH 223, admittance to program by application only, department permission.

MATH 400 History and Development of Mathematics. 3 hrs

The course presents topics in the evolution of mathematics—the historical development of algebra, geometry, and calculus provides the major focus. Problems will be assigned that reflect the content and methods of this development.

Prereq: MATH 121 and MATH 122.

MATH 401 Mathematics and its History for Elementary Teachers. 3 hrs

Topics in the evolution of mathematics from ancient times through the present, with an emphasis on connections with the elementary school curriculum. Development of numeration systems, algebra, different geometries, calculus; including the contributions of different cultures in the development of mathematics.

Prereq: MATH 240 and MATH 301.

MATH 403 Current Research in Elementary School Mathematics. 3 hrs

A brief history of mathematics education, 1890 to present. Special emphasis on important recent research studies. Consideration of various textbook series, use and evaluation of supplementary materials, the place and value of teaching aids. Professional journals will be

utilized throughout the course.

Prereq: MATH 301 and MATH 381.

MATH 406 Introduction to Computability. 3 hrs

Computable functions, register machines, recursion, minimalization, Church's thesis, Turing machines, diagonal method, universal programs, decidability, recursive and recursively enumerable sets, undecidability, applications to computer science and the foundations of mathematics.

Prereq: MATH 223 or COSC 330.

MATH 411 Abstract Algebra 3 hrs

An introduction to the theory and concepts of abstract algebra. Topics from group theory: subgroups, cosets, Lagrange's Theorem, homomorphisms. Also selected topics from ring theory and field theory.

Prereq's: MATH 121, MATH 122 and MATH 211.

MATH 416 Linear Algebra. 3 hrs

Theoretical aspects of linear algebra: vector spaces, linear transformations and matrices, systems of linear equations, diagonalization, inner product spaces.

Prereq: MATH 121, MATH 122, and MATH 211; or department permission.

MATH 418 Applied Linear Algebra. 3 hrs

Discussion of mathematical algorithms that make wide use of linear algebra methods; their implementation in computer systems and their applications to real life problems. Numerical solution of simultaneous linear equations, the simplex algorithm, linear programming, and their applications.

Prereq: MATH 120, MATH 122; COSC 137 or COSC 138 or COSC 237 or department permission.

MATH 419 Advanced Mathematical Modeling. 3 hrs

A course involving an in-depth study of mathematical models of greater complexity than is possible in MATH 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: MATH 319.

MATH 420 Introduction to Analysis. 3 hrs

Real numbers, elementary topology of the real line, sequences and series, continuity, uniform continuity, differentiation, integration, sequences and series of functions.

Prereq: MATH 121 and MATH 211; or department permission.

MATH 424 Introduction to Complex Variables. 3 hrs
Complex numbers, analytic functions, elementary functions and their mapping properties, conformal mapping and applications; contour integrals, Cauchy-Goursat Theorem and its consequences, Taylor and Laurent series, calculus of residues.

Prereq: MATH 223.

MATH 425 Mathematics for Scientists. 3 hrs
The scientific applications of mathematics. Topics chosen will reflect the interests of the class. Possible areas of study include Fourier series and transforms, complex variables, generalized functions, Laplace transform, Bessel functions, curve fitting, partial differential equations, and the calculus of variations. A record of topics studied each semester will be kept in the mathematics files.

Prereq: MATH 223.

MATH 426 Differential Equations II. 3 hrs
Systems of linear differential equations, transforms, qualitative theory of systems, existence and uniqueness theorems.

Prereq: MATH 325.

MATH 436 Introduction to Numerical Analysis. 3 hrs
Introduces the theory and application of numeric methods using the digital computer as a tool; finite differences, polynomial approximation, numeric integration, solution of equations and nonlinear systems, numeric solution of differential equations, error analysis.

Prereq: MATH 223; and COSC 137 or COSC 138 or COSC 237 or department permission.

MATH 448 Differential Geometry with an Introduction to General Relativity. 3 hrs

Curve and surface theory in three-dimensional space; introduction to special and general relativity. *Not open to students with credit in MATH 548 Introduction to Differential Geometry.*

Prereq: MATH 223 and MATH 325

MATH 460 Applied Survey Sampling. 3 hrs

A course in principles of sampling for assessment of data in business, social sciences, or natural resource management. Sampling problem, selection of samples, designing questionnaires, estimation of means and variances, ratio, regression and difference methods, simple and stratified random sampling, systematic sampling, cluster sampling, probability proportional to size sampling. A special survey software package is used.

Prereq: MATH 360 or MATH 370.

MATH 461 Linear Regression Analysis. 3 hrs

Topics include modeling a response as a simple or multiple regression model, validity of assumptions, using models for estimation and prediction, multicollinearity, auto-correlation of error terms, residual analysis, stepwise regression. A statistical software package (SAS) is used extensively.

Prereq: MATH 122 and MATH 360 or MATH 370.

MATH 462 Design and Analysis of Experiments. 3 hrs

A basic course in principles of experimental designs and analysis: randomized blocks and latin squares, nested experiments, experimental and sampling errors, fixed and random effects models, factorial and fractional designs. A statistical software package (SAS) is used extensively.

Prereq: MATH 360 or MATH 370 or equivalent.

MATH 471 Probability and Statistics II. 3 hrs

Nature of statistics; distributions, measure of central value and dispersion; sampling; statistical inference estimation and tests of hypothesis. Methods of computation applications and data analysis will be stressed. Nonparametric statistics: sequential tests, analysis of variance.

Prereq: MATH 223 and MATH 370, or department permission.

MATH 472 Problems in Actuarial Studies II. 2 hrs

Applications of probability and statistics to actuarial science. Particular attention paid to subject matter not covered in the regular mathematics curriculum and to special techniques of problem solving appropriate to actuarial science. (This course can be useful in preparing for the Actuarial Examination, Part II—Probability and Statistics).

Prereq: MATH 471 (may be taken concurrently); a minimum GPA in mathematics of 3.4 is strongly recommended.

MATH 474 Applied Statistics. 3 hrs

This course stresses the empirical approach to statistics: Monte Carlo methods to generate samples and to model distributions; tests of fit to assumed distributions; medians vs. means and range vs. standard deviations; demonstrations of basic theorems; randomness and independence.

Prereq: MATH 360 or MATH 370.

MATH 477/478/479 Special Topics. 1/2/3 hrs

A senior level course in a specific area of mathematics. The area to be studied will be determined by the field of specialization of the staff member teaching the course and the interest of the students enrolled.

Prereq: Undergraduate grade point average in mathematics 3.0 or above and department permission.

MATH 480 Honors Course in Mathematics. 2 hrs

The content of this course varies with the instructor and the individual student. It consists of advanced reading and/or an individual project of a difficult nature. The work will be done independently with periodic reports to the instructor.

Prereq: Completion of the requirements for a major with 3.5 grade point average in mathematics.

MATH 487 Cooperative Education. 3 hrs

Four to six months of full-time employment at an industrial firm specially chosen to provide practical experience in mathematics. The program consists of two work experiences (MATH 387 and MATH 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, MATH 387, department permission.

MATH 497/498/499 Independent Study. 1/2/3 hrs

A report on an approved subject in the field of mathematics under the guidance of the Mathematics Department staff.

Prereq: Undergraduate grade point average in mathematics 3.0 or above and department permission.

MUSIC

Gordon McQuere
Department Head
N101 Alexander
487-4380

Professors: Nelson Amos, Carter J. Eggers, Anne B. Gajda, Joseph Gurt, Oscar M. Henry, Anthony Iannaccone, Sylvan S. Kalib, Glenda E. Kirkland, Michael G. McGuire, Dady Mehta, Louise R. Patrick, Max E. Plank, J. Whitney Prince, Leonard L. Riccinto, Edward J. Szabo, Mary D. Teal, Mary Ida Yost, Willard Zirk

Associate Professors: Ernest Brandon, Rachel B. Harley, Donald C. Hartmann, Kristy Meretta, Kevin Miller, Garik Pedersen, David Pierce, Diane L. Winder, David O. Woike

Assistant Professors: Daniel Foster, Marilyn Saker, John R. Smith, Julie Stone

Emeritus Professors: Armand Abramson, James Hause, Rodney Hill

The Music department offers five baccalaureate degree programs as well as cultural enrichment for all students. Music is presented in the context of a broad liberal education; as preparation for teaching of vocal and instrumental music at the elementary and secondary levels; as preparation for becoming a music therapist; as individual and group study for performance media; as basic training for professional careers as instrumentalists, singers, conductors, composers, arrangers, and music scholarship; and as preparation for concentrated graduate study and college teaching.

The department collaborates with other departments in dance, radio, television, and theatre. A marketing minor also is available to students interested in music-related businesses.

Housed in the Alexander Music Building, the department has three rehearsal halls, a recital hall, an organ recital/teaching studio, an electronic music studio, a computer lab, and 65 practice rooms.

The Music department is a member of the National Association of Schools of Music.

Degrees:

- Bachelor of Arts
- Bachelor of Music
- Bachelor of Music Education
- Bachelor of Music Therapy
- Bachelor of Science

Programs of Study

Curricula:

- Music education (instrumental and vocal) for elementary education
- Music education (instrumental and vocal) for K-12 education
- Music performance
- Music therapy

Major:

- Music
- Music education (instrumental and vocal) for elementary education

Minors:

- General music
- Music education for elementary education

Advising is according to student interest. Advisers are posted each term in the department office, or the advising coordinator may be contacted for further information.

Advising Coordinator:

- Curricula for teachers of instrumental music, vocal music, and music therapy: David Pierce
- Curriculum for music performance: David Pierce
- Music major: David Pierce
- General music, elementary music education minors: David Pierce

Enrollment in any music curriculum will be determined by the results of an audition process. All new students should write the department well in advance of their intended registration date to arrange these auditions and examinations. Transfer students may apply at the same time for advanced standing in music.

Address all correspondence to:

Department of Music
 Eastern Michigan University
 Ypsilanti, MI 48197
 (313) 487-4380

Music fees are charged for private lessons according to the following schedule (1995-96):

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

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

Students from public schools and the community, and EMU staff and families: Lessons are available

through the EMU Community Music School. Fees vary depending on the length of the lesson, and the instructor. Call the Department of Music for details.

Student recitals are a participatory expectation of all music students. These performances may take place in studio classes, informal departmental recitals, or in public recitals where required.

A senior recital to fulfill requirements of graduation must be prepared and approved by an appropriate faculty committee. Ensemble music may be included on the programs. In such event, the recitalist must have a principal solo role in the music performed. Additional approval of senior programs for public performance will rest with the committee's recommendation.

All public recitals are subject to prior review and approval by a faculty committee.

All full-time (minimum 12 hours) music majors are required to attend a quota of music recitals and concerts each semester. Majors should consult with their major applied instructor or department adviser for specific requirements.

Graduate study leads to the Master of Arts degree in music. For description of graduate courses, see the Graduate Catalog.

ACADEMIC MAJORS 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 crosscultural or international studies. (Complete pattern sheet is available in the department.)

	Sem hours
Symbolics and communication	14-18
Requirements 1, 2, 3, 4, and 5 (page 41)	
Science and technology	9-14
Requirements 1, 2, and 3 (page 43)	
Social science	12
Requirements 1, 2, 3, and 4 (page 44)	
Arts and humanities	9
Requirements 1, 2, and 3 (page 45)	
One course in art, music, or theatre arts (automatically met by fine arts courses below)	
Fine arts	92-98

1. Applied music	40
Recommended at four semester hours for eight semesters with both a junior and senior recital required	32
Music courses chosen according to area of specialization	8
2. Supporting courses	48-52
MUSC 101 Music Theory I	3
MUSC 102 Music Theory II	3
MUSC 118 Music Literature I	1
MUSC 119 Aural Skills I	1
MUSC 128 Music Literature II	1
MUSC 129 Aural Skills II	1
MUSC 201 Music Theory III	3
MUSC 202 Music Theory IV	3
MUSC 218 Music Literature III	1
MUSC 219 Aural Skills III	1
MUSC 228 Music Literature IV	1
MUSC 229 Aural Skills IV	1
MUSC 301 History of Music	3
MUSC 302 History of Music	3
MUSC 413 Orchestration	2
MUSC 414 Band Arranging	2
Secondary instruments	4
Ensembles	8
Conducting	2-4
3. Electives	4-6
(If a student takes a two-course sequence in conducting, only four hours of electives are available)	
Physical education and health	2
Physical education activity courses	2
(Any two courses in military science or two semesters of Marching Band may be applied)	
Total	136-149

CURRICULUM FOR MUSIC THERAPY

The Bachelor of Music Therapy degree is awarded on completion of this curriculum. The degree program is approved by the National Association for Music Therapy.

All students must take the courses specified in education and fine arts.

	Sem hours
Symbolics and communication	14-15
Requirements 1, 2, and 4 (page 41)	
Choose one course from the following:	
CTAC 225 Listening Behavior, CTAC 226 Nonverbal Communication, CTAC 227	

Interpersonal Communication, CTAC 374	
Intercultural Communication	3
IHHS 226 Computers for Health and Human Services	3
Science and technology	19-20
A course in physical science	3
BIOL 105 Biology and the Human Species	4
ZOOL 326 Human Physiology	3
PSY 101/102 General Psychology	3/4
PSY 360 Abnormal Psychology	3
Choose one psychology elective	3
Social science	12
Requirements 1, 2, and 4 (page 44)	
SOCL 105 Introductory Sociology	3
Arts and humanities	6
Requirements 1, 2, and 3 (page 45)	6
One course in art, music, or theatre arts (automatically met in fine arts courses below)	
Education	3
SPGN 251 Education of Exceptional Children .	3
Fine arts	84
1. Music theory and history courses	28
MUSC 101 Music Theory I	3
MUSC 102 Music Theory II	3
MUSC 118 Music Literature I	1
MUSC 119 Aural Skills I	1
MUSC 128 Music Literature II	1
MUSC 129 Aural Skills II	1
MUSC 201 Music Theory III	3
MUSC 202 Music Theory IV	3
MUSC 218 Music Literature III	1
MUSC 219 Aural Skills III	1
MUSC 228 Music Literature IV	1
MUSC 229 Aural Skills IV	1
MUSC 301 History of Music	3
MUSC 302 History of Music	3
MUSC 413 Orchestration	2
2. Applied music	34
MUSC 326 Conducting	2
Ensembles	4
Applied Music courses at the 100-300 level (principal instrument)	14
Minimal performance skills as determined by the National Association for Music Therapy	
Most students should be able to meet some of these skill requirements upon entrance or they can be achieved through the courses listed below:	
Voice: MUSC 232 Voice Class and AVOC 101-A01 Applied Music	2
Piano: MUSC 251-254 Functional Piano and MUSC 305 Keyboard Skills	6

Guitar: MUSC 274 Functional Guitar	2
Secondary instrument classes	4
MUSC 211 Basic Brass Class, MUSC 241 Percussion, MUSC 261 Basic String Class: Violin, MUSC 281 Basic Woodwind Class	
3. Music therapy courses	22
MUSC 103 Introduction to Music Therapy	2
MUSC 221 Methods and Materials in Music Therapy	2
MUSC 222 Preclinical Training Practicum in Music Therapy I	1
MUSC 223 Preclinical Training Practicum in Music Therapy II	1
MUSC 303 Music Therapy Principles I	4
MUSC 304 Music Therapy Principles II	4
MUSC 404 Psychology of Music I	2
MUSC 405 Psychology of Music II	2
MUSC 424 Preclinical Training Practicum in Music Therapy III	1
MUSC 425 Preclinical Training Practicum in Music Therapy IV	1
MUSC 488 Clinical Training in Music Therapy 2	
Physical education and health	2
Choose two activity courses from the following:	
PEGN 103 Couple, Square, and Ballroom Dancing; PEGN 155 Jazz I; PEGN 158 Folk Dancing; PEGN 161 Modern Dance; PEGN 255 Jazz II; PEGN 258 Intermediate Folk Dancing; PEGN 261 Intermediate Modern Dance	
Total	140-142

MUSIC MAJOR

Students must complete the requirements for the Bachelor of Arts or Bachelor of Science degrees by including the academic major below and a different minor subject of 20-24 semester hours in some other department. Students will not earn a teaching certificate by completing this major.

Students must complete all basic studies requirements including one approved course in crosscultural or international studies. (Complete pattern sheet is available in the department.)

	Sem hours
Major in music	49
1. Required courses	44
MUSC 101 Music Theory I	3
MUSC 102 Music Theory II	3
MUSC 118 Music Literature I	1
MUSC 119 Aural Skills I	1
MUSC 128 Music Literature II	1

MUSC 129 Aural Skills II.....	1
MUSC 201 Music Theory III.....	3
MUSC 202 Music Theory IV.....	3
MUSC 218 Music Literature III.....	1
MUSC 219 Aural Skills III.....	1
MUSC 228 Music Literature IV.....	1
MUSC 229 Aural Skills IV.....	1
MUSC 301 History of Music.....	3
MUSC 302 History of Music.....	3
MUSC 413 Orchestration.....	2
MUSC 414 Band Arranging.....	2
Applied Music courses at the 100-300 level (principal instrument).....	12
MUSC 251-252 Functional Piano.....	2
Ensembles.....	2
2. Electives in music.....	3

ACADEMIC MINOR

GENERAL MUSIC MINOR

Students seeking admission to the general minor in music must complete an application at the Music department office and take placement tests in applied music and basic musicianship. Each must work out a course of study with a designated music adviser.

Minor in general music..... 20 sem hours

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 Music department 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:

- Bassoon (ABSN)
- Cello (AVCL)
- Clarinet (ACLA)

- Euphonium (AEPH)
- Flute (ABSN)
- Guitar* (AGTR)
- Harp (AHRP)
- Harpsichord (AHPS)
- Oboe (AOBO)
- Organ (AORG)
- Piano (APNO)
- Percussion (APER)
- Saxophone (ASAX)
- String Bass (ADBS)
- Trumpet (ATPT)
- Tuba (ATUB)
- Viola (AVLA)
- Violin (AVLN)

*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 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.

TEACHING MAJORS

MUSIC EDUCATION (INSTRUMENTAL)

MAJOR

K-12 TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in music education, certification code "JX." The certification test covering this field is #39, "Music Education."

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
- I-B-2.** Basic Studies requirement. See inside back cover
- I-B-3.** Basic Studies requirement. See inside back cover
- I-B-4.** Basic Studies requirement. See inside back cover
- I-B-5.** Basic Studies requirement. See inside back cover

- II-B-1. *Basic Studies requirement. See inside back cover*
 II-B-2. *Basic Studies requirement. See inside back cover*
 II-B-3. *Basic Studies requirement. See inside back cover*
 III-B-1. *Basic Studies requirement. See inside back cover*
 III-B-2. *Basic Studies requirement. See inside back cover*
 III-B-3. *Basic Studies requirement. See inside back cover*
 III-B-4. *Basic Studies requirement. See inside back cover*
 IV-B-1. *Basic Studies requirement. See inside back cover*
 IV-B-2. *Basic Studies requirement. See inside back cover*
 IV-B-3. *Basic Studies requirement. See inside back cover*
 IV-B-4. **Arts**—Included in the teaching major.

Physical education, military science, or equivalent
 PEGN 140 Marching Band (2)

Credit hours in Basic Studies:..... 47

Teaching Major/Minor

- MUSC 101 Music Theory I (3)
 MUSC 102 Music Theory II (3)
 MUSC 118 Music Literature I (1)
 MUSC 119 Aural Skills I (1)
 MUSC 128 Music Literature II (1)
 MUSC 129 Aural Skills II (1)
 MUSC 201 Music Theory III (3)
 MUSC 202 Music Theory IV (3)
 MUSC 218 Music Literature III (1)
 MUSC 219 Aural Skills III (1)
 MUSC 228 Music Literature IV (1)
 MUSC 229 Aural Skills IV (1)
 MUSC 232 Voice Class (1)
 MUSC 301 History of Music (3)
 MUSC 302 History of Music (3)
 MUSC 413 Orchestration (2)
 MUSC 414 Band Arranging (2)
 MUSC 211 Basic Brass Class (1)
 MUSC 241 Percussion (1)
 MUSC 261 Basic String Class: Violin (1)
 MUSC 281 Basic Woodwind Class (1)

Two of:

- MUSC 212 Brass Class (1)
 MUSC 262 String Class: Viola (1)
 MUSC 263 String Class: Cello and Double
 Bass (1)
 MUSC 282 Woodwind Class (1)
 MUSC 283 Woodwind Class (1)
 MUSC 251-254 Functional Piano (4)
 Applied Music courses at the 100-300 level
 (principal instrument) (16)
 MUSC 326 Conducting (2)
 MUSC 327 Instrumental Conducting (2)
 Ensembles (8)
 Electives (4)

Subtotal, Major and minor:..... 73

Professional Studies

- 100 clock hours of approved prestudent teaching
 field experiences (0)
 EDTC 300 Introduction to Computer Applications
 in Education (1)
 EDTC 251 Educating the Exceptional Child (3)
 SPGN 300 Exceptional Children in the Regular
 Classroom (1)
 EDPS 322 Human Development and Learning (4)

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

- RDNG 311 Teaching Reading in the Secondary
 School (3)
 SOFD 328 Schools in a Multicultural Society (3)
 MUSC 332 Instrumental Music in the Public
 Schools (3)

One of:

- MUSC 333 Orchestral Methods (3)
 MUSC 334 Band Methods (3)
 EDUC 496 Student Teaching (6)
 EDUC 497 Student Teaching (6)

Credit hours in Professional Studies:..... 30

Total credit hours required:..... 152

MUSIC EDUCATION (VOCAL) MAJOR

K-12 TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in music education, certification code "JK." The certification test covering this field is #39, "Music Education."

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 I-B-2. *Basic Studies requirement. See inside back cover*
 I-B-3. *Basic Studies requirement. See inside back cover*
 I-B-4. *Basic Studies requirement. See inside back cover*
 I-B-5. *Basic Studies requirement. See inside back cover*
 II-B-1. *Basic Studies requirement. See inside back cover*
 II-B-2. *Basic Studies requirement. See inside back cover*
 II-B-3. *Basic Studies requirement. See inside back cover*
 III-B-1. *Basic Studies requirement. See inside back cover*
 III-B-2. *Basic Studies requirement. See inside back cover*
 III-B-3. *Basic Studies requirement. See inside back cover*
 III-B-4. *Basic Studies requirement. See inside back cover*
 IV-B-1. *Basic Studies requirement. See inside back cover*
 IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*

IV-B-4. Arts

Included in the teaching major.

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 47

Teaching Major

- MUSC 101 Music Theory I (3)
- MUSC 102 Music Theory II (3)
- MUSC 118 Music Literature I (1)
- MUSC 119 Aural Skills I (1)
- MUSC 128 Music Literature II (1)
- MUSC 129 Aural Skills II (1)
- MUSC 201 Music Theory III (3)
- MUSC 202 Music Theory IV (3)
- MUSC 218 Music Literature III (1)
- MUSC 219 Aural Skills III (1)
- MUSC 228 Music Literature IV (1)
- MUSC 229 Aural Skills IV (1)
- MUSC 301 History of Music (3)
- MUSC 302 History of Music (3)
- MUSC 413 Orchestration (2)
- MUSC 274 Functional Guitar (2)

Two of:

- MUSC 212 Brass Class (1)
- MUSC 241 Percussion (1)
- MUSC 261 Basic String Class: Violin (1)
- MUSC 281 Basic Woodwind Class (1)
- Applied Music courses at the 100-300 level (principal instrument) (16)

One of:

- MUSC 251-4 and APNO/AORG 111-113 Applied Music (if keyboard is secondary instrument) (0-6)
- AVOC 101-113 Applied Music in Voice (if secondary instrument) (0-6)
- MUSC 326 Conducting (2)
- MUSC 328 Choral Conducting (2)
- Ensembles (8)
- Electives (2)

Subtotal, Major and minor:..... 62

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
- EDTC 300 Introduction to Computer Applications in Education (1)
- SPGN 251 Educating the Exceptional Child (1)
- EDPS 322 Human Development and Learning (4)

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

- RDNG 311 Teaching Reading in the Secondary School (3)
- SOFD 328 Schools in a Multicultural Society (3)
- MUSC 330 Music Education in the Elementary School (3)
- MUSC 331 Music Education in the Secondary School (3)
- EDUC 496 Student Teaching (6)
- EDUC 497 Student Teaching (6)

Credit hours in Professional Studies:..... 30

Total credit hours required:..... 138

MUSIC MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in music education, certification code "JX." The certification test covering this field is #39, "Music Education."

The curriculum for this major is that which is listed under "Teaching Major" in the K-12 music (instrumental) or K-12 music (vocal) program. No minor is required.

75 hours for instrumental, 80 hours for vocal.

For certification in both K-12 Music and K-8 Elementary Education student teaching in both Music (12 hours) and Elementary Education (12 hours) is required

TEACHING MINOR

ELEMENTARY MUSIC EDUCATION

MINOR

ELEMENTARY AND SPECIAL EDUCATION-ELEMENTARY TEACHER CERTIFICATION

Students seeking admission to the minor in elementary music education must complete an application at the Music department office and take placement tests in applied music and basic musicianship. Each must work out a course of study with a designated music adviser.

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in music education, certification code "JX." The certification test covering this field is #39, "Music Education."

24 hours in music theory, music literature, music

education, applied music, conducting, and piano. Three or four semester hours of student teaching also are required. The methods course must be taken in the area of teaching desired. All courses in the minor must be completed before student teaching in the minor field.

MUSIC COURSES THEORY-LITERATURE AND HISTORY

MUSC 100 Introduction to Music Theory. 3 hrs

Designed for the nonmusic major. A preparatory course for MUSC 101 for the music major or minor deficient in music theory. The basic elements of music: notation of pitch and rhythm, scales, intervals, tonality, beginning sightsinging, and dictation.

MUSC 101 Music Theory I. 3 hrs

Integrated theory course dealing with perception, writing, analysis, and performance of basic musical materials; stylistic comprehension of music of all periods. For music majors and minors. Generally taken concurrently with MUSC 118 and MUSC 119.

Prereq: Music majors / minors or placement examination.

MUSC 102 Music Theory II. 3 hrs

Continuation of MUSC 101. For music majors and minors. Generally taken concurrently with MUSC 128 and MUSC 129.

Prereq: MUSC 101, MUSC 118, MUSC 119, or placement examination.

MUSC 106 Introduction to the Performing Arts. 3 hrs

A survey of the arts of dance, theatre, and music, developing an understanding and appreciation of representative works in the three fields; the place of these arts in contemporary society and their contribution to a richer life. Attendance required at specified on-campus performances. Nonmusic majors only.

MUSC 107 Music Appreciation. 2 hrs

Guides the student in listening to and understanding various types, forms, and styles of instrumental and vocal music of the world. Representative works of all periods and cultures, including contemporary developments, will be studied. Attendance at some concerts and recitals required. Nonmusic majors only.

MUSC 118 Music Literature I. 1 hr

Stylistic analysis and aural presentation of selected musical masterworks in the history of western music, from the medieval period through the classic period.

Objectives of the course parallel and relate to those of MUSC 101. Generally taken concurrently with MUSC 101 and MUSC 119.

Prereq: Music majors / minors or placement examination.

MUSC 119 Aural Skills I. 1 hr

Development of fundamental sight singing techniques as well as skills in notating performed melodic and harmonic musical examples. Objectives of the course parallel those of MUSC 101. Generally taken concurrently with MUSC 101 and MUSC 118.

Prereq: Music majors / minors or placement examination.

MUSC 127 The Splendid Centuries of Austria. 3 hrs

A survey of the art, music, and literature of Austria from the 17th to early 20th century in its intellectual, political, and social setting. Baroque and Rococo art, and Classical and Romantic music and literature are considered. Extensive use is made of recordings and slides. Team taught by a member of one of the fine arts Departments and a member of the History Department. *This course satisfies one fine arts or one history requirement. Note: See Honors Humanities Courses, page 81.*

MUSC 128 Music Literature II. 1 hr

A continuation of MUSC 118. Stylistic analysis and aural presentation of selected musical masterworks in the history of western music, from the classic period through the 20th century. Objectives of the course parallel and relate to those of MUSC 102. Generally taken concurrently with MUSC 102 and MUSC 129.

Prereq: MUSC 118 or placement examination. Music majors / minors.

MUSC 129 Aural Skills II. 1 hr

A continuation of MUSC 119. Development of intermediate sight singing techniques as well as skills in notating performed melodic and harmonic musical examples. Objectives of the course parallel those of MUSC 102. Generally taken concurrently with MUSC 102 and MUSC 128.

Prereq: Music majors / minors. MUSC 101, MUSC 118, MUSC 119, or placement examination.

MUSC 201 Music Theory III. 3 hrs

Continuation of MUSC 102 with more emphasis on harmonic, melodic, compositional, and structural techniques of 16th through 20th centuries. Generally taken concurrently with MUSC 218 and MUSC 219.

Prereq: MUSC 102, MUSC 128, MUSC 129, or placement examination.

MUSC 202 Music Theory IV. 3 hrs

Continuation of MUSC 201. For music majors/minors. Generally taken concurrently with MUSC 228 and MUSC 229.

Prereq: MUSC 201, MUSC 218, MUSC 219, or placement examination.

MUSC 203 Jazz Styles, History, and Analysis. 2 hrs

Presents stylistic, historical, and analytical perspectives in jazz from its origin through the present. Includes vocal jazz, extensive use of recordings.

Prereq: Music major/minor, sophomore standing, or MUSC 102.

MUSC 219 Aural Skills III. 1 hr

A continuation of MUSC 129. Development of intermediate/advanced sight singing techniques as well as skills in notating performed melodic and harmonic musical examples. Objectives of the course parallel those of MUSC 201. Generally taken concurrently with MUSC 201 and MUSC 218.

Prereq: Music majors/minors. MUSC 102, MUSC 128, MUSC 129, or placement examination.

MUSC 228 Music Literature IV. 1 hr

A continuation of MUSC 218. Stylistic analysis and aural presentation of selected musical masterworks in the history of western music, from the classic period through the 20th century. Objectives of the course parallel and relate to those of MUSC 202. Generally taken concurrently with MUSC 202 and MUSC 229.

Prereq: MUSC 201, MUSC 218, MUSC 219; or placement examination. Music majors/minors.

MUSC 229 Aural Skills IV. 1 hr

A continuation of MUSC 219. Development of advanced sight singing techniques as well as skills in notating performed melodic and harmonic musical examples. Objectives of the course parallel those of MUSC 202. Generally taken concurrently with MUSC 202 and MUSC 228.

Prereq: Music majors/minors. MUSC 201, MUSC 218, MUSC 219; or placement examination.

MUSC 301 History of Music. 3 hrs

A chronological study of western music in its historical and cultural setting. Recognition of idioms, changing sounds, styles, and forms of music in medieval, Renaissance, and Baroque periods, approximately through 1750. Students survey the history of their instruments.

Prereq: MUSC 202.

MUSC 302 History of Music. 3 hrs

A continued chronological study of western music in its historical and cultural setting, beginning about 1750. Emphasis similar to MUSC 301 but with a strong concentration in contemporary music. Covers classical, Romantic, and present periods.

Prereq: MUSC 301.

MUSC 317 Music Composition. 2 hrs

Original writing and analysis of music, beginning with the smaller forms. May be repeated for credit.

Prereq: MUSC 202 and department permission.

MUSC 341 Contrapuntal Techniques. 2 hrs

Writing in polyphonic forms with concomitant analysis.

Prereq: MUSC 202.

MUSC 401 Music Theory-Literature V. 2 hrs

Integration of previous studies in theory-literature and music history; continued study and analysis of music from all periods; original, creative composition with special emphasis on contemporary style.

Prereq: MUSC 202.

MUSC 402 Music Theory-Literature VI. 2 hrs

Continuation of MUSC 401.

Prereq: MUSC 401.

MUSC 413 Orchestration. 2 hrs

Practical work in setting compositions for full orchestra and various other instrumental ensembles.

Prereq: MUSC 202.

MUSC 414 Band Arranging. 2 hrs

Arranging for band; transcription from other media; original composition; analysis of representative work.

Prereq: Senior standing

MUSIC EDUCATION COURSES

MUSC 104 Elements of Music. 2 hrs

Singing, music reading, and theory experience in the elements of music for the elementary classroom teacher. Concepts of rhythm and tonality. Lecture: two hours per week. Laboratory: one hour per week.

Prereq: Elementary education or special education major.

- MUSC 151 Class Piano.** 2 hrs
Group instruction in piano for students with no previous keyboard experience. Provides the necessary skills for carrying on a music program in the elementary classroom. Nonmusic majors only.
- MUSC 152 Class Piano.** 2 hrs
Continuation of MUSC 151 with emphasis on the functional aspects of piano playing and elementary piano literature. For students not specializing in music and with not more than one year of previous keyboard experience.
Prereq: MUSC 151 or department permission.
- MUSC 211 Basic Brass Class.** 1 hr
The teaching and playing of trumpet and trombone. Majors and minors only.
- MUSC 212 Brass Class.** 1 hr
The teaching and playing of French horn, euphonium, and tuba. Majors and minors only.
- MUSC 224 Recreational Music.** 2 hrs
For recreation majors. Specific activities, techniques, and resources for directing recreational music programs.
- MUSC 232 Voice Class.** 1 hr
Improving the singing and speaking voice through the study of breath control, tone production, and diction. Not open to students with voice as a principal instrument.
Prereq: The ability to read music in the clef appropriate to student's voice classification.
- MUSC 235 Diction in Singing.** 2 hrs
The physiological descriptions and laboratory practice of diction as used in singing English, French, German, Italian, and Latin.
- MUSC 241 Percussion.** 1 hr
The teaching and playing of snare drum, tympani, and keyboard percussion with an emphasis on group lesson techniques; survey of accessory instruments; introduction of methods, literature, and use of the percussion ensemble. Majors and minors only.
- MUSC 261 Basic String Class: Violin.** 1 hr
The teaching and playing of the violin from a pedagogical approach. Designed primarily for music education and music therapy majors. Small and large group instruction and current methods including rote and Suzuki approaches. Majors and minors only.
- MUSC 262 String Class: Viola.** 1 hr
Continuation of MUSC 261; teaching and playing of viola. Majors and minors only.
Prereq: MUSC 261.
- MUSC 263 String Class: Cello and Double Bass.** 1 hr
The teaching and playing of cello and double bass. Majors and minors only.
- MUSC 271 Beginning Classical Guitar.** 2 hrs
Group instruction in classical guitar through the study of standard beginning methods and repertoire.
Prereq: Department permission.
- MUSC 272 Intermediate Classical Guitar.** 2 hrs
Group instruction in classical guitar through the study of standard intermediate methods and repertoire.
Prereq: MUSC 271.
- MUSC 274 Functional Guitar.** 2 hrs
Functional skills for playing guitar. Students will learn guitar notation, chords, and various accompaniment styles. Intended primarily for music education majors, music education minors, and music therapy majors.
Prereq: Department permission.
- MUSC 281 Basic Woodwind Class.** 1 hr
The teaching and playing of clarinet. Majors and minors only.
- MUSC 282 Woodwind Class.** 1 hr
The teaching and playing of flute and saxophone. Majors and minors only.
- MUSC 283 Woodwind Class.** 1 hr
The teaching and playing of oboe and bassoon. Majors and minors only.
- MUSC 320 Elementary Music Education.** 2 hrs
A study of materials and teaching techniques in relation to the interests, characteristics, and needs of children in elementary and special education classrooms. Nonmajors only.
Prereq: MUSC 104 and junior standing.
- MUSC 330 Music Education in the Elementary School.** 3 hrs
Organization, planning, and teaching of elementary music. Examination, evaluation, and preparation of materials. Music curriculum based on child growth and development principles. Concurrent placement in

schools for observation and prestudent teaching experience. Open to music education majors and minors only. *Prereq: Junior standing. Completion of MUSC 254 and Applied Music Course 114/115/116, or Applied Music Course 105/106 and Applied Music Course 134/135/136; MUSC 202; Coreq: MUSC 326.*

MUSC 331 Music Education in the Secondary School.

3 hrs

Care and treatment of adolescent voices; classification and training of voices; song interpretation; organization and administration of all types of choral ensembles; theory, history, and literature of music classes; evaluation of numerous materials suitable for choral organizations and other classes in the secondary school; psychology and philosophy of music education. Open to music education majors only.

Prereq: Junior standing; satisfactory completion of MUSC 330. Proficiency in piano and voice; Coreq: MUSC 328.

MUSC 332 Instrumental Music in the Public Schools.

8 hrs

Designed to prepare students to teach instrumental music; covers organization of beginning classes, special problems of strings, selection of suitable materials, techniques of teaching, public relations, and other areas of interest in the development of orchestras and bands. Special emphasis placed on music for grades four through nine. Open only to instrumental music education majors and minors. No students on academic probation.

Prereq: Junior standing.

MUSC 333 Orchestral Methods. **3 hrs**

Designed to assist students in their preparation as orchestra directors; special problems relevant to the string orchestra, string ensembles, and the string curriculum in the secondary schools. Open only to instrumental music majors. No students on academic probation.

Prereq: MUSC 332 and junior standing.

MUSC 334 Band Methods. **3 hrs**

Designed to assist students in their preparation as band directors in secondary schools; charting and drills for marching band; rehearsal procedures and selection of suitable materials for the concert band. Open only to instrumental music education majors. No students on academic probation.

Prereq: MUSC 332 and junior standing.

MUSC 361 Methods and Materials for Teaching Piano.

2 hrs

Study of methods and materials suitable for use with beginning- and intermediate-level students.

Prereq: Junior standing

MUSIC THERAPY

MUSC 103 Introduction to Music Therapy. **2 hrs**

An orientation to music therapy. Introductory survey of the various impaired and disabled populations served, current career opportunities, and exploration of interventions 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.

MUSC 221 Methods and Materials in Music Therapy.

2 hrs

Study of resources available in music therapy and their systematic application to meet the treatment needs of children and adults with various dysfunctions. Presentation of specifically designed music therapy experiences.

Prereq: MUSC 102, MUSC 103.

MUSC 222 Preclinical Training Practicum in Music

Therapy I.

1 hr

Introductory fieldwork experience in music therapy. Observation and documentation of music therapy sessions in clinical or educational settings.

Prereq: MUSC 103.

MUSC 223 Preclinical Training Practicum in Music

Therapy II.

1 hr

Continuation of MUSC 222. Leadership or co-leadership of music therapy sessions.

Prereq: MUSC 222.

MUSC 303 Music Therapy Principles I. **4 hrs**

Examination of the research literature dealing specifically with the influence of music on behavior, including neurophysiological effects. In-depth study of diagnostic categories and systematic application of music therapy treatment to people within these categories. Laboratory experience is required in which music therapy treatment is provided to individuals with various dysfunctions.

Prereq: Admission to music therapy program, PSY 101/102, MUSC 221, MUSC 222, and MUSC 223.

MUSC 304 Music Therapy Principles II. 4 hrs

Continuation of MUSC 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: MUSC 303.

MUSC 404 Psychology of Music I. 2 hrs

Study of the functional uses, psychological attributes, aesthetic effects, and psycho-acoustical properties of music. Introduction to statistical analysis and evaluation of research in the field; examination of the continued need for investigation and documentation.

Prereq: MUSC 304.

MUSC 405 Psychology of Music II. 2 hrs

Continuation of MUSC 404. In-depth exploration of empirical research in the field, with opportunities to conduct individual investigation of selected topics.

Prereq: MUSC 404.

MUSC 424 Preclinical Training Practicum in Music Therapy III. 1 hr

Fieldwork experience in clinical or educational setting under supervision of a registered music therapist. Taken concurrently with MUSC 404.

Prereq: Senior standing in music therapy program; MUSC 304.

MUSC 425 Preclinical Training Practicum in Music Therapy IV. 1 hr

Fieldwork experience continued. Taken concurrently with MUSC 405.

Prereq: MUSC 424.

MUSC 488 Clinical Training in Music Therapy. 2 hrs

Six months of supervised training in a hospital, clinical, or educational setting affiliated with the National Association for Music Therapy.

Prereq: Senior standing, completion of all other music therapy curriculum requirements, and successful completion of guitar, keyboard and voice competency examinations.

COOPERATIVE EDUCATION**MUSC 387 Cooperative Education. 3 hrs**

A cooperative work experience in the field of music.

Prereq: Department permission.

MUSIC HONORS**MUSC 490 Honors Course in Music. 2 hrs**

Provides superior students with the opportunity for an intensive program of independent study, original composition, performance, or research.

Prereq: Senior standing, cumulative average of 3.5 in music, 3.2 in general studies. Regulations governing honors courses must be followed (see page 15).

Honors program available. Consult with department adviser, D. Pierce.

SPECIAL TOPICS COURSES**MUSC 177/178/179 Special Topics. 1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

MUSC 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

MUSC 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

MUSC 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

APPLIED MUSIC COURSES**Applied Music Course 100 01-04. 1 to 2 hrs**

For the student who requires additional preparation in his or her principal instrument before entering regular freshman level work. Cannot apply toward graduation requirements in either music major curriculum.

Applied Music Course 100 11-22. 1 to 4 hrs

Lower level work for music majors and minors only. May be repeated for credit.

Applied Music Course 100 01-22. 1 hr
For music minors. May be repeated for credit.

Applied Music Course 300 31-62. 1 to 4 hrs
Upper level work for music majors and minors. May be repeated for credit.

SECONDARY INSTRUMENTS

MUSC 251 Functional Piano. 1 hr
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
Prereq: Majors or minors only.

MUSC 252 Functional Piano. 1 hr
Continuation of MUSC 251.
Prereq: MUSC 251 or equivalent. Majors or minors only.

MUSC 253 Functional Piano. 1 hr
Continuation of MUSC 252. Stresses keyboard harmony, accompaniment, sight-reading, piano literature, and technique.
Prereq: MUSC 252. Majors or minors only.

MUSC 254 Functional Piano. 1 hr
Continuation of MUSC 253. Additional accompaniment experience, keyboard harmony, improvisation, piano literature, and techniques. Any break in the continuity of Functional Piano courses will require an audition before resumption of study.
Prereq: MUSC 253 or equivalent. Majors or minors only.

MUSC 305 Keyboard Skills. 2 hrs
Sight reading, harmonization, transposition, improvisation, and score reading.
Prereq: MUSC 102, MUSC 254. Majors or minors only.

MUSC 326 Conducting. 2 hrs
Fundamentals of baton technique, score reading, and interpretation of instrumental and vocal music.
Prereq: Junior standing. Majors or minors only.

MUSC 327 Instrumental Conducting. 2 hrs
A practical course in instrumental conducting; score preparation, baton technique, study of technical and musical problems in conducting traditional and contemporary works.
Prereq: MUSC 326.

MUSC 328 Choral Conducting. 2 hrs
A practical course in choral conducting; baton technique, score analysis, study of technical and musical problems in conducting traditional and contemporary works.
Prereq: MUSC 326.

LARGE ENSEMBLES

MUSC 131 University Choir. 1 hr
An ensemble of advanced singers. Open to all students in the University.
Prereq: Department permission.

MUSC 134 University Women's Chorus. 1 hr
Open to all women students.

MUSC 135 University Men's Chorus. 1 hr
Open to all men students.
Prereq: Department permission.

MUSC 136 Chamber Choir. 1 hr
Chamber music for mixed voices. Open to all students.
Prereq: Department permission.

PEGN 140 Marching Band. 1 hr
(See Health, Physical Education, Recreation, and Dance department.)

MUSC 149 Athletic Band. 1 hr
The Athletic Band rehearses music and performs for a schedule (determined by the instructor) of the University's men's and women's basketball and volleyball home games. The Athletic Band also may perform for postseason basketball competition. MUSC 149 may not serve to fulfill Group V basic studies requirement.
Prereq: Department permission.

MUSC 248 Orchestra. 1 hr
Open to all students in the University.
Prereq: Department permission.

MUSC 249 Band. 1 hr
MUSC 249 includes Concert Winds, Symphonic Band, and Marching Band. Open to all students of the University. Enrollment in MUSC 249 requires attendance for the entire semester. Students electing MUSC 249 may also elect PEGN 140 for one credit.

MUSC 350 Contemporary Chamber Ensemble. 1 hr
Various mixed ensembles of soloists. Devoted to performance of 20th-century music, especially of the last 15 years. Compositions require performers on all instruments, solo voices, and, on occasion, electronic music. Open to all qualified musicians.
Prereq: Department permission.

MUSC 351 Collegium Musicum. 1 hr
Various ensembles of soloists—instrumental, vocal, and mixed. Opportunity to perform old and new music infrequently heard. Open to all qualified students.

MUSC 445 The Opera. 2 hrs
The history and literature of opera from its inception to the present day as music and theater.
Prereq: Voice major or department permission.

MUSC 448/449 Opera Workshop. 1/2 hrs
A laboratory-performance course that deals with performance of opera scenes and, when feasible, complete works. Musical, technical, and dramatic aspects of production.
Prereq: Department permission.

SMALL ENSEMBLES

MUSC 243 Percussion Ensemble. 1 hr
Performance class designed to develop the percussionist's technical and musical skills in an ensemble setting. Devoted to the rehearsal and performance of the best in twentieth-century percussion ensemble literature in a variety of styles.
Prereq: Percussion major or minor or department permission.

MUSC 244 Jazz Ensemble. 1 hr
Performance class dealing with the elements of jazz arrangement, improvisation, and ensemble techniques with special emphasis on the function of jazz in music education.
Prereq: Department permission.

MUSC 245 Brass Ensemble. 1 hr
Chamber music for brass.
Prereq: Department permission.

MUSC 246 String Ensemble. 1 hr
Chamber music for strings.
Prereq: Department permission.

MUSC 247 Woodwind Ensemble. 1 hr
Chamber music for woodwinds.
Prereq: Department permission.

MUSC 475 Chamber Music Performance. 2 hrs
Study and performance of literature for small chamber groups. May be repeated for credit.
Prereq: Department permission.

PHILOSOPHY

(SEE UNDER HISTORY AND PHILOSOPHY)

PHYSICS AND ASTRONOMY

Dan Trochet
Department Head
 303 Strong Hall
 487-4144

Professors: James C. Porter, Dan Trochet, Jon K. Wooley

Associate Professors: Diane A. Jacobs, Alexandria Oakes, Natthi Sharma, James P. Sheerin, Weidian Shen, Marshall Thomsen

Assistant Professors: Ernest Behringer, David D. Reid, Bonnie L. Wylo

The Physics and Astronomy department offers majors in physics, physics research, and engineering physics. Minors are offered in astronomy, general science, and physics. The department also administers interdisciplinary offerings in applied science and general science. Transfer students who wish to major in physics, physics research, or engineering physics must take a minimum of nine semester hours at the 300-level or above in this department. Transfer students who wish to minor in these areas must take a minimum of six semester hours of coursework 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:

General science
 General science-Biology for secondary education
 General science-Chemistry for secondary education
 General science-Earth Science for secondary education
 General science-Mathematics for secondary education
 General science-Physics for secondary education

Group minors:

General science

Majors:

Engineering physics
 Geophysics
 Physics research
 Physics
 Physics for secondary education

Minors:

Astronomy
 Astronomy for secondary, K-12, and special education-secondary
 General science

General science for secondary, K-12, and special education-secondary

Physics

Physics for secondary, K-12, and special education-secondary

Advising is assigned according to the indicated field of study.

Advising coordinators:

Applied science curriculum: Dan Trochet

Astronomy minor: David Reid, Jon Wooley

Engineering physics: Alexandria Oakes, Weidian Shen

Physics major: Diane Jacobs, David Reid, Marshall Thomsen

General science major/minor: Jon Wooley, Bonnie Wylo

Geophysics: James Sheerin

Physics-research major: Natthi Sharma, James Sheerin

Graduate study leads to the master's degree in physics research, physics education, or general science. These programs are described in the Graduate Catalog.

ACADEMIC MAJORS

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.

	Sem hours
Symbolics and communication	14-18
Science and technology	68-70
1. Required courses	50
<i>Chemistry courses</i>	<i>15</i>
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
CHEM 241 Materials Science	3
CHEM 281 Quantitative Analysis	4
<i>Mathematics and computer science courses</i>	<i>17</i>
MATH 120 Calculus I	4
MATH 121 Calculus II	4

MATH 122 Elementary Linear Algebra	2
MATH 223 Multivariable Calculus	4
COSC 237 Computer Programming and Numeric Methods	3
<i>Physics courses</i>	18
PHY 223 Mechanics, Sound, and Heat	5
PHY 224 Electricity and Light	5
PHY 370 Introduction to Modern Physics	3
PHY 372 Modern Physics Laboratory	1
PHY 456 Electronics for Scientists	4
2. Restricted electives	18-20
Choose 18-20 credits from one of the following groups to complete the major: chemistry, mathematics, or physics	
<i>Chemistry:</i> CHEM 371 Organic Chemistry I, CHEM 372 Organic Chemistry II, CHEM 373 Organic Chemistry Laboratory, CHEM 461 Physical Chemistry I, CHEM 462 Physical Chemistry II, and electives chosen in consultation with advising coordinator in applied science	
<i>Mathematics:</i> MATH 325 Differential Equations, MATH 426 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
INTE 122 Engineering Graphics I	3
INTE 223 Engineering Graphics II	3
Physical education and health	2
Physical education activity courses	2
(Any two courses in military science may be applied)	
Electives	2-10
Total	124

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 com-

plete a 20 semester hour cognate minor in one of the areas listed above and a 36 hour group major composed of courses from the other four areas.

	Sem hours
Group major (36 hrs) with cognate minor (20-21 hrs)	56-57
1. Cognate minor in one of the following five science areas	20-21
Biology	20
Chemistry	20
Earth science	21
Mathematics	20
Physics	20

Select courses for your minor in consultation with an adviser in the appropriate department.

2. Group major

With a **biology minor**, take the following for the group major:

ASTR 205 Principles of Astronomy; CHEM 121 General Chemistry I; CHEM 122 General Chemistry I Laboratory; GESC 108 Earth Science; GESC 324 Weather; MATH 105 College Algebra; MATH 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:

ASTR 205 Principles of Astronomy; BIOL 105 Biology and the Human Species; BIOL 224 Principles of Conservation; GESC 108 Earth Science; GESC 324 Weather; MATH 105 College Algebra; MATH 107 Plane Trigonometry; PHY 221 Mechanics, Sound, and Heat; PHY 222 Electricity and Light	32
Approved electives in biology, earth science, mathematics, and physics	4

With an **earth science minor**, take the following for the group major:

ASTR 205 Principles of Astronomy; BIOL 105 Biology and the Human Species; BIOL 224 Principles of Conservation; CHEM 121 General Chemistry I; CHEM 122 General Chemistry I Laboratory; MATH 105 College Algebra; MATH 107 Plane Trigonometry; PHY 221 Mechanics, Sound, and Heat; PHY 222 Electricity and Light	29
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Approved electives in biology, chemistry, mathematics, and physics	7
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With a **mathematics minor**, take the following for the

group major:

ASTR 205 Principles of Astronomy; BIOL 105 Biology and the Human Species; BIOL 224 Principles of Conservation; CHEM 121 General Chemistry I; CHEM 122 General Chemistry I Laboratory; GESC 108 Earth Science; GESC 324 Weather; PHY 221 Mechanics, Sound, and Heat; PHY 222 Electricity and Light 31
Approved electives in biology, chemistry, earth science, and physics 5

With a **physics minor**, take the following for the group major:

ASTR 205 Principles of Astronomy; BIOL 105 Biology and the Human Species; BIOL 224 Principles of Conservation; CHEM 121 General Chemistry I; CHEM 122 General Chemistry I Laboratory; GESC 108 Earth Science; GESC 324 Weather; MATH 120-121 Calculus I-II 31
Approved electives in biology, chemistry, earth science, and mathematics 5

Approved electives:

ASTR 204 Astronomical Investigations; BIOL 205 Field Biology; BIOL 207 Elements of Ecology; BOTN 221 General Botany; ZOOL 222 General Zoology; CHEM 123 General Chemistry II; CHEM 124 General Chemistry II Laboratory; CHEM 270 Organic Chemistry; CHEM 271 Organic Chemistry Laboratory; COSC 137 Introduction to FORTRAN Programming; GESC 114 National Parks and Monuments; GESC 309 Plate Tectonics; GEOL 228 Mineralogy; GESC 320 The Oceans; GEOL 229 Rocks of Michigan; MATH 120 Calculus I; MATH 121 Calculus II; MATH 122 Elementary Linear Algebra; MATH 223 Multivariable Calculus; PHY 330 Intermediate Mechanics I; PHY 370 Introduction to Modern Physics; PHY 372 Modern Physics Laboratory. This list is not complete; consult with the general science adviser for other possible courses.

GEOPHYSICS MAJOR

The geophysics major involves concentrations in physics, geology, and mathematics. This major is designed to bring together the traditional sciences of physics and geology into a program that will prepare persons for employment in the modern day geoscience area. This major also will prepare the student for graduate work in either geophysics, geology, or physics.

Sem hours**Required physics and geology courses..... 60-62**

PHY 223 Mechanics, Sound, and Heat 5
PHY 224 Electricity and Light 5
PHY 229 Strength and Elasticity of Materials. 4
PHY 330 Intermediate Mechanics I 3
PHY 350 Electricity and Magnetism I 3
PHY 481 Mathematical Physics 3
GEOL 160 Physical Geology 4
GEOL 228 Mineralogy 4
GEOL 161 Historical Geology 4
GESC 309 Plate Tectonics 3
GEOL 326 Structural Geology 3
GEOL 329 Petrology 4
GEOL 330 Sedimentology and Stratigraphy 4
GEOL 355 Field Geology I 2
GEOL 356 Field Geology II 3

Select two of the following:

PHY 370 Introduction to Modern Physics 3
PHY 436 Vibration and Sound 4
PHY 452 Electrical Measurements 4
PHY 456 Electronics for Scientists 4
PHY 485 Fluid Dynamics 3

Required mathematics courses (these courses may be used on a minor in mathematics)..... 21

MATH 120 Calculus I 4
MATH 121 Calculus II 4
MATH 122 Elementary Linear Algebra 3
COSC 237 Computer Programming and Numeric Methods 3
MATH 223 Multivariable Calculus 4
MATH 325 Differential Equations 3

Required chemistry courses (these courses may be used on a minor in chemistry) 8

CHEM 121 General Chemistry I 3
CHEM 122 General Chemistry I Laboratory ... 1
CHEM 123 General Chemistry II 3
CHEM 124 General Chemistry II Laboratory .. 1

PHYSICS RESEARCH MAJOR

The physics research major provides the necessary background for those planning to become professional physicists. The requirements listed below ensure adequate depth and breadth of subject matter in both theoretical and experimental physics and in mathematics. Students successfully completing this major are prepared to enter technical positions in government or industrial research or to undertake graduate study in physics. Further work on the graduate level is highly recommended.

	Sem hours
Major in physics research (all required courses)	70
1. Total physics and astronomy courses	49
A. Required physics courses	37
PHY 223 Mechanics, Sound, and Heat	5
PHY 224 Electricity and Light	5
PHY 330 Intermediate Mechanics I	3
PHY 350 Electricity and Magnetism I	3
PHY 360 Heat and Thermodynamics or PHY 462 Kinetic Theory and Statistical Mechanics	3
PHY 370 Introduction to Modern Physics	3
PHY 431 Intermediate Mechanics II	3
PHY 450 Electricity and Magnetism II	4
PHY 475 Introduction to Quantum Mechanics	3
PHY 481 Mathematical Physics	3
PHY 417 Undergraduate Research Laboratory or PHY 490 Special Problems (Honors).....	2
B. Restricted electives	3-12
<i>Choose three of the following laboratory courses:</i>	
PHY 332 Mechanics Laboratory, PHY 372 Modern Physics Laboratory, PHY 436 Vibration and Sound, PHY 442 Optics Laboratory, PHY 456 Electronics for Scientists, PHY 458 Microcomputer and Digital Electronics, PHY 471 Nuclear Physics	
C. General electives in physics and astronomy	0-9
No physics or astronomy courses numbered less than 300 are to be used as electives on this major. PHY 325 is not to be used as an elective on this major.	
2. Additional required courses (these courses may be used on a minor in mathematics).....	21
MATH 120 Calculus I	4
MATH 121 Calculus II	4
MATH 122 Elementary Linear Algebra	3
MATH 223 Multivariable Calculus	4
MATH 325 Differential Equations	3
COSC 237 Computer Programming and Numeric Methods	3

PHYSICS MAJOR

This major is provided for students who desire a general cultural education with an emphasis on physics, who are preparing for work in another field such as premedicine or prelaw or who are interested in combining physics with an allied field such as biology, chemistry, astronomy, or geology or with the field of business.

Sem hours

Major in physics	50
1. Total physics and astronomy courses	32

A. Required physics courses	20
PHY 223 Mechanics, Sound, and Heat	5
PHY 224 Electricity and Light	5
PHY 330 Intermediate Mechanics I	3
PHY 350 Electricity and Magnetism I	3
PHY 370 Introduction to Modern Physics	3
PHY 406 Ethical Issues in Physics	1
B. Restricted electives	3-12
<i>Choose three of the following laboratory courses:</i>	
PHY 332 Mechanics Laboratory, PHY 372 Modern Physics Laboratory, PHY 436 Vibration and Sound, PHY 442 Optics Laboratory, PHY 456 Electronics for Scientists, PHY 458 Microcomputer and Digital Electronics, PHY 471 Nuclear Physics	
C. General electives in physics and astronomy	0-9
No physics or astronomy courses numbered less than 300 are to be used as electives on this major. PHY 325 is not to be used as an elective on this major.	
2. Additional required courses (these courses may be used on a minor in mathematics).....	18
MATH 120 Calculus I	4
MATH 121 Calculus II	4
MATH 122 Elementary Linear Algebra	3
MATH 223 Multivariable Calculus	4
COSC 237 Computer Programming and Numeric Methods	3

ENGINEERING PHYSICS MAJOR

Students following this program will earn a Bachelor of Science degree with a major in physics and will have a strong background in engineering mechanics. Graduates will be well qualified to fill engineering-oriented positions.

Sem hours

Concentration in physics-engineering	77
1. Required physics courses	28
PHY 223 Mechanics, Sound, and Heat	5
PHY 224 Electricity and Light	5
PHY 360 Heat and Thermodynamics	3
PHY 370 Introduction to Modern Physics	3
PHY 372 Modern Physics Laboratory	1
PHY 440 Optics	3
PHY 442 Optics Laboratory	1
PHY 456 Electronics for Scientists	4
PHY 458 Microcomputer and Digital Electronics ...	3
2. Physics electives	6
<i>Choose six credits from the following:</i>	
PHY 332 Mechanics Laboratory, PHY 406 Ethical	

Issues in Physics, PHY 431 Intermediate Mechanics II, PHY 436 Vibration and Sound, PHY 471 Nuclear Physics, PHY 497/498 Independent Study (with prior department approval)

3. **Required engineering mechanics courses 14**
 PHY 229 Strength and Elasticity of Materials. 4
 PHY 230 Engineering Dynamics..... 4
 PHY 420 Engineering Physics Design 3
 PHY 485 Fluid Dynamics 3
4. **Required chemistry courses** (these courses may be used on a minor in chemistry)..... 8
 CHEM 121 General Chemistry I..... 3
 CHEM 122 General Chemistry I Laboratory ... 1
 CHEM 241 Materials Science 3
 CHEM 242 Materials Science Laboratory 1
5. **Required mathematics courses** (these courses may be used on a minor in mathematics)..... 21
 MATH 120 Calculus I 4
 MATH 121 Calculus II 4
 MATH 122 Elementary Linear Algebra 3
 MATH 223 Multivariable Calculus 4
 COSC 237 Computer Programming and Numeric Methods 3
 MATH 325 Differential Equations 3

ACADEMIC MINORS

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 |
| ASTR 204 Astronomical Investigations | 1 |
| ASTR 205 Principles of Astronomy | 4 |
| ASTR 315 Applied Astronomy | 3 |
| ASTR 370 Astrophysical 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: | |
| ASTR 205 Principles of Astronomy, CHEM 121 General Chemistry I, CHEM 122 General Chemistry I Laboratory, GESC 108 Earth Science, MATH 105 College Algebra, MATH 107 Plane Trigonometry, PHY 221 Mechanics, Sound, and Heat | 21 |
| Approved electives in chemistry, earth science, mathematics, or physics | 3 |
| With a major in chemistry , take the following courses: | |
| ASTR 205 Principles of Astronomy, BIOL 105 Biology and the Human Species, GESC 108 Earth Science, MATH 105 College Algebra, MATH 107 Plane Trigonometry, PHY 221 Mechanics, Sound, and Heat | 21 |
| Approved electives in biology, earth science, mathematics, or physics | 3 |
| With a major in earth science , take the following courses: | |
| ASTR 205 Principles of Astronomy, BIOL 105 Biology and the Human Species, CHEM 121 General Chemistry I, CHEM 122 General Chemistry I Laboratory, MATH 105 College Algebra, MATH 107 Plane Trigonometry, PHY 221 Mechanics, Sound, and Heat | 21 |
| Approved electives in biology, chemistry, mathematics, or physics | 3 |
| With a major in mathematics , take the following courses: | |
| ASTR 205 Principles of Astronomy, BIOL 105 Biology and the Human Species, CHEM 121 General Chemistry I, CHEM 122 General Chemistry I Laboratory, GESC 108 Earth Science, PHY 221 Mechanics, Sound, and Heat | 20 |
| Approved electives in biology, chemistry, earth science, or physics | 4 |
| With a major in physics , take the following courses: | |
| ASTR 205 Principles of Astronomy, BIOL 105 Biology and the Human Species, CHEM 121 General Chemistry I, CHEM 122 General Chemistry I Laboratory, GESC 108 Earth Science, MATH 120 Calculus I | 20 |
| Approved electives in biology, chemistry, earth science, or mathematics | 4 |

Approved electives: BIOL 224 Principles of Conservation, CHEM 123 General Chemistry II, CHEM 124 General Chemistry II Laboratory, GESC 324 Weather, COSC 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
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
2. Restricted electives	1-4
<i>Choose one of the following laboratory courses:</i>	
PHY 332 Mechanics Laboratory, PHY 372 Modern Physics Laboratory, PHY 436 Vibration and Sound, PHY 442 Optics Laboratory, PHY 452 Electrical Measurements, PHY 456 Electronics for Scientists, PHY 458 Microcomputer and Digital Electronics, PHY 471 Nuclear Physics	
3. Electives in physics to complete the 20-hour minor	3-6
No physics courses numbered less than 300 are to be used as electives on this minor. No astronomy courses can be used on this minor.	
4. All students earning a minor in physics must also take, as a minimum, the following courses in mathematics. (These courses may be used on a minor in mathematics.)	
MATH 120 Calculus I	4
MATH 121 Calculus II	4

TEACHING MAJORS

GENERAL SCIENCE MAJORS WITH BIOLOGY MINOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and biology, certification code "DA." The certification tests covering this field are #16, "Science," and #17, "Biology."

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
I-B-2. *Basic Studies requirement. See inside back cover*
I-B-3. *Basic Studies requirement. See inside back cover*
I-B-4. *Basic Studies requirement. See inside back cover*
I-B-5. *Basic Studies requirement. See inside back cover*
II-B-1. CHEM 121 General Chemistry I (3)^a
 CHEM 122 General Chemistry I Laboratory (1)^a
II-B-2. *Basic Studies requirement. See inside back cover*
II-B-3. PHY 221 Mechanics, Sound, and Heat (4)^a
III-B-1. *Basic Studies requirement. See inside back cover*
III-B-2. *Basic Studies requirement. See inside back cover*
III-B-3. *Basic Studies requirement. See inside back cover*
III-B-4. *Basic Studies requirement. See inside back cover*
IV-B-1. *Basic Studies requirement. See inside back cover*
IV-B-2. *Basic Studies requirement. See inside back cover*
IV-B-3. *Basic Studies requirement. See inside back cover*
IV-B-4. *Basic Studies requirement. See inside back cover*
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 50

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

BOTN 221 General Botany (4)

ZOOL 222 General Zoology (4)

BIOL 301 Genetics (3)

Nine hours of electives from biology, botany, microbiology, or zoology. *Restrictions:* May not include ESCI 302, ESCI 303, BIOL 205, and BIOL 403. No more than two hours may be taken in any combination of BIOL/BOTN/ZOOL 497/498/499 or 477/478/479 Independent Study/Special Topics courses or BIOL/BOTN/MICR/ZOOL 387/487 Cooperative Education courses will not count.

MATH 105 College Algebra (3)

MATH 107 Plane Trigonometry (2)

GESC 108 Earth Science (4)

ASTR 205 Principles of Astronomy (4)

PHY 222 Electricity and Light (4)

GESC 324 Weather (3)

Eight hours of electives from among:

ASTR 204 Astronomical Investigations (1)

CHEM 123 General Chemistry II and CHEM 124 General Chemistry II Laboratory (4)

CHEM 270 Organic Chemistry (4)

CHEM 271 Organic Chemistry Laboratory (1)

COSC 137 Introduction to FORTRAN Programming (3)

GESC 114 National Parks and Monuments (2)
 GESC 309 Plate Tectonics (3)
 GESC 320 The Oceans (3)
 GEOL 228 Mineralogy (4)
 GEOL 229 Rocks of Michigan (2)
 MATH 120 Calculus I (4)
 MATH 121 Calculus II (4)
 MATH 122 Elementary Linear Algebra (3)
 MATH 223 Multivariable Calculus (4)
 PHY 330 Intermediate Mechanics I (3)
 PHY 370 Introduction to Modern Physics (3)
 PHY 372 Modern Physics Laboratory (1)
 Others selected in consultation with general
 science adviser

Subtotal, Major and related areas: 48

Professional Studies

100 clock hours of approved prestudent teaching
 field experiences (0)
 EDTC 300 Introduction to Computer Applications
 in Education (1)
 SPGN 300 Exceptional Children in the Regular
 Classroom (1)
 EDPS 322 Human Development and Learning (4)

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

CURR 305 Curriculum and Methods:
 Secondary (3)
 RDNG 311 Teaching Reading in the Secondary
 School (3)
 SOFD 328 Schools in a Multicultural Society (3)
 EDPS 340 Introduction to Assessment and
 Evaluation (3)
 EDMD 345 Media for the Classroom Teacher (1)
 BIOL 403 Methods and Materials for Teaching
 Biology (3)
 EDUC 492 Student Teaching (12)

Credit hours in Professional Studies:..... 34

Total credit hours required:..... 132

**Course required for and applicable to major.*

WITH CHEMISTRY MINOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the

Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and chemistry, certification code "DC." The certification tests covering this field are #16, "Science," and #18, "Chemistry."

Basic Studies

I-B-1. ENGL 121 English Composition (3)
I-B-2. *Basic Studies requirement. See inside back cover*
I-B-3. *Basic Studies requirement. See inside back cover*
I-B-4. *Basic Studies requirement. See inside back cover*
I-B-5. *Basic Studies requirement. See inside back cover*
II-B-1. CHEM 121 General Chemistry I (3)^a
 CHEM 122 General Chemistry I Laboratory (1)^a
II-B-2. *Basic Studies requirement. See inside back cover*
II-B-3. PHY 221 Mechanics, Sound, and Heat (4)^a
III-B-1. *Basic Studies requirement. See inside back cover*
III-B-2. *Basic Studies requirement. See inside back cover*
III-B-3. *Basic Studies requirement. See inside back cover*
III-B-4. *Basic Studies requirement. See inside back cover*
IV-B-1. *Basic Studies requirement. See inside back cover*
IV-B-2. *Basic Studies requirement. See inside back cover*
IV-B-3. *Basic Studies requirement. See inside back cover*
IV-B-4. *Basic Studies requirement. See inside back cover*
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 50

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

CHEM 123 General Chemistry II (3)
 CHEM 124 General Chemistry II Laboratory (1)
 CHEM 281 Quantitative Analysis (4)

One of:

CHEM 270 Organic Chemistry and CHEM 271
 Organic Chemistry Laboratory (5)
 CHEM 371 Organic Chemistry I, CHEM 372
 Organic Chemistry II, and CHEM 373 Organic
 Chemistry Laboratory (8)

Three hours of electives chosen from courses numbered above 200 in chemistry

BIOL 105 Biology and the Human Species (4)
 MATH 105 College Algebra (3)
 MATH 107 Plane Trigonometry (2)
 GESC 108 Earth Science (4)
 ASTR 205 Principles of Astronomy (4)
 PHY 222 Electricity and Light (4)
 BIOL 224 Principles of Conservation (4)
 GESC 324 Weather (3)

Four hours of electives from among:

- ASTR 204 Astronomical Investigations (1)
- BIOL 205 Field Biology (4)
- BIOL 207 Elements of Ecology (2)
- BOTN 221 General Botany (4)
- COSC 137 Introduction to FORTRAN Programming (3)
- GESC 114 National Parks and Monuments (2)
- GESC 309 Plate Tectonics (3)
- GESC 320 The Oceans (3)
- GEOL 228 Mineralogy (4)
- GEOL 229 Rocks of Michigan (2)
- MATH 120 Calculus I (4)
- MATH 121 Calculus II (4)
- MATH 122 Elementary Linear Algebra (3)
- MATH 223 Multivariable Calculus (4)
- PHY 330 Intermediate Mechanics I (3)
- PHY 370 Introduction to Modern Physics (3)
- PHY 372 Modern Physics Laboratory (1)
- ZOOL 222 General Zoology (4)
- Others selected in consultation with general science adviser

Subtotal, Major and related areas: 48

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
- EDTC 300 Introduction to Computer Applications in Education (1)
- SPGN 300 Exceptional Children in the Regular Classroom (1)
- EDPS 322 Human Development and Learning (4)

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

- CURR 305 Curriculum and Methods: Secondary (3)
- RDNG 311 Teaching Reading in the Secondary School (3)
- PHY 325 Methods of Teaching the Physical Sciences (3)
- SOFD 328 Schools in a Multicultural Society (3)
- EDPS 340 Introduction to Assessment and Evaluation (3)
- EDMD 345 Media for the Classroom Teacher (1)
- EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required: 132

**Course required for and applicable to major.*

WITH EARTH SCIENCE MINOR**SECONDARY TEACHER CERTIFICATION**

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and geology/earth science, certification code "DH." The certification tests covering this field are #16, "Science," and #20, "Geology/Earth Science."

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
- I-B-2.** *Basic Studies requirement. See inside back cover*
- I-B-3.** *Basic Studies requirement. See inside back cover*
- I-B-4.** *Basic Studies requirement. See inside back cover*
- I-B-5.** *Basic Studies requirement. See inside back cover*
- II-B-1.** CHEM 121 General Chemistry I (3)^a
- CHEM 122 General Chemistry I Laboratory (1)^a
- II-B-2.** *Basic Studies requirement. See inside back cover*
- II-B-3.** PHY 221 Mechanics, Sound, and Heat (4)^a
- III-B-1.** *Basic Studies requirement. See inside back cover*
- III-B-2.** *Basic Studies requirement. See inside back cover*
- III-B-3.** *Basic Studies requirement. See inside back cover*
- III-B-4.** *Basic Studies requirement. See inside back cover*
- IV-B-1.** *Basic Studies requirement. See inside back cover*
- IV-B-2.** *Basic Studies requirement. See inside back cover*
- IV-B-3.** *Basic Studies requirement. See inside back cover*
- IV-B-4.** *Basic Studies requirement. See inside back cover*
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 50

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

- BIOL 105 Biology and the Human Species (4)
- MATH 105 College Algebra (3)
- MATH 107 Plane Trigonometry (2)
- GESC 108 Earth Science (4)
- ASTR 205 Principles of Astronomy (4)
- PHY 222 Electricity and Light (4)
- BIOL 224 Principles of Conservation (4)
- GEOL 229 Rocks of Michigan (2)
- GESC 309 Plate Tectonics (3)
- GESC 320 The Oceans (3)
- GESC 324 Weather (3)

One of:

- GEOL 228 Mineralogy (4)
- GEOL 161 Historical Geology (4)
- GEOL 325 Geomorphology (3)

GEOL 331 Paleontology (4)

GEOL 370 Glacial Geology (3)

Seven hours of electives from among:

ASTR 204 Astronomical Investigations (1)

BIOL 205 Field Biology (4)

BIOL 207 Elements of Ecology (2)

BOTN 221 General Botany (4)

ZOOL 222 General Zoology (4)

CHEM 123 General Chemistry II and CHEM
1234 General Chemistry Laboratory (4)

CHEM 270 Organic Chemistry and CHEM 271
Organic Chemistry Laboratory (5)

COSC 137 Introduction to FORTRAN
Programming (3)

MATH 120 Calculus I (4)

MATH 121 Calculus II (4)

MATH 122 Elementary Linear Algebra (3)

MATH 223 Multivariable Calculus (4)

PHY 330 Intermediate Mechanics I (3)

PHY 370 Introduction to Modern Physics (3)

PHY 372 Modern Physics Laboratory (1)

Others selected in consultation with general
science adviser

Subtotal, Major and related areas: 46

Professional Studies

100 clock hours of approved prestudent teaching
field experiences (0)

EDTC 300 Introduction to Computer Applications
in Education (1)

SPGN 300 Exceptional Children in the Regular
Classroom (1)

EDPS 322 Human Development and Learning (4)

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

CURR 305 Curriculum and Methods: Secondary (3)

RDNG 311 Teaching Reading in the Secondary
School (3)

SOFD 328 Schools in a Multicultural Society (3)

EDPS 340 Introduction to Assessment and Evaluation (3)

EDMD 345 Media for the Classroom Teacher (1)

GESC 347 Teaching Earth Science and Physical
Geography (3)

EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required: 130

**Course required for and applicable to major.*

WITH MATHEMATICS MINOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and mathematics, certification code "EX." The certification tests covering this field are #16, "Science," and #22, "Mathematics."

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *Basic Studies requirement. See inside back cover*

I-B-4. MATH 120 Calculus I (4)^a

I-B-5. *One of:*^a

COSC 137 Introduction to FORTRAN Program-
ming (3)

COSC 138 Computer Science I (3)

COSC 237 Computer Programming and Numeric
Methods (3)

II-B-1. CHEM 121 General Chemistry I (3)^a

CHEM 122 General Chemistry I Laboratory (1)^a

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. PHY 221 Mechanics, Sound, and Heat (4)^a

III-B-1. *Basic Studies requirement. See inside back cover*

III-B-2. *Basic Studies requirement. See inside back cover*

III-B-3. *Basic Studies requirement. See inside back cover*

III-B-4. *Basic Studies requirement. See inside back cover*

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*

IV-B-4. *Basic Studies requirement. See inside back cover*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 51

Teaching Major

See note "a" above for courses applicable to both
Basic Studies and the major.

BIOL 105 Biology and the Human Species (4)

GESC 108 Earth Science (4)

MATH 121 Calculus II (4)

MATH 122 Elementary Linear Algebra (3)

ASTR 205 Principles of Astronomy (4)

PHY 222 Electricity and Light (4)

BIOL 224 Principles of Conservation (4)

GESC 324 Weather (3)

One of:

MATH 170 Elementary Statistics (3)

MATH 211 Discrete Mathematics (3)
 MATH 370 Probability and Statistics I (4)

One of:

MATH 341 College Geometry (3)
 MATH 342 Elementary Space-Time Geometry (2)

One of:

MATH 360 Statistical Methods (3)
 MATH 370 Probability and Statistics I (4)
 MATH 400 History and Development of Mathematics (3)
 MATH 411 Modern Algebra with Applications (3)
 MATH 416 Linear Algebra (3)
 MATH 418 Applied Linear Algebra (3)
 MATH 420 Introduction to Analysis (3)
 MATH 424 Introduction to Complex Variables (3)

Five hours from among:

MATH 223 Multivariable Calculus (4)
 MATH 307 Elementary Number Theory (3)
 MATH 319 Mathematical Modeling (3)
 MATH 325 Differential Equations (3)
 MATH 341 College Geometry (3)
 MATH 342 Elementary Space-Time Geometry (2)

Five hours of electives from among:

ASTR 204 Astronomical Investigations (1)
 BIOL 205 Field Biology (4)
 BIOL 207 Elements of Ecology (2)
 BOTN 221 General Botany (4)
 ZOOL 222 General Zoology (4)
 CHEM 123 General Chemistry II and CHEM 124
 General Chemistry II Laboratory (4)
 CHEM 270 Organic Chemistry and CHEM 271
 Organic Chemistry Laboratory (5)
 COSC 137 Introduction to FORTRAN
 Programming (3)
 GESC 114 National Parks and Monuments (2)
 GESC 309 Plate Tectonics (3)
 GESC 320 The Oceans (3)
 GEOL 228 Mineralogy (4)
 GEOL 229 Rocks of Michigan (2)
 PHY 330 Intermediate Mechanics I (3)
 PHY 370 Introduction to Modern Physics (3)
 PHY 372 Modern Physics Laboratory (1)

Subtotal, Major and related areas: 45

Professional Studies

100 clock hours of approved prestudent teaching
 field experiences (0)
 EDTC 300 Introduction to Computer Applications
 in Education (1)

SPGN 300 Exceptional Children in the Regular
 Classroom (1)

EDPS 322 Human Development and Learning (4)

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

CURR 305 Curriculum and Methods:
 Secondary (3)

MATH 306 Teaching of High School
 Mathematics (3)

RDNG 311 Teaching Reading in the Secondary
 School (3)

SOFD 328 Schools in a Multicultural Society (3)

EDPS 340 Introduction to Assessment and
 Evaluation (3)

EDMD 345 Media for the Classroom Teacher (1)

EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required: 130

**Course required for and applicable to major.*

WITH PHYSICS MINOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and physics, certification code "DE." The certification tests covering this field are #16, "Science," and #19, "Physics."

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *Basic Studies requirement. See inside back cover*

I-B-4. MATH 120 Calculus I (4)^a

I-B-5. *Basic Studies requirement. See inside back cover*

II-B-1. CHEM 121 General Chemistry I (3)^a

CHEM 122 General Chemistry I Laboratory (1)^a

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. PHY 223 Mechanics, Sound, and Heat (5)^a

III-B-1. *Basic Studies requirement. See inside back cover*

III-B-2. *Basic Studies requirement. See inside back cover*

III-B-3. *Basic Studies requirement. See inside back cover*

III-B-4. *Basic Studies requirement. See inside back cover*

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*

IV-B-4. Basic Studies requirement. See inside back cover
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 52

Teaching Major

See note "a" above for courses applicable to both
 Basic Studies and the major.

- BIOL 105 Biology and the Human Species (4)
- GESC 108 Earth Science (4)
- GESC 324 Weather (3)
- MATH 121 Calculus II (4)
- ASTR 205 Principles of Astronomy (4)
- BIOL 224 Principles of Conservation (4)
- PHY 224 Electricity and Light (5)
- PHY 370 Introduction to Modern Physics (3)

One of:

- PHY 332 Mechanics Laboratory (1)
- PHY 372 Modern Physics Laboratory (1)
- PHY 436 Vibration and Sound (4)
- PHY 442 Optics Laboratory (1)
- PHY 452 Electrical Measurements (4)
- PHY 456 Electronics for Scientists (4)
- PHY 471 Nuclear Physics (4)

Three to six hours of electives in physics (300 and above,
 no astronomy) to complete the minor

Five hours of electives from among:

- BIOL 205 Field Biology (4)
- BIOL 207 Elements of Ecology (2)
- BOTN 221 General Botany (4)
- CHEM 123, 124 General Chemistry II (4)
- CHEM 270 Organic Chemistry and CHEM 271
 Organic Chemistry Laboratory (5)
- COSC 137 Introduction to FORTRAN
 Programming (3)
- GESC 114 National Parks and Monuments (2)
- GESC 309 Plate Tectonics (3)
- GESC 320 The Oceans (3)
- GEOL 228 Mineralogy (4)
- GEOL 229 Rocks of Michigan (2)
- MATH 122 Elementary Linear Algebra (3)
- MATH 223 Multivariable Calculus (4)
- ZOOL 222 General Zoology (4)

Subtotal, Major and minor:..... 43

Professional Studies

- 100 clock hours of approved prestudent teaching
 field experiences (0)
- EDTC 300 Introduction to Computer Applications
 in Education (1)

SPGN 300 Exceptional Children in the Regular
 Classroom (1)

EDPS 322 Human Development and Learning (4)

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

CURR 305 Curriculum and Methods:
 Secondary (3)

RDNG 311 Teaching Reading in the Secondary
 School (3)

PHY 325 Methods of Teaching the Physical
 Sciences (3)

SOFD 328 Schools in a Multicultural Society (3)

EDPS 340 Introduction to Assessment and
 Evaluation (3)

EDMD 345 Media for the Classroom Teacher (1)

EDUC 492 Student Teaching (12)

Credit hours in Professional Studies:..... 34

Total credit hours required:..... 129

**Course required for and applicable to major.*

PHYSICS MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in
 the context of other program requirements, qualifies the
 student for recommendation for certification for the
 Michigan Department of Education Secondary Provi-
 sional Certificate endorsed in physics, certification code
 "DE," and, depending on the minor selected, an addi-
 tional endorsement. This program of studies meets all
 requirements of the National Science Teachers Associa-
 tion. The certification test covering this field is #19,
 "Physics."

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *Basic Studies requirement. See inside back cover*

I-B-4. MATH 120 Calculus I (4)^b

I-B-5. COSC 237 Computer Programming and Numeric
 Methods (3)

II-B-1. *One of:*

CHEM 115 Chemistry and Society and CHEM 116
 Chemistry and Society Laboratory (4)

CHEM 119 Fundamentals of Chemistry (4)

CHEM 120 Fundamentals of Organic and Bio-
 chemistry (4)

CHEM 121 General Chemistry I and CHEM 122
 General Chemistry I Laboratory (4)

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. *One of:*

BIOL 105 Biology and the Human Species (4)

BOTN 221 General Botany (4)

ZOOL 222 General Zoology (4)

III-B-1. *Basic Studies requirement. See inside back cover*

III-B-2. *Basic Studies requirement. See inside back cover*

III-B-3. *Basic Studies requirement. See inside back cover*

III-B-4. *Basic Studies requirement. See inside back cover*

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*

IV-B-4. *Basic Studies requirement. See inside back cover*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 48

Teaching Major

ASTR 204 Astronomical Investigations (1)

ASTR 205 Principles of Astronomy (4)

MATH 121 Calculus II (4)

MATH 122 Elementary Linear Algebra (3)

MATH 223 Multivariable Calculus (4)

PHY 223 Mechanics, Sound, and Heat (5)

PHY 224 Electricity and Light (5)

PHY 330 Intermediate Mechanics I (3)

PHY 350 Electricity and Magnetism I (3)

PHY 370 Introduction to Modern Physics (3)

PHY 406 Ethical Issues in Physics (1)

Three of:

PHY 332 Mechanics Laboratory (1)

PHY 372 Modern Physics Laboratory (1)

PHY 436 Vibration and Sound (4)

PHY 442 Optics Laboratory (1)

PHY 456 Electronics for Scientists (4)

PHY 458 Microcomputer and Digital Electronics (4)

PHY 471 Nuclear Physics (4)

Zero to four hours of electives in physics (300-level and above) to complete 32 hours of physics and astronomy courses.

Additional Requirement

A four-hour geology course (4)

An additional four hours in the areas of biology, chemistry, or geology (4)

Minor

A minor from the approved list (see p. 363, mathematics highly recommended)

Subtotal, Major and minor:..... 57

Professional Studies

100 clock hours of approved prestudent teaching field experiences (0)

EDTC 300 Introduction to Computer Applications in Education (1)

SPGN 300 Exceptional Children in the Regular Classroom (1)

EDPS 322 Human Development and Learning (4)

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

CURR 305 Curriculum and Methods: Secondary (3)

RDNG 311 Teaching Reading in the Secondary School (3)

PHY 325 Methods of Teaching the Physical Sciences (3)

SOFD 328 Schools in a Multicultural Society (3)

EDPS 340 Introduction to Assessment and Evaluation (3)

EDMD 345 Media for the Classroom Teacher (1)

EDUC 492 Student Teaching (12)

Credit hours in Professional Studies, with 20-hour minor: 34

Total credit hours required:..... 143

^b*Prerequisite for another course in program.*

TEACHING MINORS

ASTRONOMY MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in astronomy, certification code "DO." The certification test covering this field is #21, "Astronomy."

*ASTR 204 Astronomical Investigations (1)

ASTR 205 Principles of Astronomy (4)

ASTR 315 Applied Astronomy (3)

ASTR 370 Astrophysical Concepts (3)

13 credits from approved courses in physics, astronomy, mathematics, or chemistry in consultation with the advising coordinator for astronomy.

Electives used to fulfill the astronomy minor cannot be used to complete any other major or minor.

24 hours (including hours satisfied in Basic Studies)

*ASTR 204 may be satisfied in Basic Studies in some programs.

GENERAL SCIENCE MINOR (AVAILABLE ONLY TO MAJORS IN ONE OF THE SCIENCES)

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in science, certification code "DX." The certification test covering this field is #16, "Science."

With a major in *biology*, take the following courses:

- ASTR 205 Principles of Astronomy (4)
- *CHEM 121 General Chemistry I (3)
- *CHEM 122 General Chemistry I Laboratory (1)
- GESC 108 Earth Science (4)
- MATH 105 College Algebra (3)
- MATH 107 Plane Trigonometry (2)
- *PHY 221 Mechanics, Sound, and Heat (4)

3 hours from:

- #CHEM 123 General Chemistry II (3)
- #CHEM 124 General Chemistry II Laboratory (1)
- GESC 324 Weather (3)
- **COSC 137 Introduction to FORTRAN Programming (3)
- #PHY 222 Electricity and Light (4)

Others as approved by general science adviser

24 hours (including hours satisfied in Basic Studies)

With a major in *chemistry*, take the following courses:

- ASTR 205 Principles of Astronomy (4)
- BIOL 105 Biology and the Human Species (4)
- GESC 108 Earth Science (4)
- MATH 105 College Algebra (3)
- MATH 107 Plane Trigonometry (2)
- PHY 221 Mechanics, Sound, and Heat (4)

3 hours from:

- BIOL 224 Principles of Conservation (4)
- GESC 324 Weather (3)
- **COSC 137 Introduction to FORTRAN Programming (3)
- #PHY 222 Electricity and Light (4)

Others as approved by general science adviser

24 hours (including hours satisfied in Basic Studies)

With a major in *earth science*, a structured general science minor is included in the program.

With a major in *mathematics*, take the following courses:

- *ASTR 205 Principles of Astronomy (4)
- *BIOL 105 Biology and the Human Species (4)
- *CHEM 121 General Chemistry I and CHEM 122 General Chemistry I Laboratory (4)

*GESC 108 Earth Science (4)

*PHY 221 Mechanics, Sound, and Heat (4)

4 hours from:

- BIOL 224 Principles of Conservation (4)
- CHEM 123 General Chemistry II (3)
- CHEM 124 General Chemistry II Laboratory (1)
- GESC 324 Weather (3)
- PHY 222 Electricity and Light (4)

Others as approved by general science adviser

24 hours (including hours satisfied in Basic Studies)

With a major in *physics*, take the following courses:

- ASTR 205 Principles of Astronomy (4)
- *BIOL 105 Biology and the Human Species (4)
- *CHEM 121 General Chemistry I (3)
- *CHEM 122 General Chemistry I Laboratory (1)
- *GESC 108 Earth Science (4)
- **MATH 120 Calculus I (4)

4 hours from:

- BIOL 224 Principles of Conservation (4)
- CHEM 123 General Chemistry II (3)
- CHEM 124 General Chemistry II Laboratory (1)
- GESC 324 Weather (3)
- *COSC 137 Introduction to FORTRAN Programming (3)

Others as approved by general science adviser

24 hours (including hours satisfied in Basic Studies)

*Included in Basic Studies.

**May be satisfied through Basic Studies.

#Included in specialty studies.

PHYSICS MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in physics, certification code "DE." The certification test covering this field is #19, "Physics."

- *MATH 120-121 Calculus I-II (8) (*Math requirement to meet physics prerequisites*)
- *PHY 223 Mechanics, Sound, and Heat (5)
- PHY 224 Electricity and Light (5)
- PHY 370 Introduction to Modern Physics (3)

One of:

- PHY 332 Mechanics Laboratory (1) (*Pre- or coreq: PHY 330*)
- PHY 372 Modern Physics Laboratory (1)
- PHY 436 Vibration and Sound (4)
- PHY 442 Optics Laboratory (1) (*Pre- or coreq: PHY 440*)

PHY 452 Electrical Measurements
 PHY 456 Electronics for Scientists
 PHY 458 Microcomputer and Digital Electronics
 PHY 471 Nuclear Physics (*Prereq: PHY 370*)

Electives in physics to total 20 hours. 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.

20 hours (including hours satisfied in Basic Studies)

**Could be satisfied in Basic Studies.*

PHYSICS COURSES

PHY 100 Science for Elementary Teachers. 3 hrs
 Designed to stimulate interest in science by the use of simple and inexpensive equipment to demonstrate scientific principles. Sound, light, heat, electricity, and magnetism. Does not count toward a physics major or minor. Open only to students pursuing any curriculum for elementary teachers.

PHY 110 Physical Science. 4 hrs
 Designed for the nonscience major with little or no background in science or mathematics. Provides a more perceptive view of physical reality by introducing central ideas, principles, and relationships of physical science that relate to one's everyday environment. Students in science, medicine, or engineering should take physics courses PHY 221 and PHY 222, or PHY 223 and PHY 224. Does not count toward a physics major or minor.

PHY 115 Physics in the Modern Home. 4 hrs
 A course for nonscience majors including the areas of mechanics, heat, sound, electricity, light, and modern physics with special emphasis on application in the environment of the home. Three lecture hours and two lab hours per week. Does not count on a physics major or minor.

PHY 140 Light, Color, and Photography for Artists and Others. 4 hrs
 A course for nonscientists 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. 1/2/3 hrs
 This special topics course will be used to teach some aspects of physics at an elementary level that would not be regularly offered. A new course may be taught on an experimental basis with this offering.
Prereq: See department for prerequisites.

PHY 210 Musical Acoustics. 4 hrs
 For students with a major interest in music. The physical bases of sound production, transmission, and reception. Application to topics such as intervals, temperament, acoustics of rooms, and tone production in the various types of musical instruments. Does not count on a physics major or minor.

PHY 216 Science of High Fidelity. 3 hrs
 Scientific base of high-fidelity equipment for the home and studio. Lecture-demonstrations cover components and fundamental physics. Laboratory experiences involve basic physics and testing of modern equipment.

PHY 221 Mechanics, Sound, and Heat. 4 hrs
 A basic course in college physics for liberal arts students who desire an introduction to physics and for preprofessional students who do not require a rigorous knowledge of problem solving. All physics majors and preengineers must elect PHY 223. The laws of mechanics, sound, and heat with more emphasis on applications and somewhat less on problems. Laboratory: two consecutive hours, one day per week.
Prereq: MATH 105 and MATH 107 with a "C" or better in both courses.

PHY 222 Electricity and Light. 4 hrs
 A continuation of PHY 221. Static and current electricity, magnetism, and light. Laboratory: two consecutive hours, one day per week.
Prereq: PHY 221.

PHY 223 Mechanics, Sound, and Heat. 5 hrs
 A basic course in college physics for students majoring in physical science and those on a preengineering curriculum. Laws of mechanics, sound, and heat together with their application. Laboratory: two consecutive hours, one day per week.
Prereq: MATH 120.

PHY 224 Electricity and Light. 5 hrs
 A continuation of PHY 223. Static and current electricity, magnetism, and light. Laboratory: two consecutive

hours, one day per week.

Prereq: PHY 223; MATH 121.

PHY 229 Strength and Elasticity of Materials. 4 hrs
Fundamental principles of mechanics applied to solids. Equilibrium, elasticity, stress and strain, generalized Hooke's Law, tension, torsion, shear, bending, deflection of beams, theory of columns, and strain energy. Four lecture-recitation periods per week. Laboratory required.
Prereq: PHY 223; MATH 120.

PHY 230 Engineering Dynamics. 4 hrs
Vector representation of physical quantities. Statics of rigid bodies. Friction, kinematics of particles and rigid bodies. Dynamics of particles and rigid bodies. Work and energy. Four lecture-recitation periods per week.
Prereq: PHY 223; MATH 121; MATH 122.

PHY 256 Introduction to Electronics. 3 hrs
An introduction to electronic circuits and electronics devices for medical technology students and others desiring familiarization with electronics. Two lecture hours and one three-hour laboratory period per week. Does not apply on physics majors or minors.
Prereq: MATH 105.

PHY 277/278/279 Special Topics. 1/2/3 hrs
This special topics course will be used to teach some aspects of physics at an intermediate level that would not be regularly offered. A new course may be taught on an experimental basis with this offering.
Prereq: See department for prerequisites.

PHY 296 Science in Science Fiction. 3 hrs
Current science fiction in paperback edition serves as a springboard for a wide-ranging study of the physical sciences. Does not count on a physics major or minor.

PHY 297/298/299 Independent Study. 1/2/3 hrs
An intensive study of a problem or group of problems under the direction of a department faculty member.
Prereq: Approval by the faculty member and department permission.

PHY 311 Elementary Physical Science. 3 hrs
Designed particularly for teachers in elementary science. An elementary study of motion, forces, energy, matter, heat, sound, light, magnetism, and electricity. Focus is on simple experimental projects, followed by class discussions. Most of the apparatus will be made from ma-

terials available in the home or at a variety store. Does not count on a physics major or minor.

Prereq: PHY 100.

PHY 325 Methods of Teaching the Physical Sciences. 3 hrs

A study of strategies and procedures used in secondary school teaching. Students will be provided with the opportunity to familiarize themselves with the newer science curricula; visit secondary school classrooms; present classroom demonstrations and conduct laboratory work; learn to use modern teaching aids, especially the computer, in classroom teaching; and develop means of evaluating cognitive and affective learning. Two recitation and two laboratory hours per week. Open to prospective teachers following the junior-senior high school curriculum who are majoring or minoring in general science or a physical science. Not open to students on academic probation. Does not count on physics major or minors.

Prereq: Junior standing or department permission.

PHY 330 Intermediate Mechanics I. 3 hrs
The statics and dynamics of a particle, projectiles with air resistance, central forces, dynamics of a system of particles, vibrational motion and pendulums.
Prereq: PHY 224; MATH 121; MATH 122.

PHY 332 Mechanics Laboratory. 1 hr
A laboratory course providing experimental studies in intermediate mechanics. Three hours of laboratory per week.
Prereq: PHY 330; may be taken concurrently.

PHY 350 Electricity and Magnetism I. 3 hrs
An introductory course dealing mainly with electrostatics and magnetostatics. The following topics will be covered: vector calculus; Coulomb's law; Gauss's and Ampere's law; electric and magnetic fields; potentials and potential energies; solution of Laplace's equation for rectangular, cylindrical, and spherical geometries in the presence of conductors, dielectrics, and magnetic materials; electric and magnetic susceptibilities; resistance; capacitance; inductance; electromotive force; and electromagnetic induction.
Prereq: PHY 224; MATH 223.

PHY 360 Heat and Thermodynamics. 3 hrs
An intermediate course in the fundamentals of heat and thermodynamics. Thermal expansion, specific heat,

change of state, heat transfer, elementary kinetic theory, thermodynamic laws, entropy, and other thermodynamic functions.

Prereq: PHY 222 or PHY 224; MATH 223.

PHY 370 Introduction to Modern Physics. 3 hrs

An introduction to modern physics and relativity. The qualitative interpretation, according to the modern quantum theory, of experimental results in atomic and nuclear physics.

Prereq: MATH 120 ; PHY 222 or PHY 224.

PHY 372 Modern Physics Laboratory. 1 hr

A laboratory course providing experimental studies in such areas as late classical, relativistic, quantum, and nuclear physics. Three hours of laboratory per week.

Prereq: PHY 370; may be taken concurrently.

PHY 377/378/379 Special Topics. 1/2/3 hrs

This special topics course will be used to teach some aspects of physics at an advanced level that would not be regularly offered. A new course may be taught on an experimental basis with this offering.

Prereq: See department for prerequisites.

PHY 387 Cooperative Education. 3 hrs

Four to six months of full-time employment at an industrial firm specially chosen for imparting a practical educational experience in physics. The program consists of two work experiences (PHY 387 and PHY 487) alternated with full-time attendance at the University. Use on physics major or minor subject to department permission. Offered on a graded credit/no credit basis.

Prereq: Junior standing. Admittance by application only.

PHY 390/391 Physics Project. 2 hrs each

A suitable project in physics is to be done on an individual basis. Arrangements must be made with a physics faculty member before the beginning of the semester.

Prereq: Department permission.

PHY 397/398/399 Independent Study. 1/2/3 hrs

An intensive study of a problem or group of problems under the direction of a department faculty member.

Prereq: Approval by the faculty member and department permission.

PHY 406 Ethical Issues in Physics. 1 hr

Ethical issues that a career physicist may encounter are studied and discussed. Historical accounts and essays

are used to illustrate potential ethical conflicts associated with interactions within the scientific community as well as interactions between the scientific community and society at large.

Prereq: PHY 224.

PHY 417 Undergraduate Research Laboratory. 2 hrs

Laboratory work of a research nature done under the direction of a staff member working on a research problem. One problem will extend through the semester, with a comprehensive report required. Six hours are to be spent in the laboratory each week. Arrangements must be made with the department before the beginning of the semester. Open to seniors nearing completion of a physics major.

Prereq: Department permission.

PHY 420 Engineering Physics Design. 2 hrs

This course seeks to integrate knowledge of wide-ranging topics in engineering physics in order to solve design problems. Major emphasis is placed on a group-oriented term project which must successfully be completed from concept through analysis to layout and report.

Prereq: At least 30 hours of physics courses or department permission.

PHY 431 Intermediate Mechanics II. 3 hrs

A continuation of PHY 330. Mechanics of a rigid body, generalized coordinates, the Lagrangian and Hamiltonian functions, relative motion.

Prereq: PHY 330, MATH 223.

PHY 433 Robot Motions. 3 hrs

This course provides an introduction to the kinematics, dynamics, and trajectory control of robot manipulators.

Prereq: PHY 330.

PHY 436 Vibration and Sound. 4 hrs

Detailed studies of vibration and wave motion with specific emphasis on acoustic waves in air and other media. Reflection, refraction, and interference of sound; vibrating strings and air columns; electroacoustic transducers; architectural acoustics. Laboratory required. Laboratory meets once per week for 3 hours.

Prereq: PHY 222 or PHY 224; MATH 223.

PHY 440 Optics. 3 hrs

An intermediate course dealing with fundamentals of geometrical and physical optics. Reflection, refraction,

lenses and optical instruments, spectroscopes and spectra, interference, diffraction and polarization.

Prereq: PHY 221/223 and PHY 222/224; MATH 121.

PHY 442 Optics Laboratory. 1 hr

A laboratory course providing experimental studies in geometrical, physical, and quantum optics. Three hours of laboratory per week.

Prereq: PHY 440; may be taken concurrently.

PHY 450 Electricity and Magnetism II. 3 hrs

A brief review of electrostatics and magnetostatics. The following topics will be covered: Faraday's Law, displacement current, Maxwell's equations, Poynting vector, plane wave solutions, polarization, wave propagation in dielectrics and conductors, dispersion, Fresnel's equations, guided waves, dipole radiation, Lienard-Wiechert potentials, and radiation theory.

Prereq: PHY 350; MATH 325.

PHY 452 Electrical Measurements. 4 hrs

An intermediate course in electricity. The fundamental principles involved in measuring electric and magnetic quantities, the use of high grade electrical apparatus. Experiments include studies of galvanometers, Wheatstone bridges of various forms, potentiometers and standard cells, vacuum tubes, magnetic measurements and methods of measuring capacitance and inductance. Laboratory: four consecutive hours, one day per week.

Prereq: PHY 221/223 and PHY 222/224.

PHY 456 Electronics for Scientists. 4 hrs

Theory and application of passive and semiconductor circuit elements. Analog and digital circuit analysis and design problems. Lecture: three hours per week. Laboratory: three hours per week.

Prereq: PHY 222 or PHY 224; MATH 121.

PHY 458 Microcomputer and Digital Electronics. 4 hrs

Physical and logical structure of microcomputer systems. Interface techniques and applications to measurements. Basic digital electronics used in microcomputers: logic gates, memories, and interface circuits. Laboratory: three consecutive hours, one day per week.

Prereq: PHY 456.

PHY 462 Kinetic Theory and Statistical Mechanics.

3 hrs

An introduction to the kinetic theory of gases and statistical mechanics. For students concentrating in physics

and those contemplating advanced study in related fields of science and engineering. Maxwell-Boltzmann distribution law, entropy and probability, transport phenomena, quantum statistics, Bose-Einstein and Fermi-Dirac statistics, the connection between statistical mechanics and thermodynamics, the equation of state, the elementary electron theory of metals, and statistical methods in nuclear physics.

Prereq: PHY 224; MATH 223.

PHY 463 Finite Element Analysis. 3 hrs

An introduction to the concepts and methods of finite element analysis. Finite element computer programs are used in this course to analyze stresses in materials and to solve problems in acoustics, heat flow, and electricity and magnetism.

Prereq: PHY 330; COSC 137 or COSC 237 or IS 215.

PHY 471 Nuclear Physics. 4 hrs

Radioactivity, scintillation counters, cloud chambers, particle accelerators, transmutation of the elements, waves and particles, fission, fusion, stellar energies, nuclear reactors, cosmic rays, nuclear forces. Laboratory: two consecutive hours, one day per week.

Prereq: PHY 370, MATH 121.

PHY 475 Introduction to Quantum Mechanics. 3 hrs

The fundamental ideas of the quantum theory; the dual nature of matter, wave equations and wave packets, observable and linear operators, the application of the Schrodinger and Heisenberg equations to elementary systems, Pauli's theory of electron spin.

Prereq: PHY 370; MATH 223.

PHY 477/478/479 Special Topics. 1/2/3 hrs

This special topics course will be used to teach aspects of physics at an advanced level that would not regularly be offered.

Prereq: See department for prerequisites.

PHY 481 Mathematical Physics. 3 hrs

Advanced mathematical topics for the physics student, with applications drawn from the field of physics. Vectors, matrices, tensors, partial differential equations, contour integration, calculus of variations, integral equations and transforms, eigenvalue functions, perturbation and group theory, special functions.

Prereq: MATH 325; PHY 330.

PHY 485 Fluid Dynamics. 3 hrs

An introduction to the statics and dynamics of real and ideal fluids: properties of fluids, mathematical models, dimensional analysis, boundary layer flow, flow in pipes, compressible, incompressible, laminar, and turbulent flow.

Prereq: PHY 230 or PHY 330; PHY 360.

PHY 487 Cooperative Education. 3 hrs

Four to six months of full-time employment at an industrial firm specially chosen for imparting a practical educational experience in physics. The program consists of two work experiences (PHY 387 and PHY 487) alternated with full-time attendance at the University. Use on physics major or minor subject to department permission. Offered on a graded credit/no credit basis.

Prereq: PHY 387. Admittance by application only.

PHY 490/491 Special Problems (Honors Courses).

2 hrs each

An original experimental or theoretical problem in some area of physics investigated on an individual basis. Arrangements must be made with a staff member before the beginning of the semester.

Prereq: 20 semester hours of physics, a "B" average in physics, and department permission.

PHY 495 Readings in Physics (Honors Course). 1 hr

Designed to give individual students a planned intensive reading program in some field of physics, the subject being chosen jointly by the student and the instructor. A part of this course will be the presentation of an hour-long talk in the chosen subject at an open meeting of the Physics department staff and students.

Prereq: 20 semester hours of physics and department permission.

PHY 497/498/499 Independent Study. 1/2/3 hrs

An extensive study of a problem or group of problems under the direction of a department faculty member.

Prereq: Approval by the faculty member and department permission.

ASTRONOMY COURSES**ASTR 177/178/179 Special Topics.** 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ASTR 203 Exploration of the Universe. 3 hrs

An introductory astronomy course for students of any curriculum. The solar system, stars, galaxies, cosmology, and the history of astronomy. Observations with telescopes scheduled a few evenings each semester. ASTR 204 may be taken concurrently with this course. Cannot be applied toward a physics major or minor.

ASTR 204 Astronomical Investigations. 1 hr

A laboratory course for the beginning astronomy student. The techniques and concepts of astronomy. Two hours of laboratory per week.

Prereq or coreq: ASTR 203 or ASTR 205.

ASTR 205 Principles of Astronomy. 4 hrs

An astronomy course for students desiring a comprehensive introduction to astronomy. Topics discussed in ASTR 203 are covered in more detail and additional topics are introduced. Especially recommended for science students. ASTR 204 may be taken concurrently. Not open to students with credit in ASTR 203.

ASTR 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ASTR 297/298/299 Independent Study. 1/2/3 hrs

An intensive study of a problem or group of problems under the direction of a department faculty member.

Prereq: Approval of the faculty member and department permission.

ASTR 315 Applied Astronomy 3 hrs

The practical aspects of astronomy emphasizing advanced amateur observational practices such as identification of astronomical objects using charts and references, telescopes, imaging and darkroom techniques, and computer applications.

Prereq's: ASTR 203 and ASTR 205.

ASTR 370 Astrophysical Concepts. 3 hrs

The emphasis is on the theoretical understanding and analytical treatment of topics in astrophysics. These topics include celestial mechanics, astronautics, planetary atmospheres, stellar structure, stellar evolution, galaxies, and cosmology.

Prereq: PHY 224 or PHY 222; MATH 121.

ASTR 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ASTR 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ASTR 497/498/499 Independent Study. 1/2/3 hrs

An intensive study of a problem or group of problems under the direction of a department faculty member.

Prereq: Approval of the faculty member and department permission.

POLITICAL SCIENCE

Edward Sidlow
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. Ohren, Barnabas A. Racz, Raymond A. Rosenfeld, Leonas Sabaliunas, M. Hisham Sabki, Joanna V. Scott, Edward Sidlow

Associate Professors: David W. Hortin, F. Elaine Martin, James W. Pfister

Assistant Professors: Siba N. Grovogui, Michael Harris, Rhonda Kinney, Adrian J. Lottie

Political Science studies every aspect of public life, encouraging a high level of civic literacy and political participation. It explores political thinking, values, systems of government, and the socio-economic environments in which they function. Legislative, executive and judicial structures of government are emphasized, along with the roles of parties and interest groups, voting behavior, public opinion and political socialization.

Political Science draws upon a variety of methodological approaches to focus on public life, including both the qualitative social sciences and quantitative analytic techniques. Computer-assisted learning is encouraged.

Students who select major programs within the Political Science department 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 postbaccalaureate education at the master's and doctoral levels and in professional schools. As an inherently interdisciplinary liberal arts discipline, political science coordinates prelaw studies for the university and also participates in several international programs of study.

Degrees:

Bachelor of Arts and Bachelor of Science
 Programs of Study

Majors:

Political science
 Political science for elementary education
 Political science for secondary education
 Public administration
 Public law and government
 Public safety administration

Minors:

Political science

Political science for elementary education
 Political science for secondary, K-12, and special education-secondary
 Public administration
 Public law and government

Preprofessional Program:

Prelaw

Advising is coordinated by the Political Science office. Faculty advisers are available during posted office hours or by appointment. Students enrolled in any of the majors offered by the department are expected to consult an assigned department faculty adviser when they declare the major and prior to each registration for classes.

Advising Coordinators:

Political science: James S. Magee
 Public administration: Joseph F. Ohren
 Public law and government: David W. Hortin
 Prelaw: David W. Hortin

Graduate study in the Political Science Department consists of a Master of Public Administration degree. A political science concentration is also possible under the interdisciplinary Master of Arts in social science that is administered by the History Department. The MPA and the MA programs are described in the Graduate Catalog.

ACADEMIC MAJORS

POLITICAL SCIENCE MAJOR

To fulfill the requirements for a major in political science, students must (1) complete at least 30 semester hours in the major as specified below, (2) complete at EMU at least four courses in the major numbered 300 or above, and (3) attain at least a "C" average in the major. Students are further expected to take PLSC 112 (or 113), one of their Basic Studies courses, prior to the required core courses and to complete PLSC 112 (or 113) and the required core courses within the first 18 hours of political science coursework. 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. Finally, neither the independent study or internship/cooperative education course nor PLSC 470 meets the group distribution requirements specified below under areas of concentration, but both may be taken as free political science electives.

	Sem hours
Major in political science	30
1. Required core courses	9
<i>Choose one:</i>	3
PLSC 210 Introduction to Political Analysis (3)	
PLSC 310 Methods of Political Research (3)	
<i>Choose two:</i>	6
PLSC 211 Introduction to Comparative Government (3)	
PLSC 212 Introduction to International Politics (3)	
PLSC 213 Introduction to Political Thought (3)	
2. Areas of concentration	21
Choose seven courses from the three groups listed below, including at least one course from each group.	
<i>Group I—American politics, public law, and administration</i>	
PLSC 202 State and Local Government (3)	
PLSC 216 Municipal Government (3)	
PLSC 270 Public Administration (3)	
PLSC 301 The American Legal System (3)	
PLSC 312 American Constitutional Law I (3)	
PLSC 313 American Constitutional Law II (3)	
PLSC 330 Urban Politics (3)	
PLSC 332 Intergovernmental Relations and Federalism (3)	
PLSC 335 Labor in American Politics (3)	
PLSC 352 Politics of Government Budgeting (3)	
PLSC 358 Parties, Elections and Interest Groups (3)	
PLSC 364 The Legislative Process (3)	
PLSC 365 Women and Politics (3)	
PLSC 380 The American Presidency (3)	
PLSC 381 Public Policy Analysis (3)	
PLSC 385 Judicial Process and Behavior (3)	
<i>Group II—Comparative politics and international relations</i>	
PLSC 221 Vietnam (3)	
PLSC 222 War and Peace in the Nuclear Age (3)	
PLSC 311 Third World Politics (3)	
PLSC 327 American Foreign Policy Process (3)	
PLSC 341 International Law (3)	
PLSC 342 International Organizations (3)	
PLSC 354 Government and Politics of Canada (3)	
PLSC 361 Soviet Succession Politics (3)	
PLSC 367 Contemporary Political Systems of Latin America (3)	
PLSC 371 Government and Politics of the Middle East (3)	
PLSC 372 Government and Politics of Sub-Saharan Africa (3)	

- PLSC 374 Asian Political Systems (3)
- PLSC 462 Russian Foreign Relations (3)
- PLSC 467 Advanced International Relations (3)

Group III—Political theory and methods

- PLSC 308 Political Violence and Revolution (3)
- PLSC 359 Public Opinion and Political Learning (3)
- PLSC 382 Politics and the 21st Century (3)
- PLSC 418 20th Century Political Theory (3)
- PLSC 420 Democracy and Power (3)
- PLSC 422 American Political Theory (3)

PUBLIC ADMINISTRATION MAJOR

Public Administration is a broad-ranging discipline which combines theory and practice, and focuses on the organization of government structure, policies and programs as well as the performance of officials. Public Administration encourages public policies that are more responsible to human, social and economic needs and are more efficient and effective.

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 (PLSC 480, PLSC 486, PLSC 488, or PLSC 489) or six semester hours of cooperative education credit (PLSC 387 and PLSC 487) may be substituted for two of the restricted electives.

Courses to be completed prior to beginning the major are:

- PLSC 112 or PLSC 113 American Government
- ECON 201 Principles of Economics I
- ECON 202 Principles of Economics II
- SOCL 105 Introductory Sociology

	Sem hours
Major in public administration	36
1. Required courses	18
PLSC 270 Public Administration	3
PLSC 334 Personnel Administration in Government	3
PLSC 352 Politics of Government Budgeting ...	3
PLSC 381 Public Policy Analysis	3
PLSC 431 Theories of Public Organization	3
ACC 246 Accounting for Public Administrators	3
2. Restricted electives	18
<i>Choose one course from each of the following six categories:</i>	
a. ECON 350 Government Finance, ECON 455 Cost-Benefit Analysis	
b. COSC 137 Introduction to FORTRAN Programming, IS 215 End-User Computing	
c. SOCL 250 Social Statistics I, DS 265 Business Statistics I, ECON 310 Economic Statistics	
d. PLSC 310 Methods of Political Research, SOCL 304 Methods in Sociological Research	
e. ENGL 225 Intermediate English Composition, JRNL 314 Writing for Public Relations, ENGL 324 Principles of Technical Communication, ENGL 328 Writing: Style and Language, MGMT 202 Business Communications	
f. PLSC 216 Municipal Government, PLSC 330 Urban Politics, PLSC 332 Intergovernmental Relations and Federalism, PLSC 470 Seminar in Political Science	

CURRICULUM FOR PUBLIC SAFETY ADMINISTRATION

The Public Safety Administration Program is an interdisciplinary program involving coursework in three departments in two colleges within the university. The curriculum is intended to meet the professional development needs of inservice and entry-level personnel in public safety organizations—law enforcement, public safety, fire protection, private security, and corrections—with a competency based curriculum resting on a strong liberal arts foundation.

The public safety manager's focus is on public policy, politics, and administration. The public safety manager is concerned with the causes of crime, the nature and impact of criminal behavior, threats to public safety arising from environmental and natural disas-

ters, and the nature and operation of correctional institutions. But the administrator's responsibilities extend to addressing how the public safety organization develops a response to these problems, the nature of the response, and how resources—budgets and personnel—are obtained, utilized, and evaluated in responding to problems.

This program builds on the existing public administration major. Courses are drawn from an interdisciplinary foundation group, an administration group, and a public safety administration component including three areas: a public safety administration group, an area concentration, and an academy or internship component. The program combines both major and minor requirements, and graduating students will be awarded a baccalaureate degree in public administration.

Transfer students from associate degree programs in related fields can matriculate into the program (students transferring from another college must complete all basic studies coursework as required by the University for the bachelor's degree).

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
 - I-B-2.** CTAS 124 Fundamentals of Speech (3)
 - I-B-3.** *One of the following:*
 - CTAC 227 Interpersonal Communication (3)
 - ENGL 326 Research Writing (3)
 - *CTAC 374 Intercultural Communication (3)
 - I-B-4.** SOCL 250 Social Statistics I (3)
 - I-B-5.** INDT 201 Microcomputer Applications in Technology (3)
 - II-B-1.** *One of the following:*
 - CHEM 119 Fundamentals of Chemistry (4)
 - PHY 221 Mechanics, Sound, and Heat (4)
 - II-B-2.** PSY 101 General Psychology (3)
 - II-B-3.** *Basic Studies requirement. See inside back cover*
 - III-B-1.** *Basic Studies requirement. See inside back cover*
 - III-B-2.** *Basic Studies requirement. See inside back cover*
 - III-B-3.** SOCL 105 Introductory Sociology (3)
 - III-B-4.** SOCL 202 Social Problems (3)
 - IV-B-1.** *Basic Studies requirement. See inside back cover*
 - IV-B-2.** *Basic Studies requirement. See inside back cover*
 - IV-B-3.** *Basic Studies requirement. See inside back cover*
 - IV-B-4.** *Basic Studies requirement. See inside back cover*
- Physical education, military science, or equivalent (2)**

Sem hours

Public Administration Core

- 1. Foundation Group**
- ANTH 135 Introduction to Cultural Anthropology

or SOCL 214 Racial and Cultural Minorities 3
 PLSC 202 State and Local Government or PLSC
 216 Municipal Government or PLSC 330 Urban
 Politics 3
 PLSC 313 American Constitutional Law II or
 CRM 300 Criminal Justice 3
 CTAC 352 Communication in Negotiation or
 CTAC 354 Organizational Communication .. 3
 PLSC 310 Methods of Political Research or SOCL
 304 Methods in Sociological Research 3

2. **Administration Group** 15
 PLSC 270 Public Administration 3
 PLSC 334 Personnel Administration in
 Government 3
 PLSC 352 Politics of Government Budgeting ... 3
 PLSC 381 Public Policy Analysis 3
 PLSC 431 Theories of Public Organization 3

Public Safety Administration Focus

1. **Public Safety Administration Group** 12
 INDT 380 Planning and Decision-Making for
 Public Safety 3
 INDT 381 Public Relations and Public Safety .. 3
 PLSC 450 Managing Public Safety Agencies ... 3
 PLSC 451 Seminar in Public Safety
 Administration 3

2. **Area Concentration** 15

Students must select three courses from one, and two
 courses from the other concentration below:

Police/Fire Administration

CRM 431 Police in Modern Society (3)
 INDT 433 Arson Investigation (3)
 INDT 434 Hazardous Materials (3)
 INDT 435 Incident Command (3)
 PLSC 456 Criminal Law I (3)

Corrections Administration

HLED 390 Drug Use and Abuse (3)
 INDT 255 Emergency Preparedness Planning (3)
 CRM 331 Introduction to Corrections (3)
 PSY 360 Abnormal Psychology (3)
 INDT 475 Managing Correctional Agencies and
 Facilities (3)

3. **Academy or Internship/Coop** (6)

Preservice students must complete an internship
 or cooperative education placement or an accredited
 academy program; inservice students may substitute
 credits from an accredited academy program

PLSC 488 Internship (6)

PUBLIC LAW AND GOVERNMENT MAJOR

To fulfill the requirements for a major in public
 law and government, students must (1) complete PLSC
 112 (or 113), a Basic Studies requirement and a prereq-
 uisite for public law and government courses; (2) com-
 plete at least 16 hours in the major as specified below; (3)
 complete at EMU at least four courses in the major num-
 bered 300 or above; and (4) attain at least a "C" average
 in the major. A maximum of six semester hours of inde-
 pendent study or internship/cooperative education
 courses, or a combination of both, may be applied to the
 36 semester hours required for the major.

Sem hours

Major in public law and government 36

1. **Required courses** (9)

PLSC 301 The American Legal System (3)

Choose two courses from the following: 6

PLSC 312 American Constitutional Law I, PLSC
 313 American Constitutional Law II, PLSC 341
 International Law, PLSC 412 Comparative
 Legal Systems 3

2. **Restricted electives** 9

Choose one course in each of the following three groups:

Group I-American politics and administration

PLSC 202 State and Local Government; PLSC 216
 Municipal Government; PLSC 270 Public
 Administration; PLSC 330 Urban Politics;
 PLSC 332 Intergovernmental Relations and
 Federalism; PLSC 335 Labor in American
 Politics; PLSC 352 Politics of Government
 Budgeting; PLSC 358 Parties, Elections, and
 Interest Groups; PLSC 364 The Legislative
 Process; PLSC 365 Women and Politics; PLSC
 380 The American Presidency; PLSC 381 Public
 Policy Analysis

Group II-Comparative politics and international relations

PLSC 211 Introduction to Comparative
 Government, PLSC 212 Introduction to
 International Politics, PLSC 221 Vietnam, PLSC
 222 War and Peace in the Nuclear Age, PLSC
 311 Third World Politics, PLSC 327 American
 Foreign Policy Process, PLSC 342 International
 Organizations, PLSC 354 Government and
 Politics of Canada, PLSC 361 Soviet Succession
 Politics, PLSC 367 Contemporary Political
 Systems of Latin America, PLSC 371
 Government and Politics of the Middle East,
 PLSC 372 Government and Politics of Sub-
 Saharan Africa, PLSC 374 Asian Political

Systems, PLSC 462 Russian Foreign Relations, PLSC 467 Advanced International Relations

Group III-Political theory and methods

PLSC 210 Introduction to Political Analysis, PLSC 213 Introduction to Political Thought, PLSC 308 Political Violence and Revolution, PLSC 310 Methods of Political Research, PLSC 359 Public Opinion and Political Learning, PLSC 382 Politics and the 21st Century, PLSC 418 20th Century Political Theory, PLSC 420 Democracy and Power, PLSC 422 American Political Theory

3. Other electives 12

Choose four courses from the following:

PLSC 312 American Constitutional Law I, PLSC 313 American Constitutional Law II, PLSC 341 International Law, PLSC 385 Judicial Process and Behavior, PLSC 387 Cooperative Education, ECON 407 Economic Analysis and Law, PLSC 412 Comparative Legal Systems, PLSC 456 Criminal Law I, HIST 465 United States Constitutional History, PLSC 480 Field Seminar in Political Science/Public Administration, PLSC 486 Internship, PLSC 487 Cooperative Education, PLSC 488/489 Internship, PLSC 497/498/499 Independent Study

4. Cognate electives 6

Courses in a related content area selected with the approval of the adviser.

ACADEMIC MINORS

POLITICAL SCIENCE MINOR

Students must complete PLSC 112 American Government or PLSC 113 American Government Honors before beginning the course of study for the minor.

Sem hours

Minor in political science 21

1. Required core courses 6

Choose two core courses from the following:

PLSC 210 Introduction to Political Analysis, PLSC 211 Introduction to Comparative Government, PLSC 212 Introduction to International Politics, PLSC 213 Introduction to Political Thought, PLSC 310 Methods of Political Research

2. Area of concentration 15

Choose five courses from two of the three areas of concentration (Groups I, II, and III) listed under the political science major

PUBLIC ADMINISTRATION MINOR

Sem hours

Minor in public administration 24

1. Required course 3

PLSC 270 Public Administration 3

2. Restricted electives 12

Choose four of the following courses:

PLSC 334 Personnel Administration in Government, PLSC 352 Politics of Government Budgeting, PLSC 381 Public Policy Analysis, PLSC 431 Theories of Public Organization
ACC 246 Accounting for Public Administrators
ECON 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 (PLSC 480, 486, 488, or 489) or three semester hours of cooperative education credit (PLSC 387 or 487) may be applied to the public administration minor.

PUBLIC LAW AND GOVERNMENT MINOR

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

PLSC 301 The American Legal System (3)

Choose one course from the following: (3)

PLSC 312 American Constitutional Law I, PLSC

313 American Constitutional Law II, PLSC 412

Comparative Legal Systems

2. Restricted electives 6

Elect two courses from two of the three areas of concentration (Groups I, II, and III) listed under the public law and government major

3. Other electives 12

Choose four courses from those listed as other electives in the public law and government major. One of these four electives may be a cognate in a related content area selected with the approval of the adviser.

TEACHING MAJORS

POLITICAL SCIENCE MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in political science, certification code "CD," and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), history ("CC"), psychology ("CE"), sociology ("CF"), or social science ("CX"). The certification test covering this field is #10, "Political Science."

To fulfill the requirements for a major in political science, students must (1) complete at least 30 semester hours in the major as specified below, (2) complete at EMU at least four courses in the major numbered 300 or above, and (3) attain at least a "C" average in the major. Students are further expected to take PLSC 112 (or 113), one of their Basic Studies courses, prior to the required core courses and to complete PLSC 112 (or 113) and the required core courses within the first 18 hours of political science coursework. 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. Finally, neither the independent study or internship/cooperative education course nor PLSC 470 meets the group distribution requirements specified below under areas of concentration, but both may be taken as free political science electives.

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
- I-B-2. *Basic Studies requirement. See inside back cover*
- I-B-3. *Basic Studies requirement. See inside back cover*
- I-B-4. *Basic Studies requirement. See inside back cover*
- I-B-5. *Basic Studies requirement. See inside back cover*
- II-B-1. *Basic Studies requirement. See inside back cover*
- II-B-2. *Basic Studies requirement. See inside back cover*
- II-B-3. *Basic Studies requirement. See inside back cover*
- III-B-1. *Basic Studies requirement. See inside back cover*

Teaching Major 30
Same as political science major (see above).

Minor

A minor in one of economics, geography, history, psychology, sociology, or social science

Subtotal, Major and minor: 50

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
- EDTC 300 Introduction to Computer Applications in Education (1)
- SPGN 300 Exceptional Children in the Regular Classroom (1)
- EDPS 322 Human Development and Learning (4)

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

- CURR 305 Curriculum and Methods: Secondary (3)
- RDNG 311 Teaching Reading in the Secondary School (3)
- SOFD 328 Schools in a Multicultural Society (3)
- EDPS 340 Introduction to Assessment and Evaluation (3)
- EDMD 345 Media for the Classroom Teacher (1)
- HIST 481 The Teaching of Social Studies (3)
- EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor:
136

Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

POLITICAL SCIENCE MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in political science, certification code "CD." The certification test covering this field is #10, "Political Science."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary political science program, plus the "history" requirement and the economics course requirement under III-B-2, III-B-3, and III-B-4 in that program's Basic Studies requirements. Approved minors are geography, history, sociology, and social science group for elementary teachers.

30 hours, not including the minor, and not counting course work that may be satisfied through Basic Studies.

TEACHING MINOR POLITICAL SCIENCE MINOR

ELEMENTARY, SECONDARY, K-12, SPECIAL EDUCATION-
ELEMENTARY, AND SPECIAL EDUCATION-SECONDARY TEACHER
CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in political science, certification code "CD." The certification test covering this field is #10, "Political Science."

Minor in Political Science 21
Same as political science minor (see above).

PREPROFESSIONAL PROGRAM IN PRELAW

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 prelaw students, LSAT registration and application materials and catalogs from many law schools throughout the country.

Because law schools typically do not require specific courses for admission or identify any particular major or curriculum as preferable, it is necessary for prelaw students to plan their own academic programs. Given the increasing competitiveness of admission to law school, it is 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 prelaw students are political science, economics, history, and sociology. Other frequent choices include English language and literature, communications, psychology, philosophy, and business administration. Although less numerous, students with majors in mathematics, the natural sciences, foreign languages, music, and art 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 prelaw advisers are advanced English composition, persuasive speech, logic, and accounting. Mathematics and science courses are frequently cited as helpful in developing needed analytical skills.

Prelaw 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

PLSC 112 American Government. 3 hrs
A study of the institutions and processes of American national government. Includes critical comparisons with major foreign governmental systems. Satisfies the political science requirement of all curriculums. Not open to those with credit in PLSC 113.

PLSC 113 American Government Honors. 3 hrs
An enhanced approach to the study of the institutions and processes of American national government. Includes critical comparisons with major foreign governmental systems. Satisfies the political science requirement of all curriculums. Not open to those with credit in PLSC 112.

PLSC 177/178/179 Special Topics. 1/2/3 hrs
An examination of a topic in political science not normally covered in the curriculum in which the distinctive concerns of political science are emphasized. Students may elect this course several times 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: Department permission.

PLSC 202 State and Local Government. 3 hrs
A study of the forms and functions of state and local governments with special emphasis on the government of Michigan. Especially valuable for teachers of social studies in senior and junior high schools.
Prereq: PLSC 112/113, or department permission.

PLSC 210 Introduction to Political Analysis. 3 hrs
A study of the conceptual and analytical foci of political science. Consideration is given to micro-level analysis of personality, attitudes, socialization, and roles and to macro-level analysis of group theory, decision making, systems, and communications.
Prereq: PLSC 112/113.

PLSC 211 Introduction to Comparative Government. 3 hrs
Using a comparative focus, identifies important similarities and differences in the structure and the behavior of foreign political systems, principally but not exclusively European.
Prereq: PLSC 112/113.

PLSC 212 Introduction to International Politics. 3 hrs
The fundamentals of great power politics, the impact of efforts at international organization.
Prereq: PLSC 112/113.

PLSC 213 Introduction to Political Thought. 3 hrs
Selections from major theorists are used to examine different approaches to perennial issues such as justice, liberty, equality, legitimacy, and political order.
Prereq: PLSC 112/113.

PLSC 216 Municipal Government. 3 hrs
A study of forms and functions of municipal government.
Prereq: PLSC 112/113.

PLSC 221 Vietnam. 3 hrs
This course will be a political-military look at the Vietnam War from its beginnings in the 1940s to its climax in 1975. A brief look at the parallels with other wars (The Persian Gulf, etc.) and an aftermath will be included. The course will include the PBS videotapes of *Vietnam: A History*.
Prereq: PLSC 112/113.

PLSC 222 War and Peace in the Nuclear Age. 3 hrs
This course will be a study of the history of atomic weapons and the struggle to control them from 1945 to 1989. While concentrating most on the United States, it will include the Soviet Union, China, and western Europe. It will also examine the personalities involved and attempt to assess the impact they had on the struggle for arms control.
Prereq: PLSC 112/113.

PLSC 270 Public Administration. 3 hrs
The nature of public administration; problems connected therewith—direction and organization; recruitment, training, and promotion of personnel; maintenance of loyalty and efficiency.
Prereq: PLSC 112/113/202.

PLSC 277/278/279 Special Topics. 1/2/3 hrs
An examination of a topic in political science not normally covered in the curriculum in which the distinctive concerns of political science are emphasized. Students may elect this course several times 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: PLSC 112/113/202.

PLSC 297/298/299 Independent Study. 1/2/3 hrs
Approved studies on an individual basis in areas in which the department does not offer formal courses.
Prereq: PLSC 112/113/202.

PLSC 301 The American Legal System. 3 hrs
A survey of various substantive components of the American system of law and its function in a democratic society. Special emphasis is placed upon problems of law enforcement, legal agencies, and the processes involved in the administration of criminal justice.
Prereq: PLSC 112/113/202.

PLSC 308 Political Violence and Revolution. 3 hrs
A cross-national examination of political violence and revolution. Covers distinctions in types of political violence, examines ideological arguments on violence and revolution, examines case studies, and the impact of political, biological, psychological, and sociological factors that have been associated with violent outbreaks cross-nationally.
Prereq: PLSC 112/113/202.

PLSC 310 Methods of Political Research. 3 hrs
Acquaints students with philosophic and methodological problems and analytic techniques in the study of politics.
Prereq: PLSC 112/113/202.

PLSC 311 Third World Politics. 3 hrs
This course is designed to increase student awareness and understanding of political development within third world nations. The colonial legacy and current sociopolitical conditions are investigated in order to de-

termine how these forces influence public policy making.
Prereq: PLSC 112/113 and PLSC 212.

PLSC 312 American Constitutional Law I. 3 hrs

PLSC 313 American Constitutional Law II. 3 hrs

The environment of judicial decision-making will be ascertained through an investigation of the politics, procedures, and personalities of the Supreme Court. The impact of the court upon the development and operation of the American system of government will be assessed through an examination of leading court decisions. May be taken as a two-semester sequence, or elected independently.

Prereq: PLSC 112/113/202.

PLSC 315 Consumer Law and Politics. 3 hrs

A study of the politics of the consumer movement; executive, legislative, and judicial responses to consumer demands at the federal, state, and local levels. Investigation of the body of legislation and court decisions that affect the consumer in the market place.

Prereq: PLSC 112/113/202.

PLSC 327 American Foreign Policy Process. 3 hrs

An introduction to the formulation and execution of American foreign policy, including consideration of the role of public opinion, the press, interest groups, Congress, the president, deterrence theory, and decision-making in crisis situations.

Prereq: PLSC 112/113/202.

PLSC 330 Urban Politics. 3 hrs

An examination of the urban political environment in the United States; structure, processes, power relationships, ethnic considerations, fiscal constraints, and selected specific policy areas are considered.

Prereq: PLSC 112/113/202.

PLSC 332 Intergovernmental Relations and Federalism. 3 hrs

A study of intergovernmental relations in the United States focusing on recent trends in the federal system. Examines significant developments and alternatives in shared governmental responsibilities, such as metropolitan reorganization, grant programs, and regionalism.

Prereq: PLSC 112/113/202.

PLSC 334 Personnel Administration in Government.

3 hrs

An examination of the basic personnel management practices of public bureaucracies. Topics include the develop-

ment 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: PLSC 112/113/202.

PLSC 335 Labor in American Politics. 3 hrs

An examination of the role played by American labor as a political pressure group and as an agent of voter mobilization; American labor voting patterns; the political impact of labor organization on the civil service; American role in international union affairs.

Prereq: PLSC 112/113/202.

PLSC 341 International Law. 3 hrs

An introduction to the principles and practices of public international law. The origin and development, the nature and sources of international law. Special emphasis will be placed upon the legal problems of peace and war and the future perspectives of international law in the relations of nations.

Prereq: PLSC 112/113.

PLSC 342 International Organizations. 3 hrs

The structure and functions of international organizations. Collective security, disarmament, and the pacific settlement of disputes will be examined. Organizations emphasized will be the League of Nations, the United Nations, the European Common Market, and OPEC.

Prereq: PLSC 112/113/202.

PLSC 352 Politics of Government Budgeting. 3 hrs

An analysis of the political significance and the procedures of governmental budgeting in the United States.

Prereq: PLSC 112/113/202.

PLSC 354 Government and Politics of Canada. 3 hrs

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: PLSC 112/113.

PLSC 358 Parties, Elections, and Interest Groups.

3 hrs

The organization, operation, and function of American political parties and their impact on the American political system. The impact of interest groups and elections is also stressed.

Prereq: PLSC 112/113.

PLSC 359 Public Opinion and Political Learning. 3 hrs
The nature, formation, measurement, and role of public opinion; the structure of control and the performance of the mass media; the nature of techniques, strategies, and effects of propaganda.
Prereq: PLSC 112/113.

PLSC 361 Soviet Succession Politics. 3 hrs
Government and politics in the former USSR: the rise and decline of Communist power, party and government structures, elements of political culture, and the nature of current system-modification.
Prereq: PLSC 112/113/202.

PLSC 364 The Legislative Process. 3 hrs
A study of the agencies, procedures, and influences in the formation of public policy by Congress, state legislatures, and administrative agencies.
Prereq: PLSC 112/113.

PLSC 365 Women and Politics. 3 hrs
A study of the role of women in American politics as voters, activists, and candidates, with consideration of how the political behavior of women relates to their economic, social, and religious roles. Comparisons are made with selected European and Asian political systems.
Prereq: PLSC 112/113.

PLSC 367 Contemporary Political Systems of Latin America. 3 hrs
A study of the governmental structure and the nature of political activity in selected Latin-American nations, with an emphasis on issues such as urbanization, military influence, students, and labor, and the development of political parties.
Prereq: PLSC 112/113/202.

PLSC 371 Government and Politics of the Middle East. 3 hrs
The Middle East as a case study in the field of comparative politics, European colonial policies, nationalist movements, and politics of independent states.
Prereq: PLSC 112/113/202.

PLSC 372 Government and Politics of Sub-Saharan Africa. 3 hrs
Africa as a case study in the field of comparative politics, tribal political systems, European colonial policies, nationalist movements, multiracial conflict, and politics of independent states in sub-Saharan Africa.
Prereq: PLSC 112/113.

PLSC 374 Asian Political Systems. 3 hrs
A study of the politics and government of China, Japan, the mainland Southeast Asian states, Indonesia, and India.
Prereq: PLSC 112/113/202.

PLSC 377/378/379 Special Topics. 1/2/3 hrs
An examination of a topic in political science not normally covered in the curriculum in which the distinctive concerns of political science are emphasized. Students may elect this course several times 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: PLSC 112/113/202.

PLSC 380 The American Presidency. 3 hrs
A study of executive power, emphasizing the contemporary presidential role and how it has evolved, the politics of candidate choice, the personal qualities and political styles of recent presidents, and the array of formal and informal institutions constituting the modern presidency.
Prereq: PLSC 112/113/202.

PLSC 381 Public Policy Analysis. 3 hrs
An advanced course in public administration dealing with modern administrative techniques, budget analysis, the politics of resource allocation, and regulatory problems.
Prereq: PLSC 270.

PLSC 382 Politics and the 21st Century. 3 hrs
A study of the political and public policy directions of the future. Consideration will be given to worldwide political developments and alternative political futures as affected by accelerating sociopolitical and technological change.
Prereq: PLSC 112/113/202.

PLSC 385 Judicial Process and Behavior. 3 hrs
A study of the judicial process and behavior in the United States with emphasis on analysis of policy-making by the courts. Federal judicial structures and functions, decision-making procedures and political ideology, and judicial review.
Prereq: PLSC 112/113/202.

PLSC 387 Cooperative Education. 3 hrs
Four to six months of full-time employment in the pub-

lic sector intended to provide practical experience in government, politics, or administration. The program consists of two directed work experiences (PLSC 387 and PLSC 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.

PLSC 410 Political Science in Fiction. 3 hrs

A discussion and analysis of political theories, institutions, and practices utilizing a storehouse of insightful and articulate materials not normally tapped in traditional political science courses; the works of essayists, aphorists, dramatists, pamphleteers, poets, and novelists.

Prereq: Political science major or minor. At least nine hours of political science course work completed. Junior or senior standing or department permission.

PLSC 412 Comparative Legal Systems. 3 hrs

Analysis of fundamental elements of the common law, the civil law, socialist laws, and other legal traditions, and a comparison of the legal systems of selected foreign countries.

Prereq: PLSC 112/113.

PLSC 418 20th Century Political Theory. 3 hrs

A comparative study of recent political theories and ideologies including democracy, socialism, communism, and fascism. The analysis includes modern psychological and sociological theories as they affect political thought.

Prereq: PLSC 112/113.

PLSC 420 Democracy and Power. 3 hrs

A study of the ideals and limitations of democracy. Examines values such as consent, equality, rights, citizenship, and the public interest and the limitations posed by authority, coercion, class conflict, distribution of wealth, and the state.

Prereq: PLSC 210/213, or PHIL 225.

PLSC 422 American Political Theory. 3 hrs

A concise survey of American political thought. The origins, growth, and present state of American political ideologies will be examined.

Prereq: PLSC 112/113/202.

PLSC 431 Theories of Public Organization. 3 hrs

An introduction to theories of organization as related to public bureaucracies in a democratic political context.

Prereq: PLSC 270 or department permission.

PLSC 450 Managing Public Safety Agencies. 3 hrs

Analysis of public sector management elements, including planning, organizing, leading, controlling, and communicating, presented in the context of and applied to internal police/fire and corrections administration.

Prereq: PLSC 270 and PLSC 431, or department permission.

PLSC 451 Seminar in Public Safety Administration. 3 hrs

A capstone seminar in the public safety administration concentration; integrates previous coursework in law, management, and politics by focusing on contemporary problems and issues in public safety operations, including attention to leadership, organizational conflict, and resource allocation/utilization; utilizes a case approach.

Prereq: Senior standing and department permission.

PLSC 456 Criminal Law I. 3 hrs

A study of criminal law currently in use in the United States with emphasis upon the way its basic concepts function; its principal components and problems central to its impact upon the political system.

Prereq: PLSC 112/113.

PLSC 462 Russian Foreign Relations. 3 hrs

An analytical and historical examination of Soviet foreign policies since 1917—their sources, character, objectives, and periodization.

Prereq: PLSC 112/113/202.

PLSC 467 Advanced International Relations. 3 hrs

The course will explore through case studies the ways in which ideas, cultural differences, and different political systems combine to produce the international politics of today. Special attention will be paid to the United States in this process as well as the role of economics and international organization. *Limit: 25 students.*

Prereq: PLSC 212 and PLSC 327.

PLSC 470 Seminar in Political Science. 3 hrs

Examination and utilization of research techniques in the preparation of a major seminar paper in political science, public administration, or public law and government.

Prereq: PLSC 112/113/202.

PLSC 477/478/479 Special Topics. 1/2/3 hrs

An examination of a topic in political science not normally covered in the curriculum in which the distinctive 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: PLSC 112/113/202.

PLSC 480 Field Seminar in Political Science/Public Administration. 3 hrs

Designed to help students relate their field experience to some aspect of political science or public administration.

Prereq: Department permission.

PLSC 486/488/489 Internship. 3/6/9 hrs

Extends classroom learning through practical experience with legislative, administrative, and other public sector agencies at all levels of government. Open to majors and minors in political science and public administration.

Prereq: Department permission.

PLSC 487 Cooperative Education. 3 hrs

Four to six months of full-time employment in the public sector intended to provide practical experience in government, politics, or administration. The program consists of two directed work experiences (PLSC 387 and PLSC 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, PLSC 387 or departmental recommendation required.

PLSC 497/498/499 Independent Study. 1/2/3 hrs

Advanced study on an individual basis in areas in which the department does not offer formal courses. Normally restricted to political science majors.

Prereq: Senior standing and department permission.

PSYCHOLOGY

Kenneth W. Rusiniak
Department Head
537 Mark Jefferson
487-1155

Professors: Barbara E. Brackney, Jeffrey Dansky, Dennis J. Delprato, Barry Fish, Monroe Friedman, Norman Gordon, V. Kay Hodges, Peter A. Holmes, Stuart A. Karabenick, John Knapp, Jerry O'Dell, James Roff, Kenneth W. Rusiniak, Alida S. Westman, Zakhour I. Youssef

Associate Professors: Marilyn K. Bonem, John L. McManus, James Todd, Silvia Von Kluge

Assistant Professors: Carol Freedman-Doan

Psychology, as a discipline, is concerned with the experience, behavior, needs, desires, and potentialities of human beings. It is basic to many career fields and to any life pursuit where other human beings are encountered.

Objectives of the department are to provide a general and in-depth survey of the fields of the science of psychology for students interested in diversified career fields; to prepare undergraduate students to pursue graduate studies in order to enter one of the several professional career areas for which the major is required: clinical psychology, industrial psychology, school psychology, teaching, and research in psychology, for example; and to help students who are interested in self-development obtain current and sound approaches to problems of topical interest.

Degree:

Bachelor of Science
 Programs of Study:

Major:

Psychology
 Psychology for secondary education

Minor:

Psychology
 Psychology for secondary, K-12, and special education-secondary

Advising is available to all students and can be obtained from any department faculty. It is recommended that students see a faculty member specializing in the area of the student's interest if graduate study is anticipated. Information may be obtained in the psychology office.

Advising coordinator: Kenneth W. Rusiniak

Graduate study leads to a master's degree in psychology with programs in general psychology, clinical psychology, and clinical behavioral psychology. These programs are described in the Graduate Catalog.

ACADEMIC MAJOR

PSYCHOLOGY MAJOR

The major in psychology is designed to provide a general and in-depth survey of the fields in the science of psychology and to prepare students to work with people in several career areas. Further study beyond the baccalaureate degree is required to enter professional career work.

Sem hours

Major in psychology 30

1. Required courses 13-14

PSY 101/102 General Psychology 3/4

PSY 205 Quantitative Methods in Psychology . 3

PSY 301 Introductory Experimental Psychology 4

PSY 453 History and Systems of Psychology ... 3

2. Restricted electives 12

Choose one course from each of the following groups:

Adjustment and personality

PSY 360 Abnormal Psychology, PSY 451
 Dynamics of Personality

Biological

PSY 357 Sensation and Perception, PSY 457
 Physiological Psychology, PSY 458
 Comparative Animal Behavior

Learning and motivation

PSY 304 Learning, PSY 356 Motivation

Developmental and social

PSY 309 Social Psychology, PSY 321 Child
 Psychology

3. Electives 4-5

Choose four or five credits in consultation with
 advising coordinator.

ACADEMIC MINOR

PSYCHOLOGY MINOR

The minor provides students entering many career fields a fuller scientific understanding of human experience, behavior, needs, desires, and potentialities. The minor is flexible; within limits it may be designed to meet the needs of each student.

	Sem hours
Minor in psychology	20
1. Required courses	3-4
PSY 101/102 General Psychology	3/4
2. Electives	16-17
Choose 16-17 credits in consultation with advising coordinator.	

TEACHING MAJOR PSYCHOLOGY MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in psychology, certification code "CE," and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), history ("CC"), political science ("CD"), sociology ("CF"), or social science ("CX"). The certification test covering this field is #11, "Psychology."

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
I-B-2. *Basic Studies requirement. See inside back cover*
I-B-3. *Basic Studies requirement. See inside back cover*
I-B-4. *Basic Studies requirement. See inside back cover*
I-B-5. *Basic Studies requirement. See inside back cover*
II-B-1. *Basic Studies requirement. See inside back cover*
II-B-2. *Basic Studies requirement. See inside back cover*
II-B-3. *Basic Studies requirement. See inside back cover*
III-B-1. *Basic Studies requirement. See inside back cover*
III-B-2. HIST 102 Western Civilization, 1648 to World War I (3)
III-B-3. *One of:*
 GEOG 107 Introduction to Geography (3)
 GEOG 110 World Regions (3)
III-B-4. HIST 103 Twentieth Century Civilization (3)
IV-B-1. *Basic Studies requirement. See inside back cover*
IV-B-2. *Basic Studies requirement. See inside back cover*
IV-B-3. *Basic Studies requirement. See inside back cover*
IV-B-4. *Basic Studies requirement. See inside back cover*
Physical education, military science, or equivalent (2)
A course in economics, if not included in the minor (3)

Credit hours in Basic Studies: 52

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

- PSY 205 Quantitative Methods in Psychology (3)
PSY 301 Introductory Experimental Psychology (3)
PSY 453 History and Systems of Psychology (3)

One of:

- PSY 360 Abnormal Psychology (3)
PSY 451 Dynamics of Personality (3)

One of:

- PSY 357 Sensation and Perception (3)
PSY 457 Physiological Psychology (3)
PSY 458 Comparative Animal Behavior (3)

One of:

- PSY 304 Learning (3)
PSY 356 Motivation (3)

One of:

- PSY 309 Social Psychology (3)
PSY 321 Child Psychology (3)

Select 4-5 credits (enough to total 30 hours in psychology, including General Psychology), in consultation with an advising coordinator.

Minor

A minor in one of economics, geography, history, political science, sociology, or social science

Subtotal, Major and minor: 47¹

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
EDTC 300 Introduction to Computer Applications in Education (1)
SPGN 300 Exceptional Children in the Regular Classroom (1)
EDPS 322 Human Development and Learning (4)

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

- CURR 305 Curriculum and Methods: Secondary (3)
RDNG 311 Teaching Reading in the Secondary School (3)
SOFD 328 Schools in a Multicultural Society (3)
EDPS 340 Introduction to Assessment and Evaluation (3)
EDMD 345 Media for the Classroom Teacher (1)
HIST 481 The Teaching of Social Studies (3)
EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: . 133

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

TEACHING MINOR PSYCHOLOGY MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in psychology, certification code "CE." The certification test covering this field is #11, "Psychology."

*One of:

PSY 101 General Psychology (3)

PSY 102 General Psychology (4)

Choose 16-17 credits in consultation with advising coordinator.

20 hours (including hours satisfied in Basic Studies)

*Satisfied in Basic Studies.

PSYCHOLOGY COURSES

PSY 101 General Psychology. 3 hrs
Principles, theories, and methods evolving from the scientific analysis of behavior. This or PSY 102 is a prerequisite to all other courses. Not open to those who have earned credit in PSY 102.

PSY 102 General Psychology. 4 hrs
Principles, theories, and methods evolving from the scientific analysis of behavior. Laboratory demonstrations and experiments illustrating selected concepts. Not open to those with credit in PSY 101.

PSY 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: PSY 101/102 and department permission.

PSY 203 Self-analysis and Control. 3 hrs
Behavioral principles and techniques that can be applied to behavioral self-analysis and self-management. Student-initiated self-improvement projects encouraged.
Prereq: PSY 101/102.

PSY 205 Quantitative Methods in Psychology. 3 hrs
Basic concepts and methods used in the analysis of psy-

chological data. Methods of describing and drawing inferences from sets of data.

Prereq: PSY 101/102, and MATH 104 or equivalent.

PSY 207 Psychology of Adjustment. 3 hrs
Systematic presentation of issues, concepts, principles, and theories of human adjustment.
Prereq: PSY 101/102.

PSY 225 Psychology of Religion. 3 hrs
The application of psychological theory, principles, and method to the study of religious behavior. The relationships between religion and personality, health/pathology, social behavior, and intense emotional experience.
Prereq: PSY 101/102.

PSY 240 Psychology of Sex. 3 hrs
Survey of the psychological research concerned with human sexuality from a psychological point of view with an emphasis on research findings.
Prereq: PSY 101/102.

PSY 242 Psychology of Women. 3 hrs
Theories and empirical research concerning personality development in females. Examination of the origins of the behavior of women.
Prereq: PSY 101/102.

PSY 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: PSY 101/102 and department permission.

PSY 301 Introductory Experimental Psychology. 4 hrs
Design, control, and measurement techniques employed in the scientific investigation of behavior; e.g., motivation, emotion, perception, and learning.
Prereq: PSY 205.

PSY 304 Learning. 3 hrs
Includes learning theories and empirical research as developed by Pavlov, Thorndike, Guthrie, Tolman, Hull, Skinner, Mowrer, and others, plus selected contemporary topics.
Prereq: PSY 301.

PSY 309 Social Psychology. 3 hrs
The order and regularity underlying processes of human interaction. Motives and attitudes, social norms

and roles, the socialization process, personality, and group membership. The effect of group membership upon individual behavior. Not open to those with credit in SOCL 308.

Prereq: SOCL 105 and PSY 101/102.

PSY 321 Child Psychology. 3 hrs

The development of human behavior from conception to adolescence. Analysis of developmental processes involved in cognition, socialization, emotion, and personality, relying on research and theory; emphasis on developmental trends. Not open to students in early elementary education curriculum.

Prereq: PSY 101/102.

PSY 322 Psychology of Adolescence. 3 hrs

An opportunity to formulate, examine, and understand a comprehensive, balanced picture of the physical, mental, emotional, social, and ideological developments and adjustments during adolescence.

Prereq: PSY 101/102.

PSY 323 Psychology of Human Aging. 3 hrs

Aging individuals in the context of their life span; the special problems of the aged in modern American society. Intellectual functioning, socialization and personality, environmental effects, and the problems of isolation and institutionalization.

Prereq: PSY 101/102.

PSY 330 The Psychology of Contemporary Issues.

3 hrs

The application of psychological principles and methodology to selected contemporary world problems such as arms control, disarmament, and cybernetics.

Prereq: PSY 101/102.

PSY 340 Psychological Perspectives on Prejudice and Discrimination. 3 hrs

The psychological processes underlying the phenomena of prejudice and discrimination. A review of materials on personality and development relevant to the practice of discrimination and to the experience of prejudice on the part of both minority and majority group individuals.

Prereq: PSY 101/102 and sophomore standing.

PSY 350 Environmental Psychology. 3 hrs

The psychological effects of various environmental settings and configurations on human behavior. Selected

qualities of architectural spaces, urban environments, and natural settings.

Prereq: PSY 101/102.

PSY 351 Industrial Psychology. 3 hrs

Applications of psychological methods and principles to industrial problems.

Prereq: PSY 101/102, and junior or senior standing.

PSY 352 Psychological Testing and Evaluation. 3 hrs

Principles and theories of psychological testing. Introduction to evaluation, administration, and interpretation of group and individual tests used in diagnosis and prognosis.

Prereq: PSY 101/102, and junior or senior standing.

PSY 356 Motivation. 3 hrs

Review and analysis of research and theory on the determinants of the direction, persistence, and vigor of behavior.

Prereq: PSY 301.

PSY 357 Sensation and Perception. 3 hrs

Analysis of the psychological literature relating to sensory and perceptual experience.

Prereq: PSY 301.

PSY 358 Cognitive Processes. 3 hrs

A review of the theoretical and empirical developments concerned with cognitive processes, such as concept formation, memory and retrieval from memory, language acquisition, thought, problem solving, imagination, and creativity.

Prereq: Junior standing, PSY 205 or equivalent.

PSY 360 Abnormal Psychology. 3 hrs

Modern theories of the origin of mental disorders and personality disturbances, nature and mechanism of the various forms of abnormal behavior, prevention and treatment, social significance of aberrations.

Prereq: PSY 101/102, and junior or senior standing.

PSY 361 Psychotherapy. 3 hrs

Survey of therapeutic systems and research on psychotherapy.

Prereq: PSY 360.

PSY 362 The Psychology of Stress and Relaxation.

3 hrs

An introduction to the theoretical aspects of stress, stress

reactions, stress assessment, and stress management and prevention.

Prereq: PSY 101/102.

PSY 365 Behavior Modification. 3 hrs

For students in psychology, special education, social work, nursing, and related fields. Techniques for coping with problem behaviors. Training in practical observation and recording procedures, program evaluation designs, and behavior change principles.

Prereq: PSY 101/102.

PSY 366 Health Psychology/Behavioral Medicine.

3 hrs

The application of behavioral-science theory, principles, and techniques to understanding of health and illness and to prevention, diagnosis, treatment, rehabilitation, and health-care delivery.

Prereq: PSY 101/102.

PSY 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: PSY 101/102 and department permission.

PSY 387 Cooperative Education. 3 hrs

Four months of full-time employment at an individual employer chosen to provide practical experience in the student's major field. The program consists of two work experiences (PSY 387 and PSY 487) alternated with full-time attendance at the University.

Prereq: Two 300-level psychology courses and department permission.

PSY 388 Psychology in the Field Setting. 2 hrs

A practical work experience in a supervised mental health setting that integrates scholarly and practical aspects of psychology. Approximately three hours of field-work each week and completion of a journal of goals and experiences.

Prereq: PSY 101/102, concurrent enrollment in a three-hour psychology class, and/or department permission.

PSY 397/398/399 Independent Study. 1/2/3 hrs

Supervised reading on psychological problems.

Prereq: PSY 101/102, and prior department approval of a planned reading program.

PSY 401 Honors Seminar: Contemporary Issues and Methods in Psychology. 3 hrs

Prepares the honors student to design and develop an original senior honors thesis in current issues, methods, and research opportunities in selected specialty areas of psychology.

Prereq: PSY 301.

PSY 445 Consumer Psychology. 2 hrs

A survey of psychological principles, theories, and methodology relating to consumer behavior.

Prereq: PSY 101/102.

PSY 448 Seminar in Psychology. 2 hrs

A synthesis of various approaches to the study of psychology. Development, presentation, and critical appraisal of individual student projects. Open to seniors majoring or minoring in psychology.

PSY 450 Psychology of Individual Differences. 2 hrs

Analysis of research on variability between individuals and groups regarding intelligence, aptitudes, achievement, motivation, perception, and attitudes.

Prereq: PSY 101/102.

PSY 451 Dynamics of Personality. 3 hrs

Physiological, psychological, and cultural determinants of human personality; analysis of selected theories of human personality.

Prereq: Six hours in psychology and junior or senior standing.

PSY 453 History and Systems of Psychology. 3 hrs

Historical development of modern psychological theories; contemporary systems, including functionalism, behaviorism, phenomenology, psychoanalysis, and dynamic psychologies.

Prereq: Twelve hours of psychology and senior standing.

PSY 457 Physiological Psychology. 3 hrs

Analysis of the relationships among brain functions, physiological processes, and behavior. Open to junior and senior science majors with department permission.

Prereq: PSY 301. Recommended: BIOL 105 or ZOO 222.

PSY 458 Comparative Animal Behavior. 3 hrs

Modern solutions to the innate versus learned behavior controversy; species differences with respect to behavior and behavioral capacities.

Prereq: PSY 301.

PSY 460 Psychology of Film. 3 hrs

The psychology of film and audience. Viewer psychology, presentation of psychology, family, violence, and sexuality in film.

Prereq: Junior standing and / or two courses in psychology.

PSY 477/478/479 Special Topics. 1/2/3 hrs

An examination of topics in psychology not covered in other department offerings. May be elected more than once as long as different topics are studied.

Prereq: PSY 101 / 102, and department permission.

PSY 487 Cooperative Education. 3 hrs

Four months of full-time employment at an individual employer chosen to provide practical experience in the student's major field. The program consists of two work experiences (PSY 387 and PSY 487) alternated with full-time attendance at the University.

Prereq: PSY 387 and department permission.

PSY 497/498/499 Independent Study. 1/2/3 hrs

Supervised investigation of psychological problems.

Prereq: PSY 205 and department permission.

SOCIOLOGY, ANTHROPOLOGY, AND CRIMINOLOGY

Gregg Barak

Department Head
712 Pray-Harrold
487-0012

Professors: Gregg Barak, Patrick Easto, Allen S. Ehrlich, Stuart Henry, Lawrence K. Kersten, Gordon E. Moss, Joseph Rankin, Barbara Richardson, Marie Richmond-Abbott, Patricia Ryan, Karen P. Sinclair, Marcello Truzzi, Bruce L. Warren, Ira M. Wasserman, Jay Weinstein, Ronald M. Westrum

Associate Professors: E. L. Cerroni-Long, Mansoor Moaddel

Assistant Professors: Anthony Adams, Liqun Cao, Nancy N. Thalhofer

The department offers majors and minors in the disciplines of sociology, anthropology, and criminology and criminal justice, and participates in the social work curriculum, the major in area studies, and programs in gerontology, bilingual-bicultural education, and women's studies.

Degrees:

Bachelor of Arts and Bachelor of Science

Programs of Study

Curriculum:

Criminology and criminal justice

Majors:

Anthropology
Sociology
Sociology for secondary education

Minors:

Anthropology
Criminology and criminal justice
Sociology
Sociology for elementary education
Sociology for secondary, K-12, and special education-secondary
Interdisciplinary minors in Anthropology/Sociology:
Health and illness studies
Sociocultural 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: Patrick Easto

Graduate criminology and criminal justice: Joseph Rankin

Graduate sociology: Patricia Ryan

Graduate study leads to the master's degree in sociology or criminology and criminal justice. The MA degree is described in the Graduate Catalog.

ACADEMIC MAJORS CURRICULUM IN CRIMINOLOGY AND CRIMINAL JUSTICE

The Criminology and Criminal Justice curriculum provides students with a multidisciplinary understanding of crime and justice within the framework of broader social processes. This curriculum is a three-tiered structure 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 multidisciplinary perspective on the nature, extent, and causes of crime. Criminology (CRM 301) should be the first core course taken by the typical student, followed by Criminal Justice (CRM 300). 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 p. 41 in this catalog for exceptions to the general basic studies requirements.

	Sem hours
Core requirements	48-49
All of the following courses must be taken as part of the requirements for the Criminology and Criminal Justice curriculum:	
*PSY 101/102 General Psychology [Area II.2.] 3/4	
*PLSC 112 American Government [Area III.1.] or PLSC 202 State and Local Government ...	3
*SOCL 105 Introductory Sociology [Area III.3.]	3
*SOCL 202 Social Problems [Area III.4b.]	3
Criminology and criminal justice	18
CRM 300 Criminal Justice	3
CRM 301 Criminology	3
CRM 354 Juvenile Delinquency	3
CRM 370 Corporate and White Collar Crime ..	3
SOCL/CRM 412 Law and Society	3
CRM 447 Advanced Criminology	3
Research methods	6
*SOCL 250 Social Statistics I [Area I.4.]	3
SOCL 304 Methods in Sociological Research ...	3
<i>(Note: SOCL 341-342 Quantitative Methods of Social Research I-II may be substituted for SOCL 250 and SOCL 304)</i>	
Sociology/Anthropology	12
*ANTH 135 Introduction to Cultural Anthropology [Area III.3.]	3
*SOCL/ANTH 214 Racial and Cultural Minorities [Area III.4c.]	3
SOCL 308 Social Psychology	3
SOCL 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>	
*PHIL 130 Introduction to Logic, PHIL 355 Philosophy of Law, PLSC 456 Criminal Law I	9
<i>Choose one of the following courses:</i>	
PLSC 364 The Legislative Process, PLSC 385 Judicial Process and Behavior	3
<i>Choose three of the following courses:</i>	
CRM 460 Criminal Law II, CRM 488 Internship ANTH 330 Anthropology of Law and Politics LAW 293 Legal Environment of Business, LAW 295 Legal Research	9
BEDU 211 Introduction to Paralegalism and Legal Terminology, BEDU 304 Legal Writing, Research, and Analysis I, BEDU 412 Court Rules, Forms, and Legal Drafting	
CTAC 357 Interviewing as Communication	

PLSC 315 Consumer Law and Politics	
CNST 213 Construction Safety	
Concentration (2): Law Enforcement	
<i>Take all of the following courses:</i>	
CRM 431 Police in Modern Society	15
PLSC 456 Criminal Law I, PLSC 385 Judicial Process and Behavior	
SWRK 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>	
SOCL 306 The Urban Community, SOCL 448 Collective Behavior	6
CRM 460 Criminal Law II, CRM 488 Internship	
PSY 360 Abnormal Psychology	
PLSC 308 Political Violence and Revolution	
HLED 390 Drug Use and Abuse or SWRK 431 Substance Abuse	
Concentration (3): Corrections	
<i>Take all of the following courses:</i>	
CRM 331 Introduction to Corrections	15
SWRK 120 Introduction to Social Work Services and Professional Roles, SWRK 463 Social Work Practice with Legal Offenders	
PSY 360 Abnormal Psychology	
GDCN 450 An Introduction: Counseling Concepts and Skills	
<i>Choose two of the following courses:</i>	
SOCL 402 Group Dynamics	6
CRM 488 Internship	
PSY 340 Psychological Perspectives on Prejudice and Discrimination, PSY 365 Behavior Modification	
HLED 390 Drug Use and Abuse or SWRK 431 Substance Abuse	
CTAC 357 Interviewing as Communication	
Concentration (4): Management and Administration	
<i>Take all of the following courses:</i>	
SOCL 451 Sociology of Work and Occupations	12
PLSC 270 Public Administration, PLSC 381 Public Policy Analysis	
SWRK 470 Supervising Staff and Volunteers	
<i>Choose three of the following courses:</i>	
CRM 488 Internship	9-10
ANTH 345 Qualitative Methods	
PSY 301 Introductory Experimental Psychology	
PLSC 334 Personnel Administration in Government	

MGMT 202 Business Communications, MGMT
386 Organizational Behavior and Theory
LAW 403 Employment Law
CTAC 357 Interviewing as Communication

ANTHROPOLOGY MAJOR

(NON-TEACHING)

The program in Anthropology advances the goals of humanistic education, prepares students for successfully operating in a multicultural society, and provides majors with a foundation for graduate study. Anthropology is the comparative study of human behavior, both in terms of its development and in terms of its culture-specific expressions. The EMU program in anthropology gives particular attention to the sociocultural sub-field.

	Sem hours
Major in anthropology	30
1. Required courses	18
ANTH 135 Introduction to Cultural Anthropology 3	
ANTH 140 Introduction to Prehistoric Anthropology	3
ANTH 200 Writing in Anthropology	3
ANTH 210 History of Anthropological Theory ...	3
ANTH 439 Seminar in Anthropological Theory 3	
ANTH 441 Senior Seminar in Anthropology ...	3
2. Restricted electives	6
<i>Choose one of the following culture area courses</i>	3
ANTH 233 Peoples and Cultures of Mexico	
ANTH 236 Peoples and Cultures of New Mexico	
ANTH 237 Indians of North America	
ANTH 245 Culture of Japan	
ANTH 248 Peoples and Cultures of the Pacific	
<i>Choose one of the following methodology courses</i>	3
ANTH 345 Qualitative Methods	
ANTH 437 Kinship and Social Structure	
3. Electives	6
Choose 2 anthropology courses, one of which must be at the 300 or 400 level.	

SOCIOLOGY MAJOR

This major includes the study of social class, community, family and educational, religious, governmental, and economic institutions in complex industrial societies. Flexibility in both the major and minor allows students interested in careers in fields such as business, nursing, technology, communications, psychology, home economics, law, or the helping professions to se-

lect courses meeting their special needs.

	Sem hours
Major in sociology	30
1. Required courses	18
SOCL 105 Introductory Sociology	3
ANTH 135 Introduction to Cultural Anthropology	3
SOCL 250 Social Statistics I	3
SOCL 304 Methods in Sociological Research ...	3
SOCL 308 Social Psychology	3
SOCL 403 Modern Sociological Theory	3
2. Restricted electives	6
<i>Choose two courses from the following:</i>	
SOCL 306 The Urban Community, SOCL 307 Industrial Sociology, SOCL 310 Contemporary American Class Structure, SOCL 462 Complex Organizations, and SOCL 405 Honors Seminar	
3. Electives	6
Choose from courses in sociology, anthropology, criminology, or social work. Courses taken in social work, criminology, or anthropology as elective credit for the sociology major must be at the 300-level or above.	

ACADEMIC MINORS

ANTHROPOLOGY MINOR

	Sem hours
Minor in anthropology	20
(Non-Teaching)	
1. Required courses	15
ANTH 135 Introduction to Cultural Anthropology	3
ANTH 140 Introduction to Prehistoric Anthropology	3
ANTH 210 History of Anthropological Theory ...	3
One 200 level culture area course (see list above) ...	3
One course at the 300 or 400 level	3
2. Electives	5
Choose courses for 5 credits in anthropology.	

CRIMINOLOGY/CRIMINAL JUSTICE MINOR

	Sem hours
Minor in criminology and criminal justice	21
1. Required core courses	9
CRM 300 Criminal Justice	3
CRM 301 Criminology	3
PLSC 301 The American Legal System	3

2. Restricted criminology electives 6*Choose two courses from the following:*

CRM 331 Introduction to Corrections, CRM 354 Juvenile Delinquency, CRM 370 Corporate and White Collar Crime, CRM/SOCL 412 Law and Society, CRM 460 Criminal Law II, CRM 431 Police in Modern Society

3. Restricted social science electives 6*Choose two courses from the following:*

PLSC 308 Political Violence and Revolution, PHIL 355 Philosophy of Law, PSY 360 Abnormal Psychology, HLED 390 Drug Use and Abuse, PLSC 412 Comparative Legal Systems, SWRK 431 Substance Abuse, PLSC 456 Criminal Law I, SOCL 462 Complex Organizations

SOCIOLOGY MINOR

	Sem hours
Minor in sociology	20-21
1. Required courses	14-15
SOCL 105 Introductory Sociology	3
ANTH 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.	

SOCIOCULTURAL PERSPECTIVES ON THE FAMILY INTERDISCIPLINARY MINOR

This minor combines the perspectives of anthropology and sociology by examining the sociocultural 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 sociocultural perspectives on the family	21
1. Required courses	21
ANTH 135 Introduction to Cultural Anthropology	3

ANTH 309 Culture and Personality	3
SOCL 105 Introductory Sociology	3
SOCL 204 Marriage and Family	3
SOCL 303 Sociology of Childhood and Youth ...	3
SOCL 344 Sociology of Sex Roles	3
SOCL 450 The Family	3

HEALTH AND ILLNESS STUDIES INTERDISCIPLINARY MINOR

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
SOCL 105 Introductory Sociology	3
ANTH 135 Introduction to Cultural Anthropology	3
SOCL 311 Social Gerontology	3
SOCL 312 Medical Sociology	3
ANTH 329 Medical Anthropology	3
2. Electives	6

TEACHING MAJOR SOCIOLOGY MAJOR**SECONDARY TEACHER CERTIFICATION**

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in sociology, certification code "CF," and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), history ("CC"), political science ("CD"), psychology ("CE"), or social science ("CX"). The certification test covering this field is #12, "Sociology."

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
I-B-2. *Basic Studies requirement. See inside back cover*
I-B-3. *Basic Studies requirement. See inside back cover*
I-B-4. SOCL 250 Social Statistics I (3)
I-B-5. *Basic Studies requirement. See inside back cover*
II-B-1. *Basic Studies requirement. See inside back cover*
II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. *Basic Studies requirement. See inside back cover*

III-B-1. *Basic Studies requirement. See inside back cover*

III-B-2. HIST 102 Western Civilization, 1648 to World War I (3)

III-B-3. *One of:*

GEOG 107 Introduction to Geography (3)

GEOG 110 World Regions (3)

III-B-4. HIST 103 Twentieth Century Civilization (3)

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*

IV-B-4. *Basic Studies requirement. See inside back cover*

Physical education, military science, or equivalent (2)

A course in economics, if not included in the minor (3)

Credit hours in Basic Studies: 52

Teaching Major

SOCL 105 Introductory Sociology (3)

ANTH 135 Introduction to Cultural Anthropology (3)

SOCL 304 Methods in Sociological Research (3)

SOCL 308 Social Psychology (3)

SOCL 403 Modern Sociological Theory (3)

Two of:

SOCL 306 The Urban Community (3)

SOCL 307 Industrial Sociology (3)

SOCL 310 Contemporary American Class Structure (3)

SOCL 405 Honors Seminar (3)

SOCL 462 Complex Organizations (3)

Two courses from sociology, anthropology (at the 300-level or above), or social work (at the 300-level or above)

Minor

A minor in one of economics, geography, history, political science, psychology, or social science

Subtotal, Major and minor: 47¹

Professional Studies

100 clock hours of approved prestudent teaching field experiences (0)

EDTC 300 Introduction to Computer Applications in Education (1)

SPGN 300 Exceptional Children in the Regular Classroom (1)

EDPS 322 Human Development and Learning (4)

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

CURR 305 Curriculum and Methods: Secondary (3)

RDNG 311 Teaching Reading in the Secondary School (3)

SOFD 328 Schools in a Multicultural Society (3)

EDPS 340 Introduction to Assessment and Evaluation (3)

EDMD 345 Media for the Classroom Teacher (1)

HIST 481 The Teaching of Social Studies (3)

EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: . 133

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

TEACHING MINOR SOCIOLOGY MINOR

ELEMENTARY, SECONDARY, K-12, SPECIAL EDUCATION-ELEMENTARY, AND SPECIAL EDUCATION-SECONDARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in sociology, certification code "CF." The certification test covering this field is #12, "Sociology."

#SOCL 105 Introductory Sociology (3)

ANTH 135 Introduction to Cultural Anthropology (3)

8 hours of sociology or criminology courses at the 300-level or above.

*6 hours of electives. Any course in anthropology must be at the 300-level or above. Social work courses may not be counted.

20 hours (including hours satisfied in Basic Studies)

#Can be satisfied in Basic Studies for some programs and for special education students.

*3 hours can be satisfied in Basic Studies for some programs.

SOCIOLOGY COURSES

SOCL 105 Introductory Sociology. 3 hrs
Basic sociological concepts are used to analyze aspects of American society in intergroup relations, rural and urban communities, social classes, and in family, educational, religious, governmental, and economic institutions.

SOCL 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SOCL 202 Social Problems. 3 hrs

An analysis of problems arising in contemporary American society, such as child rearing, relations between the sexes, crime and delinquency, relations between racial and cultural subgroups, and personality disorders.

Prereq: SOCL 105.

SOCL 204 Marriage and Family. 3 hrs

The position and significance of the family in our changing society. Courtship, mate selection, and problems of marital adjustment from sociological and social-psychological perspectives.

Prereq: SOCL 105.

SOCL 205 Minority Women in the United States. 3 hrs

This course surveys the situation of and the conditions that affect the lives of four groups of minority women in the United States who are from diverse cross-cultural backgrounds: Black, Asian-American, Latin-American, and Native American. It focuses on the contemporary situation of these women and compares the four groups in terms of demographics, economic and occupational situations, education, family lives, and relationship to the feminist movement. *Not open to students with credit in ANTH 205.*

SOCL 214 Racial and Cultural Minorities. 3 hrs

Racial and cultural minorities in the modern world with particular references to the black and Hispanic, and European and Oriental immigrants in the United States; racial myths, doctrines, and movements; conflict and accommodation of majority and minority peoples; proposed solutions of ethnic problems.

Prereq: SOCL 105 or ANTH 135.

SOCL 250 Social Statistics I. 3 hrs

Introduction to the evaluation of empirical data and the organization of bivariate and univariate data using descriptive and inferential statistical techniques.

Prereq: SOCL 105 and 1 1/2 years high school algebra or MATH 104.

SOCL 277/278/279 Special Topics. 1/2/3 hrs

A single topic is covered each semester, selected as the

interest and/or problems change. Students may elect this course several times as long as different topics are studied, but only twice for credit toward a major or minor in sociology.

Prereq: SOCL 105.

SOCL 303 Sociology of Childhood and Youth. 3 hrs

Childhood and youth as elements of social organization. The relationship between social structure and the emergent personality of the individual; normality and deviance as social processes.

Prereq: SOCL 105.

SOCL 304 Methods in Sociological Research. 3 hrs

Methods used in sociological research and their various applications. Participation in conducting a survey.

Prereq: Three courses in sociology and junior standing.

SOCL 306 The Urban Community. 3 hrs

Ecological and social organization of urban life. The metropolitan trend in the United States and the social problems created by it.

Prereq: SOCL 105.

SOCL 307 Industrial Sociology. 3 hrs

The social structure of the workplace, the work experience of the participants and the relation of both to the community and to society. Formal structure of large-scale organizations and the operation of small groups within them.

Prereq: SOCL 105.

SOCL 308 Social Psychology. 3 hrs

Introductory study of the order and regularity underlying processes of human interaction. Motives and attitudes, social norms and roles, the socialization process, personality and group membership. The effect of group membership upon individual behavior. Credit cannot be earned in both SOCL 308 and PSY 309.

Prereq: SOCL 105 and PSY 101.

SOCL 309 Culture and Personality. 3 hrs

An analysis of the manner in which group and cultural factors influence the growth and change of personality. The impact of personality types on group life. Not open to those with credit in ANTH 309.

Prereq: SOCL 105 or ANTH 135 and PSY 101.

SOCL 310 Contemporary American Class Structure.**3 hrs**

The determinants and consequences of social class structure in America. The nature of social classes, status groups, and the distribution of power from various theoretical perspectives. The relationships between social class and the family, schools, government, religion, and recreation both with reference to the total system and to various racial and regional subsystems.

Prereq: SOCL 105.

SOCL 311 Social Gerontology.**3 hrs**

Demographic and sociocultural factors in aging, the aging individual as a person, older people as groups and aggregates within the culture and structure of a changing society, the manner in which society attempts to meet the needs of aging people and the aged.

Prereq: SOCL 105.

SOCL 312 Medical Sociology.**3 hrs**

Social behavior and social organization as factors in disease distribution. The sociological analysis of medical care, organization, and practitioners.

Prereq: SOCL 105 and sophomore standing.

SOCL 320 Sociology of Religion.**3 hrs**

A sociological analysis of religious organizations and the institution of religion including the interaction between religious organizations and other institutions and associations and the role of religion in social movements and social change.

Prereq: SOCL 105 or ANTH 135.

SOCL 321 Cooperation and Conflict in Society.**3 hrs**

The principles of cooperation, cooperation in our competitive-individualistic society, cooperative skills, and forms of mutual aid are examined. Students learn cooperation through doing as well as reading and writing, including a variety of group projects, exercises, and discussion.

Prereq: SOCL 105 or ANTH 135 or department permission.

SOCL 334 Population.**3 hrs**

Population size and composition and their impact on society; determinants and consequences of natality, mortality, and migration; the relationship between human numbers and resources and its politico-economic implications; population theories and policies of population control.

Prereq: SOCL 105 or department permission.

SOCL 335 The Study of Nonprimitive Societies.**3 hrs**

An analysis of studies and problems anthropology has investigated in nonprimitive societies. Problems of analysis in complex societies, national character, folk-urban continuum, peasants and colonialism. *Not open to those with credit in ANTH 335.*

Prereq: ANTH 135 or equivalent and sophomore standing.

SOCL 336 Social and Cultural Change.**3 hrs**

Survey of the theories and problems of change in developing and advanced societies. *Not open to those with credit in ANTH 336.*

Prereq: ANTH 135 or equivalent and sophomore standing.

SOCL 339 Sociology of Love.**3 hrs**

A sociological examination of love, emphasizing typologies, scientific research, and cross-cultural comparisons. Special attention is given to the analysis of love in terms of feelings, thoughts, behaviors, and attitudes.

Prereq: SOCL 105.

SOCL 341 Quantitative Methods of Social Research I.**3 hrs**

Examination and review of research methods in behavioral sciences and the nature of empirical data, organization of univariate and bivariate data. *Not open to those with credit in SOCL 250 or SOCL 304. Must be followed by SOCL 342.*

Prereq: SOCL 105, high school algebra or equivalent.

SOCL 342 Quantitative Methods of Social Research II.**3 hrs**

Further review and applications of research methods and introduction to statistical inference. *Not open to those with credit in SOCL 250 or SOCL 304.*

Prereq: SOCL 341.

SOCL 344 Sociology of Sex Roles.**3 hrs**

Analysis of past, present, and future sex roles; the changing roles of women and men and the conflicts and consequences of these changes on marriage and family systems in the United States.

Prereq: Sophomore standing and SOCL 105.

SOCL 345 Qualitative Methods.**3 hrs**

A review and examination of social science research methods that entail fieldwork, participant observation,

naturalistic experimentation, and the analysis of cultural data. *Not open to those with credit in ANTH 345.*
Prereq: Nine hours in anthropology or department permission.

SOCL 375 Political Sociology. 3 hrs
 The structure of political systems analyzed from an individual and social system perspective.
Prereq: Nine credit hours in sociology or political science or junior/senior standing.

SOCL 377/378/379 Special Topics. 1/2/3 hrs
 One topic is covered each semester, selected as the interest and/or problems change. Students may elect this course several times as long as different topics are studied, but only twice for credit toward a major or minor in sociology.
Prereq: SOCL 105.

SOCL 387 Cooperative Education. 3 hrs
 Practical experience in industrial, business, or government settings to provide job skills. Credit/no credit basis.
Prereq: Twelve hours of sociology, six of which must be at the 300 level or above.

SOCL 402 Group Dynamics. 3 hrs
 Structure and interaction processes of small groups. Cohesiveness, group standards, conformity and deviance, leadership, group emotion, communication, group roles, and sociometrics.
Prereq: SOCL 105 or PSY 101.

SOCL 403 Modern Sociological Theory. 3 hrs
 The rise and development of sociological thought from Comte to the present. The works of various European and American schools analyzed and critically appraised in terms of their value in empirical research.
Prereq: Three courses in sociology and junior standing.

SOCL 405 Honors Seminar. 3 hrs
 An undergraduate honors seminar examining selected topics in theory, research, and applied sociology.
Prereq: Senior status, a 3.0 grade point average, 12 hours of social science courses, or department permission.

SOCL 412 Law and Society. 3 hrs
 Law as a social and cultural product; the interrelationships between law and social institutions. *Not open to those with credit in CRM 412.*
Prereq: SOCL 105.

SOCL 440 Sociology of Technology. 3 hrs
 A study of social factors involved in the creation, innovation, distribution, evaluation, and social effects of technology.
Prereq: SOCL 105.

SOCL 448 Collective Behavior. 3 hrs
 Spontaneous, transitory, and volatile collective behavior contrasted with the relatively stable, institutionalized patterns of interaction. Analysis of rumor transmission, crowd behavior, mass behavior, and the emergence of organized social movements.
Prereq: SOCL 105.

SOCL 450 The Family. 3 hrs
 The family as a basic social institution. Various types of family systems throughout the world with special emphasis on the American family.
Prereq: Junior standing and either SOCL 105 or ANTH 135.

SOCL 451 Sociology of Work and Occupations. 3 hrs
 Social aspects of work. Recruitment, career patterns, professionalization, sociology of the workplace and labor force.
Prereq: SOCL 105.

SOCL 462 Complex Organizations. 3 hrs
 An examination of several types of large organizations, with emphasis on the nature of bureaucratic organizations. Theoretical and empirical studies of organizational growth, recruitment, control, and relations between organizations.
Prereq: SOCL 105.

SOCL 465 Sociology of Revolution. 3 hrs
 This course surveys major theoretical perspectives that have been used by social scientists to interpret and explain revolutions. With the aid of the best available theories, the course will examine a series of historical instances, ranging from the French Revolution of the 18 century, through the Russian and Chinese Revolutions, to recent revolutions in postcolonial or dependent countries such as the Iranian Revolution.
Prereq: SOCL 105.

SOCL 477/478/479 Special Topics. 1/2/3 hrs
 A single topic is covered each semester, selected as interest and/or problems change. Students may elect this course several times as long as different topics are studied, but only twice for credit toward a major or minor in sociology.
Prereq: SOCL 105.

SOCL 487 Cooperative Education. 3 hrs
Practical experience in industrial, business, or government settings to provide job skills. Credit/no credit basis.
Prereq: SOCL/CRM 387.

SOCL 489 Internship. 3 hrs
Students are assigned a minimum of eight hours per week to a governmental or private organization dealing with a sociological problem, issue, service, or concern. The placement, 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.
Prereq: Senior standing in major.

SOCL 497/498/499 Independent Study. 1/2/3 hrs
Directed reading and research on problems within the field of sociology.
Prereq: Department permission.

ANTHROPOLOGY COURSES

ANTH 135 Introduction to Cultural Anthropology. 3 hrs
Man's adaptation to natural and cultural environments focusing upon primitive and nonwestern societies. The basic institutions of human society such as kinship, religion, law, politics, and economics.

ANTH 140 Introduction to Prehistoric Anthropology. 3 hrs
A survey of the evolution of human societies using materials from primate studies, early man, and archeological findings.
Prereq: ANTH 135.

ANTH 150 Introductory Archeology. 3 hrs
A general survey of the field of archeology; the methodologies and analyses employed in the study of prehistoric cultures.
Prereq: ANTH 135.

ANTH 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

ANTH 200 Writing for Anthropology. 3 hrs
This course will teach students the necessary writing

and research skills for anthropology. Students will also learn how to use library resources for anthropological research.

Prereq: Sophomore standing. ANTH 135, ANTH 140, and ENGL 121.

ANTH 210 History of Anthropological Theory. 3 hrs
A survey of various theoretical approaches within the field of cultural anthropology. The course will span the period from the mid-nineteenth century to the present, covering theoretical perspectives which have dominated European and American schools of anthropology.
Prereq: ANTH 135 and ANTH 140.

ANTH 214 Racial and Cultural Minorities. 3 hrs
Racial and cultural minorities in the modern world with particular references to the black and Hispanic, and European and Oriental immigrants in the United States; racial myths, doctrines, and movements; conflict and accommodation of majority and minority peoples; proposed solutions of ethnic problems.
Prereq: SOCL 105 or ANTH 135.

ANTH 233 Peoples and Cultures of Mexico. 3 hrs
A regional, historical, and topical survey of Mexican cultures.
Prereq: ANTH 135.

ANTH 236 Peoples and Cultures of Africa. 3 hrs
Regional, historical, and topical survey of African cultures.
Prereq: ANTH 135.

ANTH 237 Indians of North America. 3 hrs
Regional, historical, and topical survey of aboriginal North American cultures.
Prereq: ANTH 135 or department permission.

ANTH 245 Culture of Japan. 3 hrs
A historical and topical survey of Japanese culture.
Prereq: ANTH 135 or department permission.

ANTH 248 Peoples and Cultures of the Pacific. 3 hrs
A regional, historical, and topical survey of aboriginal Pacific cultures.
Prereq: ANTH 135.

ANTH 277/278/279 Special Topics. 1/2/3 hrs
An examination of topics in anthropology not normally covered in the curriculum. Students may elect this

course several times as long as different topics are studied.

Prereq: ANTH 135.

ANTH 309 Culture and Personality. 3 hrs

An analysis of the manner in which group and cultural factors influence the growth and change of personality. The impact of personality types on group life. Not open to those with credit in SOCL 309.

Prereq: SOCL 105 or ANTH 135 and PSY 101.

ANTH 329 Medical Anthropology. 3 hrs

Ways in which various cultures define, explain, and treat physical and psychic illness. Different approaches to curing including witchcraft, sorcery, spiritual and psychic healing, and the use of hallucinogens compared with contemporary medical practices.

Prereq: ANTH 135 or department permission.

ANTH 330 Anthropology of Law and Politics. 3 hrs

Comparative study of political systems in primitive and peasant societies, local-level politics, government, and law; examined from an anthropological perspective.

Prereq: ANTH 135 and sophomore standing.

ANTH 336 Social and Cultural Change. 3 hrs

A survey of the theories and problems of change in developing and advanced societies. Not open to those with credit in SOCL 336.

Prereq: ANTH 135 or equivalent and sophomore standing.

ANTH 338 Anthropology of Religion. 3 hrs

The anthropological study of religious belief and ritual in primitive and peasant societies.

Prereq: ANTH 135 and sophomore standing.

ANTH 340 Language and Culture. 3 hrs

A study of the relation of language to social behavior and modes of thought in unilingual and multilingual speech communities.

Prereq: ANTH 135 or LING 201 or LNGE 223.

ANTH 345 Qualitative Methods. 3 hrs

A review and examination of social science research methods that entail fieldwork, participant observation, naturalistic experimentation, and the analysis of cultural data. *Not open to those with credit in SOCL 345.*

Prereq: Nine hours in anthropology or department permission.

ANTH 355 Anthropology of Women. 3 hrs

The role of women in diverse cultural contexts. Theories dealing with the position of women. Life histories of women constitute the basic reading in the course.

Prereq: ANTH 135.

ANTH 377/378/379 Special Topics. 1/2/3 hrs

An examination of topics in anthropology not normally covered in the curriculum in which the distinctive perspective and methodology of anthropology are emphasized. Students may elect this course several times as long as different topics are studied.

Prereq: ANTH 135.

ANTH 387 Cooperative Education. 3 hrs

Practical experience in industrial, business, or government settings that provides job skills. *Credit / no credit.*

Prereq: Twelve hours of anthropology, six of which must be at the 300 level or above.

ANTH 437 Kinship and Social Structure. 3 hrs

The comparative study of kinship and social structure traced from primitive through complex societies.

Prereq: Three courses in anthropology and junior standing.

ANTH 439 Seminar in Anthropological Theory. 3 hrs

An intensive examination of theoretical approaches to the study of cultural phenomena. Emphasis will be placed upon the critical reading of primary source materials seminal to the development of various theoretical stances within the discipline of anthropology. This course will be organized around written and oral presentations by students.

Prereq: Four courses in anthropology including ANTH 140, ANTH 200, ANTH 210, and senior standing.

ANTH 441 Senior Seminar in Anthropology. 3 hrs

An intensive study of specific subdisciplinary issues in the context of current anthropological theory and ethnographic practice. Open to Anthropology majors only.

Prereq: Twenty-one credits in anthropology, including ANTH 140, ANTH 200, and ANTH 439.

ANTH 477/478/479 Special Topics. 1/2/3 hrs

An examination of topics in anthropology not normally covered in the curriculum in which the distinctive perspective and methodology of anthropology are emphasized. Students may elect this course several times as long as different topics are studied.

Prereq: ANTH 135.

ANTH 487 Cooperative Education. 3 hrs
Practical experience in industrial, business, or government settings that provides job skills. Credit/no credit basis.

Prereq: ANTH 387.

ANTH 497/498/499 Independent Study. 1/2/3 hrs
Directed reading and research on problems within the field of anthropology.

Prereq: ANTH 135 and department permission.

CRIMINOLOGY COURSES

CRM 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CRM 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CRM 300 Criminal Justice. 3 hrs
A critical view of the entire spectrum of criminal justice. The police, courts, and corrections studied as interrelated institutions in the process of defining criminals. Not open to students with less than 35 semester hours.

Prereq: SOCL 105 or junior standing.

CRM 301 Criminology. 3 hrs
The nature, incidence, and prevalence of crime. Theory of crime and delinquency causation.

Prereq: SOCL 105 or junior standing.

CRM 331 Introduction to Corrections. 3 hrs
An examination of corrections/punishment in contemporary society, its historical development, structural dependency, relationship to the system of justice, and problems of effectiveness.

Prereq: CRM 300.

CRM 354 Juvenile Delinquency. 3 hrs
The nature, incidence, and measurement of juvenile delinquency; theories and causation; juvenile justice philosophies and treatment methods.

Prereq: SOCL 105. Not open to freshmen.

CRM 370 Corporate and White Collar Crime. 3 hrs
An examination of the definitions, laws, causes, and policy responses that shape crimes by corporations, government agencies, professionals, and others engaged in legitimate occupations.

Prereq: SOCL 105.

CRM 377/378/379 Special Topics. 1/2/3 hrs
A single topic is covered each semester, selected as the interest and/or problems change. Students may elect a topics course several times as long as different topics are studied, but only twice for credit toward a major or minor in criminology.

Prereq: SOCL 105.

CRM 387 Cooperative Education. 3 hrs
Practical experience in industrial, business, or government settings to provide job skills. Credit/no credit basis.

Prereq: Twelve hours of sociology, six of which must be at the 300 level or above.

CRM 412 Law and Society. 3 hrs
Law as a social and cultural product; the interrelationships between law and social institutions. *Not open to those with credit in SOCL 412.*

Prereq: SOCL 105.

CRM 431 Police in Modern Society. 3 hrs
The social and historical origin of the police; police culture, role, and career; police in the legal system; police discretion; ethical development of police; police and the community; police organization and community control.

Prereq: CRM 300.

CRM 447 Advanced Criminology. 3 hrs
An intensive analysis of selected problems in criminology; the application of criminology to policies and programs of crime prevention and control.

Prereq: CRM 301 or CRM 506, and CRM 300 or CRM 507; or department permission.

CRM 460 Criminal Law II. 3 hrs
The distinguishing characteristics of criminal law and its sources. Problems in determination of criminal liability; crimes against property; crimes against the person; the defenses to criminal charges.

Prereq: Junior standing.

CRM 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CRM 487 Cooperative Education. 3 hrs

Practical experience in industrial, business, or government settings to provide job skills. Credit/no credit.

Prereq: CRM/SOCL 387.

CRM 488/489 Internship. 3 hrs each

Students are assigned a minimum of eight hours per week to a governmental or private agency dealing with the crime problem. The agency, in agreement with the field instructor, provides supervised learning experiences appropriate to the objectives of the undergraduate program. A weekly seminar relates field experience to theory. May be repeated once for credit.

Prereq: Senior standing, CRM 300-301, 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 497/498/499 Independent Study. 1/2/3 hrs

Independent study, under the supervision of a department member, in areas in which the department does not offer a course.

Prereq: Department permission.

WOMEN'S STUDIES

Margaret Crouch, Ph.D.

Director

720 Pray-Harrold

487-1177

Professors: Margot Duley (HIST), Carol Haddad (INDT), Daryl Hafter (HIST), James Holoka (FLABS), Sandra McClennan (SpEd), Barbara Richardson (SAC), Marie Richmond-Abbott (SAC), Ellen Schwartz (FA), Joanna Scott (PLSC), Karen Sinclair (SAC)

Associate Professors: Ellene Tratras Contis (CHEM), Margaret Crouch (PHIL), Rachel Brett Harley (MUSC), Deborah Figart (ECON), Kate Mehuron (PHIL), Alexandra Norton (LITR)

Assistant Professors: Betty Barber (HECR), Elisabeth Dauemer (ENGL), Christina José-Kampfner (TCED)

Instructors: Barbara Bilgé (SAC), Bonnie Brereton

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:

Rachel Brett Harley (MUSC)

ACADEMIC MINOR

WOMEN'S STUDIES MINOR

For all of the following listed courses, note the relevant department's or program's course prerequisites. For availability of all of the following courses, check the Class Schedule of the Term for which you register. Also, consult the Women's Studies Program Director or the Undergraduate Advisor for other approved Women's Studies courses offered in the term for which you register.

Sem hours

Minor in women's studies 21

1. Required courses 12

WMST 200 Introduction to Women's Studies 3

Choose six hours from the courses listed under Group I, and six hours from the courses listed under Group II.

Group I: Arts & Humanities

FA/WMST 436 Women in Art (3)

HIST/WMST 335 History of Women in Europe (3)

HIST/WMST 336 History of Women in the U.S.

and Great Britain: 1800-Present (3)

LITR/WMST 443 Women in Literature (3)

PHIL/WMST 226 Philosophy of Women (3)

PHIL/WMST 426 Topics in Gender and Philosophy (3)

Group II: Social and Physical Sciences

ANTH 205 Minority Women in the U.S. (3)

ANTH 355 Anthropology of Women (3)

INDT/WMST 420 Women in Technology (3)

PLSC 365 Women and Politics (3)

PSY/WMST 242 Psychology of Women (3)

SOCL/WMST 205 Minority Women in the U.S. (3)

SOCL/WMST 344 Sociology of Sex Roles (3)

2. Electives 6

Choose six credits from the following electives:

AAS 361 The African American Family (3)

ANTH/SOCL 214 Racial and Cultural Minorities (3)

ATHL 317 Theory of Coaching Individual Sports for Women (2)

ATHL 318 Theory of Coaching and Teaching Women's Team Sports (2)

BEDU/WMST 205 Women in Business (3)

BEDU 313 Family Law (3)

CTAC 374 Intercultural Communication (3)

CTAC 375 Interracial/Ethnic Communication (3)

ECON 321 Minority Workers and the Labor

Market (3)

GDNC 450 An Introduction: Counseling Concepts and Skills (3)

HED 360 Concepts in School Sex Education (2)

HED 399 Teaching About AIDS (1)

INDT/WMST 420 Women and Technology (3)

NURS 380 Health and Illness Problems Throughout the Life Span (2)

PHED 405 Women in Sports (3)

PSY 240 Psychology of Sex (3)

PSY 340 Psychological Perspectives on Prejudice and Discrimination (3)

SOCL 450 The Family (3)

SWRK 403 Practice Issues with Women (3)

SWRK 413 Women and Aging (3)

SWRK 465 Social Work, Sex and the Family (3)

WOMEN'S STUDIES COURSES

For course descriptions of all courses listed as Required Courses or available as Electives, see their catalog descriptions under the appropriate Department or Program.

WMST 177/178/179 Special Topics. 1/2/3 hrs
Different subject matter will be taught each semester offered, including interdisciplinary courses in women's studies. Students may take these courses more than once 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.
Prereq: Department permission.

WMST 200 Introduction to Women's Studies. 3 hrs
An overview of women in society. Historical and literary perspectives on women's contributions; socialization, roles, and status in professional fields.

WMST 205 Women in Business. 3 hrs
Social and business conditions that support the entry of women to executive positions in business; career opportunities at the professional and executive levels of business.

WMST/PHIL 226 Philosophy of Women 3 hrs
A consideration of philosophical issues concerning the nature and status of women. Readings from both traditional and contemporary sources. Topics may include scientific and religious views, the ideal society and women's place in it, varieties of feminism, views on sexuality, family and reproduction, and work and the economy.

WMST 242 Psychology of Women. 3 hrs
Theories and empirical research concerning personality development in females. Examination of the origins of the behavior of women.
Prereq: PSY 101 or 102.

WMST 277/278/279 Special Topics. 1/2/3 hrs
Different subject matter will be taught each semester offered, including interdisciplinary courses in women's studies. Students may take these courses more than once 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.
Prereq: Department permission.

WMST 328 Economics of Women. 3 hrs
The changing economic role of women in the labor force. Analysis of policies affecting earnings, employment, and work and family issues in traditional and nontraditional occupations. Includes some international comparisons.
Prereq: One course in economics or junior standing.

WMST 335 History of Women in Europe. 3 hrs
A study of the history of women and views of women in western society from the 18th century to the present. Emphasizes the struggles, setbacks, and achievements of the women's movements in the context of modern European history.
Prereq: One course in history.

WMST 336 History of Women in the United States and Great Britain, 1800 to the Present. 3 hrs
A comparative study of the history of women in the United States and Great Britain. Examines the ideology of the nature and role of women, the history of women's lives, the impact of industrialization, and the feminist movements of the 19th and 20th centuries.
Prereq: One course in history or department permission.

WMST 344 Sociology of Sex Roles. 3 hrs
Analysis of past, present, and future sex roles; the changing roles of women and men and the conflicts and consequences of these changes on marriage and family systems in the United States.
Prereq: Sophomore standing.

WMST 355 Anthropology of Women. 3 hrs
The role of women in diverse cultural contexts. Theories dealing with the position of women. Life histories of women constitute the basic reading in this course.
Prereq: ANTH 135 or Department permission.

WMST 377/378/379 Special Topics. 1/2/3 hrs
Different subject matter will be taught each semester offered, including interdisciplinary courses in women's studies. Students may take these courses more than once 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.
Prereq: Department permission.

WMST 387 Cooperative Education. 3 hrs
This course provides students with an opportunity to deal directly with issues affecting women by working with agencies and local organizations.
Prereq: 12 hours of previous coursework in women's studies.

WMST 402 Sexism and Education. 3 hrs
How sexist attitudes and behaviors affect and are affected by school policies and practices; educational aims, staff relations, teaching styles, decision-making, treatment of pupils, instructional materials, antisexist programs.

WMST 405 Women in Sports. 3 hrs
Patterns, problems, and conditions associated with women's sports involvement in selected world cultures; the sportswoman in American society.

WMST 420 Women and Technology. 3 hrs
An interdisciplinary course designed to familiarize students with various concepts of technology, technological change, and technological society; probe the problems and advantages women face in technological society or technology-based professions; explore women's roles in several specific technology professions.

WMST 436 Women in Art. 3 hrs
A survey of the contributions of female artists in the history of art. Discussions will include the history of women as patrons of the arts, and the uses of the female image in art.
Prereq: FA 108 or department permission.

WMST 426 Topics in Gender and Philosophy. 3 hrs
An examination of gender and its relationship to other issues from a philosophical perspective. Possible topics include rationality, sexuality, aesthetics, ethics, and political theory.
Prereq: Two courses in philosophy.

WMST 443 Women in Literature. 3 hrs
A study of women and their experiences as described in literature.
Prereq: Two courses in literature.

WMST 450 Adult Role Transitions. 3 hrs
Investigation of changes during early, middle, and later adulthood. Normative and nonnormative role transitions related to work and family for women and men.

WMST 477/478/479 Special Topics. 1/2/3 hrs
Different subject matter will be taught each semester offered, including interdisciplinary courses in women's studies. Students may take these courses more than once 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.
Prereq: Department permission.

WMST 487 Cooperative Education. 3 hrs
This course provides students with an opportunity to deal directly with issues affecting women by working with agencies and local organizations.
Prereq: WMST 387.

WMST 497/498/499 Independent Study. 1/2/3 hrs
Advanced study on an individual basis in areas in which the program does not offer formal courses. These courses are restricted to juniors and seniors.
Prereq: Department permission.

COLLEGE OF BUSINESS

STEWART TUBBS, DEAN
SUSAN MOELLER, INTERIM ASSOCIATE DEAN
AMELIA S. CHAN, ASSISTANT DEAN
473 GARY M. OWEN BUILDING
487-4140

DEPARTMENTS

ACCOUNTING
FINANCE AND COMPUTER INFORMATION SYSTEMS
MANAGEMENT
MARKETING

COLLEGE OF BUSINESS

The College of Business develops future business leaders by providing high quality, professionally accredited programs at the undergraduate and graduate levels and by offering professional development education to the business community. The college values and promotes scholarly research, applications, and an international perspective in its programs.

Professional preparation is provided for students who contemplate administrative careers in business, government agencies, and public administration. College of Business programs emphasize the combination of tools, concepts, and theory for practical application to business decisions and business problems.

The college also serves as an educational resource for business firms of regional, national, and international scope and maintains alliances that are mutually beneficial to students, faculty, and the college. Its faculty is professionally recognized for its contributions to the body of knowledge and understanding of management and business enterprise.

The Bachelor of Business Administration degree is offered to students concentrating in any one of 9 undergraduate professional programs:

- Accounting
- Accounting Information Systems
- Computer Information Systems
- Economics*
- Finance
- General Business
- Management
- Marketing
- Production and Operations Management

*Economics is offered in cooperation with the Economics department, College of Arts and Sciences.

Degree programs are described within the appropriate departments.

The Joint Bachelor of Business Administration-Bachelor of Arts degree in Language and World Business is offered in cooperation with the College of Arts and Sciences and the EMU World College.

Graduate programs lead to the Master of Business Administration and Master of Science degrees in accounting, in computer-based information systems, and in human resources and organization development. For descriptions of graduate programs and courses in the College of Business, consult the Graduate Catalog.

Accreditation of all undergraduate and graduate programs is by the American Assembly of Collegiate Schools of Business.

ADMISSION TO THE COLLEGE OF BUSINESS

is open to student applicants with 44 or more semester hours completed who are enrolled in the last one or two of the 16 required courses to qualify for admission. Students who want to advance register should return their applications to the College of Business Undergraduate Business Program Office by the deadlines listed below:

Winter semester: November 1
Spring and summer sessions: March 1
Fall semester: March 1

Applications for each semester must be accompanied by a progress report, tabulation of transfer credit, transcripts or grade reports in order for the applicant to be approved or registered in business courses.

Students may obtain an application for admission to EMU's College of Business from the College of Business directly:

Undergraduate Business Program Office
 College of Business
 Eastern Michigan University
 401 Owen
 Ypsilanti, Michigan 48197
 (313) 487-2344

Students must be admitted by the University to be considered for admission to the College of Business. However, students admitted to the University are not automatically admitted to the College of Business.

To qualify for admission, students must have successfully completed 56 semester hours with a minimum cumulative grade point average of 2.50. In addition, the following courses (1 through 13) must be recognized as successfully completed by the University, and the business courses (9 through 13) must be completed with a minimum earned grade of "C-" in each:

01. ENGL 121 English Composition
02. CTAS 121/124 Fundamentals of Speech
03. An English, foreign language or communication elective
04. MATH 118 Mathematical Analysis for Social Sciences I or MATH 122 Elementary Linear Algebra, and MATH 105 College Algebra (MATH 119 Mathematical Analysis for Social Sciences II or 120 Calculus I accepted)
05. ECON 201 Principles of Economics I and ECON 202 Principles of Economics II
06. PLSC 112/113 American Government or PLSC 202 State and Local Government
07. Philosophy or religion (logic or ethics strongly recommended)
08. PSY 101/102 General Psychology
09. ACC 240 Principles of Accounting I and ACC 241

Principles of Accounting II

10. LAW 293 Legal Environment of Business
11. IS 215 End-User Computing
12. MGMT 202 Business Communications
13. DS 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.

Nonbusiness majors will be asked to provide academic records and to complete a Student Intake Sheet to confirm their program of study and preparation. Students must be of junior standing (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. No student majoring in a program outside of the College of Business may 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. Nonbusiness majors also must satisfy stated course prerequisites listed in this catalog or updated in the current Class Schedule Bulletin.

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 nonmatriculated 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 business intent 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.

The business core and major requirements in effect at the time of the student's initial registration at Eastern Michigan University (see the Eastern Michigan University seven year rule), 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.

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *Basic Studies requirement. See inside back cover*

I-B-4. *Either.**

*MATH 118 Mathematical Analysis for Social Sciences I (3)

or

Math 122 Elementary Linear Algebra (3)

and

MATH 105 College Algebra (3)

[Math 119 Mathematical Analysis for Social Sciences II (3) or Math 120 Calculus I (3) is also acceptable.]

BBA Economics majors must complete Math 119 or 120 and not Math 105 for second mathematics requirement.

I-B-5. IS 215 End-User Computing (3)

II-B-1. *Basic Studies requirement. See inside back cover*

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. *Basic Studies requirement. See inside back cover*

III-B-1. PLSC 112/113 American Government or PLSC 202 State and Local Government (3)

III-B-2. *Basic Studies requirement. See inside back cover*

III-B-3. ECON 201 Principles of Economics I (3)

III-B-4. ECON 202 Principles of Economics II (3)

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*
Logic or ethics is strongly recommended for philosophy or religion requirement.

IV-B-4. *Basic Studies requirement. See inside back cover*
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 42-50

Business Core

ACC 240 Principles of Accounting I (3)

ACC 241 Principles of Accounting II (3)

LAW 293 Legal Environment of Business (3)

MGMT 202 Business Communications (3)

IS 215 End-user Computing (3)

DS 265 Business Statistics I (3)

Credit hours in Business Core:..... 18

Business Administration Core

(All 200-level core courses listed above must be completed prior to admission to the College of Business)

FIN 350 Principles of Finance (3)

MKTG 360 Principles of Marketing (3)

MGMT 386 Organizational Behavior and Theory (3)

POM 374 Introduction to Production/Operations Management (3)

MGMT 490 Business Policy (3)

(All 300-level core courses listed above must be completed before enrollment in MGMT 490 Business Policy.)

Credit hours in Business Core:..... 15

Academic Major

Choose one of the following: accounting, accounting information systems, business computer systems, economics, finance, general business, management, marketing, production/operations management

Credit hours in Academic Major:..... 24-36

Electives

Students planning to continue study in a graduate school of business are urged to complete the following courses as electives:

ECON 301 Intermediate Macroeconomic Analysis

ECON 302 Intermediate Microeconomic Analysis

DS 465 Applied Linear Statistical Models (3)

Credit hours in Electives:..... 11-19

Total credit hours required:..... 124

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 US 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, without any 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.

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *Basic Studies requirement. See inside back cover*

I-B-4. *Either:*

****MATH 118** Mathematical Analysis for Social Sciences I or **MATH 122** Elementary Linear Algebra and **MATH 105** College Algebra (MATH 119 Mathematical Analysis for Social Sciences II or **MATH 120** Calculus I)

BBA Economics majors must complete Math 119 or 120 and not Math 105 for second mathematics requirement. Please check with Mathematics Department for Math placement and pre-requisites.

I-B-5. IS 215 End-User Computing (3)

II-B-1. *Basic Studies requirement. See inside back cover*

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. *Basic Studies requirement. See inside back cover*

III-B-1. *Basic Studies requirement. See inside back cover*

III-B-2. *One of:*

HIST 101 Western Civilization to 1648 (3)

HIST 102 Western Civilization, 1648 to World War I (3)

HIST 103 Twentieth Century Civilization (3)

III-B-3. ECON 201 Principles of Economics I (3)

III-B-4. ECON 202 Principles of Economics II (3)

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*

IV-B-4. *Basic Studies requirement. See inside back cover*

Additional required course

GEOG 110 World Regions

Physical education, military science, or equivalent (2)

Note: Students can sometimes test out of certain basic studies courses for up to 30 hours by using the CLEP examinations. See page 14.

Credit hours in Basic Studies:..... 49-50

Specialized Studies in Language and the Social Sciences Language Component (FRNH, GERN, JPNE, or SPNH)*

FRNH/GERN/JPNE/SPNH 343 Composition (3)

FRNH/GERN/JPNE/SPNH 361 Language for International Trade (3)

FRNH/GERN/JPNE/SPNH 446-447 Business Language I-II (6)

An additional six hours in advanced literature, culture, or technical language (6)

**Note:* Nine of these 18 hours may count toward basic studies provided they are in foreign language and advanced literature.

Credit hours in Specialized Studies:..... 18

Language and International Trade Area Studies . 9

Either:

GEOG 316 History and Geography of Modern Europe (3)

HIST 316 History and Geography of Modern Europe (3)

(Must be taken concurrently)

or

GEOG 317 History and Geography of Spanish America (3)

HIST 317 History and Geography of Spanish America (3)

(Must be taken concurrently)

or

GEOG 326 History and Geography of Modern Asia (3)

HIST 326 History and Geography of Modern Asia (3)

(Must be taken concurrently)

And one of the following: (3)

PLSC 211 Introduction to Comparative Government, PLSC 212 Introduction to International Politics, PLSC 341 International Law, PLSC 342 International Organizations, PLSC 354 Government and Politics of Canada, PLSC 367 Contemporary Political Systems of Latin America, PLSC 412 Comparative Legal Systems

Credit hours in Language and International Trade Area Studies: 9

Business Core

ACC 240 Principles of Accounting I (3)
ACC 241 Principles of Accounting II (3)
LAW 293 Legal Environment of Business (3)
MGMT 202 Business Communications (3)
IS 215 End-user Computing (3)
DS 265 Business Statistics I (3)

Credit hours in Business Core: 18

Business Administration Core

All 200-level core courses must be completed before admission to the College of Business. Most core courses will have an international component.

FIN 350 Principles of Finance (3)
MKTG 360 Principles of Marketing (3)
MGMT 386 Organizational Behavior and Theory (3)
POM 374 Introduction to Production/Operations Management (3)
MGMT 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.

(All 300-level core courses listed above must be completed before enrollment in MGMT 490 Business Policy.)

Credit hours in 300/400 level Business Core: 15

Other International Courses

FLAN 387 Cooperative Education (Spring/Summer available) (3)
FLAN 499 Independent Study (3)
MKTG 460 International Marketing (3)
ECON 370 Comparative Economic Systems or
ECON 480 International Economics (3)

Choose two restricted electives from world business courses** (3-6)

MKTG 375 International Business Transactions (3)
MGMT 492 Managing World Business

Communication (3)

MGMT 495 International Management (3)

FIN 370 International Business Finance (3)

POM 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."*

Credit hours in Other International Courses: 15-18

Academic Major

Choose one of the following:

Accounting
Computer Information Systems***
Economics
Finance
General Business
Management
Marketing
Production/Operations Management

****Students may major in Accounting Information Systems (36-hour major). Graduation requirements will exceed 154 hours.*

Credit hours in Academic Major: 24-36***

Free electives (0-6)

Total¹ credit hours required: 154

¹Some students, including transfer students, may require a slightly higher number of hours depending on level of high school language courses.

All students eligible for admission to the College of Arts and Sciences and to the College of Business are eligible for the LWB joint degree. However, a placement test is required of all students of foreign language unless they successfully completed their last course in foreign language at EMU. This placement test is also strongly advised for students whose last course in a foreign language at EMU was completed more than one year before the semester for which they are currently enrolling.

Since this professional program is especially challenging, it is suggested that students enroll at the beginning of the freshman year.

Advising is offered to all joint BBA-BA 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 177/178/179 Special Topics. 1/2/3 hrs

Team-taught current topics related to career preparation for business and industry.

Prereq: Department permission.

ACCOUNTING

**S. Thomas Cianciolo, Interim
Department Head**
406 Gary M. Owen Building
487-3320

Professors: S. Thomas A. Cianciolo, E.A. Devine, D. Robert Okopny, Chandra P. Pathak, Mohsen Sharifi, Linda Woodland

Associate Professors: Amelia A. Baldwin-Morgan, Linda J. Burilovich, George S. Clark, Wayne C. Ellis, Roger Gledhill, Zafar Khan, John W. Keros, Morrey Kramer, Sue Ravenscroft, Andrew Snyir, Kenneth C. Young

Assistant Professors: Susan C. Kattelus, Gary B. McCombs

The Accounting department 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

Track: Internal Audit

*Accounting information systems

**The Accounting Department also offers a 150-hour program designed on the basis of the American Institute of Certified Public Accountants' recommendations.*

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 (MSA). The MSA degree program and courses are described in the Graduate Catalog.

ACADEMIC MAJORS

ACCOUNTING MAJOR

Students majoring in accounting are prepared for professional careers in three major areas:

Public accounting, which leads to service as a Certified Public Accountant, primarily in the audit field. CPAs are independent professionals who provide opinions on the fairness of financial statements prepared for investors. They also render tax service and management advisory service to clients.

Strategic managerial accounting, which leads to careers in strategic cost management, financial accounting, budget analysis, cost accountancy, and internal and operational auditing. The basic function of a strategic Managerial Accountant is to process operating and financial data that help management in their strategic and operational decisions.

Institutional (not-for-profit) or governmental accounting, which leads to positions in not-for-profit organizations and local, state, and federal governmental agencies. These professionals provide financial information about the effectiveness of operations, similar to management accountants, review tax returns, analyze cost reports on projects funded by government, and assist regulatory commissions in monitoring private industry and individual businesses.

Internal Audit is a track available to students who seek careers in large private corporations. Internal auditors are viable candidates for executive development programs in large organizations.

Through an internship program, students with good academic records have an opportunity to work in public accounting or industry. These internships provide education, market 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 (managerial, or not-for-profit, or governmental accounting) will meet the educational requirements and qualify to sit for national examinations that test for entrance into the above professional fields.

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 must be completed.

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
I-B-2. *Basic Studies requirement. See inside back cover*
I-B-3. *Basic Studies requirement. See inside back cover*
I-B-4. *Either:**
 *MATH 118 Mathematical Analysis for Social Sciences I (3)
 or
 Math 122 Elementary Linear Algebra (3)
 and
 MATH 105 College Algebra (3)
 [Math 119 Mathematical Analysis for Social Sciences II (3) or Math 120 Calculus I (3) is also acceptable.]
I-B-5. IS 215 End-User Computing (3)
II-B-1. *Basic Studies requirement. See inside back cover*
II-B-2. *Basic Studies requirement. See inside back cover*
II-B-3. *Basic Studies requirement. See inside back cover*
III-B-1. PLSC 112/113 American Government or PLSC 202 State and Local Government (3)
III-B-2. *Basic Studies requirement. See inside back cover*
III-B-3. ECON 201 Principles of Economics I (3)
III-B-4. ECON 202 Principles of Economics II (3)
IV-B-1. *Basic Studies requirement. See inside back cover*
IV-B-2. *Basic Studies requirement. See inside back cover*
IV-B-3. *Basic Studies requirement. See inside back cover*
 Logic or ethics is strongly recommended for philosophy or religion requirement.
IV-B-4. *Basic Studies requirement. See inside back cover*
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 49

**Students planning to pursue graduate study in business administration are encouraged to select MATH 120 Calculus I and MATH 122 Elementary Linear Algebra.*

Business Core

- ACC 240 Principles of Accounting I (3)
 ACC 241 Principles of Accounting II (3)
 LAW 293 Legal Environment of Business (3)
 MGMT 202 Business Communications (3)
 IS 215 End-User Computing (3)
 DS 265 Business Statistics I (3)

Credit hours in Business Core: 18

Business Administration Core

- (All 200-level core courses must be completed prior to admission to the College of Business)
 FIN 350 Principles of Finance (3)
 MKTG 360 Principles of Marketing (3)

- MGMT 386 Organizational Behavior and Theory (3)
 POM 374 Introduction to Production/Operations Management (3)
 MGMT 490 Business Policy (3)

(All 300-level core courses listed above must be completed before enrollment in MGMT 490 Business Policy.)

Credit hours in Business Core: 15

Academic Major

- 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)

Credit hours in Academic Major: 24

Restricted Electives

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, ACC 499 Independent Study, ACC 540 Advanced Accounting I, ACC 541 Advanced Accounting II

Note: Students planning on sitting for the CPA examination in Michigan should elect ACC 346 Governmental Accounting or ACC 540 Advanced Accounting I.

Credit hours in Restricted Electives: 6

Electives

Students planning to continue study in a graduate school of business are urged to complete the following courses as electives:

- ECON 301 Intermediate Macroeconomic Analysis (3)
 ECON 302 Intermediate Microeconomic Analysis (3)
 DS 465 Applied Linear Statistical Models (3)

Credit hours in Electives: 11-19

Total credit hours required: 124

ACCOUNTING INFORMATION SYSTEMS MAJOR

Accounting information systems is a four-year program designed to provide a bachelor's degree with a concentration in accounting and computer-based information systems. The program combines the coursework required for a degree in accounting with numerous computer information systems 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 systems is fast becoming mandatory. Possible career choices include computer systems design, information systems auditing, computer security analysis, internal auditing, public accounting, not-for-profit accounting, and strategic managerial accounting.

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 must be completed.

COB program

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *Basic Studies requirement. See inside back cover*

I-B-4. *Either.**

*MATH 118 Mathematical Analysis for Social Sciences I (3)

or

Math 122 Elementary Linear Algebra (3)

and

MATH 106 College Algebra (3)

[Math 119 Mathematical Analysis for Social Sciences II (3) or Math 120 Calculus I (3) is also acceptable.]

I-B-5. IS 215 End-User Computing (3)

II-B-1. *Basic Studies requirement. See inside back cover*

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. *Basic Studies requirement. See inside back cover*

III-B-1. PLSC 112/113 American Government or PLSC 202 State and Local Government (3)

III-B-2. *Basic Studies requirement. See inside back cover*

III-B-3. ECON 201 Principles of Economics I (3)

III-B-4. ECON 202 Principles of Economics II (3)

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*

Logic or ethics is strongly recommended for philosophy or religion requirement.

IV-B-4 *Basic Studies requirement. See inside back cover*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 49

*Students planning to pursue graduate study in business administration are encouraged to select MATH 120 Calculus I and MATH 122 Elementary Linear Algebra.

Business Core

ACC 240 Principles of Accounting I (3)

ACC 241 Principles of Accounting II (3)

LAW 293 Legal Environment of Business (3)

MGMT 202 Business Communications (3)

IS 215 End-user Computing (3)

DS 265 Business Statistics I (3)

Credit hours in Business Core:..... 18

Business Administration Core

(All 200-level core courses must be completed prior to admission to the College of Business)

FIN 350 Principles of Finance (3)

MKTG 360 Principles of Marketing (3)

MGMT 386 Organizational Behavior and Theory (3)

POM 374 Introduction to Production/Operations Management (3)

MGMT 490 Business Policy (3)

(All 300-level core courses listed above must be completed before enrollment in MGMT 490 Business Policy.)

Credit hours in Business Core:..... 15

Academic Major

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)

IS 219 File Processing and COBOL Programming (3)

IS 380 Database Concepts (3)

Choose 2 of the following:

IS 247 Software Design and Programming in Business (3)

IS 280 Introduction to Expert Systems in Business (3)

IS 315 Applied Data Structures (3)

IS 420 Business Data Communications and Computer Networks (3)

Credit hours in Academic Major: 36

Restricted Electives

Students may elect courses in other areas of interest

Note: Students planning on sitting for the CPA examination in Michigan should elect ACC 346 Governmental Accounting or ACC 540 Advanced Accounting I.

Credit hours in Restricted Electives: 0

Electives

Students planning to continue study in a graduate school of business are urged to complete the following courses as electives:

ECON 301 Intermediate Macroeconomic Analysis (3)

ECON 302 Intermediate Microeconomic Analysis (3)

DS 465 Applied Linear Statistical Models (3)

Credit hours in Electives: 0-6

Total credit hours required: 124

150-HOUR ACCOUNTING PROGRAM COMBINED MSA AND BBA DEGREES

Beginning in the year 2000, a CPA candidate must have completed 150 hours of education prior to being admitted as a member of the American Institute of Certified Public Accountants.

Admission Requirements

Following are the minimal standards for admission to the 150-Hour Program. Generally, each item should be satisfied, though the candidate's overall record is considered most significant. Thus, a slight deficiency in one criterion may be compensated by the candidate's strengths in other areas. Special circumstances, particularly improvement in recent performance, will be considered on their merits by the 150-Hour Program Policy Committee. Transfer credits and grades will be evaluated in terms of Eastern Michigan University equivalency.

Initial admission is dependent on:

1. Completion of 90 semester hours of undergraduate coursework including the College of Busi-

ness requirements, Basic Studies, and ACC 341.

2. Cumulative grade point average of 3.00 on a 4.00 scale.

3. The candidate's written statement of personal goals.

4. Interview with the 150-Hour program director/adviser.

Admission to the graduate level requires:

1. Completion of 120 semester hours of undergraduate coursework including course content noted under initial admission above and the undergraduate components (i.e., required and restricted electives).

2. Graduate Management Admission Test score of 500 (must be taken during the 4th year so the candidate's score is received before admission to the 5th year).

3. Application to the University Graduate School with payment of fee.

If the candidate is an accounting undergraduate from another four-year accredited school and plans to complete the graduate level program at EMU, he/she must meet the minimum requirements set for graduate level admission noted above, in addition to the bachelor's degree. The candidate is encouraged to apply to EMU at the beginning of his/her senior year and take the Graduate Management Admission Test during that same year.

For more information, please contact the Director of Graduate Business Programs, 401 Gary M. Owen Building, (313) 487-4444.

ACADEMIC MINOR ACCOUNTING MINOR

21 hours

(For nonbusiness majors)

ACC 240 Principles of Accounting I (3)

ACC 241 Principles of Accounting II (3)

ACC 340 Intermediate Accounting I (3)

ACC 341 Intermediate Accounting II (3)

Choose three courses from the following: (9)

ACC 342 Managerial Cost Accounting, ACC 344

Tax Accounting, ACC 346 Governmental

Accounting, ACC 356 Accounting Information

Systems, ACC 440 Advanced Accounting, ACC

442 Advanced Cost Accounting, ACC 444

Advanced Tax Accounting, ACC 450 Internal

Auditing, ACC 451 Advanced Internal Auditing,

ACC 475 International Accounting

ACCOUNTING COURSES

ACC 130 Accounting for Nonbusiness Majors. 3 hrs
Introduction to financial information generated by typical business organizations, with special emphasis on the use and interpretation of this information in managerial and financial 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 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ACC 240 Principles of Accounting I. 3 hrs
Use and development of financial information about economic organizations, with special emphasis on the use of financial statements and their creation in the business decision-making and reporting process.

ACC 241 Principles of Accounting II. 3 hrs
Use and development of accounting information in managerial settings to achieve managerial goals. Use of managerial accounting tools such as budgets and cost analysis in typical business environments.

Prereq: ACC 240.

ACC 244 Personal Tax Accounting. 2 hrs
Introduction to federal and state income and social security tax problems of individuals. Practice on preparation of individual tax returns. Credit toward a degree will not be permitted for both ACC 244 and ACC 344. (Business education majors may substitute this course for ACC 344 with permission of their department head.)

ACC 246 Accounting for Public Administrators. 3 hrs
Surveys the use of accounting to manage a public organization. Basic accounting principles, program budgeting, and the construction of internal control systems.

ACC 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ACC 286 Cooperative Education. 1 hr
Accounting employment at a business or public organization imparting a practical experience in accounting. Position may be part-time, volunteer, or less than full semester in duration. Use on an accounting major or minor is not permitted. Graded credit/no credit. Admittance by application only. This course may be repeated once for additional credit.

Prereq: Department permission.

ACC 287 Cooperative Education. 3 hrs
One term of full-time or two terms of part-time employment at a business or public organization chosen for imparting a practical experience in accounting. Use on an accounting major or minor is not permitted. Graded credit/no credit. Admittance by application only. This course may be repeated once for additional credit.

Prereq: Department permission.

ACC 340 Intermediate Accounting I. 3 hrs
Review of recording and reporting procedures; accounting concepts and theories guiding the valuation and classification of current assets, plant assets, intangible assets, and current liabilities.

Prereq: ACC 241.

ACC 341 Intermediate Accounting II. 3 hrs
Capital stock, rights, options, and retained earnings; long term liabilities; income tax allocation; long term investments; prior period adjustments; funds flow; price level accounting; consignments; installment sales.

Prereq: ACC 340.

ACC 342 Managerial Cost Accounting. 3 hrs
Accounting information for use in planning objectives and controlling operations. A framework for measuring managerial performance is developed through an analytic treatment of cost behavior under dynamic conditions by employing such devices as cost-volume-profit relationships, flexible budgeting, and standards.

Prereq: ACC 241.

ACC 344 Tax Accounting. 3 hrs
History of the income tax; the tax legislative process; tax research; income and loss realization and recognition; capital gains and losses; exclusions; deductions; losses; exemptions; rates, personal tax returns.

Prereq: ACC 241.

ACC 346 Governmental Accounting. 3 hrs
Accounting philosophy for nonprofit organizations; prin-

principles of fund accounting; the budget process including program budgeting; institutional (college, hospital, welfare agency) accounting; internal control; data processing.
Prereq: ACC 241.

ACC 356 Accounting Information Systems. 3 hrs
Concepts of a responsive information system, including principles of design, profitability and responsibility, accounting, and control. Description of typical accounting systems and procedures within the business enterprise.
Prereq: IS 215 and ACC 342 or department permission.

ACC 377/378/379 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

ACC 440 Advanced Accounting. 3 hrs
Consolidation accounting; partnership organization, change, and liquidation; fiduciary accounting; introduction to governmental accounting.
Prereq: ACC 341.

ACC 442 Advanced Cost Accounting. 3 hrs
Cost concepts on an advanced level such as standard costs and variance analysis; responsibility accounting, direct costing, overhead allocation, break-even; product pricing through return on investment methods; divisional income measurement; forecasting with statistical models; capital budgeting; applications of mathematics to cost accounting problems.
Prereq: ACC 342.

ACC 444 Advanced Tax Accounting. 3 hrs
Tax law applicable to partnerships and corporations; operation distributions, reorganization, and liquidation.
Prereq: ACC 344.

ACC 445 Auditing. 3 hrs
Audit standards, professional responsibility, ethics, internal control evaluation, statistical sampling, and audit of EDP systems.
Prereq: 18 semester hours of accounting, including ACC 341 and ACC 356.

ACC 447 Contemporary CPA Problems. 3 hrs
Analysis of current accounting problems faced by the CPA profession. Audit, legal liability, ethics, theory, and practice.
Prereq: ACC 440.

ACC 448 EDP Auditing and Controls. 3 hrs
A comprehensive coverage of electronic data processing (EDP) auditing from both a theoretical and pragmatic point of view with special emphasis on control features of a system and its purpose.
Prereq: ACC 356 and ACC 445.

ACC 450 Internal Auditing. 3 hrs
Introduction to the profession of internal auditing. Includes professional standards, techniques, scientific methods, reporting, operational auditing, and internal audit management.
Prereq: ACC 341 or permission of instructor.

ACC 451 Advanced Internal Auditing. 3 hrs
Continued study of the profession of internal auditing. The focus of this course will be on the advanced study of topics that were briefly discussed in the introductory course. Special emphasis will be placed on applying the concepts learned in the introductory course by performing various exercises with practical (real world) applications.
Prereq: ACC 450.

ACC 456 Accounting Information Systems Implementation and Projects. 3 hrs
A capstone course for the accounting information systems major designed to develop expertise in the implementation of an accounting information system.
Prereq: ACC 356 and IS 380, or department permission.

ACC 475 International Accounting. 3 hrs
Introduction to accounting in an international environment. Includes the study of environmental factors, performance evaluation, financial reporting, and specific accounting and auditing problems.
Prereq: ACC 241, or department permission.

ACC 477/478/479 Special Topics. 1/2/3 hrs
Specialized accounting topics in relation to changes in the practice of accounting and its regulation by government agencies.
Prereq: Department permission and ACC 341.

ACC 489 Accounting Internship. 3 hrs
Directed full-time work experience in the accounting phase of a business organization. Use on an accounting major or minor is not permitted. This course may be repeated once for additional credit. *Credit/no credit.*
Prereq: Department permission. To be used as an elective only; does not apply on a major or minor.

ACC 491 Accounting Honors Thesis. 3 hrs

A directed studies course for accounting honors students only. An in-depth research thesis or project under the direction of an accounting faculty member is required with an oral examination or form of presentation to the faculty and other interested parties upon completion of the thesis.

Prereq: Final semester in undergraduate accounting Honors Program.

ACC 497/498/499 Independent Study. 1/2/3 hrs

Directed study of a problem or group of problems in accounting not otherwise treated in departmental courses.

Prereq: Department permission.

DECISION SCIENCE COURSES**DS 177/178/179 Special Topics. 1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

DS 265 Business Statistics I. 3 hrs

Concepts of statistics and applications to business decisions. Elements of probability, random samples, descriptive statistics, sampling distributions, point and interval estimation, hypothesis testing, chi-square analysis, and regression and correlation analysis.

Prereq: MATH 118, MATH 119, IS 215.

DS 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

DS 300 Quantitative Analysis and Statistics for Business. 3 hrs

An elementary course for MBA students emphasizing three quantitative areas: differentiation and optimization, probability and statistics, and a matrix algebra approach to systems of linear equations.

Prereq: Two years of high school algebra or MATH 104 or equivalent.

DS 317 System Simulation. 3 hrs

Computer-based simulation techniques for business analysis and decision-making. Random number and process generators, system simulation models, and spe-

cialized computer simulation languages. Simulation of discrete time systems and the GPSS language.

Prereq: IS 215 and DS 265.

DS 367 Business Statistics II. 3 hrs

A continuation of the statistical methodology developed in Business Statistics I. Topics include two sample interval estimation and hypothesis tests, inference about the population variance, and simple and multiple regressions.

Prereq: DS 265.

DS 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

DS 387 Cooperative Education. 3 hrs

Four months of full-time employment at a business or public organization to impart a practical experience in decision science disciplines. *Credit / no credit basis for general elective credit only. Admittance by application only.*

Prereq: Completion of three hours in decision science systems area. Department permission.

DS 465 Applied Linear Statistical Models. 3 hrs

An introduction to linear models with an emphasis on business applications. Topics include multiple linear regression models, analysis of variance and multivariate data analysis. Computer packages will be used.

Prereq: DS 265.

DS 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

DS 487 Cooperative Education. 3 hrs

Four months of full-time employment at a business or public organization to impart a practical experience in decision science disciplines. *Credit / no credit basis for general elective credit only. Admittance by application only.*

Prereq: DS 387. Department permission.

DS 497/498/499 Independent Study. 1/2/3 hrs

Directed study of a problem or group of problems in decision science.

Prereq: Department permission.

FINANCE AND COMPUTER INFORMATION SYSTEMS

Asrat Tessema

Department Head

412 Gary M. Owen Building

487-2454

Professors: Imtiaz S. Ahmad, Badie Farah, Ramesh C. Garg, Asad S. Khailany, Pedro Sanchez, Charles S. Saxon, Fathi Sokkar, V.M. Asrat Tessema, Rao Tummala, Nesa L. Wu

Associate Professors: Alahassane Diallo, Juan C. Esteva, Ronald E. Hutchins, Wafa Khorsheed, Susan Moeller, Stevan Mrdalj

Assistant Professors: Robert Kiss, Michel Mitri, Mahmud Rahman, Reino V. Warren

The Finance area prepares students for professional careers related to the fields of finance. Students can develop their expertise in a variety of areas including corporate financial analysis, budgeting, banking, investments, and appraisal.

The Computer Information Systems area prepares students for careers in business information systems, and the Production/Operations Management area unit prepares students for careers in production and operations management.

Programs of Study

Majors:

- Computer information systems
- Finance
- Production/operations management

Minors:

- Computer information systems
- Finance
- Production/operations management

Advising assistance, both academic and career, is provided by the faculty and is available Monday through Friday while school is in session, or by appointment.

Advising coordinator: Asrat Tessema

Graduate study leads to the Master of Business Administration with concentration in finance, CIS and POM or the Master of Science degree in Information Systems (MSIS). These degree programs and courses are described in the Graduate Catalog.

ACADEMIC MAJORS

COMPUTER INFORMATION SYSTEMS

MAJOR

Computer information systems emphasizes the role and application of the computer in making management decisions. Students are prepared for careers as systems analysts, programmers software engineers, database specialists, and information systems and database management administrators.

The general requirements for the Bachelor of Business Administration degree, the academic major requirements below, and sufficient electives to meet the minimum of 124 semester hours for graduation must be completed.

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *Basic Studies requirement. See inside back cover*

I-B-4. *Either:**

*MATH 118 Mathematical Analysis for Social Sciences I (3)

or

Math 122 Elementary Linear Algebra (3)

and

MATH 105 College Algebra (3)

[Math 119 Mathematical Analysis for Social Sciences II (3) or Math 120 Calculus I (3) is also acceptable.]

I-B-5. IS 215 End-User Computing (3)

II-B-1. *Basic Studies requirement. See inside back cover*

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. *Basic Studies requirement. See inside back cover*

III-B-1. PLSC 112/113 American Government or PLSC 202 State and Local Government (3)

III-B-2. *Basic Studies requirement. See inside back cover*

III-B-3. ECON 201 Principles of Economics I (3)

III-B-4. ECON 202 Principles of Economics II (3)

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*

Logic or ethics is strongly recommended for philosophy or religion requirement.

IV-B-4. *Basic Studies requirement. See inside back cover*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 49

**Students planning to pursue graduate study in business administration are encouraged to select MATH 120 Calculus I and MATH 122 Elementary Linear Algebra.*

Business Core

- ACC 240 Principles of Accounting I (3)
 ACC 241 Principles of Accounting II (3)
 LAW 293 Legal Environment of Business (3)
 MGMT 202 Business Communications (3)
 IS 215 End-user Computing (3)
 DS 265 Business Statistics I (3)

Credit hours in Business Core: 18

Business Administration Core

- (All 200-level core courses must be completed prior to admission to the College of Business)
 FIN 350 Principles of Finance (3)
 MKTG 360 Principles of Marketing (3)
 MGMT 386 Organizational Behavior and Theory (3)
 POM 374 Introduction to Production/Operations Management (3)
 MGMT 490 Business Policy (3)

(All 300-level core courses listed above must be completed before enrollment in MGMT 490 Business Policy.)

Credit hours in Business Core: 15

Academic Major

- IS 219 File Processing and COBOL Programming (3)
 IS 247 Software Design and Programming in Business (3)
 IS 315 Applied Data Structures (3)
 IS 380 Database Concepts (3)
 IS 417 Systems Analysis and Design (3)
 IS 420 Business Data Communications and Computer Networks (3)
 IS 425 Software Engineering Management (3)
 IS 442 Information Resource Management (3)
 IS 449 Information Systems Development and Implementation Projects (3)

Choose one course from the following:

- IS 280 Introduction to expert Systems in Business, DS 317 System Simulation, IS 375 Object-Oriented Programming and Database, IS 410 Knowledge-Based Systems, IS 413 Evaluation and Application of Computer Hardware, IS 416 Computer Operating Systems, IS 426 Advanced Structured COBOL Programming

COSC 239 Assembly and Machine Language Programming

INTE 431 Interactive Industrial Computer Graphics

Credit hours in Academic Major: 30

Electives

Students planning to continue study in a graduate school of business are urged to complete the following courses as electives:

- ECON 301 Intermediate Macroeconomic Analysis (3)
 ECON 302 Intermediate Microeconomic Analysis (3)
 DS 367 Business Statistics II (3)

Credit hours in Electives: 11-19

Total credit hours required: 124

FINANCE MAJOR

The finance major is designed for students interested in planning and managing assets and the acquisition of funds for investment by corporations, nonprofit organizations, governmental units, and financial institutions.

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 must be completed for graduation.

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *Basic Studies requirement. See inside back cover*

I-B-4. *Either.**

*MATH 118 Mathematical Analysis for Social Sciences I (3)

or

Math 122 Elementary Linear Algebra (3)

and

MATH 105 College Algebra (3)

[Math 119 Mathematical Analysis for Social Sciences II (3) or Math 120 Calculus I (3) is also acceptable.]

I-B-5. IS 215 End-User Computing (3)

II-B-1. *Basic Studies requirement. See inside back cover*

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. *Basic Studies requirement. See inside back cover*

III-B-1. PLSC 112/113 American Government or PLSC 202 State and Local Government (3)

III-B-2. *Basic Studies requirement. See inside back cover*

III-B-3. ECON 201 Principles of Economics I (3)

III-B-4. ECON 202 Principles of Economics II (3)

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*

Logic or ethics is strongly recommended for philosophy or religion requirement.

IV-B-4. Basic Studies requirement. See inside back cover
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 49

**Students planning to pursue graduate study in business administration are encouraged to select MATH 120 Calculus I and MATH 122 Elementary Linear Algebra.*

Business Core

ACC 240 Principles of Accounting I (3)
 ACC 241 Principles of Accounting II (3)
 LAW 293 Legal Environment of Business (3)
 MGMT 202 Business Communications (3)
 IS 215 End-user Computing
 DS 265 Business Statistics I (3)

Credit hours in Business Core:..... 18

Business Administration Core

(All 200-level core courses must be completed prior to admission to the College of Business)

FIN 350 Principles of Finance (3)
 MKTG 360 Principles of Marketing (3)
 MGMT 386 Organizational Behavior and Theory (3)
 POM 374 Introduction to Production/Operations Management (3)
 MGMT 490 Business Policy (3)

(All 300-level core courses listed above must be completed before enrollment in MGMT 490 Business Policy.)

Credit hours in Business Core:..... 15

Academic Major

(24 Credit Hours)

Credit hours in required courses: (15 Credit Hours)

FIN 354 Investments (3)
 FIN 357 Financial Markets and institutions (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)
 Restricted Electives

Choose three from the following (9 Credit Hours) :

FIN 370 International Business Finance (3), FIN 451 Intro. to Speculative Markets (3), FIN 453 Commercial Banking (3)
 FIN 454 Mortgage Banking (3)
 FIN 479 Special Topics (3)
 INS 351 Introduction to Risk and Insurance (3)
 ACC 341 Intermediate Accounting II (3)

ECON 445 Economic Fluctuations and Forecasting (3)

Electives

Students planning to continue study in a graduate school of business are urged to complete the following courses as electives:

ECON 301 Intermediate Macroeconomic Analysis (3)

ECON 302 Intermediate Microeconomic Analysis (3)

DS 367 Business Statistics II (3)

Credit hours in Electives:..... 11-19

Total credit hours required:..... 124

Banking Track

(27 Credit Hours)

Required Courses:..... 24

ACC 340 Intermediate Accounting I (3)

FIN 354 Investments (3)

FIN 357 Financial Markets and Institutions (3)

FIN 359 Intermediate Financial Theory (3)

FIN 450 Problems in Financial Management (3)

FIN 453 Commercial Banking

FIN 454 Mortgage Banking (3)

FIN 479 Special Topics (3)

Restricted Electives (3 Credit Hours)

Choose one from the following:

FIN 370 International Business Finance (3)

FIN 451 Intro. to Speculative Markets (3)

PRODUCTION/OPERATIONS MANAGEMENT MAJOR

This major equips graduates to work in various kinds and sizes of production systems as well as to pursue graduate study in several areas. Emphasized are production planning and scheduling, material procurement, inventory control, project scheduling, quality control, layout of facilities, and time and motion studies. The program responds to social, economic, and technological developments. Students are prepared for careers as production planners, materials planners, production supervisors, and industrial buyers.

To be completed are the general requirements for the Bachelor of Business Administration degree, the academic major requirements below, and sufficient electives to meet the minimum of 124 semester hours for graduation.

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
I-B-2. *Basic Studies requirement. See inside back cover*
I-B-3. *Basic Studies requirement. See inside back cover*
I-B-4. *Either.**

*MATH 118 Mathematical Analysis for Social Sciences I (3)

or

Math 122 Elementary Linear Algebra (3)

and

MATH 106 College Algebra (3)

[Math 119 Mathematical Analysis for Social Sciences II (3) or Math 120 Calculus I (3) is also acceptable.]

- I-B-5.** IS 215 End-User Computing (3)
II-B-1. *Basic Studies requirement. See inside back cover*
II-B-2. *Basic Studies requirement. See inside back cover*
II-B-3. *Basic Studies requirement. See inside back cover*
III-B-1. PLSC 112/113 American Government or PLSC 202 State and Local Government (3)
III-B-2. *Basic Studies requirement. See inside back cover*
III-B-3. ECON 201 Principles of Economics I (3)
III-B-4. ECON 202 Principles of Economics II (3)
IV-B-1. *Basic Studies requirement. See inside back cover*
IV-B-2. *Basic Studies requirement. See inside back cover*
IV-B-3. *Basic Studies requirement. See inside back cover*
 Logic or ethics is strongly recommended for philosophy or religion requirement.
IV-B-4. *Basic Studies requirement. See inside back cover*
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 49

*Students planning to pursue graduate study in business administration are encouraged to select MATH 120 Calculus I and MATH 122 Elementary Linear Algebra.

Business Core

- ACC 240 Principles of Accounting I (3)
 ACC 241 Principles of Accounting II (3)
 LAW 293 Legal Environment of Business (3)
 MGMT 202 Business Communications (3)
 IS 215 End-user Computing (3)
 DS 265 Business Statistics I (3)

Credit hours in Business Core:..... 18

Business Administration Core

- (All 200-level core courses must be completed prior to admission to the College of Business)
 FIN 350 Principles of Finance (3)
 MKTG 360 Principles of Marketing (3)

MGMT 386 Organizational Behavior and Theory (3)

POM 374 Introduction to Production/Operations Management (3)

MGMT 490 Business Policy (3)

(All 300-level core courses listed above must be completed before enrollment in MGMT 490 Business Policy.)

Credit hours in Business Core:..... 16

Academic Major

Credit hours in Academic Major:..... 24

Credit hours in required courses:..... 15

ACC 342 Managerial Cost Accounting (3)

POM 472 Tools for Strategic Quality Management (3)

POM 474 Design of the Production/Operations System (3)

POM 475 Production and Inventory Control I (3)

POM 476 Production and Inventory Control II (3)

Choose three courses from the following: (9 credit hours)

- IS 219 File Processing and COBOL Programming (3),
 MGMT 384 Human Resource Management (3), IS 417 Systems Analysis and Design (3), INTE 431 Interactive Industrial Computer Graphics (3), INTE 432 3-D Computer-Aided Design (3), INTE 433 Advanced Computer-Aided Design (3), DS 465 Applied Linear Statistical Models (3), MGMT 484 Management-Union Relations (3)

Electives

Students planning to continue study in a graduate school of business are urged to complete the following courses as electives:

ECON 301 Intermediate Macroeconomic Analysis (3)

ECON 302 Intermediate Microeconomic Analysis (3)

DS 367 Business Statistics II (3)

Credit hours in Electives:..... 11-19

Total credit hours required:..... 124

ACADEMIC MINORS**COMPUTER INFORMATION SYSTEMS****MINOR****(FOR NONBUSINESS MAJORS)**

*IS 215 End-User Computing (3)

IS 219 File Processing and COBOL Programming (3)

IS 247 Software Design and Programming in Business (3)

IS 417 Systems Analysis and Design (3)

POM 476 Production and Inventory Control II (3)

MGMT 386 Organizational Behavior and Theory (3)

Choose one course from the following:

IS 315 Applied Data Structures (3), IS 416

Computer Operating Systems (3), IS 380

Database Concepts (3), IS 420 Business Data

Communications and Computer Networks (3),

IS 426 Advanced Structured COBOL

Programming (3), ACC 356 Accounting

Information Systems (3)

*Satisfies Basic Studies requirement I-B-5.

FINANCE MINOR

(FOR NONBUSINESS MAJORS)

ACC 240 Principles of Accounting I (3)

ACC 241 Principles of Accounting II (3)

FIN 350 Principles of Finance (3)

FIN 359 Intermediate Financial Theory (3)

Choose three courses from the following:

FIN 354 Investments (3), FIN 358 Analysis of

Financial Statements (3), FIN 450 Problems in

Financial Management (3), FIN 451 Introduction

to Speculative Markets (3), FIN 453 Commercial

Banking (3), FIN 479 Special Topics (3), FIN 370

International Business of Finance (3)

PRODUCTION/OPERATIONS

MANAGEMENT MINOR

(FOR NONBUSINESS MAJORS)

ACC 342 Managerial Cost Accounting (3)

POM 374 Introduction to Production/Operations Management (3)

MGMT 386 Organizational Behavior and Theory (3)

POM 474 Design of the Production/Operations System (3)

POM 475 Production and Inventory Control I (3)

Choose two courses from the following:

IS 219 File Processing and COBOL Programming (3), IS 417 Systems Analysis and Design (3), ACC 356 Accounting Information Systems (3), MGMT 384 Human Resource Management (3), PSY 351 Industrial Psychology (3)

FINANCE COURSES

FIN 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

FIN 277/278/279 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

FIN 287 Cooperative Education. 3 hrs

Four months of full-time employment at a business or public organization in a finance position chosen for imparting a practical experience in finance. Use on a finance major or minor not permitted. *Credit/no credit. Admittance by application only.*

Prereq: ACC 240 and department permission.

FIN 350 Principles of Finance. 3 hrs

A survey course covering the financial operations of business corporations. It begins with a general overview, then goes into detail on several concepts and techniques used in financial decision making. Specific topics emphasized include the time value of money, asset valuation models, risk management, and financial statement analysis. The course is designed for the general business student.

Prereq: ACC 241.

FIN 352 Financial Management for Entrepreneurs.

3 hrs

A continuation of FIN 350, but with an emphasis on financial management for growth of the small- to medium-sized firm. Working capital management, short-term financing, equipment financing, and other topics pertinent to the growth firm.

Prereq: FIN 350 or equivalent.

FIN 354 Investments. 3 hrs

The purpose of the course is to introduce students to fundamentals of investment analysis. The course attempts to highlight the alternative investments available and develop a way of thinking about investments. The course is a mixture of description and theory. The descriptive material involves a discussion of available

investment instruments and considers the way the capital market currently works. The theoretical portion takes into consideration ways you should evaluate current investments and future opportunities.

Prereq: FIN 350.

FIN 357 Financial Markets and Institutions. 3 hrs

The operation and behavior of capital markets and financial intermediaries as sources of investment capital to the business firm. Liability management and investment portfolio behavior of financial market participants. Flow of funds through money and capital markets, and investment characteristics of securities traded. Term structure of yields, yield differentials, and the valuation of debt and equity securities.

Prereq: FIN 350.

FIN 358 Analysis of Financial Statements. 3 hrs

Analysis and interpretation of the financial statements and reports of various types of businesses and industries. Examination of the impact of using alternative accounting methods on reported profits, taxes, and cash flows. Forecast of financial statements for planning purposes.

Prereq: FIN 350.

FIN 359 Intermediate Financial Theory. 3 hrs

Focuses on the theory of financial management and analysis of financial decisions made by financial managers. The financial decisions include capital structure, dividend policy, lease or buy, mergers and issuance of new securities.

Prereq: FIN 350.

FIN 370 International Business Finance. 3 hrs

This course deals with how decisions about financial management are made in the modern multinational enterprises. Financial management of any firm involves acquisition of funds, investing of these funds in economically productive assets, the managing of assets so acquired and eventually reconversion of some of the productive assets into funds to return to the original investors, creditors, suppliers, employees and other interest groups. International Business Finance deals with the management of these functions for firms operating in several separate countries.

Prereq: FIN 350 or equivalent.

FIN 377/378/379 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other

department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

FIN 387 Cooperative Education. 3 hrs

Four months of full-time employment at a business or public organization in a finance position chosen for imparting a practical experience in finance. Use on a finance major or minor not permitted. *Credit/no credit.* Admittance by application only.

Prereq: FIN 287. Department permission.

FIN 450 Problems in Financial Management. 3 hrs

Deals with application of financial management theory. Emphasis is placed on problem-solving in differing economic and situational environments using various quantitative tools. Case analysis and class discussions are emphasized.

Prereq: FIN 359.

FIN 451 Introduction to Speculative Markets. 3 hrs

This course is designed to provide a solid foundation in the principles of derivatives. It attempts to strike a balance between institutional details, theoretical foundations, and practical applications. Options and futures will be the primary focus.

Prereq: FIN 354 or equivalent or equivalent.

FIN 453 Commercial Banking. 3 hrs

Practices, policies, and problems of commercial bank management and operation, capital adequacy, loan and investment policy, liquidity and profit maximization.

Prereq: FIN 350.

FIN 454 Mortgage Banking. 3 hrs

The purpose of this course is to communicate and explain the fundamentals of mortgage lending in as simple and concise a manner as possible. A good portion of the course deals with real estate appraisal.

Prereq: FIN 350 or equivalent.

FIN 477/478/479 Special Topics. 1/2/3 hrs

These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.

Prereq: Department permission.

FIN 487 Cooperative Education. 3 hrs

Four months of full-time employment at a business or public organization in a finance position chosen for im-

parting a practical experience in finance. Use on a finance major or minor not permitted. *Credit/no credit. Admittance by application only.*
Prereq: FIN 387, Department permission.

FIN 489 Internship. 3 hrs
 Directed full-time work experience in the finance phase of a business or public organization. Use on a finance major or minor not permitted. May be repeated once for additional credit. Graded credit/no credit. Admittance by application only.
Prereq: Department permission.

FIN 497/498/499 Independent Study. 1/2/3 hrs
 Directed study of a problem or group of problems in finance.
Prereq: Department permission.

INSURANCE COURSES

INS 177/178/179 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

INS 258 Personal Insurance Planning. 3 hrs
 A study of the major risks of individuals and the methods of handling these risks. Topics covered include types of risks, handling risks, purposes and nature of insurance, and basic insurance principles and coverages. Primary emphasis is placed on family insurance programs: automobile, home, life, health, and retirement.
Prereq: Sophomore standing.

INS 277/278/279 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

INS 351 Introduction to Risk and Insurance. 3 hrs
 An introduction to study of pure risks, risk management, and insurance, with emphasis on the application of risk management principles and techniques of handling the pure risks of business firms and public institutions. Topics covered include nature and types of risks, risk management process, and types and uses of insurance.
Prereq: ACC 241.

INS 377/378/379 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other

departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

INS 457 Property and Liability Insurance. 3 hrs
 A study of the principles and practices of property and liability insurance. Primary emphasis is on developing an understanding of the various property and liability insurance contracts and their uses. Role of risk manager in handling personal and business risk is stressed.
Prereq: INS 351.

INS 458 Life and Health Insurance. 3 hrs
 A study of the purposes, uses, and role of life insurance in our society. Major topics covered are nature and uses, legal aspects, types of policies, contract provisions, rate-making, company organization and operation, underwriting practices, and regulation.
Prereq: INS 351.

INS 477/478/479 Special Topics. 1/2/3 hrs
 A study of risks, including the identification, measurement, analysis, and handling of business risks from the viewpoint of a risk manager. Cases are used extensively to provide practical applications of risk management principles and practices.
Prereq: INS 457 and INS 458.

COMPUTER INFORMATION SYSTEMS COURSES

IS 177/178/179 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

IS 215 End-User Computing. 3 hrs
 Computers are being used more extensively by managers and professionals. This revolution is known by the name "End-User Computing" (EUC). Students learn traditional information systems topics such as software life cycles, transaction processing systems, and business problem solving. In addition, a wide range of applications including Decision Support Systems, Executive Information Systems, Nonclerical Office Automation, Data Communications, and Local Area Networks, are covered. These applications cover all the functional areas of businesses. Coursework includes conceptual material as well as laboratory material.
Prereq: MATH 118.

IS 219 File Processing and COBOL Programming.

3 hrs

COBOL programming is an important skill for business application developers. 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 computer information systems majors and others.

Prereq: IS 215.

IS 247 Software Design and Programming in Business.

3 hrs

Business computer programmers must be able to use problem-solving techniques, appropriate algorithms, and follow the principles of software engineering to develop good computer solutions to business problems. In this class, the students will study these topics and apply them in the design, writing, debugging, and testing of several programs. **This is the first of a sequence of three courses, the others being IS 315 and IS 375.**

Prereq: IS 215.

IS 277/278/279 Special Topics.

1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

IS 280 Introduction to Expert Systems in Business.

3 hrs

Recent developments in computer technology have had a dramatic effect on the way decision-making is done in business. The advent of small but powerful computers has made it possible to capture knowledge and distribute it throughout corporations with computerized expert systems. These expert systems can be developed without programming in the traditional sense by using expert shells. In this class, students will use expert systems shells to create several expert systems. Additional topics related to the development and use of expert systems in business will also be studied. Intended for non-CIS majors.

IS 315 Applied Data Structures.

3 hrs

Business computer programmers must have a good knowledge of basic data structures such as linked lists, trees, and networks to permit them to design appropri-

ate 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. **This is the second of a sequence of three courses, the others being IS 247 and IS 375.**

Prereq: IS 247.

IS 375 Object-Oriented Programming and Database.

3 hrs

Students will gain an understanding of the principles of object-oriented programming and databases. Students will learn concepts and techniques of object-oriented software development, object-oriented programming principles, characteristics of object-oriented languages, and fundamentals of object-oriented database management systems. Students will also gain hands-on experience in designing and building object-oriented applications. **This is the third of a sequence of three courses, the others being IS 247 and IS 315.**

Prereq: IS 315.

IS 377/378/379 Special Topics.

1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

IS 380 Database Concepts.

3 hrs

Database concepts for large-scale information systems. Logical and physical designs for data element usage; database management systems.

Prereq: IS 315.

IS 387 Cooperative Education.

3 hrs

Four months of full-time employment at a business or public organization to impart a practical experience in computer information systems disciplines. *Credit/no credit basis for general elective credit only. Admittance by application only.*

Prereq: Completion of three hours in computer information systems area. Department permission.

IS 410 Knowledge-Based Systems.

3 hrs

Modern knowledge-based software is being used increasingly in all business activities. Techniques such as English language database queries and expert systems have moved from the realm of research laboratories to everyday business use in the last few years. Business

computer professionals of the future will be expected to be skilled in the use of a wide variety of knowledge-based software and knowledge engineering techniques. This class will study one important programming language and its application to several knowledge-based systems. Each student will design and implement several computer programs.

Prereq: IS 315.

IS 413 Evaluation and Application of Computer Hardware. 3 hrs

Evaluation of computer hardware found in business computer systems. A nontechnical 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: IS 219.

IS 416 Computer Operating Systems. 3 hrs

Decision methods and concepts for determining the types of computer operating systems required for a particular business environment. Various operating system designs with respect to allocation and utilization of resources; the acceptance, executive, and presentation portions of the systems; large and small operating systems to be considered for the business environment.

Prereq: IS 315.

IS 417 Systems Analysis and Design. 3 hrs

Computer-based information systems exist everywhere in business and industry. People armed with the necessary tools are the key to both successful development and performance of these systems. The objective of this course is to introduce students to processes, principles, guidelines, tools, and techniques for systems analysis and design of information systems. The major thrust of the course is to aid the communication process that must take place between the system developers and users. This is facilitated by the use of projects as a vehicle for effectively communicating the content of this course.

Prereq: IS 219 and DS 265.

IS 420 Business Data Communications and Computer Networks. 3 hrs

In an information-based society, knowledge of data communications and computer networks is very important to everyone who works with computers. This course is intended to teach students everything they need to know to be effective participants in the establishment of data communications links for their employers. This course

assumes no prior data communications and computer networks knowledge. It combines technical aspects with practical business applications without resorting to a rigorous mathematical approach.

Prereq: IS 215.

IS 421 Pictorial Information Systems. 3 hrs

The study of Pictorial Information Systems is applicable to a variety of areas dealing with representation, storage, retrieval, manipulation, and communication of business information. Examples of the current activity in this area include documents, forms, and photographs in office information systems; pictorial databases for manufacturing information systems; image understanding support for information systems in semiconductor, aerospace, and other industries; and medical pictorial archiving and communication systems (PACS).

Prereq: IS 315.

IS 425 Software Engineering Management. 3 hrs

Introduction of the concept and techniques managing software growth and software life cycle, increasing software productivity reliability, correctness, and predicting software costs. Legal and ethical aspects of software and human factors are discussed.

Prereq: IS 417.

IS 426 Advanced Structured COBOL Programming.

3 hrs

Students work in teams developing integrated information systems in structured COBOL. Searches, reporting, subprograms, random files, indexed sequential files, various sorting routines, debugging techniques, programming style, optimization techniques, structured and modular programming concepts, transferability and portability strategies, and documentation, including writing program specifications and users' manuals.

Prereq: IS 219.

IS 441 FORTRAN Programming Language. 1 hr

An introduction to the FORTRAN language. Variables and constants, format statements, input/output, arithmetic and logical assignment statements, dimension statements and subscripts, subprograms, and advanced IO statements. *Credit can be earned only by nonbusiness undergraduate majors or by graduate students meeting a programming language requirement.*

IS 442 Information Resource Management. 3 hrs

Most organizations use computers for operations, control and planning, and for office automation. Although

computers facilitate and enhance the functioning of organizations, they do add to the responsibilities of managers. In this course, students learn how to acquire, organize, monitor, and control information resources. The course also discusses problems unique to the management of information resources.

Prereq: IS 417.

IS 447 Basic Assembly Language. 2 hrs

Introduction to assembly language. Data format, storage allocation, symbolic programming, macro definition, data movement and branching, arithmetic operations, editing, tables, indexing, subroutines, program linkage, and interrupts. *Credit can be earned only by nonbusiness majors or by graduate students meeting a programming language requirement.*

Prereq: IS 215 or equivalent.

IS 449 Information Systems Development and Implementation Projects. 3 hrs

This is the capstone course. Students work in teams to develop information systems for real-life organizations. These organizations are local businesses, industries, nonprofit organizations, 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: IS 417, IS 420, and IS 380.

IS 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

IS 487 Cooperative Education. 3 hrs

Four months of full-time employment at a business or public organization to impart a practical experience in computer information systems disciplines. *Credit/no credit basis for general elective credit only. Admittance by application only.*

Prereq: IS 387, Department permission.

IS 489 Internship. 3 hrs

Directed full-time work experience in the business computer systems units of a business organization. This course may be repeated for a maximum total of six hours.

Prereq: Major and department permission.

IS 497/498/499 Independent Study. 1/2/3 hrs

Directed study of a problem or group of problems in production systems or management science.

Prereq: Department permission.

PRODUCTION/OPERATIONS MANAGEMENT COURSES

POM 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

POM 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

POM 374 Introduction to Production/Operations Management. 3 hrs

The major design, operation, and control problems of production/operations management in manufacturing and service organizations. Topics include 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: DS 265.

POM 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

POM 387 Cooperative Education. 3 hrs

Four months of full-time employment at a business or public organization to impart a practical experience in production/operations management disciplines. *Credit/no credit basis for general elective credit only. Admittance by application only.*

Prereq: Completion of three hours in production/operations management area. Department permission.

POM 390 Management Systems. 3 hrs

Various concepts of systems theory and applications to management. The environment and boundaries of a

system, organizational information flows and the firm as a system, cybernetics and communication theory, and the management of large-scale systems. Not open to ORIS majors.

Prereq: MGMT 386.

POM 428 Linear Programming. 3 hrs

Theory and business applications of linear programming models. Formulation, graphical solution, simplex method, revised simplex method, duality theorem, sensitivity analysis, parametric programming, integer programming, transportation models, transshipment models, assignment models, input/output models, and zero-sum game models.

Prereq: IS 215.

POM 472 Tools for Strategic Quality Management.

3 hrs

Examination of "Enumerative" and "Analytic" statistical studies of Quality Management. Emphasis is given on how to diagnose an unstable process and how to improve a stable process through analysis of control charts and other management tools for continuous improvement. Major modern philosophies by Deming and Taguchi as well as others, concerning quality management, are discussed.

Prereq: POM 374

POM 474 Design of the Production/Operations System. 3 hrs

An in-depth qualitative, quantitative, and computerized analysis of problems related to the design of manufacturing and non-manufacturing systems. Product service design, process planning, facilities planning, job design and measurement, maintenance planning and control.

Prereq: POM 374

POM 475 Production and Inventory Control I. 3 hrs

The **main objective** of this course is to provide students with a solid background in several topics in the field of production and inventory control. Specifically, an in-depth analysis of the following topics is covered; Strategic Planning; Forecasting of Demand and its relationships to Production Planning; Master Production Scheduling & Demand Management; Material Requirements Planning; and Capacity Management. These topics are discussed within the framework of production to stock, assemble or finish to order, with production to order. A **secondary objective** of this course is to provide students with material necessary to start prepar-

ing for the certification exams of the American Production & Inventory Control Society (APICS) in Master Planning, and Material & Capacity Requirements Planning.

Prereq: POM 374

POM 476 Production and Inventory Control II. 3 hrs

The **main objective** of this course is to provide students with a solid background in several topics in the field of production and inventory control. Specifically, an in-depth analysis of the following topics is covered: Inventory Management & Distribution Requirements Planning (DRP), Production Activity Control (PAC), Purchasing Management, Project Management, Just-In-Time and the role of Quality Management. A **secondary objective** of this course is to provide students with the material necessary to start preparing for the CPIM exams of the American Production & Inventory Control Society (APICS) in Inventory Management, Production Activity Control, and Just-In-Time.

Prereq: POM 374

POM 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

POM 480 Production/Operations Management A

World Business View.

3 hrs

A discussion of similarities and differences in concepts and techniques used worldwide in Production/Operations Management. American, European, and Japanese systems are compared and analyzed throughout this course. Comparative topics in POM include productivity, management, product/service design, process planning and manufacturing technology, facilities planning, maintenance and quality management, production/inventory planning and control system, and planning and control of repetitive manufacturing.

POM 487 Cooperative Education. 3 hrs

Four months of full-time employment at a business or public organization to impart a practical experience in production/operations management disciplines. *Credit/no credit basis for general elective credit only. Admittance by application only.*

Prereq: POM 387, Department permission.

POM 489 Internship. 3 hrs

Directed full-time work experience in the production/operations management units of a business organization. This course may be repeated for a maximum total of six hours.

Prereq: Major and department permission.

POM 497/498/499 Independent Study. 1/2/3 hrs

Directed study of a problem or group of problems in production systems or management science.

Prereq: Department permission.

MANAGEMENT

Sahab Dayal

Department Head

466 Gary M. Owen Building

487-3240

Professors: Nick Blanchard, Richaard Camp, James H. Conley, Robert P. Crowner, Lorraine Hendrickson, Mary Vielhaber Hermon, Raymond E. Hill, Denise Hoyer, Gregory Huszco, Jean McEnery, Floyd A. Patrick, Stewart L. Tubbs, Fraya Wagner-Marsh, David Victor, John Waltman

Associate Professors: Jean Bush-Bacelis, Pradeep Chowdhry, Jagdish Danak

Assistant Professors: Deborah Ettington, Stephanie E. Newell, Jack Nightingale

Graduates from Eastern's Management department are prepared to assume leadership roles in today's dynamic environment in both business and nonbusiness organizations. They understand the roles of management as well as the complex social and environmental obligations faced in business today. In so doing, they are ready to apply the needed technical, human, and conceptual skills.

Eastern's Management graduates understand and are able to apply the behavioral sciences in planning, implementation, communication, organizational design and development, and in performance measurement to maximize organizational and employee achievement.

Programs of Study

Majors:

General business
Management

Minors:

General Business
Management

Faculty from the department provide both academic and career advising assistance Monday through Friday while school is in session, or by appointment. Management advisers are available to help students tailor a course program that answers a variety of career needs in both general business and management.

Advising Coordinator: Sahab Dayal

Details on the department's innovative Master of Science degree in human resource organizational development (HR/OD) are available in the Graduate Catalog.

ACADEMIC MAJORS

GENERAL BUSINESS MAJOR

The major in general business has been designed for students seeking a broad business background rather than specialization in any one functional area of business. The program for the general business major includes a minimum of 124 semester hours for graduation as stipulated in the catalog.

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *Basic Studies requirement. See inside back cover*

I-B-4. *Either:**

*MATH 118 Mathematical Analysis for Social Sciences I (3)

or

Math 122 Elementary Linear Algebra (3)

and

MATH 105 College Algebra (3)

[Math 119 Mathematical Analysis for Social Sciences II (3) or Math 120 Calculus I (3) is also acceptable.]

I-B-5. IS 215 End-User Computing (3)

II-B-1. *Basic Studies requirement. See inside back cover*

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. *Basic Studies requirement. See inside back cover*

III-B-1. PLSC 112/113 American Government or PLSC 202 State and Local Government (3)

III-B-2. *Basic Studies requirement. See inside back cover*

III-B-3. ECON 201 Principles of Economics I (3)

III-B-4. ECON 202 Principles of Economics II (3)

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*

Logic or ethics is strongly recommended for philosophy or religion requirement.

IV-B-4. *Basic Studies requirement. See inside back cover*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 49

**Students planning to pursue graduate study in business administration are encouraged to select MATH 120 Calculus I and MATH 122 Elementary Linear Algebra.*

Business Core

- ACC 240 Principles of Accounting I (3)
- ACC 241 Principles of Accounting II (3)
- LAW 293 Legal Environment of Business (3)
- MGMT 202 Business Communications (3)
- IS 215 End-user Computing (3)
- DS 265 Business Statistics I (3)

Credit hours in Business Core: 18

Business Administration Core

- (All 200-level core courses must be completed prior to admission to the College of Business)
- FIN 350 Principles of Finance (3)
 - MKTG 360 Principles of Marketing (3)
 - MGMT 386 Organizational Behavior and Theory (3)
 - POM 374 Introduction to Production/Operations Management (3)
 - MGMT 490 Business Policy (3)

(All 300-level core courses listed above must be completed before enrollment in MGMT 490 Business Policy.)

Credit hours in Business Core: 15

Additional Required Courses

Credit hours in Additional Required Courses: 12

Academic Major

- MGMT 384 Human Resource Management (3)
- MGMT 388 Introduction to Entrepreneurship (3)
- MGMT 460 Management Skills (3)
- MGMT 480 Management Responsibility and Ethics (3)

Credit hours in Academic Major: 12

Restricted Electives

Twelve hours of restricted electives must come from at least 3 different departments in the College of Business. At least 6 hours must be at the 300 or 400 level.

Credit hours in Restricted Electives: 12

Electives

Credit hours in Electives: 11-19

Total credit hours required: 124

MANAGEMENT MAJOR

The major in management prepares students for a variety of roles in the business world. Depending on the courses chosen, these roles can include line and staff supervisory positions and human resource assignments. The general requirements for the Bachelor of Business Administration degree include a minimum of 124 semester hours for graduation as stipulated in the catalog.

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *Basic Studies requirement. See inside back cover*

I-B-4. *Either:**

*MATH 118 Mathematical Analysis for Social Sciences I (3)

or

Math 122 Elementary Linear Algebra (3)

and

MATH 105 College Algebra (3)

[Math 119 Mathematical Analysis for Social Sciences II (3) or Math 120 Calculus I (3) is also acceptable.]

I-B-5. IS 215 End-User Computing (3)

II-B-1. *Basic Studies requirement. See inside back cover*

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. *Basic Studies requirement. See inside back cover*

III-B-1. PLSC 112/113 American Government or PLSC 202 State and Local Government (3)

III-B-2. *Basic Studies requirement. See inside back cover*

III-B-3. ECON 201 Principles of Economics I (3)

III-B-4. ECON 202 Principles of Economics II (3)

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*
Logic or ethics is strongly recommended for philosophy or religion requirement.

IV-B-4. *Basic Studies requirement. See inside back cover*
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 42-50

**Students planning to pursue graduate study in business administration are encouraged to select MATH 120 Calculus I and MATH 122 Elementary Linear Algebra.*

Business Core

- ACC 240 Principles of Accounting I (3)
- ACC 241 Principles of Accounting II (3)
- LAW 293 Legal Environment of Business (3)
- MGMT 202 Business Communications (3)
- IS 215 End-User Computing (3)
- DS 265 Business Statistics I (3)

Credit hours in Business Core: 18

Business Administration Core

(All 200-level core courses listed above must be completed prior to admission to the College of Business)

FIN 350 Principles of Finance (3)

MKTG 360 Principles of Marketing (3)

MGMT 386 Organizational Behavior and Theory (3)

POM 374 Introduction to Production/Operations Management (3)

MGMT 490 Business Policy (3)

(All 300-level core courses listed above must be completed before enrollment in MGMT 490 Business Policy.)

Credit hours in Business Core: 15

Academic Major

MGMT 384 Human Resource Management (3)

MGMT 460 Management Skills (3)

MGMT 480 Management Responsibility and Ethics (3)

MGMT 486 Organizational Development (3)

Choose four courses from the following:

MGMT 388 Introduction to Entrepreneurship (3), MGMT 402 Business Report Writing or MGMT 403 Managerial Communication: Theory and Application (3), MGMT 479 Special Topics (3), MGMT 482 Compensation Administration (3), MGMT 483 Staffing Organizations (3), MGMT 484 Management-Union Relations (3), MGMT 485 Human Resource Development (3), MGMT 492 Managing World Business Communication or MGMT 495 International Management (3), MGMT 496 Current Issues in Human Resource Management (3)

Credit hours in Academic Major: 24

Credit hours in Electives: 11-19

Total credit hours required: 124

GENERAL BUSINESS MINOR

(21 HOURS)

(FOR NONBUSINESS MAJORS)

ACC 240 Principles of Accounting I (3)

ACC 241 Principles of Accounting II (3)

LAW 293 Legal Environment of Business (3)

Choose four courses from the following:

FIN 350 Principles of Finance (3), FIN 354 Investments (3)

*IS 215 End-User Computing (3)

LAW 393 Law of Business Enterprises (3)

MGMT 202 Business Communications (3), MGMT 386 Organizational Behavior and Theory (3), MGMT 388 Introduction to Entrepreneurship (3), MGMT 402 Business Report Writing (3), MGMT 403 Managerial

Communication: Theory and Application (3)

MKTG 360 Principles of Marketing (3)

*Satisfies Basic Studies requirement I-B-6.

MANAGEMENT MINOR

(21 HOURS)

(FOR NONBUSINESS MAJORS)

ACC 240 Principles of Accounting I (3)

MKTG 360 Principles of Marketing (3)

MGMT 386 Organizational Behavior and Theory (3)

Choose four courses from the following:

MGMT 202 Business Communications, MGMT 384 Human Resource Management, MGMT 388 Introduction to Entrepreneurship, MGMT 402 Business Report Writing, MGMT 403 Managerial Communication: Theory and Application, MGMT 480 Management Responsibility and Ethics, MGMT 481 Small Business Management, MGMT 482 Compensation Administration, MGMT 483 Staffing Organizations, MGMT 484 Management-Union Relations, MGMT 485 Human Resource Development, MGMT 486 Organizational Development, MGMT 495 International Management, MGMT 496 Current Issues in Human Resource Management

IS 215 End-User Computing, POM 374 Introduction to Production/Operations Management, POM 390 Management Systems

MANAGEMENT COURSES

MGMT 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

MGMT 202 Business Communications. 3 hrs
Study of principles, elements, and practices underlying administrative communication. The thinking and creative processes involved in problem-solving. The psychology, planning, and transmittal of business information.

Prereq: CTAS 121/124 and ENGL 121.

MGMT 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other

departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

MGMT 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

MGMT 384 Human Resource Management. 3 hrs

Industrial relations functions in business organization. Recruitment, selection, placement, training, motivation, and appraisal of personnel; the scientific approach to the solution of practical problems of industrial manpower utilization.

MGMT 386 Organizational Behavior and Theory. 3 hrs

The study of behavioral problems in administration. Individual, group, intergroup, and organizational behavior under dynamic environment conditions.

MGMT 387 Cooperative Education. 3 hrs

Four months of full-time employment at a business or public organization in a management position chosen for imparting a practical experience in management. Use on a management major or minor not permitted. Graded credit/no credit. Admittance by application only.

Prereq: Completion of three hours in management.

MGMT 388 Introduction to Entrepreneurship. 3 hrs

This course emphasizes the role of entrepreneurs in making integrated managerial and growth decisions for an enterprise from the initial start-up through various evolutionary stages of growth.

MGMT 390 Introduction to Strategic Management.

3 hrs

A study of the environment in which managers operate, using cases and exercises. The development of decision making and other analytical skills.

Prereq: MGMT 386 and FIN 350 (FIN 350 may be taken concurrently).

MGMT 402 Business Report Writing. 3 hrs

Study of principles and practices of business report writing required of men and women in business, industry, education, and government. Concepts, their illustrations, and applications. The creative and functional aspects in understanding the problem, gathering, and or-

ganizing data, and presenting reports for management, employees, and the public.

Prereq: MGMT 202.

MGMT 403 Managerial Communication: Theory and Application. 3 hrs

A theoretical framework of key managerial communication concepts; skills used to diagnose communication problems and to communicate corporate policies.

Prereq: MGMT 202, MGMT 386 or department permission.

MGMT 460 Management Skills. 3 hrs

This course will provide students with extensive practice in critical management skills such as group facilitation, project management, supervising employees, and individual career management. Multiple participative techniques will be used such as case study, exercises, group projects, and student presentations.

Prereq: MGMT 384 and MGMT 386.

MGMT 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: MGMT 386 or department permission.

MGMT 480 Management Responsibility and Ethics.

3 hrs

Social, legal, and moral pressures of external and community groups on business operations; management's role of responsibility and leadership in interacting with these forces and reducing and resolving conflicts with them.

Prereq: Senior standing or department permission.

MGMT 481 Small Business Management. 3 hrs

A study of the major concepts and fundamental principles involved in the management of a small business enterprise. The role of the small firm in the national economy; the managerial considerations and problems confronting the entrepreneur in establishing such a venture.

Prereq: Completion of all business junior-level core courses.

MGMT 482 Compensation Administration. 3 hrs

Basic concepts of design and methodology for wage and salary administration in an organization. Fundamental considerations in evaluating jobs and positions. Com-

pensation methods and wage incentive systems.
Prereq: MGMT 384 and MGMT 386 or department permission.

MGMT 483 Staffing Organizations. 3 hrs
 The staffing of organizations; skills needed in human resource planning, recruitment, job analysis, selection techniques, and evaluation.
Prereq: MGMT 384.

MGMT 484 Management-Union Relations. 3 hrs
 Management strategy and techniques for conducting effective management-union relationships and negotiations; contract administration for both industrial and non industrial organizations.
Prereq: MGMT 384 and MGMT 386 or department permission.

MGMT 485 Human Resource Development. 3 hrs
 Determination of training needs; development of training objectives; selection and development of resources for appropriate training experiences; implementation of training program evaluation.
Prereq: MGMT 384 or department permission.

MGMT 486 Organizational Development. 3 hrs
 A practical approach to organizational renewal, or the strategies used to effect change in organizations operating under dynamic conditions, including the role of the change agent.
Prereq: MGMT 386 or department permission.

MGMT 487 Cooperative Education. 3 hrs
 Four months of full-time employment at a business or public organization in a management position chosen for imparting a practical experience in management. Use on a management major or minor not permitted. *Credit / no credit. Admittance by application only.*
Prereq: MGMT 387. Department permission.

MGMT 488 Small Business Management Field Study. 3 hrs
 Detailed study of an actual small business, analyzing the operation and making recommendations. A comprehensive written report is required, with one copy going to the owner of the business. *Credit / no credit.*
Prereq: Department permission.

MGMT 489 Internship. 3 hrs
 Approved on-the-job experience of students in the man-

agement 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 free elective credits only. Graded credit/no credit.
Prereq: Department permission.

MGMT 490 Business Policy. 3 hrs
 Integration and analytical application of fundamental areas of business to case problems. Policy issues in the identification and resolution of problem situations.
Prereq: Senior standing in business administration or department permission (senior standing implies completion of the College of Business core): FIN 350, MKTG 360, MGMT 386, POM 374)

MGMT 492 Managing World Business Communication. 3 hrs
 This course focuses on such issues as global management in a cultural context, breaking down international business barriers, motivation in a global context, management of culture shock, international conflict management, management and cultural synergy, and business communication practice and traditions in specific national settings.
Prereq: MGMT 202 or department permission.

MGMT 495 International Management. 3 hrs
 Comparisons of management concepts, processes, and practices in various countries with their different educational, sociological, legal-political, and cultural constraints. The evolution of management and the transfer of managerial philosophy and practices to other countries.
Prereq: MGMT 386 and senior standing or department permission.

MGMT 496 Current Issues in Human Resource Management. 3 hrs
 A practical application of personnel management techniques to actual current business issues; specially designed workshop-type sessions for prospective managers, supervisors, and personnel specialists.
Prereq: MGMT 384 and 3 hours of HRM courses.

MGMT 497/498/499 Independent Study. 1/2/3 hrs
 Directed study of a problem in management not otherwise treated in department courses.
Prereq: Senior standing and department permission.

MARKETING

H. Robert Dodge
Department Head
 469 Gary M. Owen Building
 487-3323

Professors: Joseph L. Braden, H. Robert Dodge, Sam D. Fullerton, Hugh B. McSurely, G. Russell Merz, Colin F. Neuhaus, Roger A. Peterson, Matthew H. Sauber, Gary M. Victor

Associate Professors: Albert W. Belskus, Sandra J. Defebaugh, Harash Sachdev, Patricia B. Weber

Assistant Professors: Daryl L. Barton, Elizabeth A. Edwards, Judy Foster-Davis, Harash Sachdev, Tammy M. Pappas, 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
 Distribution
 International business
 Marketing management
 Purchasing and materials management
 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 (MBA) degree. The MBA degree program and courses are described in the Graduate Catalog.

ACADEMIC MAJOR

MARKETING MAJOR

The marketing major offers career concentrations in advertising and sales promotion, international business, marketing research, purchasing and materials management, retailing and sales, and sales management. Students are encouraged to complete one of the specified concentrations, or they may elect any nine-hour combination of marketing electives.

To be completed are the general requirements for the Bachelor of Business Administration degree, the academic major requirements below, and sufficient electives to meet the minimum of 124 semester hours for graduation.

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. *Basic Studies requirement. See inside back cover*

I-B-3. *Basic Studies requirement. See inside back cover*

I-B-4. *Either:**

*MATH 118 Mathematical Analysis for Social Sciences I (3)

or

Math 122 Elementary Linear Algebra (3)

and

MATH 105 College Algebra (3)

[Math 119 Mathematical Analysis for Social Sciences II (3) or Math 120 Calculus I (3) is also acceptable.]

I-B-5. IS 215 End-User Computing (3)

II-B-1. *Basic Studies requirement. See inside back cover*

II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. *Basic Studies requirement. See inside back cover*

III-B-1. PLSC 112/113 American Government or PLSC 202 State and Local Government (3)

III-B-2. *Basic Studies requirement. See inside back cover*

III-B-3. ECON 201 Principles of Economics I (3)

III-B-4. ECON 202 Principles of Economics II (3)

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. *Basic Studies requirement. See inside back cover*

IV-B-3. *Basic Studies requirement. See inside back cover*

Logic or ethics is strongly recommended for philosophy or religion requirement.

IV-B-4 *Basic Studies requirement. See inside back cover*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 49-50

Business Core

ACC 240 Principles of Accounting I (3)

ACC 241 Principles of Accounting II (3)

LAW 293 Legal Environment of Business (3)

MGMT 202 Business Communications (3)

IS 215 End-user Computing (3)

DS 265 Business Statistics I (3)

Credit hours in Business Core:..... 18

Business Administration Core

(All 200-level core courses must be completed prior to admission to the College of Business)

FIN 350 Principles of Finance (3)

MKTG 360 Principles of Marketing (3)

MGMT 386 Organizational Behavior and Theory (3)

POM 374 Introduction to Production/Operations Management (3)

MGMT 490 Business Policy (3)

(All 300-level core courses listed above must be completed before enrollment in MGMT 490 Business Policy.)

Credit hours in Business Core: 15

Academic Major

MKTG 261 Contemporary Selling (3)

MKTG 365 Buyer Behavior (3)

MKTG 368 Marketing Strategy (3)

MKTG 470 Marketing Research (3)

MKTG 475 Marketing Planning and Management (3)

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.

MKTG 369 Advertising (3)

MKTG 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.

MKTG 375 International Business Transactions (3)

MKTG 460 International Marketing (3)

Any additional marketing elective (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.

MKTG 364 Logistics and Materials Management (3)

MKTG 374 Business to Business Marketing (3)

MKTG 464 Purchasing Management (3)

The **distribution concentration** prepares students for careers as retail buyers, merchandising managers, and store managers. Course work covers subjects such as retailing as an institution, site selection, product assortment, merchandising, retail

advertising, and inventory control.

MKTG 363 Retailing (3)

MKTG 369 Advertising (3)

MGMT 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.

MKTG 374 Business to Business Marketing (3)

MKTG 461 Sales Management (3)

Any additional marketing elective (3)

The **marketing management concentration** prepares students for positions in marketing administration such as product or brand management, customer satisfaction, and market manager.

Any three marketing electives (9)

Credit hours in Academic Major: 24

Credit hours in Electives: 11-19

Total credit hours required: 124

ACADEMIC MINORS

MARKETING MINOR

(FOR NONBUSINESS MAJORS)

Students who are not majors in the College of Business may elect to minor in marketing.

ACC 240 Principles of Accounting I (3)

MKTG 360 Principles of Marketing (3)

MGMT 386 Organizational Behavior and Theory (3)

Choose 12 credits from marketing courses (12)

MARKETING COURSES

MKTG 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Departmental permission.

MKTG 261 Contemporary Selling. 3 hrs

The basic principles of personal selling applicable to any product and/or service; professional attitudes and performance.

MKTG 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Departmental permission.

MKTG 287 Cooperative Education. 3 hrs

Four months of full-time employment at a business or public organization in a marketing position. General elective credit only. *Credit / no credit.*

Prereq: Department permission.

MKTG 360 Principles of Marketing. 3 hrs

Marketplace exchanges; the relationship between marketing activities of the organization and the consumer.

MKTG 363 Retailing. 3 hrs

The practices of retail store management. Store location, layout, organization, buying systems, sales promotion activities, customer services, and store operating expenses.

Prereq: MKTG 360.

MKTG 364 Logistics and Materials Management. 3 hrs

Concepts and systems designed to facilitate and control the movement of materials and parts through the procurement, production, and distribution processes until they reach the final user. Transportation, inventory control, materials handling, warehousing, customer service, order processing, planning, and control.

Prereq: MKTG 360.

MKTG 365 Buyer Behavior. 3 hrs

Concepts and research related to consumer and industrial buyer behavior. Sociological and psychological aspects of consumer and industrial buyer behavior, product adoption and diffusion, and purchasing decision-making.

Prereq: MKTG 360 and PSY 101.

MKTG 368 Marketing Strategy. 3 hrs

Advanced policies and practices in marketing. Case analysis of marketing problems pertinent to product, price, promotion, and channels of distribution policies.

Prereq: MKTG 360 and ACC 240.

MKTG 369 Advertising. 3 hrs

Advertising as a communications tool in marketing management. The role of advertising in the marketing mix; advertising and the process of communication; influence of buyer behavior on the character of promotional efforts; planning creative strategy; effective execution of promotional programs; measuring the results of promotional efforts.

Prereq: MKTG 360.

MKTG 374 Business to Business Marketing. 3 hrs

Concepts, procedures, and problems encountered when one business markets its products or services to another company. Emphasizes the marketing practices employed by industrial organizations. Topics include market analysis, organizational buying behavior, purchasing procedures, pricing and negotiation, selling, and marketing planning.

Prereq: MKTG 360.

MKTG 375 International Business Transactions. 3 hrs

How goods and services are moved internationally. Transportation concepts and systems, the shipping scene, various documents needed to expedite the international movement of goods.

Prereq: MKTG 360.

MKTG 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Departmental permission.

MKTG 387 Cooperative Education. 3 hrs

Four months of full-time employment at a business or public organization in a marketing position. General elective credit only. *Credit / no credit.*

Prereq: Three hours of marketing. Department permission.

MKTG 460 International Marketing. 3 hrs

International marketing and its role in the multinational corporation. Appraising international market opportunities; product, price, promotion, and distribution policies; foreign marketing environments.

Prereq: MKTG 360.

MKTG 461 Sales Management. 3 hrs

Planning, organizing, directing, and controlling the sales force. Recruiting, selecting, training, evaluating, compensating, and supervising.

Prereq: MKTG 261 and MKTG 360.

MKTG 464 Purchasing Management. 3 hrs

Planning, organizing, directing, and controlling the purchasing function. Purchasing systems, forms, and procedures; selecting sources of supply; inventory control; transportation; legal aspects of purchasing; purchasing research, planning, and budgeting.

Prereq: MKTG 360 and FIN 350.

MKTG 470 Marketing Research. 3 hrs

Skills and attitudes required to specify and utilize market and buyer information in defining marketing problems and making marketing decisions. Applied marketing research problems.

Prereq: MKTG 360 and DS 265.

MKTG 473 Marketing and Product Innovation. 3 hrs

Marketing and product successes and failures, environmental influences, market/product plans, and the new product planning process. Development of a project starting with product idea and continuing through offering a new product/service.

Prereq: MKTG 360.

MKTG 474 Promotional Strategy. 3 hrs

Problems of advertising and promotion including appropriate use of research in advertising decision-making. Development of advertising campaigns, determining advertising effectiveness, client-agency relationships and societal impact of advertising.

Prereq: MKTG 369.

MKTG 475 Marketing Planning and Management.

3 hrs

Integration of concepts from previous marketing courses and planning the marketing program.

Prereq: MKTG 368 and marketing major with senior standing or department permission.

MKTG 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

MKTG 487 Cooperative Education. 3 hrs

Four months of full-time employment at a business or public organization in a marketing position. General elective credit only. *Credit / no credit.*

Prereq: MKTG 387. Department permission.

MKTG 489 Internship. 3 hrs

Approved marketing projects with business or nonprofit organizations.

Prereq: Marketing major and department permission.

MKTG 497/498/499 Independent Study. 1/2/3 hrs

Directed study of a specific problem area under the direction of a faculty member.

Prereq: Senior standing and department permission.

LAW COURSES**LAW 177/178/179 Special Topics. 1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Departmental permission.

LAW 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Departmental permission.

LAW 293 Legal Environment of Business. 3 hrs

The judicial system and legal procedure, crimes and torts, contractual arrangements, sales of goods, and other transactions under the Uniform Commercial Code.

LAW 295 Legal Research. 3 hrs

The performance of research on several actual legal problems.

Prereq: LAW 293.

LAW 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Departmental permission.

LAW 393 Law of Business Enterprises. 3 hrs

The law of forms of business enterprise and negotiable instruments. Agency, partnerships, corporations, and negotiable instruments.

Prereq: LAW 293 or department permission.

LAW 403 Employment Law. 3 hrs

The legal framework within which business (or public) managers must make employment and labor relations decisions; includes laws relative to labor relations, discrimination, affirmative action, occupational health and safety, wage-hour, wrongful discharge, workers compensation, etc.

Prereq: LAW 293.

LAW 435 Law and Marketing. 3 hrs

The influence of law on decision-making in marketing; antitrust and consumer protection issues.

Prereq: LAW 293.

LAW 455 Real Estate Law. 3 hrs

Legal principles involved in real estate. Evidence of title, deeds, financing, legal position of brokers, leases, zoning, real estate taxes.

Prereq: LAW 293 or RES 210.

LAW 479 Special Topics. 3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: LAW 293. Department permission.

LAW 499 Independent Study. 3 hrs

Directed study of a problem in business law not otherwise treated in department courses.

Prereq: Senior standing and department permission.

COLLEGE OF EDUCATION

JERRY H. ROBBINS, DEAN
ROBBIE A. JOHNSON, ASSOCIATE DEAN
MARTHA TACK, INTERIM ASSOCIATE DEAN
117 BOONE HALL
487-1414

DEPARTMENTS

HEALTH, PHYSICAL EDUCATION, RECREATION, AND DANCE
LEADERSHIP AND COUNSELING
SPECIAL EDUCATION
TEACHER EDUCATION

THE PROFESSIONAL EDUCATION PROGRAMS OF EASTERN MICHIGAN UNIVERSITY

APPLICABILITY

The curricula and academic policies contained in this portion of the catalog are applicable to students who were admitted to the professional education program for the initial preparation of teachers (the teacher education program) on or after the effective date of this catalog.

Persons admitted to the teacher education program under the provisions of an earlier catalog may continue to follow the curriculum and academic policies of the earlier catalog, except in such cases as a state-imposed policy (e.g., testing), expiration of a time limit, courses/programs no longer being offered, etc. However, students falling under the provisions of an earlier catalog are encouraged to change to and to follow the provisions of this catalog or its successors.

AUTHORITY

The curricula and academic policies contained in this catalog have been established under the EMU procedures for faculty input and administrative action. Extensive effort has been made to insure that the curricula and academic policies contained herein are in conformity with requirements of the National Council for the Accreditation of Teacher Education, the state of Michigan, the Michigan Department of Education, the Board of Regents of Eastern Michigan University, policies and processes of Eastern Michigan University, and, in a number of instances, discipline-based accrediting bodies and professional associations.

It is not necessarily the case that other EMU materials (e.g., older catalogs, departmental/program hand-out materials) are in conformity with the curricula and academic policies described in the previous paragraph. Therefore students subject to the provisions of this catalog must consider this portion of the catalog as the authoritative source of information.

AMENDMENT

As this document is used, technical errors may be found and corrected. It is possible that substantive changes may be made and implemented before the next editions of either or both the Undergraduate Catalog or Graduate Catalog are issued.

The University reserves the right to change fees, courses, policies, programs, services, and personnel as required. The official, amended edition of the curriculum and academic policy portions of this catalog is main-

tained in the Office of the Dean of the College of Education. An informational copy, accessible to students, faculty, and staff, is maintained in the College of Education, Office of Academic Services.

TRANSFER STUDENTS

Many of the curricular and academic policy provisions of this catalog are stated as though the student took all work at Eastern Michigan University. It is recognized that many students have course work from other institutions. Inquiries about the possible application of some or all work from other institutions to an undergraduate program of study at Eastern Michigan University should be directed to the Office of Records and Registration, where they will be addressed in conformity with EMU policies on transfer work. Inquiries about the possible application of some or all work from other institutions to a graduate program of study at EMU should be directed to the graduate coordinator in the department in which the program is housed.

POST BACCALAUREATE STUDENTS

Except where otherwise noted, students who hold a baccalaureate (or higher) degree prior to the beginning of pedagogical studies or prior to admission to the teacher education program are expected to complete all requirements for the desired teaching speciality as outlined in this catalog. These requirements include (but are not limited to) those related to the teachable major and teachable minor, grade point average, admission to the teacher education program, the appropriate pedagogical sequence, and required state tests.

A useful first step for persons who fall into this category is to consult with personnel of the Records and Registration Office regarding which courses already part of the person's academic record are applicable to the desired teaching speciality.

EXCEPTIONS

By policy of the College of Education Council, covering matters related to all professional education programs and, in addition, all other programs offered by the College of Education, requests for exceptions to academic policy (e.g., admission, retention, exit requirements) and for exceptions to curricular requirements are to be processed through administrative channels.

In particular, a request for an exception should be discussed with the academic adviser, reviewed and ap-

proved by the appropriate department head, and reviewed and approved by the Dean of the College of Education (or his designee). From there, depending on the nature of the request for exception, it may be reviewed as necessary by other administrators, and, if approved at all levels, transmitted to the appropriate office for use at the time of graduation audit and/or request for recommendation for certification.

In general, there are few appropriate opportunities for exceptions to be made. Each component of a program is carefully designed to accomplish some particular purpose. Where options are available, they are identified in this document. Where options are not available, it is generally because requirements (local or external) do not permit other approaches.

INTERPRETATION

Any student, staff member, faculty member, or administrator may request an official interpretation of the provisions of this portion of the catalog. Such a request must be made, in writing, to the Dean of the College of Education. The Dean will advise the requester of the source of the policy or curriculum requirement in question. If the source is an authority other than EMU governance structure for professional education (e.g., Michigan Department of Education), the requester will be advised from whom the interpretation should be sought. If the source is the EMU governance structure for professional education, the Dean, in consultation with appropriate parties, will obtain and provide the requested interpretation.

RELATIONSHIP OF THIS DOCUMENT TO OTHER MODES OF WRITTEN AND ORAL ADVICE

Students to whom the provisions of this catalog are applicable (see above) must understand that, in the event of inconsistency between (a) oral advice (e.g., conversation with a faculty or staff member) or informal written advice (e.g., an advising form, a brochure, a letter) and (b) the provisions of this catalog, the provisions of this catalog are the ones that govern the situation.

Given the size and complexities of the professional preparation programs of Eastern Michigan University, the complicated interactions between university programming and external authorities, the rapid change that is occurring to keep EMU professional education programming on "the cutting edge," and other such factors, it is virtually impossible for any single faculty or staff member to be completely and fully informed on every matter that might be raised.

Faculty and staff members make every effort to be helpful to students and departmental/program materials are intended to inform. Even so, none of these sources is infallible, especially in complicated situations.

Thus there is the need for a single, authoritative source of information about professional education curricula and academic policy on which the entire EMU community can draw and in which all can have confidence. This portion of the catalog is intended to serve that purpose.

THE GOVERNANCE OF PROFESSIONAL EDUCATION

As a member of The Renaissance Group, Eastern Michigan University is committed to the principle that teacher preparation is a campus-wide responsibility. Many EMU organizational entities are involved with services to prospective teachers (and other professional personnel) and teacher (and other professional personnel) preparation program delivery. Several established faculty bodies are charged with roles involving curriculum and academic policy issues.

Committee on Basic Programs

The Committee on Basic Programs (CBP) is charged, under its governing document, with the coordination of initial teacher preparation. The CBP is composed of elected faculty members from three academic colleges, each representing one or more program areas in which the institution prepares beginning teachers; students; and major administrators of the teacher education program. The determinations of the CBP are made as recommendations to the Education Council.

College of Education Council

The College of Education Council (COE Council) is composed of elected members of the faculty of the College of Education. CBP recommendations are forwarded to the COE Council for its review. Positive recommendations are forwarded through the dean of the College of Education to the Office of the Provost/Vice President for Academic Affairs for further review and approval.

All matters related to the advanced preparation of teachers and related to the preparation of all other types of educational personnel (e.g., principals, counselors) are processed through the Committee on Advanced Programs and the COE Council determinations are forwarded through the dean of the College of Education to the Office of the Provost/Vice President for Academic Affairs.

Central Institutional Structures

An item approved by the College of Education Council and also approved by the dean of the College of Education is transmitted to the Office of the Provost and Vice President for Academic Affairs. From there, the routing to obtain closure on the item, depending on the nature of the item, might be to one or more of several different entities, including the Faculty Council, the Graduate School, the Board of Regents, etc. The policies, procedures, minutes, etc. of these various structures are available through the executive officer of the body or the relevant Eastern Michigan University administrator.

GENERAL INFORMATION APPLICABLE TO ALL PROSPECTIVE TEACHERS

Eastern Michigan University is authorized and approved by the Michigan Department of Education and accredited by the National Council for Accreditation of Teacher Education to prepare the following types of teachers. Successful completion of the appropriate program of studies leads to a recommendation for the Michigan provisional certificate.

Elementary

Several approaches for establishing eligibility for recommendation for certification as an elementary teacher are offered. One approach includes the coursework necessary for eligibility for the additional early childhood education endorsement. See for the curricula in both elementary and early childhood education.

Secondary and K-12

Programming is offered to establish eligibility for recommendation for certification as a secondary teacher in the following fields: biology, business education, chemistry, computer science, earth science, economics, English, French, general science, geography, German, history, industrial-vocational education, marketing education, mathematics, physics, political science, psychology, social science, sociology, Spanish, and speech. See the curricula for these secondary programs.

Programming is offered to establish eligibility for recommendation for certification as a K-12 teacher in the following fields: art, industrial arts, Japanese language and culture, music, and physical education. See the curricula for these K-12 programs.

Special Education

In general, one must complete requirements for becoming an elementary or secondary teacher prior to or simultaneously with completing additional requirements for becoming a special education teacher. At the baccalaureate level, EMU prepares special education teachers in the areas of emotionally impaired, hearing impaired, mentally impaired, physically and otherwise health impaired, and visually impaired. The speech and language impaired program is a five-year course of study that culminates in a master's degree. The learning disabilities program is a graduate-level program only. See the curricula for these special education programs.

Endorsements

One may become eligible to become endorsed in a second (or third or fourth) teaching field. In addition to the teaching fields given above, coursework leading to eligibility for recommendation for a certification endorsement is available in such fields as astronomy, bilingual Spanish, health, vocational business education, and vocational home economics.

Employment Opportunities

The demand for certain kinds of teachers is much greater, both in Michigan and nationally, than it is for other kinds of teachers. In addition, it is sometimes difficult to place student teachers in certain teaching fields. Accordingly, prospective teachers are urged to consult with an adviser at an early point so as to optimize ultimate employment opportunities through careful selection of a course of study.

ADMISSION TO AND RETENTION IN THE TEACHER EDUCATION PROGRAM

In order to pursue the sequence of courses necessary to complete eligibility for recommendation for certification, one must apply for and be admitted to the teacher education program. Admission requirements are common for all teacher education programs.

Application for admission to the teacher education program should occur immediately after the semester in which the student has earned 56 semester hours of credit. Transfer students with more than 56 semester hours should apply immediately after the semester in which they have earned 12 semester hours at EMU.

Admission to the teacher education program is not automatic. Only those persons who have formally applied are considered for admission. Not all persons who apply become eligible for admission.

Application forms and additional information are available in the College of Education Office of Academic Services, 101 Boone Hall.

Criteria

Criteria for admission to and continuance in the teacher education program are:

1. A minimum EMU overall grade point average of at least 2.50 and at least 2.50 in the major (secondary and where applicable, elementary) or three minors (elementary). As an alternative to the overall 2.50 GPA requirement, an applicant may substitute either of the following:
 - a. Complete 24 credit hours of approved undergraduate work in Michigan-approved substantive fields at Eastern Michigan University and earn a GPA of 2.50 or better. At least one half of the credits must be in the student's major or minor(s) which he/she expects to teach. Students may not enroll in courses for which admission to the teacher education program is a prerequisite before the 24 hours are completed. Courses to be included in the 24 hours must either: (i) be taken after submission of the application for entrance to the teacher education program or (ii) be completed no earlier than 12 months prior to the approval for admission.
 - b. Complete a master's degree in a Michigan substantive field he/she expects to teach. Students may not enroll in courses for which admission to the teacher education program is a prerequisite before the master's degree is completed.
2. Demonstrated competence in:
 - a. speaking effectiveness as determined by successful completion of the required course(s) in speech;
 - b. reading ability as determined by EMU admission policies, successful completion of basic studies requirements; and successful completion of the state-mandated basic skills test.
 - c. written expression as determined by successful completion of all basic studies requirements, a review of an autobiography submitted as a part of the teacher education program admission process; and successful completion of the state-mandated basic skills test.
 - d. mathematical computation as determined by EMU admissions policies, completion of basic studies requirements in science and mathematics with a C or better, and successful completion of the state-mandated basic skills test.

3. Satisfactory health status, including tuberculosis and speech and hearing screenings.
4. Social and emotional adjustment: account is taken of standards of conduct expected on Eastern's campus; the degree to which students meet their academic, financial, moral, social, and other obligations; and the practice of good citizenship among fellow students.
5. Freedom from any kind of probation—administrative or academic. While on academic probation, students may not register for, remain in, or receive credit for a professional education course. This includes all methods classes taught in departments outside of the College of Education.

Undergraduate students on academic probation may not earn credit for any graduate level on-campus or off-campus courses (500 level and above).

PRESTUDENT TEACHING FIELD EXPERIENCES

Robbie A. Johnson
Director

The prestudent 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 prestudent teaching field experiences are required of all candidates for a recommendation for a teaching certificate. See the program descriptions for the exact requirement in each program. At least 50 percent of the experience must be in a classroom situation with the age group and (in the case of secondary/K-12) in the subject matter area the student plans to teach. By the end of the prestudent 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 prestudent teaching experience early in their college career. Students should identify a prestudent 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 College of Education Office of Academic Services. All prestudent teaching requires the completion of a course pack.

Majors in special education should consult their advisers or the prestudent teaching director concerning overlapping preclinical requirements.

STUDENT TEACHING

Robbie A. Johnson
Director

Applicability

All candidates for recommendation for certification as a teacher are required to fulfill a student teaching requirement in the area of their academic preparation and at the level for which certification is being sought.

Students desiring certification in the **elementary, secondary, and K-12** programs are required to complete successfully twelve semester hours of student teaching.

Students in **special education** areas (emotionally impaired, hearing impaired, mentally impaired, physically or otherwise health impaired, visually impaired) are required to fulfill six semester hours of student teaching with nonimpaired 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 8 semester hours of student teaching with English-speaking children and an additional 4 semester hours of student teaching in bilingual education.

Application Deadlines

Applications for student teaching may be obtained from the College of Education Office of Academic Services, 101 Boone Hall, and should be completed and re-

turned to that 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 prestudent teaching field experience.
2. Demonstrate minimum levels of skills in reading, written English, and mathematics as defined and measured by the state-mandated basic skills test.
3. Demonstrate competence in the teaching field(s) through a satisfactory score on state-mandated subject area test(s), if required by the state.
4. Provide written recommendations from course instructors and field supervisors demonstrating a minimum level of skill in working with students. These become a part of the student teacher's file.
5. Have a positive recommendation from the designated representative of the department in which the major is located.
6. Register in the appropriate student teaching course (see course descriptions).
7. Be a first semester senior with the majority of major courses completed.
8. Carry a class load of no more than 15 hours. To be considered for more than 15 semester hours, the student must have a 3.0 cumulative GPA.
9. Complete one semester of resident study at EMU prior to student teaching. Exceptions are subject to approval by the dean of the College of Education or the Dean's designee.

The following prerequisites are to be completed

prior to student teaching and cannot be taken concurrently:

1. CURR 304 Curriculum and Methods: Elementary (Elementary) or CURR 305 Curriculum and Methods: Secondary (Secondary and K-12)
2. EDPS 322 Human Development and Learning (all except Special Education) or EDPS 325 Life Span Human Growth and Development (Special Education)
3. SOFD 328 Schools in a Multicultural Society
4. Secondary and K-12: the appropriate special methods course in the major or minor field.
5. Elementary: RDNG 314 Teaching Reading in the Elementary School and MATH 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 combined 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 College of Education Office of Academic Services. Placement could be delayed a full semester in these cases.

A preferred student teaching placement will be accommodated by the College of Education Office of Academic Services if possible.

In requesting placement in a particular school district, the student is advised to avoid the following: districts in which a parent or other relative is employed by the district board of education; districts in which the student has a record of significant prior involvement; and districts that are outside of the list of the student teaching agreements.

The director of student teaching must approve all placements outside the list of Eastern Michigan University cooperating districts. A request for a guest student teaching must be approved by the Office of Records and Teacher Certification and the director of student teaching and must be at an NCATE (National Council for Accreditation of Teacher Education) accredited institution. Guest status at another university requires a 3.0 Eastern Michigan GPA.

Students enrolled at another institution in Michigan or in another state, who wish to do their student teaching through Eastern Michigan University, are advised to consult the director of student teaching on their campus prior to submitting the request to this University. Students granted guest student status for student teaching are expected to have fulfilled all prerequisites required for student teaching at the home institution.

Spring student teaching is available only under very specialized circumstances involving special education teachers.

When students are doing student teaching, they should arrange their daily schedule so that teaching will take precedence over other interests and duties.

Students requesting placements beyond a 40-mile radius from Eastern Michigan may be assessed a mileage fee.

Courses

All student teaching courses (EDUC 490 through EDUC 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 EDPS 322 or EDPS 325, RDNG 314, CURR 304, SOFD 328, and MATH 381 (or appropriate substitutions).

Secondary—Completion of EDPS 322, CURR 305, SOFD 328, and completion of the special methods course in the major or minor (or appropriate substitutions).

COLLEGE OF EDUCATION COURSES

EDUC 490 Student Teaching.	8 hrs
EDUC 491 Student Teaching.	10 hrs
EDUC 492 Student Teaching.	12 hrs
EDUC 493 Student Teaching.	2 hrs
<i>For experienced, certified teachers.</i>	
<i>Prereq: Permission from College of Education Office of Academic Services .</i>	
EDUC 494 Student Teaching.	3 hrs
<i>For experienced, certified teachers.</i>	
<i>Prereq: Permission from College of Education Office of Academic Services.</i>	
EDUC 495 Student Teaching.	4 hrs
<i>Prereq: Permission from College of Education Office of Academic Services.</i>	
EDUC 496 Student Teaching.	6 hrs
<i>Prereq: Permission from College of Education Office of Academic Services.</i>	
EDUC 497 Student Teaching.	6 hrs
<i>Prereq: Credit toward certification in either EDUC 496 or EDUC 499.</i>	
EDUC 498 Student Teaching.	5 hrs
<i>Prereq: Credit toward certification in either EDUC 496 or EDUC 499.</i>	
EDUC 499 Student Teaching.	6 hrs
<i>Prereq: Permission from College of Education of Academic Services.</i>	

ELEMENTARY AND EARLY CHILDHOOD

The curricula for the elementary education programs (including early childhood with the selection of the appropriate minor) consist of (1) an appropriately selected group of courses in Basic Studies, (2) an appropriately chosen major and minor (or three minors), and (3) a required group of professional education courses. If these minors are selected, the three minors must include at least one of (a) Elementary Science Group, (b) Social Studies Group, (c) Language Arts Group, or (d) Mathematics for the Elementary Teaching Certificate. See page 436 for requirements having

to do with admission to, retention in, and exit from the teacher education program. Satisfactory completion of these courses and requirements will satisfy requirements for a baccalaureate degree and for eligibility for recommendation for the State of Michigan Provisional Elementary Certificate.

Ordinarily, the degree earned is the Bachelor of Science. The Bachelor of Arts degree requires completion of 75 hours in the liberal arts and one year of college credit in foreign language. In any event, the student must complete a minimum of 124-128 appropriate semester hours to satisfy graduation requirements.

The State Elementary Provisional Certificate is valid for teaching all subjects kindergarten through grade 5, for teaching in self-contained classrooms in grades 6-8, and for teaching in one's major or minor areas of concentration in grades 6-8. The certification test for elementary education is #83, "Elementary Education."

APPROVED MAJORS FOR THE
ELEMENTARY PROGRAM

Elementary Science Group	p. 440
Language Arts Group (see adviser)	
Mathematics for the Elementary Teaching Certificate ...	p. 246
Social Science Group Major for Elementary Education ..	p. 441

APPROVED MINORS FOR THE
ELEMENTARY PROGRAM AND THE
SPECIAL EDUCATION-ELEMENTARY
PROGRAMS

Art	p. 81
Arts Group (not available with art major or with music major)	p. 441
Bilingual-Bicultural Education Spanish-English	p. 184
Communication Minor for Elementary and Special Education Students	p. 125
Drama/Theatre for the Young	p. 125
Early Childhood Education	p. 442
Elementary Music Education	p. 442
Elementary Science Group	p. 442
English and American Language and Literature	p. 161
French Language	p. 184
German Language	p. 184
Health	p. 394
Language Arts Group (see adviser)	
Mathematics for the Elementary Teaching Certificate ...	p. 247
Physical Education for Special Education	p. 394

Social Science Group (Elementary)	p. 443
Spanish Language	p. 185
Technology Education	p. 510

CURRICULA FOR SECONDARY (JUNIOR-SENIOR HIGH SCHOOL) AND K-12 TEACHERS

The curricula for the secondary/K-12 teacher education programs consist of (1) an appropriately selected group of courses in Basic Studies, (2) an appropriately chosen major and (except where noted below) minor, (3) and a required group of professional education courses. See page 358 for requirements having to do with admission to, retention in, and exit from the teacher education program. Satisfactory completion of these courses and requirements will satisfy requirements for a baccalaureate degree and for eligibility for recommendation for the State of Michigan Provisional Secondary Certificate. The student must complete a minimum of 124-128 appropriate semester hours to satisfy graduation requirements.

Ordinarily, the degree earned is the Bachelor of Science; however, the Bachelor of Arts degree may be obtained by completion of 75 hours in the liberal arts and one year of college credit in foreign language.

The teaching majors offered by Eastern Michigan University consist of:

Secondary Programs

Biology	p. 93
Business Services and Technology Education	p. 504
Chemistry	p. 110
Communication	p. 123
Computer Science	p. 139
Earth Science	p. 210
Economics	p. 147
English and American Language and Literature ..	p. 160
French	p. 180
General Science—Biology	p. 272
General Science—Chemistry	p. 273
General Science—Earth Science	p. 274
General Science—Mathematics	p. 275
General Science—Physics	p. 276
Geography	p. 208
German	p. 181
History	p. 228
Industrial-Vocational Education	p. 507
Marketing Education	p. 505
Mathematics	p. 245
Physics	p. 277
Political Science	p. 291

Psychology	p. 299
Social Science	p. 229
Sociology	p. 307
Spanish	p. 183
Vocational Business	p. 507
Vocational Marketing Education	p. 505

K-12 Programs

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Japanese Language and Culture	p. 182
Music (Instrumental)	p. 257
Music (Vocal)	p. 258
Physical Education	p. 387
Technology	p. 508

APPROVED MINORS FOR SECONDARY, K-12, AND SPECIAL EDUCATION-SECONDARY PROGRAMS

Art	p. 81
Astronomy	p. 278
Bilingual-Bicultural Education Spanish-English	p. 184
Biology	p. 95
Chemistry	p. 111
Comprehensive Minor in Communication and Theatre Arts ..	p. 122
Computer Science	p. 140
Earth Science	p. 210
Economics	p. 148
English Language and Literature	p. 161
French Language	p. 443
General Science (available only to majors in one of the sciences)	p. 279
Geography	p. 210
Geology	p. 211
German Language	p. 184
Group Minor in Social Science (not available with the social science major)	p. 443
Health	p. 394
History	p. 230
Mathematics	p. 246
Occupational Foods (available only to Business Education and Technology Education majors)	p. 475
Physical Education	p. 394
Physical Education for Special Education Majors (available only to special education majors). ..	p. 394
Physics	p. 279
Political Science	p. 292
Psychology	p. 300
Sociology	p. 308
Spanish Language	p. 185

SPECIAL EDUCATION PROGRAMS

ADMISSION

Admission requirements to the University, the teacher education program, and the department of Special Education must be met by students intending to major in the programs listed below. However, students may indicate their intention to major in special education upon entrance to the University. Formal application for admission to any of the special education programs of study will be considered only when supported by a letter of recommendation from a faculty member in the department of Special Education and following acceptance into the teacher education program. Program area faculty will determine admission.

ADMISSION AND CONTINUANCE CRITERIA (FOR ALL PROGRAMS EXCEPT SPEECH AND LANGUAGE IMPAIRED)

1. Completion of 56 semester hours of college credit and with an EMU grade point average of 2.50 or better.
2. Completion of SPGN 251 Education of Exceptional Children and the introductory course in the major area of study with a grade of "C" or better. These introductory courses are:
 - a. Emotionally impaired: SPEI 301 Emotionally Impaired Children and Adolescents.
 - b. Hearing impaired: (see statement under Hearing Impaired).
 - c. Mentally impaired: SPMI 360 Introduction to Mental Retardation.
 - d. Physically and otherwise health impaired: SPPI 310 Developmental Sciences for Teachers of the Physically and Health Impaired.
 - e. Visually impaired: Demonstrate proficiency in typing.
3. Successful completion of the state-mandated basic skills test.
4. Submission of a formal application for admission to the department of Special Education supported by a letter of recommendation from a faculty member in the Department of Special Education.

Criteria for continuance in a program of study in the department of Special Education is dependent upon:

1. Maintenance of a 2.50 cumulative grade point average.
2. Maintenance of a 2.50 cumulative grade point average in major courses in program of study.

3. Completion of all courses in the major with a grade of "C" or better. Students will be required to retake any major course in which they earn a grade below "C." A major course may be repeated only once.
4. Demonstration of performance that indicates reasonable aptitude, maturity, stability, skill, and understanding necessary for success in the professional field of special education.

The continuance or termination decision will be made by the faculty in the program area. Students may request a meeting with the faculty of a program area to apprise 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.

SPEECH AND LANGUAGE IMPAIRED ADMISSION AND CONTINUANCE CRITERIA

The following criteria must be met before admission to the undergraduate program is granted:

1. Must complete 35-45 credit hours with a minimum GPA of 2.75.
2. Must have taken the Basic Skills Test, which assesses math, reading comprehension, grammar, and writing skills. Must achieve or surpass the score established by the College of Education.
3. Must pass a speech and hearing screening.
4. Must meet application submission deadlines:

Fall semester	February 15
Winter semester	October 15

When the number of applicants exceeds program capacity, a specific formula will be applied to make selections. Preference will be given on the basis of GPA, previous enrollment at EMU, membership in a protected minority group, and membership in the underrepresented gender.

To be allowed to continue in the speech-language pathology program, the student must meet the following:

1. Maintenance of a cumulative overall GPA of 2.75 or better.
2. Maintenance of a cumulative major GPA of 3.0 or better.
3. Completion of all major academic courses with a grade of "C" or better. Courses in which a grade of "C-" or lower is achieved must be repeated and may be repeated only once. A student must retake the course

in which the lowest grade was received. No more than two courses may be repeated. Students will not be able to enroll in courses at the management level or beyond until this requirement is met. Students must remain in their planned tracks if they are required to repeat. This implies ineligibility to take advanced SPSI courses for 1 or 2 terms.

4. Completion of all major clinical courses with a grade of "C+" or better. Clinical courses in which a grade of "C" or lower is achieved must be repeated before the student is allowed to continue with the next level of courses and may be repeated only once.
5. Demonstration of behaviors which indicate reasonable stability, maturity, understanding and aptitude as judged necessary for predicted success as a speech-language pathologist. Such qualitative judgements will be made by the SLP faculty.
6. Students on academic probation will not be allowed to enroll in major courses until the probation is lifted and their overall GPA is 2.75.

TERMINATION FROM THE PROGRAM

Students who fail to comply with the continuation criteria stated above will be notified in writing of their termination from the program. Students so notified have the right to appeal such termination through normal University channels. In some cases, a student will be required to meet with the full faculty for discussion of academic performance and continuation in the program.

GENERAL INFORMATION

Fieldwork in both general and special education is required. Prestudent teaching experiences are required of all candidates pursuing a teaching certificate. (See Prestudent Teaching, page 359.) Majors in special education are required to complete practicums or pre-clinical experiences in addition to those required for teacher certification and should consult with their 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 – 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 MA degree program in which K-12 endorsement is granted.

Each of the programs of study in special education meets or exceeds minimum course, experience, or competency requirements established by the Michigan State Board of Education for that endorsement area. However, meeting Michigan teaching certification and endorsement requirements does not necessarily meet requirements for teacher certification or endorsement in other states. All special education programs of study are recognized and approved for accreditation by the International Council for Exceptional Children.

The hearing impaired and speech and language impaired programs also are certified by national professional associations. The American Speech-Language-Hearing Association issues Certificates of Clinical Competence to individuals who present satisfactory evidence of their ability to provide independent clinical services to persons who have disorders of communication (speech, language, and/or hearing). An individual who meets these requirements may be awarded a Certificate of Clinical Competence in Speech Pathology. Specific requirements may be obtained from the advisers in speech and language impairment.

National certification is provided by the Council on Education of the Deaf to eligible majors in the hearing impaired program. Specific requirements may be obtained from advisers in this area.

Special Education Programs

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Emotionally Impaired (Secondary)	p. 416
Hearing Impaired (Elementary).....	p. 417
Hearing Impaired (Secondary)	p. 418
Mentally Impaired (Elementary)	p. 419
Mentally Impaired (Secondary).....	p. 420
Physically and Otherwise Health Impaired (Elementary) ..	p. 421
Physically and Otherwise Health Impaired (Secondary)	p. 422
Speech and Language Impaired (All Grade Levels) ...	p. 423
Visually Impaired (Elementary).....	p. 425
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TEACHING MINOR METHODS COURSES FOR SPECIAL EDUCATION/SECONDARY PROGRAMS

Art—FA 317 (2) and FA 416 (2)
Astronomy—PHY 325 (3)
Bilingual-Bicultural Education Spanish-English— FLAN 422 (3)
Biology—BIOL 403 (3)
Chemistry—PHY 325 (3)
Communication Minor for Elementary and Spe- cial Education Students—CTAC 307 (3)
Computer Science—COSC 346 (3)
Earth Science—GESC 347 (3)
Economics—HIST 481 (3)
English Language and Literature—ENGL 308 (3)
French Language—FLAN 411 (3)
German Language—FLAN 411 (3)
Geography—HIST 481 (3)
Geology—GESC 347 (3)
Group Minor in Social Science—HIST 481 (3)
Health—PHED 367 (3)
History—HIST 481 (3)
Mathematics—MATH 304 or MATH 306 (3)
Physical Education—PHED 367 (3)
Physical Education for Special Education Majors (available only to special education majors)— PHED 367 (3)
Physics—PHY 325 (3)
Political Science—HIST 481 (3)
Psychology—HIST 481 (3)
Sociology—HIST 481 (3)
Spanish Language—FLAN 411 (3)

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Geology	p. 211
German Language	p. 184
Group Minor in Social Science (not available with the social science major)	p. 443
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History	p. 230
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Occupational Foods (available only to Business Education and Technology Education majors)	p. 475
Physical Education	p. 394
Physical Education for Special Education Majors (available only to special education majors)	p. 394
Physics	p. 279
Political Science	p. 292
Psychology	p. 300
Sociology	p. 308
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Computer Science	p. 140
Earth Science	p. 210
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French Language	p. 184
General Science (available only to majors in one of the sciences)	p. 279

TEACHING MAJORS AND MINORS IN THE COLLEGE OF ARTS & SCIENCES

ART

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TEACHING MAJORS

CURRICULUM FOR FINE ARTS PLUS TEACHER CERTIFICATION AND CURRICULUM FOR ART EDUCATION

K-12 TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in art, certification code "LX." The certification test covering this field is #41, "Art Education." See page 80.

ART MAJOR

K-12 TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in art, certification code "LX." The certification test covering this field is #41, "Art Education." See page 80.

TEACHING MINOR

ART MINOR

ELEMENTARY, SECONDARY, K-12, SPECIAL EDUCATION-ELEMENTARY, AND SPECIAL EDUCATION-SECONDARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in art, certification code "LX." The certification test covering this field is #41, "Art Education." See page 81.

BIOLOGY

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TEACHING MAJORS

BIOLOGY MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in biology, certification code "DA," and, depending on the minor selected, an additional endorsement. This program of studies meets all requirements of the National Science Teachers Association. The certification test covering this field is #17, "Biology." See page 93.

TEACHING MINOR

BIOLOGY MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in biology, certification code "DA." The certification test covering this field is #17, "Biology." See page 95.

CHEMISTRY

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TEACHING MAJOR

CHEMISTRY MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in chemistry, certification code "DC," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #18, "Chemistry." See page 110.

TEACHING MINOR

CHEMISTRY MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in chemistry, certification code "DC." The certification test covering this field is #18, "Chemistry." See page 111.

COMMUNICATION AND THEATRE ARTS

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TEACHING MAJORS

COMMUNICATION MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in speech, certification code "BD," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #04, "Speech." See page 123.

TEACHING MINORS

COMPREHENSIVE MINOR IN COMMUNICATION AND THEATRE ARTS

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in speech, certification code "BD." The certification test covering this field is #04, "Speech." See page 122.

COMMUNICATION MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in speech, certification code "BD." The certification test covering this field is #04, "Speech." See page 125.

DRAMA/THEATRE FOR THE YOUNG MINOR

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in speech, certification code "BD." The certification test covering this field is #04, "Speech." See page 125.

COMPUTER SCIENCE

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TEACHING MAJOR

COMPUTER SCIENCE MAJOR

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

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in computer science, certification code "NR," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #50, "Computer Science." See page 139.

TEACHING MINOR

COMPUTER SCIENCE MINOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in computer science, certification code "NR." The certification test covering this field is #50, "Computer Science." See page 140.

ECONOMICS

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TEACHING MAJOR

ECONOMICS MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in economics, certification code "CA" and, depending on the minor selected, endorsement in geography ("CB"), history ("CC"), political science ("CD"), psychology ("CE"), sociology ("CF"), or social science ("CX"). The certification test covering this field is #07, "Economics." See page 147.

TEACHING MINOR

ECONOMICS MINOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in economics, certification code "CA." The certification test covering this field is #07, "Economics." See page 148.

ENGLISH LANGUAGE AND LITERATURE

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TEACHING MAJORS

ENGLISH AND AMERICAN LANGUAGE AND LITERATURE GROUP MAJOR SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in English, certification code "BA," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #02, "English." See page 160.

ENGLISH AND AMERICAN LANGUAGE AND LITERATURE GROUP MAJOR ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in English, certification code "BA." The certification test covering this field is #02, "English." See page 160.

TEACHING MINORS

ENGLISH AND AMERICAN LANGUAGE AND LITERATURE GROUP MINOR SECONDARY, K-12, AND SPECIAL EDUCATION- SECONDARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in English, certification code "BA." The certification test covering this field is #02, "English." See page 161.

FOREIGN LANGUAGE AND BILINGUAL STUDIES

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TEACHING MAJORS

FRENCH MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in French, certification code "FA," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #23, "French." See page 180.

GERMAN LANGUAGE AND LITERATURE MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in German, certification code "FB." The certification test covering this field is #24, "German." See page 181.

JAPANESE LANGUAGE AND CULTURE MAJOR

K-12 TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in Japanese, certification code "FL." The certification test covering this field has not yet been developed. See page 182.

SPANISH MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in Spanish, certification code "FF," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #28, "Spanish." See page 183.

TEACHING MINORS

FRENCH LANGUAGE MINOR

SECONDARY, K-12, AND SPECIAL EDUCATION-SECONDARY CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in French, certification code "FA." The certification test covering this field is #23, "French." See page 443.

GERMAN LANGUAGE MINOR

SECONDARY, K-12, AND SPECIAL EDUCATION-SECONDARY CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in German, certification code "FB." The certification test covering this field is #24, "German." See page 184.

SPANISH LANGUAGE MINOR

SECONDARY, K-12, AND SPECIAL EDUCATION-SECONDARY CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in Spanish, certification code "FF." The certification test covering this field is #28, "Spanish." See page 185.

BILINGUAL-BICULTURAL EDUCATION

SPANISH-ENGLISH MINOR

ELEMENTARY, SECONDARY, K-12, SPECIAL EDUCATION-ELEMENTARY, AND SPECIAL EDUCATION-SECONDARY TEACHER CERTIFICATION

Successful completion of this minor, in the context

of other program requirements, qualifies the student for recommendation for endorsement in bilingual Spanish, certification code "YF." The certification test covering this field is #70, "Bilingual Spanish." See page 184.

GEOGRAPHY AND GEOLOGY

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TEACHING MAJORS

EARTH SCIENCE MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in earth science/geology, certification code "DH." The program includes a structured general science minor. The student following this program is also qualified for recommendation for endorsement in science, certification code "DX." The certification test covering this field is #16, "Science." See page 210.

GEOGRAPHY MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in geography, certification code "CB" and, depending on the minor selected, endorsement in economics ("CA"), history ("CC"), political science ("CD"), psychology ("CE"), sociology ("CF"), or social science ("CX"). The certification test covering this field is #08, "Geography." See page 208.

TEACHING MINORS

EARTH SCIENCE MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science." See page 210.

GEOGRAPHY MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in geography, certification code "CB." The certification test covering this field is #08, "Geography." See page 210.

GEOLOGY MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science." See page 211.

HISTORY AND PHILOSOPHY

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TEACHING MAJORS

HISTORY MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the

student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in history, certification code "CC" and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), political science ("CD"), psychology ("CE"), sociology ("CF"), or social science ("CX"). The certification test covering this field is #09, "History." See page 228.

SOCIAL SCIENCE

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in social science, certification code "CX," and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), history ("CC"), political science ("CD"), psychology ("CE"), or sociology ("CF"). The certification test covering this field is #06, "Social Studies." See page 229.

TEACHING MINORS

HISTORY MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in history, certification code "CC." The certification test covering this field is #09, "History." See page 230.

SOCIAL SCIENCE GROUP MINOR (NOT AVAILABLE WITH THE SOCIAL SCIENCE MAJOR)

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in social science, certification code "CX." The certification test covering this field is #06, "Social Sciences." See page 443.

MATHEMATICS

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TEACHING MAJORS

MATHEMATICS MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in mathematics, certification code "EX," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #22, "Mathematics." See page 245.

MATHEMATICS MAJOR FOR THE ELEMENTARY TEACHING CERTIFICATE

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in mathematics, certification code "EX." The certification test covering this field is #22, "Mathematics." See page 246.

TEACHING MINORS

MATHEMATICS MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in mathematics, certification code "EX." The certification test covering this field is #22, "Mathematics." See page 246.

MATHEMATICS MINOR FOR THE ELEMENTARY TEACHING CERTIFICATE

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context

of other program requirements, qualifies the student for recommendation for endorsement in mathematics, certification code "EX." The certification test covering this field is #22, "Mathematics." See page 247.

MUSIC

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TEACHING MAJORS

MUSIC EDUCATION (INSTRUMENTAL) MAJOR

K-12 TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in music education, certification code "JX." The certification test covering this field is #39, "Music Education." See page 257.

MUSIC EDUCATION (VOCAL) MAJOR

K-12 TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in music education, certification code "JX." The certification test covering this field is #39, "Music Education." See page 258.

TEACHING MINOR

ELEMENTARY MUSIC EDUCATION MINOR

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in music education, certification code "JX." The certification test covering this field is #39, "Music Education." See page 442.

PHYSICS AND ASTRONOMY

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TEACHING MAJORS

GENERAL SCIENCE MAJOR—BIOLOGY MINOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and biology, certification code "DA." The certification tests covering this field are #16, "Science," and #17, "Biology." See page 272.

GENERAL SCIENCE MAJOR—CHEMISTRY MINOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and chemistry, certification code "DC." The certification tests covering this field are #16, "Science," and #18, "Chemistry." See page 273.

GENERAL SCIENCE MAJOR—EARTH SCIENCE MINOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and geology/earth science, certification code "DH." The certification tests covering this field are #16, "Science," and #20, "Geology/Earth Science." See page 274.

GENERAL SCIENCE MAJOR—MATHEMATICS MINOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and mathematics, certification code "EX." The certification tests covering this field are #16, "Science," and #22, "Mathematics." See page 275.

GENERAL SCIENCE MAJOR—PHYSICS MINOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and physics, certification code "DE." The certification tests covering this field are #16, "Science," and #19, "Physics." See page 276.

PHYSICS MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in physics, certification code "DE," and, depending on the minor selected, an additional endorsement. This program of studies meets all requirements of the National Science Teachers Association. The certification test covering this field is #19, "Physics." See page 277.

TEACHING MINORS

ASTRONOMY MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in astronomy, certification code "DO." The certification test covering this field is #21, "Astronomy." See page 278.

GENERAL SCIENCE MINOR (AVAILABLE ONLY TO MAJORS IN ONE OF THE SCIENCES)

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in science, certification code "DX." The certification test covering this field is #16, "Science." See page 279.

PHYSICS MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in physics, certification code "DE." The certification test covering this field is #19, "Physics." See page 279.

POLITICAL SCIENCE

Edward Sidlow
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TEACHING MAJORS

POLITICAL SCIENCE MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in political science, certification code "CD," and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), history ("CC"), psychology ("CE"), sociology ("CF"), or social science ("CX"). The certification test covering this field is #10, "Political Science." See page 291.

TEACHING MINOR

POLITICAL SCIENCE MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in political science, certification code "CD." The certification test covering this field is #10, "Political Science." See page 292.

PSYCHOLOGY

Kenneth W. Rusiniak
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TEACHING MAJOR

PSYCHOLOGY MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in psychology, certification code "CE," and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), history ("CC"), political science ("CD"), sociology ("CF"), or social science ("CX"). The certification test covering this field is #11, "Psychology." See page 299.

TEACHING MINOR

PSYCHOLOGY MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in psychology, certification code "CE." The certification test covering this field is #11, "Psychology." See page 300.

SOCIOLOGY, ANTHROPOLOGY, AND CRIMINOLOGY

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TEACHING MAJOR

SOCIOLOGY MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in sociology, certification code "CF," and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), history ("CC"), political science ("CD"), psychology ("CE"), or social science ("CX"). The certification test covering this field is #12, "Sociology." See page 307.

TEACHING MINOR

SOCIOLOGY MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in sociology, certification code "CF." The certification test covering this field is #12, "Sociology." See page 308.

TEACHING PROGRAMS, MAJORS, AND MINORS IN THE COLLEGE OF EDUCATION

HEALTH, PHYSICAL EDUCATION, RECREATION, AND DANCE

Michael M. Bretting
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487-4388

TEACHING MAJOR

PHYSICAL EDUCATION MAJOR K-12 TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, leads to a Bachelors of Science degree, and qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate K-12 endorsement in physical education, certification code "MB," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #44, "Physical Education" and is taken at the completion of all program requirements. See page 387.

TEACHING MINORS

HEALTH MINOR

ELEMENTARY, SECONDARY, K-12, SPECIAL
EDUCATION-ELEMENTARY, AND SPECIAL
EDUCATION-SECONDARY TEACHER
CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in health, certification code "MA." The certification test covering this field is #43, "Health." See page 394.

PHYSICAL EDUCATION MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in physical education, certification code "MB." The certification test covering this field is #44, "Physical Education." See page 394.

PHYSICAL EDUCATION MINOR FOR SPECIAL EDUCATION MAJORS

SPECIAL EDUCATION-SECONDARY AND SPECIAL
EDUCATION-ELEMENTARY TEACHER
CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in physical education, certification code "MB" and fulfills the State of Michigan Approval as a Physical Education Teacher for Students with Disabilities. The certification test covering this field is #44, "Physical Education." See page 394.

SPECIAL EDUCATION

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TEACHING PROGRAMS

EMOTIONALLY IMPAIRED

(ELEMENTARY)

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in emotionally impaired, certification code "SE," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #59, "Emotionally Impaired." See page 415.

EMOTIONALLY IMPAIRED**(SECONDARY)**

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in emotionally impaired, certification code "SE," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #59, "Emotionally Impaired," and the minor area. See page 416.

HEARING IMPAIRED**(ELEMENTARY)**

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in hearing impaired, certification code "SL," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #62, "Hearing Impaired." See page 417.

HEARING IMPAIRED**(SECONDARY)**

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in hearing impaired, certification code "SL," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #62, "Hearing Impaired," and the minor area. See page 418.

MENTALLY IMPAIRED**(ELEMENTARY)**

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in mentally impaired, certification code "SA," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #56, "Mentally Impaired." See page 419.

MENTALLY IMPAIRED**(SECONDARY)**

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in mentally impaired, certification code "SA," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #56, "Mentally Impaired," and the minor area. See page 420.

PHYSICALLY AND OTHERWISE HEALTH IMPAIRED**(ELEMENTARY)**

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in physically impaired, certification code "SC," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #58, "Physically and Otherwise Health Impaired." See page 421.

PHYSICALLY AND OTHERWISE HEALTH IMPAIRED**(SECONDARY)**

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in physically impaired, certification code "SC," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #58, "Physically and Otherwise Health Impaired," and the minor area. See page 422.

SPEECH AND LANGUAGE IMPAIRED**(ALL GRADE LEVELS)**

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for either the Michigan Department of Education Elementary Provisional Certificate endorsed in speech/language impaired, certification code "SB" or the Michigan De-

partment of Education Secondary Provisional Certificate endorsed in speech/language impaired, certification code "SB." For elementary, the certification tests covering this field are #83, "Elementary Education," and #57, "Speech and Language Impaired." For secondary, the certification tests covering this field are #57, "Speech and Language Impaired," and the minor area. See page 423.

VISUALLY IMPAIRED

(ELEMENTARY)

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in visually impaired, certification code "SK," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #61, "Visually Impaired." See page 425.

VISUALLY IMPAIRED

(SECONDARY)

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in visually impaired, certification code "SK," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #61, "Visually Impaired," and the minor area. See page 426.

TEACHER EDUCATION

James D. Riley
Department Head
234 Boone Hall
487-3260

TEACHING PROGRAMS

EARLY CHILDHOOD

(ELEMENTARY WITH EARLY CHILDHOOD
MINOR)

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate, which is valid for teaching all subjects kindergarten through grade 5, for teaching in self-contained classrooms in grades 6-8, and for teaching in one's major or minor subject areas of concentration in grades 6-8. In addition, the student is qualified for recommendation for endorsement in early childhood, certification code "ZA." Depending on the major selected (or two other minors selected), the individual will be eligible for an additional endorsement(s). The certification tests for this field are #81, "Early Childhood," #83, "Elementary," and those needed for subject area endorsements. See page 442.

ELEMENTARY EDUCATION

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate, which is valid for teaching all subjects kindergarten through grade 5, for teaching in self-contained classrooms in grades 6-8, and for teaching in one's major or minor areas of concentration in grades 6-8. Depending on the major and minor selected (or three minors selected), the individual will be eligible for additional endorsements. The certification tests for this field are #81, "Early Childhood," #83, "Elementary," and those needed for subject area endorsements. The certification tests for this field are #83, "Elementary," and those needed for subject area endorsements. See page 437.

TEACHING MAJORS

ARTS GROUP MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in fine arts, certification code "OX." The certification test covering this field is #53, "Fine Arts." See page 439.

ELEMENTARY SCIENCE GROUP MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in science, certification code "DX." The certification test covering this field is #16, "Science." See page 440.

LITERATURE, LANGUAGE, COMMUNICATION, AND THEATRE ARTS GROUP MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in language arts, certification code "BX." The certification test covering this field is #01, "Language Arts." See page 440.

SOCIAL SCIENCE GROUP MAJOR FOR ELEMENTARY EDUCATION

ELEMENTARY TEACHER CERTIFICATION

Note: Recommendation for endorsement in social science (certification code "CX") requires a group major of 36 hours from economics, geography, history, political science, psychology, sociology, anthropology, cultural studies, government, and behavioral studies. The certification test covering social sciences is #06, "Social Sciences." See page 441.

TEACHING MINORS

ARTS GROUP MINOR (NOT AVAILABLE WITH ART MAJOR OR WITH MUSIC MAJOR)

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in fine arts, certification code "OX." The certification test covering this field is #53, "Fine Arts." 13 hours for elementary program, not counting hours in Basic Studies and professional studies. See page 441.

EARLY CHILDHOOD EDUCATION MINOR

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in early childhood, certification code "ZA." The certification test covering this field is #82, "Early Childhood." See page 442.

ELEMENTARY SCIENCE GROUP MINOR

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in science, certification code "DX." The certification test covering this field is #16, "Science." See page 442.

FRENCH LANGUAGE MINOR

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in French, certification code "FA." The certification test covering this field is #23, "French." See page 443.

GERMAN LANGUAGE MINOR

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in German, certification code "FB." The certification test covering this field is #24, "German." See page 443.

SOCIAL SCIENCE GROUP MINOR (ELEMENTARY)

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in social science, certification code "CX." The certification test covering this field is #06, "Social Sciences." See page 443.

SPANISH LANGUAGE MINOR

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in Spanish, certification code "FF." The certification test covering this field is #28, "Spanish." See page 444.

TEACHING MINOR IN THE COLLEGE OF HEALTH & HUMAN SERVICES

HUMAN, ENVIRONMENTAL, AND CONSUMER RESOURCES

George Lipka
Department Head
108 Roosevelt Building
487-0077/487-0078

TEACHING MINOR

OCCUPATIONAL FOODS MINOR (AVAILABLE ONLY TO BUSINESS EDUCATION AND TECHNOLOGY EDUCATION MAJORS)

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

Students who will qualify for the Vocational Secondary Provisional Teaching Certificate may choose to take the courses 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. See p. 475.

TEACHING MAJORS AND MINOR IN THE COLLEGE OF TECHNOLOGY

BUSINESS AND TECHNOLOGY EDUCATION

Ann M. Remp
Department Head
 14 Sill Hall
 487-4330

TEACHING MAJORS

BUSINESS SERVICES AND TECHNOLOGY EDUCATION MAJOR

SECONDARY TEACHER CERTIFICATION

The Business Services and Technology Education major leads to a Michigan Department of Education Secondary Provisional Certificate and, upon meeting the requirements according to the current Michigan State Plan, a vocational endorsement. The program prepares prospective teachers in the areas of information processing and management, administrative services, accounting and computing, and basic business such as economics, consumer economics, business law, business management, computer literacy, and introduction to business.

This major can be completed only in conjunction with the Bachelor of Business Education curriculum. Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in business education, certification code "GX," and, with appropriate work experience, certification code "VB." The certification test covering this field is #32, "Business Education." See page 504.

MARKETING EDUCATION

SECONDARY TEACHER CERTIFICATION

The Marketing Education major leads to a Michigan Department of Education Secondary Provisional Certificate and, if requirements are met, vocational en-

dorsement qualifying the prospective teacher in such areas as sales, retailing, marketing, and advertising.

This major can be completed only in conjunction with the Bachelor of Business Education curriculum. Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in business education, certification code "GX," or, with appropriate work experience, certification code "VB." The certification test covering this field is #36, "Marketing (Distributive Education)." See page 505.

INDUSTRIAL-VOCATIONAL EDUCATION MAJOR

SECONDARY TEACHER CERTIFICATION

The Industrial-Vocational major is designed to prepare teachers of industrial-vocational subjects for senior high school and community college vocational education programs. Graduate who complete this major and have a minimum of two years work experience in a certifiable occupational area will qualify for the Temporary Vocational Authorization to teach in a specific occupational area. Options for cooperative work experience studies are available to the student as partial credit toward the occupational requirement.

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in vocational trades, certification code "VT." The certification test covering this field is an occupational area test. See page 507.

TECHNOLOGY EDUCATION MAJOR

SECONDARY TEACHER CERTIFICATION

This major must be completed in conjunction with the Industrial Education curriculum. Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in industrial arts, certification code "IX." The certification test covering this field is #38, "Industrial Arts." See page 508.

TEACHING MINOR

TECHNOLOGY EDUCATION MINOR

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in industrial arts, certification code "IX." The certification test covering this field is #38, "Industrial Arts." See page 510.

HEALTH, PHYSICAL EDUCATION, RECREATION, AND DANCE

Michael M. Bretting
Department Head
235 Warner Physical Education Building
487-0090

Professors: John R. Adams, Gary C. Banks, Marvin J. Johnson, Steve W. Moyer, Michael J. Paciorek, Erik J. Pedersen, Ronald J. Saunders, John E. Sheard, Roger L. Williams, Charles X. Witten, Winifred Witten, Myrna A. Yeakle

Associate Professors: Michael M. Bretting, Jennifer Beller, Douglas W. Briggs, Jean E. Folkner, Robbie A. Johnson, Michael H. Jones, Joann McNamara, Robert C. Parks, Jerry Ricciardo, Claudia B. Wasik

Assistant Professors: Eddie Bedford, Victor Chiasson, Allan P. Freund, Suzanne Geldys-Zelnik, Jeff Goodwin, Paul Gordon, Gloria D. Neve, Ronald E. Oestrike, Joan H. Sheard, Ronald M. Venis, Ariel Weymouth-Payne

Instructors: Linda Hemmelgarn, Sharon Pendleton

All University students are required to take PEGN 210 Lifetime Wellness and Fitness in the Health, Physical Education, Recreation, and Dance department as part of their undergraduate degree requirements. In addition, students may elect up to eight hours of physical education activity courses that enhance students' personal development, health-related fitness, and their use of leisure. All students seeking admission to a professional major program must 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, adapted 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 Alliance 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). Other student organizations include the Student Athletic Trainer Club, the Student Exercise Science Club, and the Physical Education Organization.

Degree

Bachelor of Science

Programs of Study

Majors:

Dance
Physical education for K-12 education
Recreation and park management
Sports medicine-athletic training
Sports medicine-exercise science
Therapeutic recreation

Minors:

Athletic coaching
Dance
Health education
Health education for elementary, secondary, K-12, special education-elementary, and special education-secondary
Physical education for secondary, K-12, and special education-secondary
Physical education for special education-elementary and special education-secondary
Recreation and park management

The list of officially assigned advisees is posted in Room 235 of Warner Physical Education Building.

It is recommended that students seek out their adviser as soon as possible to establish a course of study leading to the degree sought.

Advising Coordinators:

Faculty in each of the professional programs are assigned advising responsibilities for those who declare their majors in one of the four disciplines. Coordinators are:

Majors:

Dance: Linda Hemmelgarn
 Teachers of physical education: Michael Paciorek
 Recreation and park management: Vic Chiasson
 Therapeutic recreation: Jean Folkerth
 Sports medicine-athletic training: Ron Venis
 Sports medicine-exercise science: Charles X. Witten

Minors:

Coaching: Michael Paciorek
 Dance: Linda Hemmelgarn
 Health: Myrna Yeakle
 Physical education: Michael Paciorek
 Physical education minor for special education: Michael Paciorek
 Recreation and park management: Vic Chiasson

Approvals:

State of Michigan Approval as a Physical Education Teacher for Students with Disabilities: Michael Paciorek

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.

ACADEMIC MAJORS

DANCE CURRICULUM

The dance curriculum is uniquely designed, offering students of dance a choice of three career-track options. This curriculum leads to a Bachelor of Science degree. The three tracks are: (1) pre-dance therapy, (2) studio management, and (3) performance. Students are not required to choose a minor, with the exception of (2) studio management.

Students planning admission to the dance major must officially enroll in the program at the Academic Advising Center and complete the following:

1. A technical assessment and audition into the program
2. An application into the dance program at 108 Warner
3. An application at 223 Warner Physical Education Building
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.

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 I-B-2. *Basic Studies requirement. See inside back cover*
 I-B-3. *Basic Studies requirement. See inside back cover*
 I-B-4. *Basic Studies requirement. See inside back cover*
 I-B-5. *Basic Studies requirement. See inside back cover*
 II-B-1. *Basic Studies requirement. See inside back cover*
 II-B-2. *Basic Studies requirement. See inside back cover*
 II-B-3. *Basic Studies requirement. See inside back cover*
 III-B-1. *Basic Studies requirement. See inside back cover*
 III-B-2. *Basic Studies requirement. See inside back cover*
 III-B-3. *Basic Studies requirement. See inside back cover*
 III-B-4. *Basic Studies requirement. See inside back cover*
 IV-B-1. *Basic Studies requirement. See inside back cover*
 IV-B-2. *Basic Studies requirement. See inside back cover*
 IV-B-3. *Basic Studies requirement. See inside back cover*
 IV-B-4. *Basic Studies requirement. See inside back cover*

Credit hours in Basic Studies: 49

Dance Core

- DANC 107 Rhythmic Analysis and Dance Accompaniment (3)
 DANC 208 Classical Ballet Technique III (3)
 DANC 209 Classical Ballet Technique IV (3)
 DANC 210 Modern Dance Technique III (3)
 DANC 211 Modern Dance Technique IV (3)
 DANC 245 Elements of Dance Composition (4)
 DANC 255 Dance Production (3)
 DANC 350 History of Dance (3)
 DANC 354 Methods and Materials in Teaching of Dance (3)
 DANC 450 Advanced Dance Composition (4)
 DANC 455 Seminar in Dance (2)
 PEMJ 320 Dance Workshop (1)
 PEMJ 422 Dance Workshop (1)
 PEMJ 423 Dance Workshop (1)

Track requirements*Track one: pre-dance therapy*

- EDPS 325 Life Span Human Growth and Development (4)
 PHED 200 Anatomy and Physiology (5)
 PHED 204 Kinesiology (Mechanics of Movement) (3)
 PHED 209 Bio-Fitness (3)
 PSY 309 Social Psychology (3)
 PSY 360 Abnormal Psychology (3)
 PSY 361 Psychotherapy (3)
 RECR 250 Fieldwork (1)
 DANC 231 Service Teaching (1)

Choose one:

- PSY 321 Child Psychology (3)
 PSY 322 Psychology of Adolescence (3)
 PSY 323 Psychology of Human Aging (3)

Choose one:

- PSY 362 The Psychology of Stress and Relaxation (3)
 PSY 365 Behavior Modification (3)

Choose seven hours from:

- PHED 334 Adaptive Physical Education (3)
 RECR 200 Recreation for Persons with Disabilities (3)
 MUSC 103 Introduction to Music Therapy (2)
 CTAD 326 Developmental Drama/Theatre with the Handicapped (2)

Others in consultation with adviser

<i>Basic Studies</i>	49
<i>Dance Core</i>	37
<i>Track Requirements</i>	39
Total	125

Track two: studio management

- DANC 456 Creative Dance for Children (2)
 PHED 200 Anatomy and Physiology (5)
 PHED 204 Kinesiology (Mechanics of Movement) (3)
 PEGN 102 Aerobic Dance (1)
 PEGN 103 Couple, Square, and Ballroom Dancing (1)
 PEGN 159 Tap Dancing (1)
 PEGN 277 Special Topics: Intermediate Aerobics (1)
 DANC 331 Service Teaching (1)
 DANC 333 Service Teaching (1)

<i>Basic Studies</i>	49
<i>Dance Core</i>	37
<i>Track Requirements</i>	16
<i>Business or management minor</i>	21
Total	125

Track three: Performance

- CTAO 102 Voice Development (1)
 CTAR 158 Fundamentals of Acting (3)
 CTAR 254 Stage Makeup (1)
 CTAR 457 Tryouts and Auditions (1)
 CTAR 461 Musical Theatre Acting (2)
 MUSC 232 Voice Class (1)
 PHED 200 Anatomy and Physiology (5)
 PHED 204 Kinesiology (Mechanics of Movement) (3)
 PEGN 155 Jazz I (1)
 PEGN 159 Tap Dancing (1)
 PEGN 255 Jazz II (1)
 PEMJ 320 Dance Workshop (1)
 PEMJ 322 Dance Workshop (1)

<i>Minor (or electives)</i>	20
<i>Basic Studies</i>	49
<i>Dance Core</i>	37
<i>Track Requirements</i>	22
Total	128

PHYSICAL EDUCATION MAJOR**K-12 TEACHER CERTIFICATION**

Successful completion of this course of study leads to a Bachelor's of Science Degree, and qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate K-12 endorsement in physical education, certification code "MB" and, depending on the minor selected, an additional endorsement. The certification

test covering this field is #44, "Physical Education" and is taken at the the completion of all program requirements.

Students seeking certification must meet requirements for entry into the teacher education program. The course of study requires completion of Basic Studies requirements, a minor in a secondary subject area, the physical education major, and 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 with and without disabilities, from kindergarten through grade 12. The Michigan Exemplary Physical Education Curriculum Project (Mi-EPEC) is used as a model to enable students to develop exemplary physical education programs upon graduation. The methods of teaching courses provide information on the sequencing and presenting of a wide variety of activities found within the public schools.

Fieldwork experiences are a critical component of the professional program. Extracurricular assignments enhance the practical application of knowledge learned within the classroom. Majors are required to complete a minimum of 100 hours of prestudent teaching experiences with students of all ages and abilities. Fieldwork experiences will begin in the freshman year, will include students with and without disabilities, and will culminate in a one semester student teaching assignment with elementary and secondary students under the supervision of master teachers.

This program primarily serves the needs of K-12 school programs in Michigan and the United States. Faculty provide students with numerous opportunities for professional growth. Opportunities for additional certifications and endorsements such as water safety instructor (WSI), Red Cross First Aid, coaching, and certification in programs for students with disabilities are also available and strongly encouraged.

The physical education major program participates in the University Honors Program. Students wishing to enroll in the Honors Program must maintain a GPA of 3.3 and fulfill all requirements in specific honor courses. See the department Honors adviser for specific information.

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 I-B-2. *Basic Studies requirement. See inside back cover*
 I-B-3. BIOL 105 Biology and Human Species.
 Recommended

- I-B-4. *Basic Studies requirement. See inside back cover*
 I-B-5. *Basic Studies requirement. See inside back cover*
 II-B-1. *Basic Studies requirement. See inside back cover*
 II-B-2. PSY 101 General Psychology (3)
 II-B-3. *Basic Studies requirement. See inside back cover*
 III-B-1. *Basic Studies requirement. See inside back cover*
 III-B-2. *Basic Studies requirement. See inside back cover*
 III-B-3. *Basic Studies requirement. See inside back cover*
 III-B-4. *Basic Studies requirement. See inside back cover*
 IV-B-1. *Basic Studies requirement. See inside back cover*
 IV-B-2. *Basic Studies requirement. See inside back cover*
 IV-B-3. *Basic Studies requirement. See inside back cover*
 IV-B-4. *Basic Studies requirement. See inside back cover*
 Physical education, personal fitness class and outdoor leisure pursuit class (2)

Credit hours in Basic Studies:..... 49

Teaching Major

- PHED 200 Anatomy and Physiology (5)
 PHED 204 Kinesiology (Mechanics of Movement) (3)
 PHED 240 History and Philosophy of Physical Education (2)
 PHED 281 Motor Development (2)
 PHED 300 Physiology of Exercise (4)
 HLED 210 Standard American Red Cross First Aid (2)
 PHED 334 Adaptive Physical Education (3)
 PHED 382 Motor Learning (3)
 Eleven hours of academic electives, selected in consultation with an academic adviser

Minor

Select a minor from the approved list (see pp. 362-363)

Subtotal, Major and minor:..... 50¹

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
 PHED 150 Methods of Teaching Individual Sports (3)
 PHED 151 Methods of Teaching Team Sports I (3)
 PHED 152 Methods of Teaching Team Sports II (1)
 PHED 153 Methods of Teaching Conditioning Activities (1)
 PHED 250 Methods of Teaching Aquatics (2)
 PHED 251 Methods of Teaching Gymnastics (2)
 PHED 350 Methods of Teaching Rhythmic Activities (1)

PHED 351 Methods of Teaching Fundamental Movement and Movement Education (1)

PHED 352 Methods of Teaching Elementary Physical Education (2)

EDPS 322 Human Development and Learning (4)

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

RDNG 311 Teaching Reading in the Secondary School (3)

SOFD 328 Schools in a Multicultural Society (3)

PHED 367 Curriculum and Methods in Physical Education (3)

PHED 440 Tests and Measurements in Physical Education (2)

EDUC 496 Student Teaching (6)

EDUC 497 Student Teaching (6)

Credit hours in Professional Studies:..... 44

Total credit hours required:..... 143

Could be less, depending on the minor and the possible application of basic studies courses to the minor.

RECREATION CURRICULUM

The Recreation program at Eastern Michigan University consists of two separate sub-disciplines: 1) Recreation and Park Management and 2) Therapeutic Recreation. The NRPA/AALR accredited core curriculum for both programs is listed below:

Recreation core courses 33

RECR 100 Introduction to Recreation and Leisure (F, W) (3)

RECR 200 Recreation for Persons with Disabilities (F, W) (3)

RECR 250/251/252/253 Fieldwork in Recreation (F,W) (1)

RECR 260 Recreation Leadership (F) (3)

RECR 290/479 Practical Research in Recreation (F, W) (3)

RECR 321/479 Legal Aspects of Recreation (W) (3)

RECR 360 Recreation Program Planning (W) (3)

RECR 370/479 Facility Design and Management (F) (3)

RECR 410 Professional Preparation (W) (1)

RECR 460 Park and Recreation Administration (F) (3)

EDP 325 Life Span Human Growth and Development (F, W, SP, SU) (4)

ENGL 326 Report and Research Writing (F, W, SP, SU) (3)

RECREATION AND PARK MANAGEMENT

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, and resorts. The program is a non-teaching major. A minor in Recreation and Park Management is offered to majors in other fields.

The curriculum is multidisciplinary, including course work in management and the social sciences, with required core course work to include recreation leadership, programming, and 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 52-54 credit hours of basic studies, a minimum of 59 credit hours of courses in the Recreation and Park Management major, 8-13 credit hours of electives, 250 hours of volunteer and/or paid recreation experience, and a minimum GPA requirement before taking a full-time 15 week practicum. The practicum and fieldwork cannot be completed at the same site. The student must also file for Candidate Status one semester prior to enrolling in the practicum. No outside minor required, but it is strongly recommended.

Criteria for Candidate Status in Recreation and Park Management are:

1. Obtain a minimum of 2.5 GPA overall and 2.75 GPA in all major courses.
2. Complete an application for Candidate Status in Recreation and Park Management.
3. Complete 250 hours of verified volunteer or paid work experience in one or more leisure service agencies (this requirement stands alone and does not include required hours included in other courses such as REC 200, REC 250, REC 251, REC 252, REC 253.
4. Complete 30 hours of volunteer or work experience in recreation with persons with disabilities.
5. Complete all Recreation and Park Management core courses.
6. Complete all Recreation and Park Management required courses.
7. Complete 90% of all academic courses.
8. Submit two letters of recommendation from

recreation professionals under whom the applicant has completed work or volunteer experience to the assigned academic advisor in recreation.

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 I-B-2. *Basic Studies requirement. See inside back cover*
 I-B-3. ENGL 326 Research Writing (3)
 I-B-4. MATH 150 Mathematical Reasoning (3)
 I-B-5. COSC 136 Computers for the Nonspecialist (3)
 II-B-1. CHEM 119 Fundamentals of Chemistry (4)
 II-B-2. *Basic Studies requirement. See inside back cover*
 II-B-3. INTE 240 Science, Technology, and People (3)
 III-B-1. *Basic Studies requirement. See inside back cover*
 III-B-2. *Basic Studies requirement. See inside back cover*
 III-B-3. *Basic Studies requirement. See inside back cover*
 III-B-4. *Basic Studies requirement. See inside back cover*
 IV-B-1. *Basic Studies requirement. See inside back cover*
 IV-B-2. *Basic Studies requirement. See inside back cover*
 IV-B-3. *Basic Studies requirement. See inside back cover*
 IV-B-4. CTAD 222 Drama and Play in Human Experience (3)
 Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 52-54

Recreation and Park Management Courses (required) 26

- RECR 271 Park Maintenance (F) (3)
 RECR 361/479 Special Events (W) (3)
 RECR 450 Park Planning and Design (W) (3)
 RECR 465 Park and Recreation Management (W) (3)
 RECR 471/479 Contemporary Issues in Recreation (W) (3)
 RECR 489 Recreation Practicum (F, W, SP/SU) (8)

Select 8-13 credit hours of electives from the courses provided below or other courses after consultation with the assigned Recreation and Park academic advisor.

- RECR 251/252/253 Fieldwork in Recreation/Therapeutic Recreation (F, W) (1 each)
 RECR 280 Camping (F) (2)
 RECR 310 Leisure and Older Adults (F) (3)
 RECR 320 Leisure Education (W) (3)
 RECR 477/478/479 Special Topics (W) (1-3)
 INED 152 Arts and Crafts (3)
 GEOG 112 Introduction to Travel and Tourism (3)
 GEOG 113 Foundation to Guest Service (3)
 GEOG 212 Geography of Travel and Tourism (3)
 GEOG 344 Recreation Geography (3)
 GESC 212 National Parks and Monuments (2)
 BIOL 207 Elements of Ecology (2)

- BIOL 224 Principles of Conservation (4)
 BIOL 232 Nature Interpretation (3)
 PHIL 220 Ethics (3)
 MATH 360 Statistical Methods (3)
 PLSC 330 Urban Politics (3)
 SOCL 214 Racial and Cultural Minorities (3)
 SOCL 402 Group Dynamics (3)
 MKTG 360 Principles of Marketing (3)
 MGMT 386 Organizational Behavior and Theory (3)
 PHED 353 American Red Cross Lifeguard Training (3)
 PHED 453 American Red Cross Water Safety and Lifeguard Instructor (3)
 HLED 210 First Aid (2)

Basic Studies 52-54

Recreation major

Core courses 33
Recreation and Park Management Courses 26
Electives 8-13

Total 124

THERAPEUTIC RECREATION CURRICULUM

The Therapeutic Recreation curriculum leads to a Bachelor of Science degree in Therapeutic Recreation. Graduates from this program may apply for national certification as a Certified Therapeutic Recreation Specialist.

This curriculum consists of a minimum of 52-54 credit hours of basic studies, a minimum of basic studies, a minimum of 64 credit hours of courses in the Therapeutic Recreation major, 8-10 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. The student must also file for Candidate Status one semester prior to enrolling in the practicum. No outside minor is required, but it is strongly recommend.

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 Advisor.

Criteria for Therapeutic Recreation provisional status are:

1. Application for program admission
2. Autobiographical sketch and your interest in working with special populations in the field of Therapeutic Recreation

3. Statement of current goals

Criteria for Candidate status in Therapeutic Recreation are:

1. Obtain a minimum of 2.50 GPA overall and 2.75 GPA in all major courses.
2. Complete an application for Candidate Status in Therapeutic Recreation.
3. Complete a minimum of 60 hours of verified volunteer and/or paid Therapeutic Recreation experience with special populations.
4. Complete 30 hours of volunteer work or experience in therapeutic recreation with persons who do not have disabilities.
5. Complete 250 hours of verified volunteer or paid work experience in one or more leisure service agencies (this requirement does not include items three and four listed above).
6. Complete all Therapeutic Recreation core courses.
7. Complete all Therapeutic Recreation required courses.
8. Complete 90% of all academic courses.
9. Submit two letters of recommendation from recreation professionals under whom the applicant has completed work or volunteer experience to the assigned academic advisor in recreation.

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 I-B-2. *Basic Studies requirement. See inside back cover*
 I-B-3. ENGL 326 Research Writing (3)
 I-B-4. MATH 150 Mathematical Reasoning (3)
 I-B-5. COSC 136 Computers for the Nonspecialist (3)
 II-B-1. CHEM 119 Fundamentals of Chemistry (4)
 II-B-2. *Basic Studies requirement. See inside back cover*
 II-B-3. INTE 240 Science, Technology, and People (3)
 III-B-1. *Basic Studies requirement. See inside back cover*
 III-B-2. *Basic Studies requirement. See inside back cover*
 III-B-3. *Basic Studies requirement. See inside back cover*
 III-B-4. *Basic Studies requirement. See inside back cover*
 IV-B-1. *Basic Studies requirement. See inside back cover*
 IV-B-2. *Basic Studies requirement. See inside back cover*
 IV-B-3. *Basic Studies requirement. See inside back cover*
 IV-B-4. CTAD 222 Drama and Play in Human Experience (3)

Credit hours in Basic Studies: 52-54

Therapeutic Recreation Courses (required) 31

- RECR 180 Activity Analysis and Adaptation (W) (3)
 RECR 300 Principles of Therapeutic Recreation (W) (3)

RECR 340 Techniques in Therapeutic Recreation (F) (3)
 RECR 400 Processes and Services in Therapeutic Recreation (F) (3)

RECR 430 Issues in Therapeutic Recreation (W) (3)

RECR 449 Practicum in Therapeutic Recreation (F, W, SP/SU) (8)

PHED 200 Anatomy and Physiology (F, W) (5)

PSY 360 Abnormal Psychology (F, W, SP, SU) (3)

Select 8-10 credit hours of electives from the courses provided below or other courses after consultation with the Therapeutic Recreation advisor.

RECR 251/252/253 Fieldwork in Recreation/Therapeutic Recreation (F, W) (1 each)

RECR 285 Camping for Special Populations (F) (2)

RECR 310 Leisure and Older Adults (F) (3)

RECR 320 Leisure Education (W) (3)

RECR 330 Therapeutic Recreation for Substance Abusers (3)

PHED/RECR 481 Adaptive Aquatics (2)

PHED389 Sport and Activity for the Disabled (1)

RECR 477/478/479 Special Topics (1-3)

INED 152 Arts and Crafts (3)

SPGN 251 Education of Exceptional Children (2)

CTAS 326 Developmental Drama/Theater with Handicapped Persons (2)

EDPS 318 Uses of Play in the Helping Professional (3)

Basic Studies 52-54

Therapeutic Recreation major

Core courses 33

Therapeutic Recreation Courses 31

Electives 8-10

Total 124

CURRICULUM FOR SPORTS MEDICINE

Sports medicine is a comparatively new field of study that integrates sports, medicine, the sciences, and other health related areas into a professional curriculum. It is identified under different approaches and titles including: athletic medicine, cardiovascular rehabilitation, exercise physiology and biomechanics. Essentially, the study of sports medicine provides an understanding of the health and physical implications of human movement.

The curriculum leads to a Bachelor of Science degree in sports medicine. The course of study consists of

a minimum of 53 semester hours in basic studies, a minimum of 54-59 semester hours in the major 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. The program has established special course prerequisites, GPA requirements, and candidacy admission requirements. No outside minor is needed.

Students electing this curriculum may choose one of two areas of specialization: exercise science or athletic training.

Sports medicine-athletic training:

Students entering the athletic training 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 2.9 (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: BIOL 105 Biology and the Human Species, CHEM 120 Fundamentals of Organic and Biochemistry, PHY 221 Mechanics, Sound, and Heat, PSY 101 General Psychology, ZOOL 318 Laboratory in Human Anatomy.
5. A grade of "B" or above in SPMD 200 Anatomy and Physiology, SPMD 290 Practicum II, and SPMD 295 Recognition and Evaluation of Athletic Injuries.
6. Three letters of recommendation, two professional and one personal.
7. Biographical sketch.

When an "intent" has successfully achieved the above, he or she must apply for candidacy. The admission form can be obtained from the program director. The "intent" will be notified of the date and time for a personal interview with the Sports Medicine Committee.

Sports medicine-exercise science:

Students entering the exercise science 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. (The following courses must be included in the 60 hours: SPMD 119, PHED 209, SPMD 200, ZOOL 318, and PHED 204 or SPMD 305.
4. Grades of "C" or above in each of the following: BIOL 105 Biology and the Human Species, CHEM 120 Fundamentals of Organic and Biochemistry, PHY 221 Mechanics, Sound, and Heat, SPMD 200 Anatomy and Physiology, ZOOL 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 must apply for candidacy with the program chair for a personal interview with the Sports Medicine Committee. Once accepted into candidacy, the student must maintain a 2.75 GPA. Failure to maintain the required GPA will result in dismissal from the program.

SPORTS MEDICINE—ATHLETIC TRAINING

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 - I-B-2. *Basic Studies requirement. See inside back cover*
 - I-B-3. *Basic Studies requirement. See inside back cover*
 - I-B-4. *Basic Studies requirement. See inside back cover*
 - I-B-5. *Basic Studies requirement. See inside back cover*
 - II-B-1. CHEM 120 Fundamentals of Organic and Biochemistry (4)
 - II-B-2. PSY 101 General Psychology (3)
 - II-B-3. BIOL 105 Biology and the Human Species (4)
 - III-B-1. *Basic Studies requirement. See inside back cover*
 - III-B-2. *Basic Studies requirement. See inside back cover*
 - III-B-3. *Basic Studies requirement. See inside back cover*
 - III-B-4. *Basic Studies requirement. See inside back cover*
 - IV-B-1. *Basic Studies requirement. See inside back cover*
 - IV-B-2. *Basic Studies requirement. See inside back cover*
 - IV-B-3. *Basic Studies requirement. See inside back cover*
 - IV-B-4. *Basic Studies requirement. See inside back cover*
- Additional requirement: PHY 221 Mechanics, Sound, and Heat (4)
Physical education (2)

Credit hours in Basic Studies: 53

Sports medicineAthletic training

- DTC 204 Sports Nutrition (3)
 HLED 310 Advanced First Aid and Emergency Care (3)
 HLED 390 Drug Use and Abuse (3)
 PHED 300 Physiology of Exercise (4)#
 SPMD 119 Orientation to Sports Medicine (1)
 SPMD 200 Anatomy and Physiology (5)
 SPMD 219 Introduction to Athletic Training (3)
 SPMD 225 Practicum I (2)
 SPMD 290 Practicum II (2)
 SPMD 295 Recognition and Evaluation of Athletic Injury (4)
 SPMD 305 Kinesiology-Tissue Biomechanics (2)#
 SPMD 315 Applied Sport Psychology (3)#
 *SPMD 378 Special Topics: SPMD 321 Therapeutic Modalities for Athletic Trainers (2)#
 *SPMD 379 Special Topics: SPMD 322 Therapeutic Exercise for Athletic Trainers (3)#
 SPMD 390 Preinternship (2)#
 SPMD 419 Medical and Administrative Aspects of Athletic Training (2)#
 *SPMD 479 Special Topics: SPMD 419 Medical Aspects of Sports Medicine (3)#
 *SPMD 479 Special Topics: SPMD 421 Legal Aspects of Sports Medicine (3)#
 SPMD 490 Internship—Athletic Training (8)#
 ZOO 318 Laboratory in Human Anatomy (2)
 Physical education activity courses (4)#

The above curriculum and 1,500 hours of practicum under the supervision of an NATA certified athletic trainer are required for graduation and to sit for the NATA Certification Exam. These hours must be attained in no less than two academic years and not more than five years.

<i>Required courses</i>	59
<i>Free electives</i>	5-10
Total	124

*These courses are in the University input system for permanent approval

#These courses are reserved for candidate students

SPORTS MEDICINE—EXERCISE SCIENCE**Basic Studies**

- I-B-1. ENGL 121 English Composition (3)
 I-B-2. *Basic Studies requirement. See inside back cover*
 I-B-3. *Basic Studies requirement. See inside back cover*
 I-B-4. *Basic Studies requirement. See inside back cover*
 I-B-5. *Basic Studies requirement. See inside back cover*
 II-B-1. CHEM 120 Fundamentals of Organic and Biochemistry (4)
 II-B-2. PSY 101 General Psychology (3)
 II-B-3. BIOL 105 Biology and the Human Species (4)
 III-B-1. *Basic Studies requirement. See inside back cover*
 III-B-2. *Basic Studies requirement. See inside back cover*
 III-B-3. *Basic Studies requirement. See inside back cover*
 III-B-4. *Basic Studies requirement. See inside back cover*
 IV-B-1. *Basic Studies requirement. See inside back cover*
 IV-B-2. *Basic Studies requirement. See inside back cover*
 IV-B-3. *Basic Studies requirement. See inside back cover*
 IV-B-4. *Basic Studies requirement. See inside back cover*
 Additional requirement: PHY 221 Mechanics, Sound, and Heat (4)

Physical education (4)

Credit hours in Basic Studies: 53

Sports medicineExercise science

- HECR 202 Principles of Human Nutrition (3)
 HLED 310 Advanced First Aid and Emergency Care (3)
 NURS 270 Pharmacology (2)
 PHED 204 Kinesiology (Mechanics of Movement) (3) or SPMD 305 Kinesiology-Tissue Mechanics (3)
 PHED 209 Bio-Fitness (2)
 PHED 300 Physiology of Exercise (4)
 SPMD 119 Orientation to Sports Medicine (1)
 SPMD 200 Anatomy and Physiology (5)
 SPMD 315 Applied Sport Psychology (3)#
 SPMD 410 Laboratory Techniques in Human Performance Analysis (4)#
 SPMD 425 Sports Medicine Practicum—Exercise Science (2)#
 SPMD 430 Basic Principles of Electrocardiography (3)#
 *SPMD 479 Special Topics: SPMD 421 Legal Aspects of Sports Medicine (3)#
 *SPMD 479 Special Topics: SPMD 431 Pathology for Sports Medicine (3)#
 *SPMD 479 Special Topics: SPMD 432 Introduction of Exercise Programming (3)#

SPMD 480 Internship—Exercise Science (8)#
 ZOOL 318 Laboratory in Human Anatomy (2)
 Physical education activity courses (swimming,
 jogging, conditioning activities, aerobic dance,
 cycling, weight training) (2)
 Select eighteen hours of general electives in
 consultation with adviser.

Required courses 50

Free electives 9-18

Total 124

*These courses are in the University input system for permanent approval.

#These courses are reserved for candidate students

TEACHING MINORS

HEALTH MINOR

ELEMENTARY, SECONDARY, K-12, SPECIAL
 EDUCATION-ELEMENTARY, AND SPECIAL
 EDUCATION-SECONDARY TEACHER
 CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in health, certification code "MA." The certification test covering this field is #43, "Health."

HLED 210 Standard American Red Cross First Aid (2)

HLED 302 From Host to Host: The Communicable Diseases (1)

HLED 320 Health Education in the Elementary Grades (2)

HLED 360 Scientific Foundations in Health (3)

HLED 360 Concepts in School Sex Education (2)

HLED 380 Psychosocial Concepts of Health (2)

HLED 390 Drug Use and Abuse (3)

HLED 399 Teaching about AIDS (1)

Eight credits chosen in consultation with advising coordinator.

24 hours

PHYSICAL EDUCATION MINOR

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

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in physical education, certification code "MB." The certification test

covering this field is #44, "Physical Education," and should be taken at the Completion of the program.

HLED 210 Standard American Red Cross First Aid (2)

PHED 200 Anatomy and Physiology (5)

PHED 204 Kinesiology (Mechanics of Movement) (3)

PHED 281 Motor Development (2)

PHED 300 Physiology of Exercise (4)

PHED 334 Adaptive Physical Education (3)

PHED 367 Methods and Materials in Physical Education (3)

Select at least four credits from the following courses:

PHED 150 Methods of Teaching Individual Sports (3)

PHED 151 Methods of Teaching Team Sports I (3)

PHED 152 Methods of Teaching Team Sports II (1)

PHED 153 Methods of Teaching Conditioning Activities (1)

24 hours

PHYSICAL EDUCATION MINOR FOR SPECIAL EDUCATION MAJORS

SPECIAL EDUCATION-ELEMENTARY AND
 SPECIAL EDUCATION-SECONDARY TEACHER
 CERTIFICATION (AVAILABLE ONLY TO SPECIAL
 EDUCATION MAJORS)

This program is intended for SPECIAL EDUCATION MAJORS interested in a teaching minor in adapted physical education. The minor in adapted physical education is designed for undergraduates who wish to complete the State of Michigan Approval for Teachers of Students with Disabilities. Because it is a minor, students are required to meet university requirements governing minors as well as the competencies in the Revised Administrative Rules for Special Education, July 1, 1987.

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in physical education, certification code "MB". The certification test covering this field is #44, Physical Education, and should be taken at the completion of the program.

PHED 200* Anatomy and Physiology (5)

PHED 281 Motor Behavior (3)

PHED 282 Perceptual-Motor Training (1)

PHED 334 Adaptive Physical Education (2)

- PHED 388 Assessment in Adaptive Physical Education (1)
 PHED 367 Curriculum and Methods in Physical Education (3)
 PHED 389 Sport and Activity for the Disabled (1)
 **PHED 490 Field Experience in Adaptive Physical Education (4)

Select at least 4 credits from the following courses:

- PHED 150 Methods of Teaching Individual Sports (3)
 PHED 151 Methods of Teaching Team Sports I (3)
 PHED 152 Methods of Teaching Team Sports II (1)
 PHED 153 Methods of Teaching Conditioning Activities (1)
 PHED 250 Methods of Teaching Aquatics (2)
 PHED 251 Methods of Teaching Gymnastics (2)
 PHED 350 Methods of Teaching Rhythmic Activities (1)
 PHED 351 Methods of Teaching Fundamental Movement and Movement Education (1)
 PHED 352 Methods of Teaching Elementary Physical Education (2)

**Majors in Physically and Otherwise Health Impaired (POHI) are exempt from this requirement. However, students must select an additional 6 credit hours of electives in consultation with the adapted physical education advisor.*

***This course is required for those students seeking the State of Michigan Approval as a Physical Education Teachers for Students with Disabilities.*

COACHING MINOR

This program is intended for students planning to pursue coaching as a full-or part-time activity. This is not a minor for prospective teachers. The Coaching Minor leads to PACE certification.

- ATHL 315 Psychology of Sports Competition (3)
 HLED 390 Drug Use and Abuse (3)
 PHED 200 Anatomy and Physiology (5)
 PHED 312 Athletic Training and Physiotherapy (2)
 PHED 421 Legal Aspects of Sport, Physical Education and Recreation (3)

Select a minimum of 4 hours from the following:

- ATHL 263 Theory of Coaching Football (2)
 ATHL 265 Theory of Coaching Baseball (2)
 ATHL 267 Theory of Coaching Basketball (2)
 ATHL 268 Theory of Coaching Swimming (2)
 ATHL 269 Theory of Coaching Track and Field (2)

Select a minimum of 3 hours from the following:

- ATHL 261 Techniques in Officiating I (2)
 ATHL 262 Techniques in Officiating II (2)
 PHED 305 Practical Concepts of Conditioning (2)
 PHED 316 Foundations of Coaching (2)
 PHED 389 Sport and Activity for the Disabled (2)
 PHED 405 Women in Sport (2)
 PHED 477-479 Special Topics (see adviser) (1-3)

23 hours

DANCE MINOR

Students planning admission to the dance minor must complete the following:

1. A technical assessment and audition into the program.
2. An application at 108 Warner Physical Education Building.
3. A course of study planned with a dance adviser.

- DANC 107 Rhythmic Analysis and Dance Accompaniment (3)
 DANC 245 Elements of Dance Composition (3)
 DANC 255 Dance Production (3)
 DANC 350 History of Dance (3)
 DANC 450 Advanced Dance Composition (4)
 DANC 455 Seminar in Dance (2)
 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-II (2)

24 hours

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 an excellent background for graduate programs in the school health and community health disciplines.

- HLED 210 Standard American RedCross First Aid (2)
 HLED 302 From Host to Host: The Communicable Diseases (1)
 HLED 320 Health Education in the Elementary Grades (2)
 HLED 350 Scientific Foundations in Health (3)
 HLED 360 Concepts in School Sex Education (2)
 HLED 380 Psychosocial Concepts of Health (2)
 HLED 390 Drug Use and Abuse (3)
 HLED 399 Teaching about AIDS (4-6)
 Eight credits chosen in consultation with advising coordinator.

24 hours

RECREATION AND PARK MANAGEMENT MINOR

1. Required Courses (16 hours)

- RECR 100 Introduction to Recreation and Leisure (2)
 RECR 200 Recreation for Persons with Disabilities (3)
 RECR 250/251/252/253 Fieldwork in Recreation (1 each)
 RECR 260 Recreation Leadership (3)
 RECR 360 Recreation Program Planning (3)
 RECR 460 Recreation and Park Planning (3)

2. Restricted Electives (5-6 hours)

Choose 5-6 credit hours from any of the following:

- RECR 271 Park Maintenance (3)
 RECR 280 Camping (2)
 RECR 285 Camping for Special Populations (2)
 RECR 290 Practical Research in Recreation (3)
 RECR 300 Principles of Therapeutic Recreation (3)
 RECR 321 Legal Issues in Recreation (3)
 RECR 361 Special Events (3)
 RECR 370 Facility Design and Management (3)
 RECR 390 Outdoor Recreation (3)
 RECR 400 Processes and Services in Therapeutic Recreation (3)
 RECR 430 Issues in Therapeutic Recreation (3)
 RECR 450 Park Planning and Design (3)
 RECR 465 Park Management (3)
 RECR 477/478/479 Special Topics (1/2/3)
 PHED 389 Sport and Activity for the Disabled (1)

24 hours

ACTIVITY COURSES FOR GENERAL STUDENTS

The physical education activity requirement is explained on page 40 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 PEGN 119 Women's Gymnastics and PEGN 122 Men's Gymnastics I.

	Sem hours
PEGN 101 Weight Control and Fitness	2
PEGN 102 Aerobic Dance	1
PEGN 103 Couple, Square, and Ballroom Dancing ...	1
PEGN 108 Basketball	1
PEGN 109 Jishukan Jujitsu	1
PEGN 111 Volleyball	1
PEGN 117 Synchronized Swimming	1
PEGN 119 Women's Gymnastics	1
PEGN 120 Modern Rhythmic Gymnastics	1
PEGN 121 Orienteering	1
PEGN 122 Men's Gymnastics I	1
PEGN 126 Conditioning Activities	1
PEGN 128 Judo	1
PEGN 130 Assault and Rape Prevention	1
PEGN 135 Softball	1
PEGN 140 Marching Band	1
PEGN 141 Adaptive Activities	1
PEGN 142 Racquetball and Paddleball	1
PEGN 143 Fencing	1
PEGN 144 Trap and Skeet Shooting	1
PEGN 145 Cross Country Skiing	1
PEGN 146 Beginning Snow Skiing	1
PEGN 147 Archery	1
PEGN 148 Tennis	1
PEGN 149 Badminton	1
PEGN 150 Golf	1
PEGN 151 Bowling	1
PEGN 152 Sailing	1
PEGN 153 Swimming	1
PEGN 155 Jazz I	1
PEGN 156 Canoeing	1
PEGN 158 Folk Dancing	1
PEGN 159 Tap Dancing	1
PEGN 160 Ballet	1
PEGN 161 Modern Dance	1
PEGN 177/178/179 Special Topics	1/2/3

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.

Intermediate	Sem hours
PEGN 208 Basketball	1
PEGN 209 Intermediate Jishukan Jujitsu	1
PEGN 211 Volleyball	1
PEGN 219 Intermediate Apparatus	1
PEGN 221 Cycling	1
PEGN 222 Men's Gymnastics II	1
PEGN 224 Jogging	1
PEGN 225 Intermediate Golf	1
PEGN 226 Weight Training	1
PEGN 228 Intermediate Badminton	1
PEGN 243 Intermediate Fencing	1
PEGN 244 Recreational Shooting and Hunting Safety	1
PEGN 248 Intermediate Tennis	1
PEGN 253 Intermediate Swimming	1
PEGN 254 Diving Techniques and Competitive Swimming	1
PEGN 255 Jazz II	1
PEGN 258 Intermediate Folk Dancing	1
PEGN 260 Intermediate Ballet	1
PEGN 261 Intermediate Modern Dance	1
PEGN 277/278/279 Special Topics	1/2/3
PEGN 316 Intermediate Tumbling and Floor Exercise—Women	1
PEGN 333 American Red Cross Lifeguard Training	2

Advanced

PEGN 220 Varsity Rifle Team	1
PEGN 229 Varsity Soccer	1
PEGN 230 Varsity Cross Country	1
PEGN 231 Varsity Football	1
PEGN 232 Varsity Basketball	1
PEGN 233 Varsity Swimming	1
PEGN 234 Varsity Gymnastics	1
PEGN 235 Varsity Wrestling	1
PEGN 236 Varsity Track	1
PEGN 237 Varsity Baseball	1
PEGN 238 Varsity Golf	1

PEGN 239 Varsity Tennis	1
PEGN 240 Varsity Volleyball	1
PEGN 241 Varsity Field Hockey	1
PEGN 242 Varsity Softball	1
PEGN 245 Precision Drill Team	1
PEGN 309 Jishukan Jujitsu—Sankyu Brown Belt....	1
PEGN 321 Backpacking	1
PEGN 324 Long Distance Running	1
PEGN 348 Basic Scuba Diving	2
PEGN 353 American Red Cross Lifeguard Training ..	2
PEGN 377/378/379 Special Topics	1/2/3
PEGN 453 Water Safety Instructor—ARC	2
PEGN 477/478/479 Special Topics	1/2/3

ATHLETIC COURSES

ATHL 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ATHL 220 Remedial Exercises and Therapeutic

Modalities. 3 hrs

A study of the principles of applications, physiological effects, indications and contraindications of all commonly used therapeutic modalities and therapeutic exercise methods used in athletic training.

Prereq: SPMD 219.

ATHL 250 Techniques of Officiating Volleyball. 1 hr

The proper techniques and mechanics of officiating volleyball taught through class presentations and practical experiences. Rules interpretation and application, positioning, scoring, verbal and hand signals and the responsibilities of an official. Students may become registered volleyball officials with the Michigan High School Athletic Association.

ATHL 251 Techniques of Officiating Basketball. 1 hr

The proper techniques and mechanics of officiating basketball taught through class presentations and practical experience. Floor positions, signals, interpretation and application of rules, officials' duties and the psychology of officiating. For students interested in pursuing job opportunities in officiating basketball, as well as coaches and teachers. Lecture and laboratory sessions.

ATHL 252 Techniques of Officiating Softball. 1 hr
Proper mechanics and techniques of officiating softball. Rules interpretation and application, positioning, scoring, verbal and hand signals, and the duties of an official. Students may also become registered softball officials with the Michigan High School Athletic Association. Lecture and laboratory sessions.

ATHL 261 Techniques of Officiating I. 2 hrs
An elective course offered to men and women students interested in pursuing officiating as an avocation or as an integral part of a coaching background. The course covers football and men's and women's basketball. Registration with the Michigan High School Athletic Association will be available.

ATHL 262 Techniques of Officiating II. 2 hrs
An elective course offered to men and women students who are interested in pursuing officiating as an avocation. The course would also be valuable to those students who are interested in coaching as the coach-official relationship is a valuable tool in one's coaching background. The sports covered are: track and field, baseball, and softball. There will be a practical phase as well as a lecture phase of instruction.

ATHL 263 Theory of Football. 2 hrs
Lecture course covering the basic fundamentals and styles of offensive and defensive football.

ATHL 265 Theory of Baseball. 2 hrs
The fundamental skills and strategy of baseball for the prospective teacher and coach.

ATHL 267 Theory of Basketball. 2 hrs
Lecture course covering the basic fundamentals and styles of offensive and defensive basketball.

ATHL 268 Theory of Coaching Swimming. 2 hrs
ATHL 268 is a lecture course for anyone who might coach swimming. The topics covered are stroke technique, applied physiology, strength and flexibility training, rules, and how these components contribute to a daily, weekly, and seasonal training plan.

ATHL 269 Theory of Track and Field. 2 hrs
The fundamental techniques for coaching and administering programs of track and field for the prospective teacher and coach.

ATHL 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

ATHL 317 Theory of Coaching Individual Sports for Women. 2 hrs
Coordinates, correlates and supplements skills and information already conveyed in badminton, golf, tennis, and archery activity classes. Place of individual sports in the school intramural and interschool programs, lesson plans, unit plans, techniques and strategies of advanced play, organization of a large class, evaluation of current literature pertinent to each activity.

ATHL 318 Theory of Coaching and Teaching Women's Team Sports. 2 hrs
Coordinates, correlates and supplements skills and coaching techniques introduced in activity courses. Field sports, volleyball and basketball.

ATHL 377/378/379 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

DANCE COURSES

DANC 106 Introduction to the Performing Arts. 3 hrs
A survey of the arts of dance, theatre, and music; developing an understanding and appreciation of representative works in the three fields. The place of these arts in contemporary society and their contribution to a richer life. Attendance required at specific on campus performances.

DANC 107 Rhythmic Analysis and Dance Accompaniment. 3 hrs
The study of rhythm, sound and music literature as related to the teaching and performing of dance. Assigned listening experiences and designated explorations of pertinent elements of music.

DANC 108 Classical Ballet Technique I. 2 hrs
Theory and technique of beginning classical ballet.
Prereq: Dance major/minor, DANC 107 or equivalent, and/or permission.

- DANC 109 Classical Ballet Technique II.** 2 hrs
A continuation of the theory and technique of beginning classical ballet.
Prereq: Dance major/minor, DANC 108 or equivalent, and/or permission.
- DANC 110 Modern Dance I.** 2 hrs
The course is designed as an introduction to the technique of modern dance. The course will include beginning-level skills, modern dance terminology, and the history and combinations of variety of modern dance techniques.
- DANC 111 Modern Dance II.** 2 hrs
A continuation of the theory and technique of DANC 110.
Prereq: DANC 110.
- DANC 177/178/179 Special Topics.** 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.
- DANC 208 Classical Ballet Technique III.** 3 hrs
Theory and technique of intermediate classical ballet.
Prereq: Dance major/minor, DANC 109 or equivalent, and/or permission.
- DANC 209 Classical Ballet Technique IV.** 3 hrs
A continuation of the theory and technique of advanced and intermediate classical ballet.
Prereq: Dance major/minor, DANC 208 or equivalent, and/or permission.
- DANC 210 Modern Dance Technique III.** 3 hrs
A continuation of DANC 111.
Prereq: DANC 111.
- DANC 211 Modern Dance Technique IV.** 3 hrs
A continuation of DANC 210.
Prereq: DANC 210.
- DANC 231 Service Teaching.** 1 hr
- DANC 233 Service Teaching.** 1 hr
- DANC 331 Service Teaching.** 1 hr
- DANC 333 Service Teaching.** 1 hr
- DANC 245 Elements of Dance Composition.** 3 hrs
An introduction to the fundamentals of choreography, including the use of improvisation and the development of compositions. Exploration and manipulation of the elements of dance.
Prereq: DANC 110.
- DANC 255 Dance Production.** 3 hrs
A study of the fundamentals of dance production including publicity, planning and organization, set design and construction, stage lighting, sound effects, recording, costuming and stage makeup. Laboratory projects coordinated with dance productions.
- DANC 277/278/279 Special Topics.** 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.
- DANC 350 History of Dance.** 3 hrs
A lecture and reference course covering the history, philosophy and theory of dance from primitive man to modern man, including the social and educational implications of dance today.
- DANC 354 Methods and Materials in Teaching of Dance.** 3 hrs
A study of the methods and the use of materials in the teaching of dance idioms K-12. Modes and models that facilitate learning, lesson planning and vertical progression. Experiences in teaching and field observations.
- DANC 355 Labanotation.** 3 hrs
A study of the basic elements of Labanotation with special emphasis on the analysis of dance movements. The course will also include the development of skills necessary to record movement and read notation.
Prereq: DANC 110, DANC 245
- DANC 377/378/379 Special Topics.** 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.
- DANC 450 Advanced Dance Composition.** 4 hrs
An extension of the principles explored in DANC 245 with emphasis on structural development and experiences in the use of thematic materials, selected dance

idioms, multimedia resources and group choreography. A choreographic work will be required of students.

Prereq: DANC 107 and DANC 211.

DANC 455 Seminar in Dance. 2 hrs

Current literature and dance research, trends in dance education and developments in contemporary concert dance. Lecture-discussion.

Prereq: DANC 350, DANC 450, or department permission.

DANC 456 Creative Dance for Children. 2 hrs

Goals, concepts, materials and experiences to teach children's creative dance.

DANC 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

DANC 497/498/499 Independent Study. 1/2/3 hrs

An opportunity for directed study in areas not provided in other course offerings, or greater depth of study in areas in which the student has a continuing interest. Students will be assigned to selected faculty members for direction, consultation and evaluation of the completed study or project. Open only to department majors and minors who have attained junior standing, with a grade point average of 3.0 or above and who have completed the appropriate background courses.

Prereq: Department permission.

HEALTH COURSES

HLED 110 Introduction to Safety Education. 2 hrs

An orientation of the field of safety education with emphasis on the safety movement, accident causation, school safety programs, and the application of the principles of accident prevention to selected areas of safety.

HLED 120 Healthful Living. 3 hrs

Develops in students the responsibility for guiding and evaluating their own health. Acquisition of attitudes, habits, skills, and ideas favorable to efficient and healthful living. Material and information concerning mental, physical, and social well-being. Group discussion, lectures, instructional aids.

HLED 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

HLED 210 Standard American Red Cross First Aid. 2 hrs

For all students interested in accident prevention and in the development of the knowledge and skills essential for the immediate care of the suddenly ill or injured. Readings, lectures, and practical work. Certificates for Standard First Aid and for Cardiopulmonary Resuscitation are awarded upon successful completion of the requirements for each.

HLED 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

HLED 301 Drinking, Drunkenness, and Alcoholism. 1 hr

Alcoholic beverages, effects of alcohol on the human body, drinking patterns, alcoholism, alcoholism and the family, and treatment and rehabilitation of the alcoholic. A lecture-discussion course intended to meet the personal needs of students and/or the professional needs of students who may deal with alcohol-related problems.

HLED 302 From Host to Host: The Communicable Diseases. 1 hr

Various types of communicable diseases—childhood and young adulthood, skin, upper respiratory, gastrointestinal, and sexually transmitted—their causes, modes of transmission, signs and symptoms, treatment, complications, and means of control. Lectures, discussions, readings, and audiovisual materials.

HLED 310 Advanced First Aid and Emergency Care. 3 hrs

Designed for the sports medicine major. At the completion of this course, the student should have developed the functional first aid capabilities required of police officers, firefighters, emergency squad members, ambulance attendants, and others who, as part of their daily routines, may be required to provide the initial emergency care necessary to sustain life and to maintain life support until the victims of accidents or sudden illness are cared for by qualified medical personnel.

Prereq: HLED 210 or current Red Cross certification in First Aid.

HLED 320 Health Education in the Elementary Grades.

2 hrs

For students preparing to teach primary and intermediate grades. Health observation of school children, survey of environmental conditions and other methods of determining the health needs of the child. The application of educational principles in health instruction. Evaluation of the newer courses in health education.

Prereq: Sophomore standing.

HLED 330 Health Work in the Schools.

2 hrs

Scientific facts and current issues, practices and trends in school health programs at the secondary level. Methods and materials of health instruction.

Prereq: Sophomore standing.

HLED 350 Scientific Foundations in Health.

3 hrs

Basic instruction in the physiological and anatomical concepts related to the health of the human organism.

HLED 360 Concepts in School Sex Education.

2 hrs

The concepts of sex education as they apply to the school setting. A study of the biological, sociological, and psychological foundations of sex education and the methods and materials for use in presenting sex education in schools.

HLED 377/378/379 Special Topics.

1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

HLED 380 Psychosocial Concepts of Health.

2 hrs

Mental and social factors as they affect the health of the human being. An exploration of all health concepts and correlation of the mental and social phenomena with the physiological principles presented in HLED 350.

HLED 390 Drug Use and Abuse.

3 hrs

Alcohol and other drug use and abuse. Historical perspectives of current problems, pharmacology of drugs commonly used and abused, physiological and psychosocial factors related to abuse, drug problems of special populations, alcohol and other drug abuse prevention, treatment and rehabilitation, drugs and the law.

HLED 399 Teaching about AIDS.

1 hr

A course for prospective teachers, nurses, or others who want to examine the issues pertaining to teaching about

AIDS prevention. Includes curriculum, methods, and resources.

Prereq: One course in AIDS or department permission.

HLED 402 Selecting Health Products and Services.

3 hrs

The development of skills in making wise selections of health products and services. Characteristics of the health consumer, consumer protection agencies and laws, quackery, evaluation of health products and services.

Prereq: Sophomore standing.

HLED 410 Drug Overdose Aid.

2 hrs

Outlined by the American Red Cross. Lectures, textbook and practical application of first aid skills and overdose aid skills to give immediate, temporary help in cases of accidents involving drugs. Listening, feedback, and communication skills; limited field experience or its equivalent. Certification in Multi-Media First Aid, Cardiopulmonary Resuscitation, and Overdose Aid is awarded upon successful completion of the course.

HLED 420 Health and Aging.

3 hrs

A study of some of the major physiological aspects of aging. A review of the basic systemic anatomy and physiology necessary to understand the major aspects of biological aging and the chronic diseases associated with aging. For the general student.

Prereq: Sophomore standing.

HLED 430 Community Health Resources.

2 hrs

Community health programs and resources as they apply to the school health program.

Prereq: HLED 320.

HLED 477/478/479 Special Topics.

1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

PHYSICAL EDUCATION COURSES**PHED 150 Methods of Teaching Individual Sports.**

3 hrs

A required class for physical education majors/minors who are preparing to teach individual sports in the elementary and secondary schools. Instruction in the teaching, performance, analysis, and evaluation of selected fundamental badminton, golf, and tennis skills.

PHED 151 Methods of Teaching Team Sports I. 3 hrs
A required class for physical education majors/minors who are preparing to teach in elementary and secondary schools. Instruction in the teaching, performance, analysis, and evaluation of fundamental basketball, softball, and volleyball skills will be presented.

PHED 152 Methods of Teaching Team Sports II. 1 hr
A required class for physical education majors/minors who are preparing to teach in elementary and secondary schools. Instruction will focus on performance, analysis, methods of teaching and evaluation of skills utilized in soccer, team handball, and nontraditional activities.

PHED 153 Methods of Teaching Conditioning Activities. 1 hr
A required class for physical education majors/minors who are preparing to teach in elementary and secondary schools. Instruction will focus on performance, analysis, methods of teaching, and evaluating conditioning activities to increase physical fitness.

PHED 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

PHED 204 Kinesiology (Mechanics of Movement). 3 hrs
A required class for sports medicine and physical education majors/minors to scientifically analyze the techniques involved in the performance of human movement skills.
Prereq: SPMD 200.

PHED 209 Bio-Fitness. 2 hrs
Individual biological needs and how those needs are related to daily habits. Students will complete an individual fitness profile that will be the basis for understanding how desirable changes in fitness are achieved.

PHED 210 Lifetime Wellness and Fitness. 2 hrs
A lecture course covering the essential elements of wellness and fitness. This course is geared toward entering freshmen and is a graduation requirement.
Prereq: Honors student.

PHED 231 Service Teaching. 1 hr

PHED 232 Service Teaching. 1 hr

PHED 240 History and Philosophy of Physical Education. 2 hrs
A lecture and reference course covering the history and philosophy of physical education and play and how they have influenced the social structure of the various countries and their educational implications.

PHED 250 Methods of Teaching Aquatics. 2 hrs
A required course for physical education majors/minors. Aquatics covers the teaching of the four competitive swimming strokes; front crawl, back crawl, breast stroke, and butterfly. In addition, lifesaving strokes, side stroke, and elementary backstroke are studied to prepare students to teach swimming in physical education classes.

PHED 251 Methods of Teaching Gymnastics. 3 hrs
A required class for physical education majors/minors who are preparing to teach in elementary and secondary schools. Instruction in the teaching, performance, analysis, and evaluation of fundamental gymnastics skills will be presented.

PHED 257 Physical Education for the Classroom Teacher. 2 hrs
A methods and materials course in which the prospective classroom teacher gains knowledge in organizing and implementing a physical education program. Not intended for students majoring in physical education.

PHED 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

PHED 281 Motor Behavior. 2 hrs
A required course for physical education majors and minors. Instruction will focus on principles of motor development, with implications for learning gross motor skills. Consideration of the factors associated with individual differences in attaining motor proficiency during childhood and adolescence will be examined.

PHED 282 Perceptual-Motor Training. 1 hr
Planning and effecting gross motor activity programs for students with neurological dysfunction. Assessment procedures and activity sequences. Supervised field experiences required.

PHED 287 Cooperative Education. 3 hrs

One semester of supervised work in concentration area. An evaluation is required at the end of the employment period.

Prereq: Nine credit hours in concentration, approval by Cooperative Education Office, and department permission.

PHED 300 Physiology of Exercise. 4 hrs

A lecture/laboratory course concerned with human responses and adaptations to muscular activity. The enhancement of health and physical fitness for the general population, optimizing performance in the various types and levels of competitive athletics.

Prereq: SPMD 200.

PHED 304 Microcomputer Applications in HPERD.

2 hrs

The course provides a basic overview of how the microcomputer can be integrated into the physical education, recreation, health, dance, and sports medicine programs. Through the use of lecture/demonstrations and hands-on activities, participants use and evaluate a variety of software applicable to school and nonschool settings.

PHED 305 Practical Concepts of Conditioning. 2 hrs

A practical experience in applying the concepts and theories of conditioning to in-class situations as well as coaching. Programs such as interval training will be designed and experienced by the student for use in a particular situation.

PHED 310 Physiology of Human Performance. 2 hrs

Environmental physiology (heat stress, altitude, and underwater physiology) as it relates to physical education; exercise metabolism as it relates to training techniques for endurance, strength, speed, weight control, and physical fitness; physiological and structural sex differences as they relate to physical education; special aids to performance.

Prereq: SPMD 200.

PHED 312 Athletic Training and Physiotherapy. 2 hrs

For prospective coaches and physical educators. Principles and skills of athletic training and physiotherapy. Lectures, demonstration, and practice of massaging, bandaging, taping, and therapeutic measures as applied in athletic activities and injuries.

Prereq: SPMD 200.

PHED 316 Foundations of Coaching. 2 hrs

Practical and scientific information necessary for the implementation of a successful coaching program.

PHED 331 Service Teaching. 1 hr**PHED 332 Service Teaching. 1 hr****PHED 334 Adaptive Physical Education. 2 hrs**

A lecture and participation course covering the philosophy and goals of adaptive physical education, the relationship of adaptive physical education to the general physical education program, the needs and characteristics of the students with disabilities, and the designing of exemplary adapted physical education programs. Supervised fieldwork required.

PHED 350 Methods of Teaching Rhythmic Activities.

1 hr

A required class for physical education majors who are preparing to teach in elementary and secondary schools. Instruction will focus on the teaching, performance, analysis, and evaluation of fundamental rhythmic and dance skills.

PHED 351 Methods of Teaching Fundamental Movement and Movement Education. 1 hr

A required class for physical education majors who are preparing to teach in elementary and secondary schools. Instruction will focus on the teaching, performance, analysis, and evaluation of fundamental movement skills.

Prereq: PHED 281.

PHED 352 Methods of Teaching Elementary Physical Education. 2 hrs

A required course for physical education majors who are preparing to teach and direct physical education experiences for elementary school children. The course focuses on theory and practical experience in physical education in the elementary school. It presents a variety of activities and teaching styles needed to meet the needs of children in the elementary school years.

Prereq: PHED 351.

PHED 353 American Red Cross Lifeguarding. 3 hrs

American Red Cross (A.C.R.) This course covers C.P.R. for the professional rescuer (C.P.R.- P.R.), first aid, and in-water rescue skills. A.R.C. lifeguarding certificates are awarded upon successful course completion.

PHED 367 Methods and Materials in Physical Education. 3 hrs

Methods and use of materials in the teaching of activities in the elementary and secondary grades. Unit and lesson planning, classroom management, audiovisual aids. Observations of physical education classes at different levels required. Entry into College of Education required.

PHED 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

PHED 384 Physical Education for the Visually and Hearing Impaired. 1 hr

Planning and effecting physical education programs for visually and hearing impaired students. Adaptations, teaching strategies, and activity sequences. Supervised field experiences required.

Prereq: PHED 281 or PHED 334.

PHED 385 Special Olympics. 3 hrs

Planning and effecting Special Olympics participation for mentally impaired students. Task analysis, organization, instructional techniques, and program content. Supervised field experiences required.

Prereq: PHED 386 and either PHED 281 or PHED 334.

PHED 386 Physical Education for the Mentally Impaired. 1 hr

Planning and effecting physical education programs for trainable and severely mentally impaired students. Assessment procedures, teaching strategies, and activity sequences. Supervised field experiences required.

Prereq: PHED 281 or PHED 334.

PHED 387 Cooperative Education. 3 hrs

One semester of supervised work in concentration area. An evaluation is required at the end of the employment period.

Prereq: Nine credit hours in concentration, approval by Cooperative Education Office, and department permission.

PHED 388 Assessment in Adaptive Physical Education. 1 hr

A study of the process of assessing gross motor functioning of students who exhibit a variety of disabilities. Investigation of the legislative mandates requiring as-

essment and application of the latest assessment instruments for students with disabilities. Fieldwork required.

Prereq: PHED 334.

PHED 389 Sport and Activity for the Disabled. 1 hr

A course designed to investigate sports organizations that serve people with disabilities. Topics to be explored include the role of the United States Olympic Committee, Group E members of the USOC and Committee on Sports for the Disabled, classification of athletes for competition, role of the National Governing Bodies in promoting sports, and ways people with disabilities can access sports and noncompetitive opportunities.

PHED 405 Women in Sports. 3 hrs

Patterns, problems, and conditions associated with women's sports involvement in selected world cultures; the sportswoman in American society.

PHED 421 Legal Aspects of Sport, Physical Education, and Recreation. 2 hrs

Individual rights, due process, selected legal concepts and principles, liability, safe environments, risk management, contracts, insurance, and other selected topics.

Prereq: Senior standing.

PHED 440 Tests and Measurements in Physical Education. 2 hrs

The discriminating selection, administration, interpretation, and use of standardized tests and measurements in physical education. Entry into College of Education required.

PHED 441 Organization and Administration of Physical Education. 3 hrs

Principles and objectives in physical education in the light of the needs, interests, and characteristics of public school students. Principles of organization and administration of programs in departments, classes, clubs, intramurals, athletics, and leadership. Functional construction of gymnasiums, swimming pools, athletic fields, and various facilities.

Prereq: Junior or senior standing.

PHED 453 American Red Cross Water Safety and Lifeguard Instructor 3 hrs

This course offers students American Red Cross (A.R.C.) Certification in instructor candidate training, (I.C.T.) water safety instructor (W.S.I.), lifeguarding instructor

(L.G.I.), waterfront lifeguarding instructor (W.F.I.), and head lifeguarding instructor (H.G.I.). Demonstration; explanation, analysis, practice of teaching skills, use of manuals and videos are used to implement the course content.

PHED 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

PHED 481 Adaptive Aquatics. 2 hrs

Aquatic instructional techniques in working with special populations including physically disabled, developmentally disabled, and the aging. Lectures, films, swimming skills, adaptations of swimming skills, and 20 hours of fieldwork experience. Students with current WSI who meet course requirements will receive Adaptive Aquatics Instructor certification. Students with no WSI but who meet course requirements will receive Adaptive Aquatics Aide certification.

PHED 487 Cooperative Education. 3 hrs

One semester of supervised work in concentration area. An evaluation is required at the end of the employment period.

Prereq: Nine credit hours in concentration, approval by Cooperative Education Office, and department permission.

PHED 490 Field Experience in Adaptive Physical Education. 4 hrs

Required course for "teachers of physical education for handicapped individuals; approval." A directed 15-week field experience in teaching physical education to handicapped persons in a school setting.

Prereq: Department permission.

PHED 495 Senior Seminar. 2 hrs

A synthesis of educational theories presented in the undergraduate physical education program and the student teaching experience.

PHED 496 Youth Sports Program. 2 hrs

Development of professional leadership skills for the expanding nonschool community sports programs.

PHED 497/498/499 Independent Study. 1/2/3 hrs

Directed study in areas not covered in other course offerings, or greater depth of study in areas in which the

student has a continuing interest. Students will be assigned to selected faculty members for direction, consultation, and evaluation of the completed study or project. Open only to department majors and minors who have attained junior standing, with a grade point average of 3.0 or above, and who have completed the appropriate background courses.

Prereq: Department permission.

PHYSICAL EDUCATION MAJOR COURSES

PEMJ 177/178/179 Special Topics	1/2/3
PEMJ 234 Field Hockey	1
PEMJ 236 Intermediate Volleyball	1
PEMJ 238 International and Ethnic Games	1
PEMJ 277/278/279 Special Topics	1/2/3
PEMJ 320 Dance Workshop	1
PEMJ 322 Dance Workshop	1
PEMJ 377/378/379 Special Topics	1/2/3
PEMJ 422 Dance Workshop	1
PEMJ 423 Dance Workshop	1
PEMJ 477/478/479 Special Topics	1/2/3

THERAPEUTIC RECREATION COURSES

RECR 100 Introduction to Recreation and Leisure. 3 hrs

A basic overview of the fields of recreation and leisure service delivery for the major student. Emphasizes the broad aspects of recreation and leisure as they relate to the delivery of human services. Includes history, philosophy, trends, and job opportunities. Lecture, discussion, film, and speakers from the field.

RECR 165 Leisure Lifestyles. 3 hrs

An introduction to leisure lifestyles as related to oneself and how leisure behavior relates to an individual's work, education, economy, ethnic beliefs, and values. The course involves individual leisure awareness, choices, goals, and strategies to assist in creating a quality and fulfilling life. Lecture, discussion, evaluation techniques, and self-exploration. Helpful for majors in any discipline.

RECR 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

RECR 180 Activity Analysis and Adaption. 2 hrs

Develops the skills necessary to analyze activities to find inherent characteristics that contribute to program objectives for special populations. Components of activity analysis (physical, cognitive, affective, and social/interactional skills) are studied in detail. Lecture, discussion, and experiential learning.

RECR 200 Recreation for Persons with Disabilities.**3 hrs**

An overview of therapeutic recreation relative to physically disabled, mentally impaired, emotionally impaired, socially deviant, the aged, and chemically dependent within clinical, outpatient, and community settings. Lecture, discussion, film, readings, and 20 hours of fieldwork experience.

RECR 210 Camping for Special Populations. 2 hrs

This course will provide practical experience for the student interested in working as a counselor at a camp for special populations. It will also provide experience in setting up a camp since the student will be responsible for the development of all materials and programming for a weekend camp.

Prereq: RECR 200 or SPGN 251.

RECR 250/251/252/253 Fieldwork in Recreation/**Therapeutic Recreation.****1 hr each**

An introductory course in fieldwork. Students select a site for recreation leadership within a community or clinical setting. Students spend 60 hours on-site and participate in five classroom meetings.

RECR 260 Recreation Leadership. 3 hrs

Methods and techniques of group and individual leadership skills at three levels: direct face-to-face leadership, supervision, and management. An overview of conceptual and theoretical components of the leadership process; practical application of various leadership methods and procedures in a cross section of leisure service settings. Lectures, discussion, and experiential learning.

RECR 271 Park Maintenance. 3 hrs

Principles, practices, and techniques of maintenance and management of outdoor recreation areas and facilities. Resource maintenance and management; maintenance and depreciation of equipment; personnel practices in maintenance; safety practices, legal issues; and public relations. Lecture, speakers, park visitations, and projects.

Prereq: RECR 100 or department permission.

RECR 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

RECR 280 Camping. 2 hrs

History of organized camping; camping on federal and state recreation areas; information sources for camping; planning and preparation (equipment, clothing, meals, camp schedules, and camp programs). Skills areas for camping: map and compass, ropes and knot-tying, campfire construction, camp tool use and maintenance, tents. Safety reviewed for meal preparation, use of tools, and toxic plants and animals. Lecture, demonstrations, and student participation in a weekend camping trip.

RECR 300 Principles of Therapeutic Recreation. 3 hrs

Leadership, assessment, adaption, and programming techniques to meet the leisure needs of special populations in today's society. Task analysis, facilitation techniques, leisure counseling, programming, and adaptation of specific activities. Lecture, experiential participation, and 30 hours of community fieldwork.

Prereq: RECR 200 or RECR 260.

RECR 310 Leisure and the Older Adult. 3 hrs

Interdisciplinary approach for working with older persons through physical activities, socialization, drama, music, dance, fitness, and facilitation techniques. Aspects of aging, concepts of leadership and individualized programming are studied and then experienced through activities at senior centers and long-term care facilities. Lecture, group assignments, and experiential participation.

RECR 320 Leisure Education. 3 hrs

Concepts and techniques of leisure education for use with all populations. Leisure awareness, social interaction skills, leisure activity skills, and leisure resources. Educates the student as a provider of leisure services. Lecture, speakers, readings, and participation.

RECR 330 Therapeutic Recreation: Substance Abuse.**3 hrs**

The use of leisure and recreation in the prevention and/or rehabilitation of chemical dependency. Skill development in areas of leisure education, group dynamics, facilitation techniques, communication, values clarification.

tion, decision-making, games and sports, new games, socialization and outdoor/nature techniques, and family leisure education. Lectures, discussions, and experiential learning.

Prereq: RECR 200.

RECR 340 Techniques in Therapeutic Recreation.

3 hrs

Introduction to specific techniques used in therapeutic recreation, including counseling theory, psychotherapies, medical terminology, and transfers and lifts. Lecture, speakers, assessments, and 30 hours of fieldwork.

Prereq: RECR 200.

RECR 360 Recreation Program Planning. 3 hrs

Learning to plan and deliver leisure experiences to an individual or group of individuals. Use of systematic way of identifying, developing, implementing, evaluating, and revising programs to meet people's leisure needs and interests. Plan individual programs. Lecture, speakers, projects.

Prereq: RECR 260.

RECR 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

RECR 390 Outdoor Recreation. 3 hrs

History of outdoor recreation and outdoor recreation management. A systems view of outdoor recreation resources; federal, state, and local agencies that provide outdoor recreation opportunities; their history and management philosophies and problems. Tools utilized by managers of outdoor recreation resources to provide opportunities for recreation. Lecture, speakers, projects.

RECR 400 Therapeutic Recreation Processes and Services. 3 hrs

The philosophical and theoretical premises on which program design is developed; sequential development components of program design, implementation and evaluation; specific management concerns that are crucial to the effective operation and evaluation of systems-designed therapeutic recreation programs. Lectures, study of ongoing programs, and assessment through role-playing.

Prereq: RECR 200, RECR 300, RECR 340; or department permission.

RECR 410 Professional Preparation. 1 hr

Involves self-appraisal as a recreation professional; professional ethics; writing practicum and career goals; developing a chronological and functional résumé; writing letter of inquiry and cover letter; information on job placement within recreation services; NRPA registration/certification; applying for graduate school; and the job interview process. Lecture, self-appraisal, formal videotaped interview with a recreation professional.

RECR 430 Issues in Therapeutic Recreation. 3 hrs

This required course is designed for the senior therapeutic recreation major. Students will gain an awareness of the current issues impacting the practice of therapeutic recreation.

Prereq: RECR 200, RECR 300, RECR 400.

RECR 449 Therapeutic Recreation Practicum. 8 hrs

A full-time, 15-week, 600-hour experience in an approved hospital, outpatient, or community setting under direction of a certified therapeutic recreation specialist and University supervisor. Leadership, supervisory, and administrative experience of a practical nature.

Prereq: Candidate status for a minimum of one semester prior to application for practicum; completion of 90 percent of all academic courses including RECR 100, RECR 200, RECR 250, RECR 260, RECR 300, RECR 340, RECR 360, RECR 400, RECR 460, and RECR; completion of 250 hours of fieldwork; grade point average of 2.50 overall and 2.75 in all major classes.

RECR 450 Park Planning and Design. 3 hrs

Overview of history of park planning and design; scope of park planning, types of park plans; planning processes, systems, and site-level planning; work program design; use of consultants; sources for planning; recreation standards; analysis of supply and demand for recreation and open space; site analysis; use area relationships; and site plan development and interpretation. Lab: maps and aerial photos, drawing and perspective; computer drawing; site analysis and design. Lecture, projects, field trips.

Prereq: RECR 100.

RECR 460 Park and Recreation Administration. 3 hrs

Influence of organizational thought as related to park and recreation agencies. Organizational structures of park and recreation agencies, budgeting, management by objectives, public and private financial sources,

volunteerism, marketing of park and recreation resources, pricing services and products, and administrative responsibility and ethics. Lectures, speakers, projects.

Prereq: RECR 100, RECR 260, RECR 360, or permission.

RECR 465 Park and Recreation Management. 3 hrs

Use of systems approach to agency management; nature of a problem and problem-solving model; use of public input in management decision-making; role of research in managing recreation services; personnel management practices; and basic legal issues. Lecture, speakers, projects.

Prereq: RECR 100, RECR 260, RECR 360, or permission.

RECR 471 Contemporary Issues in Recreation. 3 hrs

This course is to familiarize the recreation and park management student with vital issues that practicing professionals are facing on a daily basis. The class will utilize a seminar format with each session focusing on a single issue. A wide range of leading authorities in the field will present from their perspective followed by an in-depth discussion session on how this topic impacts the future professional.

Prereq: RECR 100, RECR 260, RECR 360, RECR 460.

RECR 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

RECR 481 Adaptive Aquatics. 2 hrs

Aquatic instructional techniques in working with special populations including physically disabled, developmentally disabled, emotionally impaired, and the aged. Lectures, films, swimming skills, adaptations of swimming skills, and 20 hours of fieldwork.

RECR 489 Recreation Practicum. 8 hrs

A full time, 15 week, 600-hour experience in a leisure services setting under a qualified recreation/leisure specialist and University supervisor.

Prereq: Completion of 90 percent of all academic courses including RECR 100, RECR 200, RECR 250, RECR 260, RECR 360, RECR 460, and RECR 465; completion of 250 hours of fieldwork. Overall grade point average of

2.5 and GPA of 2.75 in recreation and park management required and elective courses.

RECR 497/498/499 Independent Study. 1/2/3 hrs

An opportunity for directed study in areas not covered in other course offerings, or greater in-depth of study in areas of continued interest for the student. Students will be assigned to selected faculty members for direction, consultation, and evaluation of the completed study or project. Open only to department majors and minors who have attained junior standing, with a grade point average of 3.0 or above and who have completed the appropriate background courses.

SPORTS MEDICINE COURSES

SPMD 119 Orientation to Sports Medicine. 1 hr

A class for students interested in sports medicine. An introductory course to orient students to the specialized major areas of athletic training and exercise science.

SPMD 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPMD 200 Anatomy and Physiology. 6 hrs

Required lecture course for Sports Medicine Majors which examines the structure and function of the human body. Designed to accompany laboratory material in ZOOL 318, Laboratory in Human Anatomy.

Prereq: BIOL. 105, CHEM 120, 2.5 GPA.

SPMD 225 Practicum I. 2 hrs

A supervised educational experience in athletic training under the supervision of a certified athletic trainer.

Prereq: GPA 2.8, SPMD 119 and department permission.

SPMD 219 Introduction to Athletic Training. 3 hrs

An introduction designed to expose the student to the discipline of athletic health care. The student will study modern concepts of the prevention and care of athletic injury and common health care issues.

Prereq: SPMD 119.

SPMD 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPMD 290 Practicum II. 2 hrs

A supervised athletic training practicum designed to incorporate theories and technical skills learned in the prerequisite courses. The objective is to obtain hands-on experiences in an intercollegiate setting.

Prereq: Departmental Permission; Coreq.: SPMD 295, GPA 2.9.

SPMD 295 Recognition and Evaluation of Athletic Injury. 4 hrs

A study of the principles, procedures and techniques that are commonly utilized in the recognition and assessment process of athletic injury. Emphasis is on the student taking patient history, conducting the physical examination, and the primary care features of athletic injury.

Prereq: SPMD 225 and 2.9 GPA.

SPMD 305 Kinesiology-Tissue Mechanics. 3 hrs

A required course for athletic training majors in the sports medicine program. Instruction will focus on the laws of physics as they are adapted to explain biological phenomena.

Prereq: PHY 221, SPMD 200, and a 2.7 GPA.

SPMD 315 Applied Sport Psychology. 3 hrs

A course of study which provides information to help the prospective teacher/coach or sports medicine student apply behavioral science principles to the performance aspects of sport and human performance.

Prereq: PSY 101 / Candidacy.

SPMD 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPMD 378 Special Topics: SPMD 321 Therapeutic Modalities for Athletic Trainers. 2 hrs

A detailed study of theory, applications, physiological effects, and indications and contraindications of commonly used therapeutic modalities in the practice of athletic training.

Prereq: Candidacy. Recommended coreq: SPMD 379; SPMD 322.

SPMD 379 Special Topics: SPMD 322 Therapeutic Exercise for Athletic Trainers. 3 hrs

A study of the principles of applications, physiological effects, and indications and contraindications of com-

monly used therapeutic exercise methods in the practice of athletic training.

Prereq: Candidacy. Recommended coreq: SPMD 379; SPMD 321.

SPMD 390 Preinternship. 2 hrs

This course is organized and conducted to include a supervised clinical experience that allow the advanced student to assist in the skills, procedures and management of athletic injury and health care.

Prereq: Candidacy and department permission; 3.0 GPA.

SPMD 410 Laboratory Techniques in Human Performance Analysis. 4 hrs

A required course for students majoring in the Exercise portion of the Sports Medicine program. Instruction will focus on techniques of human performance analysis including Graded Exercise Testing, Measurement of resting and exercise blood pressure, body composition, EKG recordings, indirect measures of energy expenditure, estimated MET levels from walking, running, leg ergometry, arm ergometry, and stepping exercises, environmental considerations in exercise testing and training, and exercise prescription for various populations.

Prereq: SPMD 430 and Candidacy.

SPMD 419 Medical and Administrative Aspects of Athletic Training. 3 hrs

To expose a candidate student to the various medical specialties that an athletic trainer is likely to utilize as medical support staff in the athletic health care setting. The organizational and administrative concepts are also featured that are necessary to the smooth delivery of an athletic health care system. The course is primarily lecture, but practical sessions are included where appropriate.

Prereq: SPMD 295, Candidacy

SPMD 425 Sports Medicine Practicum Exercise Science. 2 hrs

A full semester experience in a department-approved agency or institution under the direction of certified personnel to work in areas including, but not limited to, adult fitness, cardiac rehabilitation, physical therapy, and other related areas.

Prereq: PHED 300, Candidacy

SPMD 430 Basic Principles of Electrocardiography.**3 hrs**

A three-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: Candidacy.

SPMD 477/478/479 Special Topics.**1/2/3 hrs**

Offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

Prereq: Candidacy and department permission.

SPMD 479 Special Topics: SPMD 421 Legal Aspects of Sports Medicine.**3 hrs**

This course examines the legal issues surrounding the field of sports medicine including: individual rights, due process, selected legal concepts and principles, liability, safe environments, risk management, contracts, insurance, and other selected topics.

Prereq: Candidacy

SPMD 479 Special Topics: SPMD 431 Pathology for Sports Medicine.**3 hrs**

A required course for sports medicine majors which relates normal body functioning to the physiologic changes that occur as a result of injury and disease, and examines the effects of physical activity on these processes.

Prereq: Candidacy

SPMD 479 Special Topics: SPMD 432 Introduction to Exercise Programming.**3 hrs**

A required course for students majoring in exercise science. This course provides information needed to develop, implement, and manage exercise programs in a variety of settings. Within the context of each program setting the following issues will be discussed: 1) the health screening, 2) implementation and management of the exercise prescription, 3) identification and development of exercise leadership skills, and 4) exercise compliance issues.

Prereq: Candidacy

SPMD 480 Internship Exercise Science.**8 hrs**

A directed full semester field experience in a department-approved agency or institution under the direction of certified personnel to work with adult fitness and/or cardiac rehabilitation.

Prereq: Candidacy and department permission.

SPMD 490 Internship Athletic Training.**8 hrs**

The course is clinical experience to be conducted at an off-campus agency. The agency provides direct supervision at the site. The course is limited to senior students in their last semester. The student will typically be expected to increase his/her skills and knowledge in the key task areas of athletic training.

Prereq: Candidacy and department permission.

LEADERSHIP AND COUNSELING

John Waidley
Interim Department Head
13 Boone Hall
487-0255/487-3270

Professors: Irene M. Ametrano, Helen E. R. Ditzhazy, John G. Pappas, Donna M. Schmitt, Martha W. Tack, Louis C. Thayer, John W. Waidley

Associate Professors: Beverly Geltree, William M. Hetrick, William J. Price

Assistant Professors: James E. Berry, Yvonne L. Calloway, John Gooden, Jane S. Goodman, Donald Hackmann, Alison J. Harmon, Christine E. Phelps, Sue A. Stickel, Jaclyn R. Tracy

GRADUATE-LEVEL STUDY

Students who wish to enter the educational leadership program or the guidance and counseling program are reminded that these are graduate-level programs. The undergraduate courses in these areas provide an introduction to the organization of American education, help students explore career opportunities, or provide an opportunity for the students to learn about basic counseling concepts and processes. Undergraduate students may not enroll in any graduate coursework in the department of Leadership and Counseling. 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 noneducation 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: James E. Berry

Guidance and counseling: John W. Waidley

EDUCATIONAL LEADERSHIP COURSES

EDLD 402 Organization of American Education. 3 hrs
A study of the organization and control of education in America to determine its purposes, structural characteristics and efficiency, and the various educational roles.
Prereq: One professional education class or department permission.

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

GDCN 100 Career Exploration and Decision-Making. 3 hrs
Self-exploration (values, interests, goals) as it relates to careers and the world of work. Presentation in an experimental format of career exploration and personal decision-making strategies and processes. Investigation of career planning and resources (people and materials).

GDCN 450 An Introduction: Counseling Concepts and Skills. 3 hrs
Introduction to basic concepts of counseling relationships; training in basic counseling skills; experiential learning activities which focus on self-development, interpersonal relationships, and related issues; and initial exposure to counseling theory and process.
Open to juniors and seniors or by department permission; recommended for those planning a career in the helping professions.

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

SPECIAL EDUCATION

Kathleen S. Quinn
Department Head
215 Rackham Building
487-3300

Professors: Henry L. Gottwald, Ronald Hoodin, Marylyn E. Lake, Nora Martin, Sandra McClennen, Gary B. Navarre, James R. Palasek, Dale L. Rice

Associate Professors: George J. Barach, Michael Beebe, Lawrence M. Bemish, Joe E. Coyner, Dorothea French, Carole Gorenflo, Nancy L. Halmhuber, Robert Kreger, Lynne A. Rocklage, Angela Massenberg, Gayle L. Nash, Kathleen S. Quinn, Marvin L. Skore, Jody Smith, Lech Wisniewski, Florence E. VanVoorhees

Assistant Professors: Roberta Anderson, Kenneth Schatz

The Special Education department is among the oldest and most prestigious preparation programs for teachers of students with disabilities in the nation. It is the largest special education program in Michigan and among the most extensive in the country because of its numerous course offerings, experienced faculty, location, and affiliations with schools, clinics, institutions, agencies, and hospitals in the metropolitan area that surrounds the University.

The department provides courses that prepare students to educate individuals with special needs and where necessary to meet the basic requirements for the State Provisional Elementary and Secondary Certificate in Teaching.

In addition, the department has unique facilities on campus:

1. A speech and hearing clinic, which provides a complete range of clinical training opportunities for majors in speech pathology as well as observation opportunities for students in other programs of study. Clinical outpatient services are available to college students and to children and adults from the surrounding areas.

Clinical speech and language evaluations and therapy and complete audiological services are offered, including diagnostic audiology, hearing aid evaluation and selection, aural rehabilitation, pre-nursery evaluation and training, and parent counseling. As part of their preparation, majors in speech and language impaired and hearing impaired may be directly involved in the

delivery of these services under staff supervision.

2. A parent-infant management program for the hearing impaired, which provides guidance for parents of hearing impaired children and enables them to help their child develop auditory/speech/language skills during their formative years.

Parents/caregivers are expected to work in the clinical setting with their infant/toddler and discuss problems concerning their child. University students also have the opportunity to observe and participate in skill development.

3. **CENTER FOR ADAPTIVE TECHNOLOGY EDUCATION (CATE)** The Center for Adaptive Technology Education is a program and facility in the department of Special Education, Rackham Building. The CATE program focuses on the use of adaptive and assistive technology to support and facilitate the activities and pursuits of persons with disabilities. CATE has three broad missions that directly relate to the University's commitment to teaching, service and research. The teaching mission of CATE is reflected in preservice and inservice educational programs. CATE's service mission focuses on providing services to EMU students, staff and faculty with disabilities, as well as providing adaptive technology evaluation and training services to persons with disabilities in the local community. CATE also is involved in research and development activities that focus on the design and development of innovative software and hardware, as well as unique adaptations to existing technology.

Students not majoring in special education may enroll in a planned program consisting of a sequence of special education courses to meet personal and professional goals. Designed primarily for those majoring in physical education or recreation, industrial education, and music education, the program provides background on handicapping conditions but will not offer sufficient specialized work to meet endorsement requirements to teach students with disabilities. The sequence of courses is to be planned in advance and have the written approval of the head of the department of Special Education.

Degrees:

Bachelor of Science and Bachelor of Arts

Programs of Study

Majors:

Emotionally impaired
 Hearing impaired
 Mentally impaired

Physically and otherwise health impaired
 Speech and language impaired*
 Visually impaired

*The speech and language impaired program is a five-year course of study to conform with professional and state guidelines and culminates in a master's degree.

Minors:

Students must complete one subject area minor of 20 hours or a group minor of 24 hours. The minor must be in a teaching subject appropriate to and approved for the level of teaching certificate for which the student is qualifying. Elementary certificate candidates may complete an approved planned program in lieu of a minor when circumstances warrant.

Advising

Students are assigned a faculty adviser from the program area he/she elects as a major. The adviser will monitor the student's progress throughout his/her professional preparation however, it is the student's responsibility to schedule advising appointments each semester prior to or during the university registration period. Faculty advisers post office hours and other times students may schedule appointments. Advisers can inform students of special area requirements and procedures. For example, students in the speech and language impaired and the hearing impaired program areas must have permission from their advisers prior to registration.

Faculty advisers

Emotionally impaired: Robert Kreger, Marvin Skore, Jody 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: Willie P. Cupples, Ronald Hoodin, James Palasek

Visually impaired: George Barach, Alicia Li

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 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 AND CONTINUANCE

CRITERIA

(FOR ALL PROGRAMS EXCEPT SPEECH AND LANGUAGE IMPAIRED)

1. Completion of 56 semester hours of college credit and with an EMU grade point average of 2.50 or better.
2. Completion of SPGN 251 Education of Exceptional Children and the introductory course in the major area of study with a grade of "C" or better. These introductory courses are:
 - a. Emotionally impaired: SPEI 301 Emotionally Impaired Children and Adolescents.
 - b. Hearing impaired: (see statement under Hearing Impaired).
 - c. Mentally impaired: SPMI 350 Introduction to Mental Retardation.
 - d. Physically and otherwise health impaired: SPPI 310 Developmental Sciences for Teachers of the Physically and Health Impaired.
 - e. Visually impaired: Demonstrate proficiency in typing.
3. Successful completion of the state-mandated basic skills test.
4. Submission of a formal application for admission to the department of Special Education supported by a letter of recommendation from a faculty member in the department of Special Education.

Criteria for continuance in a program of study in the department of Special Education is dependent upon:

1. Maintenance of a 2.50 cumulative grade point average.
2. Maintenance of a 2.50 cumulative grade point average in major courses in program of study.
3. Completion of all courses in the major with a grade of "C" or better. Students will be required to retake any major course in which they earn a grade below "C." A major course may be repeated only once.
4. Demonstration of performance that indicates reasonable aptitude, maturity, stability, skill, and understanding necessary for success in the professional field of special education.

The continuance or termination decision will be made by the faculty in the program area. Students may

request a meeting with the faculty of a program area to apprise 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.

SPEECH AND LANGUAGE IMPAIRED

ADMISSION AND CONTINUANCE CRITERIA

The following criteria must be met before admission to the undergraduate program is granted:

1. Must complete 35-45 credit hours with a minimum GPA of 2.75.
2. Must have taken the Basic Skills Test, which assesses math, reading, comprehension, grammar, and writing skills. Must achieve or surpass the score established by the College of Education.
3. Must pass a speech and hearing screening.
4. Must meet application submission deadlines:

Fall semester	February 15
Winter semester	October 15

When the number of applicants exceeds program capacity, a specific formula will be applied to make selections. Preference will be given on the basis of GPA, previous enrollment at EMU, membership in a protected minority group, and membership in the underrepresented gender.

To be allowed to continue in the speech-language pathology program, the student must meet the following:

1. Maintenance of a cumulative overall GPA of 2.75 or better.
2. Maintenance of a cumulative major GPA of 3.0 or better.
3. Completion of all major academic courses with a grade of "C" or better. All courses in which a grade of "C-" or lower is achieved must be repeated and may be repeated only once. A student must retake the course in which the lowest grade was received. No more than two courses may be repeated. Students will not be able to enroll in courses at the management level or beyond until this requirement is met. Students must remain in their planned tracks if they are required to repeat. This implies ineligibility to take advanced SPSI courses for 1 or 2 terms.

4. Completion of all major clinical courses with a grade of "C+" or better. Clinical courses in which a grade of "C" or lower is achieved must be repeated before the student is allowed to continue with the next level of courses and may be repeated only once.
5. Demonstration of behaviors which indicate reasonable stability, maturity, understanding and aptitude as judged necessary for predicted success as a speech-language pathologist. Such qualitative judgements will be made by the SLP faculty.
6. Students on academic probation will not be allowed to enroll in major courses until the probation is lifted and their overall GPA is 2.75.

TERMINATION FROM THE PROGRAM

Students who fail to comply with the continuation criteria stated above will be notified in writing of their termination from the program. Students so notified have the right to appeal such termination through normal University channels. In some cases, a student will be required to meet with the full faculty for discussion of academic performance and continuation in the program.

GENERAL INFORMATION

Fieldwork in both general and special education is required. Prestudent teaching experiences are required of all candidates pursuing a teaching certificate. (See Prestudent Teaching, page 359). 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 MA degree program in which K-12 endorsement is granted.

Each of the programs of study in the Special Education department meets or exceeds minimum course, experience, or competency requirements established by the Michigan State Board of Education for that endorse-

ment 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 special education. The MA and specialist's degrees are described in the Graduate Catalog.

TEACHING PROGRAMS

EMOTIONALLY IMPAIRED

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in emotionally impaired, certification code "SE," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #59, "Emotionally Impaired."

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
- I-B-2. Basic Studies requirement. See inside back cover
- I-B-3. ENG 323 Writing in the Professional World(3)
- I-B-4. *Both:*
 - MATH 108 Mathematics for Elementary Teachers I (3)
 - MATH 109 Mathematics for Elementary Teachers II (3)
- I-B-5. Basic Studies requirement. See inside back cover
- II-B-1. Basic Studies requirement. See inside back cover

- II-B-2. PSY 101 General Psychology (3)
- II-B-3. BIOL 105 Biology and the Human Species (4)
- III-B-1. PLSC 112 American Government (3)
- III-B-2. Basic Studies requirement. See inside back cover
- III-B-3. SOCL 106 Introductory Sociology (3)
- III-B-4. Basic Studies requirement. See inside back cover
- IV-B-1. Basic Studies requirement. See inside back cover
- IV-B-2. Basic Studies requirement. See inside back cover
- IV-B-3. Basic Studies requirement. See inside back cover
- IV-B-4. Basic Studies requirement. See inside back cover
- Physical education, military science, or equivalent (2)
- Credit hours in Basic Studies:..... 52*

Specialty studies

One of:

- A minor from the approved list (20¹) (see p. 363)
- A "planned program" (30²) (see p. 427)
- SPGN 271 Language Development and Speech Disorders in Special Populations (2)
- **SPGN 395 Special Needs Persons: School, Family, and Community Interaction (3)
- SPEI 301 Emotionally Impaired Children and Adolescents (4)^a
- PSY 360 Abnormal Psychology (3)^a

One of:

- SOCL 202 Social Problems (3)
- SOCL 402 Group Dynamics (3)
- **SPEI 449 Seminar: Current Topics in Emotional Impairment (2)^a
- **SPLI 468 Education of Children with Learning Disabilities (2)^a
- Subtotal, Specialty Studies:..... 39¹*

Professional Studies

- Approved prestudent teaching field/clinical experiences (0)
- SPEI 240 Introductory Clinical Experiences in Emotional Impairment (3)^a
- SPGN 251 Education of Exceptional Children (3)
- INED 252 Prevocational/Vocational Special Needs Program (4)
- PHED 257 Physical Education for the Classroom Teacher (2)
- EDPS 325 Life Span Human Growth and Development (4)
- The following courses require formal admission to the teacher education program:**
- CURR 304 Curriculum and Methods: Elementary (3)

- RDNG 314 Teaching Reading in the Elementary School (6)
 SOFD 328 Schools in a Multicultural Society (3)
 EDMD 345 Media for the Classroom Teacher (1)
 MATH 381 The Teaching of Mathematics K-6 (3)
 SPGN 390 Measurement and Diagnosis in Special Education (3)
 SPEI 401 Programming, Methods, and Curriculum for the Elementary Emotionally Impaired Child (4)^a
 SPGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)
 SPGN 481 Adaptive Technology in Special Education (2)
 EDUC 491 Student Teaching (10)^a
 EDUC 499 Student Teaching (6)
 SPGN 491 Seminar for Teachers of Special Education (2)

Credit hours in Professional Studies:..... 62¹

Total credit hours required:..... 153

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

²The "planned program" courses overlap with other required courses by approximately 20 hours.

EMOTIONALLY IMPAIRED

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in emotionally impaired, certification code "SE," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #59, "Emotionally Impaired," and the minor area.

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 I-B-2. Basic Studies requirement. See inside back cover
 I-B-3. ENGL 323 Writing in the Professional World (3)
 I-B-4. Basic Studies requirement. See inside back cover
 I-B-5. Basic Studies requirement. See inside back cover
 II-B-1. Basic Studies requirement. See inside back cover
 II-B-2. PSY 101 General Psychology (3)
 II-B-3. BIOL 105 Biology and the Human Species (4)

- III-B-1. PLSC 112 American Government (3)
 III-B-2. Basic Studies requirement. See inside back cover
 III-B-3. SOCL 105 Introductory Sociology (3)
 III-B-4. Basic Studies requirement. See inside back cover
 IV-B-1. Basic Studies requirement. See inside back cover
 IV-B-2. Basic Studies requirement. See inside back cover
 IV-B-3. Basic Studies requirement. See inside back cover
 IV-B-4. Basic Studies requirement. See inside back cover
 Physical education, military science, or equivalent (2)
Credit hours in Basic Studies:..... 49

Specialty Studies

- SPGN 271 Language Development and Speech Disorders in Special Populations (2)
 SPEI 301 Emotionally Impaired Children and Adolescents (4)^a
 PSY 322 Psychology of Adolescence (3)^a
 CRM 354 Juvenile Delinquency (3)^a
 PSY 360 Abnormal Psychology (3)^a
 **SPGN 395 Special Needs Persons: School, Family, and Community Interaction (3)

One of: °

- SOCL 202 Social Problems (3)
 SOCL 402 Group Dynamics (3)

**SPEI 449 Seminar: Current Topics in Emotional Impairment (2)^a

A minor from the approved list (see page 363)

Subtotal, Specialty Studies:..... 43¹

Professional Studies

- Approved prestudent teaching field experiences (0)
 SPGN 251 Education of Exceptional Children (3)
 INED 252 Prevocational/Vocational Special Needs Program (4)
 EDPS 325 Life Span Human Growth and Development (4)
 SPEI 240 Introductory Clinical Experiences in Emotional Impairment (3)^a

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

- CURR 305 Curriculum and Methods: Secondary (3)
 RDNG 311 Teaching Reading in the Secondary School (3)
 SOFD 328 Schools in a Multicultural Society (3)
 EDMD 345 Media for the Classroom Teacher (1)
 SPGN 390 Measurement and Diagnosis in Special Education (3)

- SPGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)
- SPGN 481 Adaptive Technology in Special Education (2)
- SPGN 485 Methods and Curriculum: Adolescents and Young Adults with Special Needs (2)^a
- SPEI 488 Programming, Methods, and Curriculum for Secondary Emotionally Impaired Youth (4)^a
- The appropriate secondary special methods course (see page 366) (3)
- EDUC 491 Student Teaching (10)^a
- EDUC 499 Student Teaching (6)
- SPGN 491 Seminar for Teachers of Special Education (2)

Credit hours in Professional Studies:..... 61¹

Total credit hours required:..... 153

^aCourse required for and applicable to major.

^{a*}Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

HEARING IMPAIRED

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in hearing impaired, certification code "SL," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #62, "Hearing Impaired."

Registration for the first course in the hearing impaired sequence (SPHI 228) is by permission only. If there is greater demand for enrollment than availability of places in the class, the hearing impaired program faculty will determine who receives permission. Grade point average will be the primary criterion. It is essential to see a hearing impaired program adviser in order to begin the program sequence.

All students are considered provisional majors until such time as they successfully complete SPHI 391 and pass a language proficiency examination. The basic philosophy of the program is oral communication; however, students are exposed to manual communica-

tion during their course of study.

The hearing impaired program is in the process of developing a portfolio presentation as a capstone requirement, attached to SPGN, Seminar for Teachers of Special Education for the hearing impaired program majors.

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
- I-B-2. Basic Studies requirement. See inside back cover
- I-B-3. ENGL 323 Writing in the Professional World (3)
- I-B-4. *Both:*
 MATH 108 Mathematics for Elementary Teachers I (3)
 MATH 109 Mathematics for Elementary Teachers II (3)
- I-B-5. Basic Studies requirement. See inside back cover
- II-B-1. Basic Studies requirement. See inside back cover
- II-B-2. PSY 101 General Psychology (3)
- II-B-3. BIOL 105 Biology and the Human Species (4)
- III-B-1. PLSC 112 American Government (3)
- III-B-2. Basic Studies requirement. See inside back cover
- III-B-3. Basic Studies requirement. See inside back cover
- III-B-4. Basic Studies requirement. See inside back cover
- IV-B-1. Basic Studies requirement. See inside back cover
- IV-B-2. Basic Studies requirement. See inside back cover
- IV-B-3. Basic Studies requirement. See inside back cover
- IV-B-4. Basic Studies requirement. See inside back cover
- Physical education, military science, or equivalent (2)
- Credit hours in Basic Studies:*..... 52

Specialty Studies

- SPHI 228 Education of Hearing-Impaired Students (3)^a
- SPSI 332 Acoustic Phonetics: Speech Science (2)^a
- SPSI 336 Physiologic Phonetics: Anatomy and Physiology (3)^a
- SPSI 337 Language Acquisition (3)^a
- SPHI 375 Fundamentals of Sign Communication (2)^a
- **SPHI 391 Language for Hearing-Impaired Students (4)^a
- SPHI 392 Introduction to Audiology (2)^a
- **SPHI 394 Aural Habilitation/Rehabilitation (3)^a
- **SPGN 395 Special Needs Persons: School, Family, and Community Interaction (3)
- **SPHI 435 Phonetics and Hearing Impairment (2)^a
- **SPHI 436 Speech Methods for Hearing-Impaired Persons (2)^a
- **SPHI 437 Adaptive Curriculum for Hearing-Impaired Students (3)^a

One of:^aA minor from the approved list (20¹) (see page 362)A "planned program" (30²) (see page 427)*Subtotal, Specialty Studies:*..... 51¹**Professional Studies**

Approved prestudent teaching field/clinical experiences (0)

SPGN 251 Education of Exceptional Children (3)

INED 252 Prevocational/Vocational Special Needs Program (4)

PHED 257 Physical Education for the Classroom Teacher (2)

EDPS 325 Life Span Human Growth and Development (4)

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

CURR 304 Curriculum and Methods: Elementary (3)

RDNG 314 Teaching Reading in the Elementary School (6)

SOFD 328 Schools in a Multicultural Society (3)

EDMD 345 Media for the Classroom Teacher (1)

MATH 381 The Teaching of Mathematics K-6 (3)

SPHI 387 Introductory Practicum with Hearing-Impaired Students (1)^a

SPGN 390 Measurement and Diagnosis in Special Education (3)

SPGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)

SPGN 481 Adaptive Technology in Special Education (2)

SPHI 487 Speech Practicum with Hearing-Impaired Students (1)^aEDUC 491 Student Teaching (10)^a

SPGN 491 Seminar for Teachers of Special Education (2)

EDUC 499 Student Teaching (6)

Credit hours in Professional Studies:..... 58¹**Total credit hours required:**..... 161^aCourse required for and applicable to major.¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.²The "planned program" courses overlap with other required courses by approximately 20 hours.**HEARING IMPAIRED****SECONDARY TEACHER CERTIFICATION**

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in hearing impaired, certification code "SL," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #62, "Hearing Impaired," and the minor area.

Registration for the first course in the hearing impaired sequences (SPHI 228) is by permission only. If there is greater demand for enrollment than availability of places in the class, the hearing impaired program faculty will determine who receives permission. Grade point average will be the primary criterion. It is essential to see a hearing impaired program adviser in order to begin the program sequence.

All students are considered provisional majors until such time as they successfully complete SPHI 391 and pass a language proficiency examination. The basic philosophy of the program is oral communication; however, students are exposed to manual communication during their course of study.

The hearing impaired program is in the process of developing a portfolio presentation as a capstone requirement, attached to SPGN 491, Seminar for Teachers of Special Education for the hearing impaired program majors.

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. Basic Studies requirement. See inside back cover

I-B-3. ENGL 323 Writing in the Professional World (3)

I-B-4. Basic Studies requirement. See inside back cover

I-B-5. Basic Studies requirement. See inside back cover

II-B-1. Basic Studies requirement. See inside back cover

II-B-2. PSY 101 General Psychology (3)

II-B-3. BIOL 105 Biology and the Human Species (4)

III-B-1. PLSC 112 American Government (3)

III-B-2. Basic Studies requirement. See inside back cover

III-B-3. Basic Studies requirement. See inside back cover

III-B-4. Basic Studies requirement. See inside back cover

IV-B-1. Basic Studies requirement. See inside back cover

IV-B-2. Basic Studies requirement. See inside back cover

IV-B-3. Basic Studies requirement. See inside back cover

IV-B-4. Basic Studies requirement. See inside back cover
Physical education, military science, or equivalent (2)*Credit hours in Basic Studies:*..... 49

Specialty Studies

- SPHI 228 Education of Hearing-Impaired Students (3)^a
 SPSI 332 Acoustic Phonetics: Speech Science (2)^a
 SPSI 336 Physiologic Phonetics: Anatomy and Physiology (3)^a
 SPSI 337 Language Acquisition (3)^a
 SPHI 375 Fundamentals of Sign Communication (2)^a
 **SPHI 391 Language for Hearing-Impaired Students (4)^a
 SPHI 392 Introduction to Audiology (2)^a
 **SPHI 394 Aural Habilitation/Rehabilitation (3)^a
 **SPGN 395 Special Needs Persons: School, Family, and Community Interaction (3)
 **SPHI 435 Phonetics and Hearing Impairment (2)^a
 **SPHI 436 Speech Methods for Hearing-Impaired Persons (2)^a
 **SPHI 437 Adaptive Curriculum for Hearing-Impaired Students (3)^a
 A minor from the approved list (see page 363)

Subtotal, Specialty Studies:..... 51¹

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
 SPGN 251 Education of Exceptional Children (3)
 INED 252 Prevocational/Vocational Special Needs Program (4)
 PHED 257 Physical Education for the Classroom Teacher (2)
 EDPS 325 Life Span Human Growth and Development (4)

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

- CURR 305 Curriculum and Methods: Secondary (3)
 RDNG 311 Teaching Reading in the Secondary School (3)
 SOFD 328 Schools in a Multicultural Society (3)
 EDMD 345 Media for the Classroom Teacher (1)
 SPHI 387 Introductory Practicum with Hearing-Impaired Students (1)^a
 SPGN 390 Measurement and Diagnosis in Special Education (3)
 SPGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)
 SPGN 481 Adaptive Technology in Special Education (2)

- SPGN 485 Methods and Curriculum: Adolescents and Young Adults with Special Needs (2)^a
 SPGN 486 Recitation and Field Experience with Adolescents and Young Adults: Mentally Impaired, Physically Impaired, Hearing Impaired, or Visually Impaired (2)^a
 SPHI 487 Speech Practicum with Hearing-Impaired Students (1)^a
 The appropriate secondary special methods course (see page 366) (3)
 SPGN 491 Seminar for Teachers of Special Education (2)
 EDUC 491 Student Teaching (10)^a
 EDUC 499 Student Teaching (6)

Credit hours in Professional Studies:..... 59¹

Total credit hours required:..... 159

^aCourse required for and applicable to major.

¹At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk (*).

**Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor

MENTALLY IMPAIRED**ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in mentally impaired, certification code "SA," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #56, "Mentally Impaired."

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 I-B-2. Basic Studies requirement. See inside back cover
 I-B-3. ENGL 323 Writing in the Professional World (3)
 I-B-4. *Both:*
 MATH 108 Mathematics for Elementary Teachers I (3)
 MATH 109 Mathematics for Elementary Teachers II (3)
 I-B-5. Basic Studies requirement. See inside back cover
 II-B-1. Basic Studies requirement. See inside back cover
 II-B-2. PSY 101 General Psychology (3)
 II-B-3. BIOL 105 Biology and the Human Species (4)
 III-B-1. PLSC 112 American Government (3)

III-B-2. Basic Studies requirement. See inside back cover
 III-B-3. Basic Studies requirement. See inside back cover
 III-B-4. Basic Studies requirement. See inside back cover
 IV-B-1. Basic Studies requirement. See inside back cover
 IV-B-2. Basic Studies requirement. See inside back cover
 IV-B-3. Basic Studies requirement. See inside back cover
 IV-B-4. Basic Studies requirement. See inside back cover
 Physical education, military science, or equivalent (2)
Credit hours in Basic Studies:..... 52

Specialty Studies

SPGN 271 Language Development and Speech Disorders in Special Populations (2)
 SPMI 350 Introduction to Mental Retardation (3)*
 **SPGN 395 Special Needs Persons: School, Family, and Community Interaction (3)
 **SPMI 427 Educating the Elementary Student with Mild Retardation (2)*
 **SPLI 468 Education of Children with Learning Disabilities (2)*
 **SPMI 483 Education of Students with Moderate or Severe Retardation (4)*

One of:

A minor from the approved list (20¹) (see page 362)
 A "planned program" (30²) (see page 427)

Subtotal, Specialty Studies:..... 36¹

Professional Studies

Approved prestudent teaching field/clinical experiences (0)
 SPMI 240 Preclinical: Mentally Impaired (3)*
 SPGN 251 Education of Exceptional Children (3)
 INED 252 Prevocational/Vocational Special Needs Program (4)
 PHED 257 Physical Education for the Classroom Teacher (2)
 EDPS 325 Life Span Human Growth and Development (4)

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

CURR 304 Curriculum and Methods: Elementary (3)
 RDNG 314 Teaching Reading in the Elementary School (6)
 SOFD 328 Schools in a Multicultural Society (3)
 EDMD 345 Media for the Classroom Teacher (1)
 MATH 381 The Teaching of Mathematics K-6 (3)
 SPGN 390 Measurement and Diagnosis in Special Education (3)
 SPMI 429 Curriculum Design and Education

Programs for Students with Mild Retardation (3)*

SPGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)

SPGN 481 Adaptive Technology in Special Education (2)

SPGN 491 Seminar for Teachers of Special Education (2)

EDUC 491 Student Teaching (10)*

EDUC 499 Student Teaching (6)

Credit hours in Professional Studies:..... 61¹

Total credit hours required:..... 149

¹Course required for and applicable to major.

²Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

³The "planned program" courses overlap with other required courses by approximately 20 hours.

MENTALLY IMPAIRED

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in mentally impaired, certification code "SA," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #56, "Mentally Impaired," and the minor area.

Basic Studies

I-B-1. ENGL 121 English Composition (3)
 I-B-2. Basic Studies requirement. See inside back cover
 I-B-3. ENGL 323 Writing in the Professional World (3)
 I-B-4. Basic Studies requirement. See inside back cover
 I-B-5. Basic Studies requirement. See inside back cover
 II-B-1. Basic Studies requirement. See inside back cover
 II-B-2. PSY 101 General Psychology (3)
 II-B-3. BIOL 105 Biology and the Human Species (4)
 III-B-1. PLSC 112 American Government (3)
 III-B-2. Basic Studies requirement. See inside back cover
 III-B-3. Basic Studies requirement. See inside back cover
 III-B-4. Basic Studies requirement. See inside back cover
 IV-B-1. Basic Studies requirement. See inside back cover
 IV-B-2. Basic Studies requirement. See inside back cover
 IV-B-3. Basic Studies requirement. See inside back cover
 IV-B-4. Basic Studies requirement. See inside back cover
 Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 49

Specialty Studies

SPGN 271 Language Development and Speech Disorders in Special Populations (2)

SPMI 350 Introduction to Mental Retardation (3)^a

**SPGN 395 Special Needs Persons: School, Family, and Community Interaction (3)

**SPLI 468 Education of Children with Learning Disabilities (2)^a

**SPMI 483 Education of Students with Moderate or Severe Retardation (4)^a

A minor from the approved list (see page 363)

Subtotal, Specialty Studies:..... 34¹

Professional Studies

Approved prestudent teaching field/clinical experiences (0)

SPMI 240 Preclinical; Mentally Impaired (3)^a

SPGN 251 Education of Exceptional Children (3)

INED 252 Prevocational/Vocational Special Needs Program (4)

PHED 257 Physical Education for the Classroom Teacher (2)

EDPS 325 Life Span Human Growth and Development (4)

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

CURR 305 Curriculum and Methods: Secondary (3)

RDNG 311 Teaching Reading in the Secondary School (3)

SOFD 328 Schools in a Multicultural Society (3)

EDMD 345 Media for the Classroom Teacher (1)

SPGN 390 Measurement and Diagnosis in Special Education (3)

The appropriate secondary special methods course (see page 366) (3)

SPMI 429 Curriculum Design and Education Programs for Students with Mild Retardation (3)^a

SPGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)

SPGN 481 Adaptive Technology in Special Education (2)

SPGN 485 Methods and Curriculum: Adolescents and Young Adults with Special Needs (2)^a

SPGN 486 Recitation and Field Experience with

Adolescents and Young Adults: Mentally Impaired, Physically Impaired, Hearing Impaired, or Visually Impaired (2)^a

EDUC 491 Student Teaching (10)^a

SPGN 491 Seminar for Teachers of Special Education (2)

EDUC 499 Student Teaching (6)

Credit hours in Professional Studies:..... 62¹

Total credit hours required:..... 145

^aCourse required for and applicable to major.

^{**}Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

PHYSICALLY AND OTHERWISE HEALTH IMPAIRED

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in physically impaired, certification code "SC," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #58, "Physically and Otherwise Health Impaired."

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. Basic Studies requirement. See inside back cover

I-B-3. ENGL 323 Writing in the Professional World (3)

I-B-4. *Both:*

MATH 108 Mathematics for Elementary Teachers I (3)

MATH 109 Mathematics for Elementary Teachers II (3)

I-B-5. Basic Studies requirement. See inside back cover

II-B-1. Basic Studies requirement. See inside back cover

II-B-2. PSY 101 General Psychology (3)

II-B-3. BIOL 105 Biology and the Human Species (4)

III-B-1. PLSC 112 American Government (3)

III-B-2. Basic Studies requirement. See inside back cover

III-B-3. Basic Studies requirement. See inside back cover

III-B-4. Basic Studies requirement. See inside back cover

IV-B-1. Basic Studies requirement. See inside back cover

IV-B-2. Basic Studies requirement. See inside back cover

IV-B-3. Basic Studies requirement. See inside back cover

IV-B-4. Basic Studies requirement. See inside back cover

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 52

Specialty Studies

- SPGN 271 Language Development and Speech Disorders in Special Populations (2)
 SPPI 310 Developmental Sciences for Teachers of the Physically and Health Impaired (4)^a
 SPMI 350 Introduction to Mental Retardation (3)^a
 **SPPI 360 Pathology of Physical and Health Impairments (3)^a
 **SPGN 395 Special Needs Persons: School, Family, and Community Interaction (3)
 **SPPI 412 Ancillary Services and Health Procedures for Teachers of Physically Impaired (2)^a
 **SPLI 468 Education of Children with Learning Disabilities (2)^a

One of:

- A minor from the approved list (20¹) (see page 362)
 A "planned program" (30²) (see page 427)

Subtotal, Specialty Studies:..... 39¹

Professional Studies

- Approved prestudent teaching field/clinical experiences (0)
 SPPI 240 Preclinical Experiences—POHI (3)^a
 SPGN 251 Education of Exceptional Children (3)
 INED 252 Prevocational/Vocational Special Needs Program (4)
 PHED 257 Physical Education for the Classroom Teacher (2)
 EDPS 325 Life Span Human Growth and Development (4)

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

- CURR 304 Curriculum and Methods: Elementary (3)
 RDNG 314 Teaching Reading in the Elementary School (6)
 SOFD 328 Schools in a Multicultural Society (3)
 EDMD 345 Media for the Classroom Teacher (1)
 MATH 381 The Teaching of Mathematics K-6 (3)
 SPGN 390 Measurement and Diagnosis in Special Education (3)
 SPPI 414 Educational Strategies for Teachers of the Physically Impaired (4)^a
 SPGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)
 SPGN 481 Adaptive Technology in Special Education (2)

EDUC 491 Student Teaching (10)^a

SPGN 491 Seminar for Teachers of Special Education (2)

EDUC 499 Student Teaching (6)

Credit hours in Professional Studies:..... 62

Total credit hours required:..... 153

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

²The "planned program" courses overlap with other required courses by approximately 20 hours.

PHYSICALLY AND OTHERWISE HEALTH IMPAIRED

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in physically impaired, certification code "SC," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #58, "Physically and Otherwise Health Impaired," and the minor area.

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 I-B-2. Basic Studies requirement. See inside back cover
 I-B-3. ENGL 323 Writing in the Professional World (3)
 I-B-4. Basic Studies requirement. See inside back cover
 I-B-5. Basic Studies requirement. See inside back cover
 II-B-1. Basic Studies requirement. See inside back cover
 II-B-2. PSY 101 General Psychology (3)
 II-B-3. BIOL 105 Biology and the Human Species (4)
 III-B-1. PLSC 112 American Government (3)
 III-B-2. Basic Studies requirement. See inside back cover
 III-B-3. Basic Studies requirement. See inside back cover
 III-B-4. Basic Studies requirement. See inside back cover
 IV-B-1. Basic Studies requirement. See inside back cover
 IV-B-2. Basic Studies requirement. See inside back cover
 IV-B-3. Basic Studies requirement. See inside back cover
 IV-B-4. Basic Studies requirement. See inside back cover
 Physical education, military science, or equivalent (2)
Credit hours in Basic Studies:..... 49

Specialty Studies

- SPGN 271 Language Development and Speech Disorders in Special Populations (2)
 SPPI 310 Developmental Sciences for Teachers

- of the Physically and Health Impaired (4)^a
 SPMI 350 Introduction to Mental Retardation (3)^a
 **SPPI 360 Pathology of Physical and Health
 Impairments (3)^a
 **SPGN 395 Special Needs Persons: School,
 Family, and Community Interaction (3)
 **SPPI 412 Ancillary Services and Health
 Procedures for Teachers of Physically
 Impaired (2)^a
 **SPLI 468 Education of Children with Learning
 Disabilities (2)^a
 A minor from the approved list (see page 363)
Subtotal, Specialty Studies:..... 39¹

Professional Studies

- Approved prestudent teaching field/clinical
 experiences (0)
 SPPI 240 Preclinical Experiences—POHI (3)^a
 SPGN 251 Education of Exceptional Children (3)
 INED 252 Prevocational/Vocational Special Needs
 Program (4)
 PHED 257 Physical Education for the Classroom
 Teacher (2)
 EDPS 325 Life Span Human Growth and
 Development (4)

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

- CURR 305 Curriculum and Methods:
 Secondary (3)
 RDNG 311 Teaching Reading in the Secondary
 School (3)
 SOFD 328 Schools in a Multicultural Society (3)
 EDMD 345 Media for the Classroom Teacher (1)
 SPGN 390 Measurement and Diagnosis in Special
 Education (3)
 The appropriate secondary special methods course
 (see page 366) (3)
 SPGN 461 Classroom Management and
 Intervention Strategies for Handicapped
 Students (3)
 SPGN 481 Adaptive Technology in Special
 Education (2)
 SPGN 485 Methods and Curriculum: Adolescents
 and Young Adults with Special Needs (2)^a
 SPGN 486 Recitation and Field Experience with
 Adolescents and Young Adults: Mentally
 Impaired, Physically Impaired, Hearing
 Impaired, or Visually Impaired (2)^a
 EDUC 491 Student Teaching (10)^a
 SPGN 491 Seminar for Teachers of Special
 Education (2)

EDUC 499 Student Teaching (6)
Credit hours in Professional Studies:..... 59

Total credit hours required:..... 147

^aCourse required for and applicable to major.

^{**}Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of
 Basic Studies courses to the minor.

SPEECH AND LANGUAGE IMPAIRED

ALL GRADE LEVELS TEACHER CERTIFICATION

Successful completion of this course of study, in
 the context of other program requirements, qualifies the
 student for recommendation for certification for either
 the Michigan Department of Education Elementary
 Provisional Certificate endorsed in speech/language
 impaired, certification code "SB" or the Michigan De-
 partment of Education Secondary Provisional Certifi-
 cate endorsed in speech/language impaired, certification
 code "SB." For elementary, the certification tests cover-
 ing this field are #83, "Elementary Education," and #57,
 "Speech and Language Impaired." For secondary, the
 certification tests covering this field are #57, "Speech
 and Language Impaired," and the minor area.

The program in speech and language impaired is
 a five and one-half to six-year course of study culminat-
 ing in a master's degree that conforms to the require-
 ments of the American Speech-Language-Hearing As-
 sociation. Students may elect a teacher training or
 nonteacher training track.

The undergraduate program consists of five semes-
 ters of speech-pathology coursework (approximately 36
 credit hours) in addition to those hours required by the
 University to satisfy Basic Studies, teacher certification
 (for those electing a teacher certification track), and
 minor requirements. Students must elect either a
 teacher certification track or healthcare program of
 study. In general, speech-language pathology (SLP)
 major academic courses are offered during the fall, win-
 ter, and a combination of spring-summer semesters.
 Each student should plan to attend at least one spring-
 summer term.

Major courses are entered in the second year or
 after a student has completed a minimum of 35 to 45
 credit hours and has been admitted to the program. This
 assures that the student maintains continuity once
 major coursework has begun. Although it may be pos-
 sible to complete all undergraduate requirements in four
 academic years (fall and winter semesters only), most

students find it necessary to enroll during one or more spring-summer terms. Students who transfer into the program during their first year may be unable to complete all program and University requirements in four calendar years. By working closely with their academic adviser, students can be assured of completing the program in the least amount of time possible.

Upon completion of a minimum of 124 semester hours reflecting all requirements in Basic Studies and undergraduate major and minor sequences, the student will be granted the Bachelor of Science degree without certification. For those students electing the teacher training track, certification is recommended upon completion of the master's degree. Graduate level courses are those numbered 500 and above. The endorsement is K-12.

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 - I-B-2. Basic Studies requirement. See inside back cover
 - I-B-3. ENGL 323 Writing for the Professional World (3)
 - I-B-4. Basic Studies requirement. See inside back cover
 - I-B-5. COSC 136 Computers for the Nonspecialist (3)
 - II-B-1. Basic Studies requirement. See inside back cover
 - II-B-2. PSY 101 General Psychology (3)
 - II-B-3. BIOL 105 Biology and the Human Species (4)
 - III-B-1. Basic Studies requirement. See inside back cover
 - III-B-2. Basic Studies requirement. See inside back cover
 - III-B-3. SOCL 105 Introductory Sociology (3)
 - III-B-4. SOCL 202 Social Problems (3)
 - IV-B-1. Basic Studies requirement. See inside back cover
 - IV-B-2. Basic Studies requirement. See inside back cover
 - IV-B-3. Basic Studies requirement. See inside back cover
 - IV-B-4. Basic Studies requirement. See inside back cover
- Physical education, military science, or equivalent (2)
- Credit hours in Basic Studies:*..... 49

Specialty Studies

- SPHI 392 Introduction to Audiology (2)
- SPHI 394 Aural Habilitation/Rehabilitation (3)
- SPSI 332 Acoustic Phonetics: Speech Science (2)
- SPSI 336 Physiologic Phonetics: Anatomy and Physiology (3)
- SPSI 334 Applied Phonetics (2)
- SPSI 335 Communication Disorders (3)
- SPSI 337 Language Acquisition (3)
- SPSI 340 Management of Phonological Disorders (3)
- SPSI 341 Directed Observation in Speech Pathology (2)
- SPSI 342 Management of Language Disorders (3)

- SPSI 452 Voice (3)
- SPSI 454 Stuttering (3)

Subtotal, Specialty Studies:..... 32

Professional Studies

- 100 clock hours of approved prestudent teaching field experience (0)
- **CURR 305 (or 304) Curriculum and Methods (3)
- EDPS 325 Life Span Human Growth and Development (4)
- **RDNG 311 (or 314) Teaching Reading (3-6)
- **SOFD 328 Schools in a Multicultural Society (3)
- SPGN 251 Education of Exceptional Children (3)
- SPSI 343 Clinical Practice in Speech Pathology I (2)
- SPSI 344 Clinical Practice in Speech Pathology II (2)
- SPSI 481 Adaptive Technology in Special Education (2)
- A minor from the approved list (see page 362-3)
- The secondary certification requires a special methods course in the minor (see page 366)
- EDU 499 Student Teaching (6)
- EDMD 345 (3)
- MATH 381 (3)
- **SPGN 390 Measurement and Diagnosis in Special Education (3)

Credit hours in Professional Studies:..... 23

The courses listed above are required for completion of the undergraduate degree. The total minimum hours is 126.

The courses listed below are required for the master's degree and eligibility for recommendation for certification:

Specialty Studies

- SPSI 508 Multicultural/Multilingual Communication Development and Disorders (3)
- SPSI 555 Neuroanatomy and Physiology for the Speech Pathologist (2)
- SPSI 568 Diagnostic Methods in Speech, Language, and Hearing (3)
- SPSI 578 Audiometric Testing (3)
- SPSI 607 Colloquium (2)
- SPSI 612 Motor Speech Disorders (2)
- SPSI 614 Aphasia (3)
- SPSI 616 Experiments in Speech-Language Pathology (3)
- SPSI 620 Consulting and Interviewing in Speech Pathology (3)
- SPSI 622 Augmentative Communication (2)

SPSI 624 Neurogenic Communicative Disorders (2)
Subtotal, Specialty Studies:..... 28

Professional Studies

SLI 687 Clinical Internship I (2)
 ***SLI 687 Clinical Internship II (2)
 SLI 689 Public School Internship (4)
 SLI 694 Seminar on Professional Issues (2)
 SPSI 694 Seminar: Interdisciplinary Special Education (2)
Credit hours in Professional Studies:..... 6-8

Electives

Two credit hours (minimum) in a 500-level or higher course is required for non-teacher training students.

Total credit hours at the graduate level:..... 36

***Admission to the teacher education program required.*

VISUALLY IMPAIRED

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in visually impaired, certification code "SK," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #61, "Visually Impaired."

Basic Studies

I-B-1. ENGL 121 English Composition (3)
 I-B-2. Basic Studies requirement. See inside back cover
 I-B-3. ENGL 323 Writing in the Professional World (3)
 I-B-4. *Both:*
 MATH 108 Mathematics for Elementary Teachers I (3)
 MATH 109 Mathematics for Elementary Teachers II (3)
 I-B-5. Basic Studies requirement. See inside back cover
 II-B-1. Basic Studies requirement. See inside back cover
 II-B-2. PSY 101 General Psychology (3)
 II-B-3. BIOL 105 Biology and the Human Species (4)
 III-B-1. PLSC 112 American Government (3)
 III-B-2. Basic Studies requirement. See inside back cover
 III-B-3. Basic Studies requirement. See inside back cover
 III-B-4. Basic Studies requirement. See inside back cover
 IV-B-1. Basic Studies requirement. See inside back cover

IV-B-2. Basic Studies requirement. See inside back cover
 IV-B-3. Basic Studies requirement. See inside back cover
 IV-B-4. Basic Studies requirement. See inside back cover
 Physical education, military science, or equivalent (2)
Credit hours in Basic Studies:..... 52

Specialty Studies

SPGN 271 Language Development and Speech Disorders in Special Populations (2)
 **SPGN 395 Special Needs Persons: School, Family, and Community Interaction (3)
 SPVI 365 Braille (3)^a
 SPVI 366 The Eye and Vision—Anatomy and Physiology (2)^a
 SPVI 368 Mobility Training for the Visually Impaired (2)^a
 SPVI 369 Community Considerations for the Visually Impaired (3)^a
 **SPVI 465 Braille II: Nemeth Code (3)^a
 **SPVI 467 Education of Children with Impaired Vision (2)^a
 **SPVI 469 Electronic Communication for the Visually Impaired (3)^a

One of:

A minor from the approved list (20¹) (see page 363)
 A "planned program" (30²) (see page 427)

Subtotal, Specialty Studies:..... 43¹

Professional Studies

Approved prestudent teaching field/clinical experiences (0)
 SPGN 251 Education of Exceptional Children (3)
 INED 252 Prevocational/Vocational Special Needs Program (4)
 PHED 257 Physical Education for the Classroom Teacher (2)
 EDPS 325 Life Span Human Growth and Development (4)

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

CURR 304 Curriculum and Methods: Elementary (3)
 RDNG 314 Teaching Reading in the Elementary School (6)
 SOFD 328 Schools in a Multicultural Society (3)
 EDMD 345 Media for the Classroom Teacher (1)
 MATH 381 The Teaching of Mathematics K-6 (3)
 SPGN 390 Measurement and Diagnosis in Special Education (3)

SPGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)

SPVI 464 Methods of Teaching the Blind (3)^a

SPGN 481 Adaptive Technology in Special Education (2)

EDUC 491 Student Teaching (10)^a

SPGN 491 Seminar for Teachers of Special Education (2)

EDUC 499 Student Teaching (6)

Credit hours in Professional Studies:..... 58

Total credit hours required:..... 153

^aCourse required for and applicable to major.

^bCould be less, depending on the minor and the possible application of Basic Studies courses to the minor.

^cThe "planned program" courses overlap with other required courses by approximately 20 hours.

VISUALLY IMPAIRED

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in visually impaired, certification code "SK," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #61, "Visually Impaired," and the minor area.

Basic Studies

I-B-1. ENGL 121 English Composition (3)

I-B-2. Basic Studies requirement. See inside back cover

I-B-3. ENGL 323 Writing in the Professional World (3)

I-B-4. Basic Studies requirement. See inside back cover

I-B-5. Basic Studies requirement. See inside back cover

II-B-1. Basic Studies requirement. See inside back cover

II-B-2. PSY 101 General Psychology (3)

II-B-3. BIOL 105 Biology and the Human Species (4)

III-B-1. PLSC 112 American Government (3)

III-B-2. Basic Studies requirement. See inside back cover

III-B-3. Basic Studies requirement. See inside back cover

III-B-4. Basic Studies requirement. See inside back cover

IV-B-1. Basic Studies requirement. See inside back cover

IV-B-2. Basic Studies requirement. See inside back cover

IV-B-3. Basic Studies requirement. See inside back cover

IV-B-4. Basic Studies requirement. See inside back cover
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 49

Specialty Studies

SPGN 271 Language Development and Speech Disorders in Special Populations (2)

SPVI 365 Braille (3)^a

SPVI 366 The Eye and Vision—Anatomy and Physiology (2)^a

SPVI 368 Mobility Training for the Visually Impaired (2)^a

SPVI 369 Community Considerations for the Visually Impaired (3)^a

**SPGN 395 Special Needs Persons: School, Family, and Community Interaction (3)

**SPVI 465 Braille II: Nemeth Code (3)^a

**SPVI 467 Education of Children with Impaired Vision (2)^a

**SPVI 469 Electronic Communication for the Visually Impaired (3)^a

A minor from the approved list (see page 362) 20¹

Subtotal, Specialty Studies:..... 43

Professional Studies

Approved prestudent teaching field/clinical experiences (0)

SPGN 251 Education of Exceptional Children (3)

INED 252 Prevocational/Vocational Special Needs Program (4)

PHED 257 Physical Education for the Classroom Teacher (2)

EDPS 325 Life Span Human Growth and Development (4)

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

CURR 305 Curriculum and Methods: Secondary (3)

RDNG 311 Teaching Reading in the Secondary School (3)

SOFD 328 Schools in a Multicultural Society (3)

EDMD 345 Media for the Classroom Teacher (1)

SPGN 390 Measurement and Diagnosis in Special Education (3)

The appropriate secondary special methods course (see page 366) (3)

SPGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)

SPVI 464 Methods of Teaching the Blind (3)^a

SPGN 481 Adaptive Technology in Special Education (2)

SPGN 485 Methods and Curriculum: Adolescents and Young Adults with Special Needs (2)^a

SPGN 486 Recitation and Field Experience with Adolescents and Young Adults: Mentally Impaired, Physically Impaired, Hearing Impaired, or Visually Impaired (2)^a
 EDUC 491 Student Teaching (10)^a
 SPGN 491 Seminar for Teachers of Special Education (2)
 EDUC 499 Student Teaching (6)
Credit hours in Professional Studies:..... 59

Total credit hours required:..... 151

^aCourse required for and applicable to major.

^{**}Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

"PLANNED PROGRAM" COURSES FOR SPECIAL EDUCATION-ELEMENTARY PROGRAMS

ESCI 302 (or ESCI 303) Elementary School Science (3)
 CURR 304 Curriculum and Methods: Elementary (3)
 RDNG 314 Teaching Reading in the Elementary School (6)
 EDPS 325 Life Span Human Growth and Development (4)
 SOFD 328 Schools in a Multicultural Society (3)
 EDMD 345 Media for the Classroom Teacher (1)
 GEOG 348 Teaching Social Studies in Elementary Schools (3)
 MATH 381 The Teaching of Mathematics K-6 (3)

Four hours from:

LITR 207 Introduction to Children's Literature (3)
 PHED 210 Lifetime Wellness and Fitness (3)
 HLED 320 Health Education in the Elementary Grades (2)
 FA 300 Art Integration for the Elementary Teacher (4)
 FA 101 Introduction to Art (3)
 CTAD 222 Drama and Play in Human Experience (3)
 MUSC 104 Elements of Music (2)
 MUSC 224 Recreational Music (2)
 MUSC 103 Introduction to Music Therapy (2)

Total:..... 30

EMOTIONALLY IMPAIRED COURSES

SPEI 177/178/179 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

SPEI 240 Introductory Clinical Experiences in Emotional Impairment. 3 hrs
 Students will be provided with an opportunity to work with impaired students in an effort to help them understand these youngsters, and evaluate their own qualifications for working with this type of youngster. Evaluations of the student's performance will be obtained from a supervising person. Majors in the area of emotional impairment will complete 150 clock hours of experience with youngsters prior to student teaching with emotionally impaired students. Twenty-five (25) of these hours will be completed during this course. An overview and hours introduction to the field of teaching emotionally impaired children and youth including theory, service delivery systems, and classroom practices will also be presented.

SPEI 277/278/279 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

SPEI 301 Emotionally Impaired Children and Adolescents. 4 hrs
 This course provides an explanation of conceptual models which explain disturbed behavior of children and adolescents. Definitive diagnostic categories will also be explained in context of their use in a variety of educational settings by teachers of emotionally impaired children and adolescents.
Prereq: PSY 360; SPEI 240; SPGN 251 is advised. Not open to students on academic probation.

SPEI 377/378/379 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

SPEI 401 Programming, Methods, and Curriculum for the Elementary Emotionally Impaired Child. 4 hrs
Teaching methods, techniques, and materials for educating elementary age emotionally impaired children will be presented. In addition, types of programs serving elementary age disturbed youngsters as well as the Individualized Education Program, federal, and state rules governing the programs will be discussed. For elementary majors only.

Prereq: SPEI 301 and SPGN 461; admission to the teacher education program.

SPEI 449 Seminar: Current Topics in Emotional Impairment. 2 hrs

An examination and discussion of issues and topics of current concern and pertinent to working with emotionally impaired children and adolescents.

Prereq: SPEI 301; admission to the teacher education program.

SPEI 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPEI 488 Programming, Methods, and Curriculum for Secondary Emotionally Impaired Youth. 4 hrs

Teaching methods, techniques, and materials for educating secondary age emotionally impaired youth. Types of programs serving adolescent age disturbed youth as well as the Individualized Education Program, federal, and state rules governing the programs will be discussed. For secondary majors only.

Prereq: SPEI 301 and SPGN 461; admission to the teacher education program. SPGN 485 (may be taken concurrently).

LEARNING DISABLED

SPLI 468 Education of Children with Learning Disabilities. 2 hrs

A study of educational and psychological problems of children with neurological and perceptual defects. Theories as they relate to the central nervous system, teaching techniques, classroom management, case studies, research, and teacher-child and parent relationships.

Prereq: SPGN 251; admission to the teacher education program; senior standing.

SPLI 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPEECH AND LANGUAGE IMPAIRED

SPSI 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPSI 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPSI 332 Acoustic Phonetics: Speech Science. 2 hrs

Basic principles of acoustic science and speech perception. Consideration of speech as an acoustical phenomenon and the analysis of speech patterns through measurements of sound and spectral analysis.

Coreq: SPSI 336.

SPSI 334 Applied Phonetics. 2 hrs

An introduction to the use of the International Phonetic Alphabet Classification and production of English speech sounds. Phonemic transcription, including some analysis of deviant and variant speech. Lab experiences weekly.

Coreq: SPSI 335.

SPSI 335 Communication Disorders. 3 hrs

A study of the major communication disorders as deviations from normal physical and social behavior. Etiology and symptomatology.

Coreq: SPSI 334.

SPSI 336 Physiologic Phonetics: Anatomy and Physiology. 3 hrs

Anatomy and physiology of normal speech production, consideration of speech as a motor behavior, physiological investigation of speech and voice.

Coreq: SPSI 332.

SPSI 337 Language Acquisition. 3 hrs

The development of speech, language, hearing, and com-

munication from birth. The interrelationship between cognitive development and language acquisition and usage. Developmental processes and milestones in phonology, morphology, syntax, and semantics and pragmatics as a basis for understanding the effects of speech, language, and hearing problems of the individual.

Coreq: SPSI 332, SPSI 336, and SPSI 341.

SPSI 340 Management of Phonological Disorders.

3 hrs

Diagnosis and treatment of functional articulation problems, and phonological disorders.

Prereq: SPSI 335 and SPSI 334. Coreq: SPSI 342.

SPSI 341 Directed Observation in Speech Pathology.

2 hrs

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 SPSI 337, SPSI 332, and SPSI 336.

SPSI 342 Management of Language Disorders. 3 hrs

Diagnosis and treatment of language disorders that result from developmental lag, physical anomalies, and cultural differences. Focuses on preschool, elementary, and secondary school-aged individuals.

Prereq: SPSI 334, SPSI 337, SPSI 332, SPSI 336, and SPSI 335.

Coreq.: SPSI 340

SPSI 343 Clinical Practice in Speech Pathology I.

2 hrs

A minimum of 60 clock hours of supervised clinical experience with children and adults in individual and group settings. Functional articulation, voice disorders and rhythm problems.

Prereq: SPSI 340, SPSI 342, department permission.

SPSI 344 Clinical Practice in Speech Pathology II.

2 hrs

A minimum of 60 clock hours of supervised clinical experience with speech disorders associated with organic impairment. Problems of children and adults with cerebral palsy, cleft palate, hearing losses, mental impairments, and language.

Prereq: SPSI 343 and department permission.

SPSI 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other

departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPSI 452 Voice.

3 hrs

A study of the etiology, diagnosis, and treatment of functional and organic voice disorders, including defects of loudness, pitch, and quality.

Prereq: SPSI 340, SPSI 342.

SPSI 454 Stuttering.

3 hrs

Causation, symptomatology, and remedial procedures of stuttering; specific therapy procedures in the clinic, the school, and the home.

Prereq: SPSI 340, SPSI 342.

SPSI 477/478/479 Special Topics.

1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

GENERAL SPECIAL EDUCATION COURSES

SPGN 177/178/179 Special Topics.

1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPGN 251 Education of Exceptional Children. 3 hrs

An introductory survey course providing the historical, philosophical, and organizational factors leading to the enactment of federal and state laws, rules, and regulations governing special education. Characteristics, educational considerations, and implications of all areas of exceptionality including the gifted, learning disabled, mentally, emotionally, speech and language, hearing, visually, physically, and health impaired are addressed.

SPGN 271 Language Development and Speech Disorders in Special Populations. 2 hrs

Understanding the dynamics of language development and usage from birth through the school years. The effects of disability on language development and processes. Lecture and observation. Required of all special education majors except speech and language impaired and hearing impaired who must take SPSI 337 Language Acquisition.

SPGN 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPGN 300 Exceptional Children in the Regular Classroom. 1 hr

Characteristics of the exceptional learner including impairments of hearing, vision, speech, intelligence, behavior, and physical abilities. Considerations and implications of the educational, social, and psychological experience for the exceptional learner in the regular classroom. Not open to Special Education majors.

SPGN 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPGN 387 Cooperative Education. 3 hrs

One semester of supervised work in concentration area. An evaluation is required at the end of the employment period.

Prereq: Nine credit hours in concentration, approval by Cooperative Education Office, and department permission.

SPGN 390 Measurement and Diagnosis in Special Education. 3 hrs

This course is required for all students majoring in special education. Students will learn about a wide variety of standardized and criterion-referenced tests and about their role in assessing intellectual capacity, academic achievement, socioemotional skills, adaptive behavior, and auditory and visual limitations of students with handicaps. The course will be taught in a lecture format. Students will look at and become familiar with a wide variety of commonly used tests. Cultural reactions, test bias, and limitations will be explored.

Prereq: SPGN 251; admission to the teacher education program.

SPGN 395 Special Needs Persons: School, Family, and Community Interaction. 3 hrs

Designed to provide students with knowledge of the reciprocal influences of special needs persons, birth through 26 years of age, their families, and community institutions: legal, medical, social welfare, and educa-

tional. 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: SPGN 251; admission to the teacher education program.

SPGN 481 Classroom Management and Intervention Strategies for Handicapped Students. 3 hrs

An understanding of selected approaches to effective classroom management for special education students in varied settings will be developed. Behavioral theories will provide the foundation for building effective strategies and approaches for classroom management. The roles and responsibilities of students, parents, teachers, and other school personnel will be identified.

Prereq: SPGN 251; admission to the teacher education program.

SPGN 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPGN 481 Adaptive Technology in Special Education. 2 hrs

This course is intended to assist the student in identifying and implementing adaptive technology in the special education curriculum. The course explores the latest technology available in adapting computers and other devices to assist the special child. Major areas of interest include voice input/output, switching devices, alternative keyboards for the computer, (touch pads, membranes), adaptive devices for the visually impaired (braille and voice output), and other alternative devices. Students are encouraged to look at a broad range of uses for each technological instrument rather than isolate a given advancement for the use of a designated or single disability.

Prereq: SPGN 251; a computer course; admission to the teacher education program.

SPGN 485 Methods and Curriculum: Adolescents and Young Adults with Special Needs. 2 hrs

This course is intended for all students seeking a secondary special education endorsement and interested in working with adolescents or young adults with cognitive, sensory, or physical limitations. Students will

develop knowledge and awareness about secondary and postsecondary special education programs, curriculum, and services that address the intellectual, social, emotional, physical, and vocational needs of this population.

Prereq: Admission to the teacher education program.

SPGN 486 Recitation and Field Experience with Adolescents and Young Adults: Mentally Impaired, Physically Impaired, Hearing Impaired, or Visually Impaired. 2 hrs

Adaptation and application of curriculum and methods appropriate to the student's field of study (major). Students will complete a field experience at the secondary level in the area of disability for which he/she is to be endorsed.

Prereq: Admission to the teacher education program.

SPGN 487 Cooperative Education. 3 hrs

One semester of supervised work in concentration area. An evaluation is required at the end of the employment period.

Prereq: Nine credit hours in concentration, approval by Cooperative Education Office, and department permission.

SPGN 491 Seminar for Teachers of Special Education. 2 hrs

This course provides a transition from the academic environment to the professional setting. Competencies and issues necessary for teacher preparation and pertinent to the student's internship are presented. Topics for discussion include: a review of the history, nature, and structure of the Michigan Public School system and the delivery of total services to all students including the special education child; state and federal law including due process, data privacy requirements, teacher tenure, and professional liability; professional ethics, organizations, unions, and the influences on education; supervision of and interaction with teaching aids, para-professionals, volunteers, and other school personnel including the regular classroom teacher. Concurrent with special student teaching.

Prereq: Admission to the teacher education program.

SPGN 497/498/499 Independent Study. 1/2/3 hrs

Directed study of a problem or group of problems in special education.

Prereq: Department permission.

HEARING IMPAIRED

SPHI 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPHI 228 Education of Hearing-Impaired Students. 3 hrs

Designed to cover the history of the education of persons with hearing impairments, and to provide an overview of educational programming, psychological adjustment, parent counseling, communication methods, and various philosophical approaches to education of persons with hearing impairments.

Pre- or coreq: SPGN 251

SPHI 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPHI 375 Fundamentals of Sign Communication. 2 hrs

A study of the rationale for use of manual communication systems with persons with hearing impairments, including American Sign Language, manually-coded English Sign systems, and fingerspelling. Beginning-level skills in manual communication will be developed. Observation of use of sign language in school programs will be required.

SPHI 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPHI 387 Introductory Practicum with Hearing-Impaired Students. 1 hr

Thirty clock hours of supervised observation and work with students with hearing impairments.

Prereq: SPHI 228; admission to the teacher education program.

SPHI 391 Language for Hearing-Impaired Students. 4 hrs

Language development of children with prelingual hearing impairments. Survey of various methods of teach-

ing language, including natural and structured approaches.

Prereq: SPHI 228; admission to the teacher education program.

SPHI 392 Introduction to Audiology. 2 hrs

Medical and surgical treatment of pathologies of the ear. Hearing screening tests, basic audiometric testing procedures, and audiometric interpretation.

Prereq: SPSI 332 and SPSI 336.

SPHI 394 Aural Habilitation/Rehabilitation. 3 hrs

A study of the avenues of receptive language available to persons with impaired hearing; the development of auditory learning, auditory training, and the training of speechreading. Includes the understanding of group and individual hearing aids, other assistive technology, and surgical implants.

Prereq: SPHI 392.

SPHI 435 Phonetics and Hearing Impairment. 2 hrs

Articulatory and acoustic phonetics. Speech reception of persons with hearing impairments: auditory cues available relative to the individual's hearing loss; visual, tactile, and kinesthetic correlates. Characteristics of speech production of speakers with impaired hearing. Phonetic transcription in International Phonetic Alphabet, Northampton, and Thorndike orthographic systems. Phonological level speech assessment.

Prereq: SPSI 332 and SPSI 336; admission to the teacher education program.

SPHI 436 Speech Methods for Hearing-Impaired

Persons. 2 hrs

Methods of assessment and intervention in the development of intelligible connected speech in persons with hearing impairments.

Prereq: SPHI 435; admission to the teacher education program.

SPHI 437 Adaptive Curriculum for Hearing-Impaired Students. 3 hrs

Principles and methods of teaching academic subjects to students with hearing impairments. Classroom procedures and materials especially designed for students with hearing impairments, as well as the adaptation of regular curricula and materials will be presented.

Prereq: SPHI 391; admission to the teacher education program.

SPHI 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPHI 487 Speech Practicum with Hearing-Impaired Students. 1 hr

Thirty (30) clock hours of supervised observation and speech work with persons with hearing impairments.

Prereq: SPHI 436; admission to the teacher education program.

MENTALLY IMPAIRED

SPMI 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPMI 240 Preclinical: Mentally Impaired. 3 hrs

The purposes of the preclinical experiences in the area of the mentally impaired are twofold. First, it provides the student with opportunities to observe a variety of programs and work with children or youth displaying a variety of types and/or degrees of learning, emotional, and physical difficulties. (For a more detailed description of this component, please review the Handbook for Majors in the Mentally Impaired.) Secondly, students will meet together to discuss observations, insights, and concerns related to their experiences. Educational programs for students with mental retardation will be discussed and site visits will be made.

SPMI 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPMI 350 Introduction to Mental Retardation. 3 hrs

This lecture course introduces students to the field of mental retardation: its history, terminology, causes, health, medical, and sensorineural components. The range of philosophies influencing educational practices and life management programs are also discussed.

Prereq: SPGN 251, PSY 101.

SPMI 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPMI 427 Educating the Elementary Student with Mild Retardation. 2 hrs

The development of programs, materials, and instructional techniques appropriate to the needs of the educable mentally retarded child from birth to age 12.

Prereq: SPMI 240, SPMI 350; admission to the teacher education program.

SPMI 429 Curriculum Design and Education Programs for Students with Mild Retardation. 3 hrs

Emphasis will be given to the assessment of basic learning skills and academic levels of functioning based on the use and results of formal tests, criterion referenced tests, and formal data gathering instruments. Additional emphasis will be placed on the development of appropriate educational program goals. The development of appropriate lessons using selected materials, methods, and techniques to meet these goals. Selected behavioral management approaches will be included as they relate to overall educational goals and program development.

Prereq: SPMI 240, SPMI 350, SPMI 427; admission to the teacher education program.

SPMI 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPMI 483 Education of Students with Moderate or Severe Retardation. 4 hrs

This course focuses on philosophy, curriculum, assessment, teaching methods, and classroom management techniques for students identified as TMI, SMI, or SXI. A three-hour-per-week field placement in one of the above classrooms is an integral part of the course.

Prereq: SPMI 240, SPMI 350, SPGN 461; admission to the teacher education program.

PHYSICALLY OR OTHERWISE HEALTH IMPAIRED**SPPI 177/178/179 Special Topics. 1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPPI 240 Preclinical ExperiencesPOHI. 3 hrs

This introductory course provides exposure to and experience with the physically or otherwise health impaired. Students will be encouraged to evaluate and examine their motivation for becoming a teacher of the physically and health impaired and be introduced to all aspects of the teaching profession. Students will participate in a field experience, being exposed to all age and grade levels. They will have an opportunity to visit a variety of settings that employ teachers of the physically and health impaired and be exposed to the ancillary services found in most POHI delivery models.

SPPI 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPPI 310 Developmental Sciences for Teachers of the Physically and Health Impaired. 4 hrs

A study of developmental human anatomy and physiology with emphasis upon the impact of the nervous system and its integration, function, and control of the other body systems and their functions. The relationship of normal development to disability is explored and infused throughout the course. Laboratory periods are required where students can investigate the principles covered in lecture using anatomical models and specimens.

Prereq: SPGN 251, SPPI 240, and BIOL 105.

SPPI 360 Pathology of Physical and Health Impairments. 3 hrs

A comprehensive study of orthopedic, neurologic, health, and other handicapping conditions common to children and youth comprising the population found in educational settings serviced by the POHI teacher. Medical terminology and procedures are also introduced. Laboratory assignments are included in this course.

Prereq: Admission to the teacher education program, SPPI 310.

SPPI 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPPI 412 Ancillary Services and Health Procedures for Teachers of Physically Impaired. 2 hrs

Information concerning the individual disciplines that provide ancillary services to physically and health impaired students. Skills involving the use of adaptive equipment, manipulation of orthotics, and implementation of health intervention and maintenance procedures will be learned. A field placement is also required.

Prereq: Admission to the teacher education program. SPPI 310 and SPPI 360 or instructor permission.

SPPI 414 Educational Strategies for Teachers of the Physically Impaired. 4 hrs

This course encompasses information and develops skills needed to develop, implement, and evaluate curriculum and methods for the preschool and elementary physically otherwise health impaired student. All aspects of cognitive, affective, and psychomotor education are explored. Emphasis is placed upon individualized instruction and programming, adaptations and modification of instructional methods and materials, remediation, communication, problem-solving, decision-making, personal adjustment, prevocational education, and leisure activities. A directed classroom laboratory is required.

Prereq: SPPI 310, SPPI 360, and admission to the teacher education program.

SPPI 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

VISUALLY IMPAIRED**SPVI 177/178/179 Special Topics.** 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPVI 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPVI 365 Braille. 3 hrs

Developing proficiency in reading and writing error-free braille and the reading of music braille.

Pre or coreq: SPGN 251.

SPVI 366 The Eye and Vision Anatomy and Physiology. 2 hrs

Anatomy, physiology, and pathology of the organs of vision, refractive errors, and principles of correction. Educational implications of visual handicaps in children rather than strictly medical achievements. Interpretation of medical reports to parents, students, and other teachers.

Prereq: SPGN 251.

SPVI 368 Mobility Training for the Visually Impaired. 2 hrs

Sensory training, study, and development of cane techniques as they apply to mobility for the blind. Introduction to leader dog program. Practicum included. Offered on the junior, senior, and graduate level.

Prereq: Junior level.

SPVI 369 Community Considerations for the Visually Impaired. 3 hrs

The lifestyle and needs of persons with visual impairments; appropriate considerations the community must take for all levels of physical, emotional, and vocational development. Field trips and classroom experiences, acquaintance with a wide variety of service-oriented facilities for the visually impaired.

Prereq: SPGN 251.

SPVI 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SPVI 464 Methods of Teaching the Blind. 3 hrs

A study of the various methods used in educating and assessing blind children. The adaptation of these methods to the teaching of school subjects to blind students. Further emphasis on Nemeth Code, Cranmer abacus and other teaching materials and devices.

Prereq: SPGN 251; admission to the teacher education program.

SPVI 466 Braille II: Nemeth Code. 3 hrs

Transcription skills with Nemeth Code.

Prereq: SPVI 365; admission to the teacher education program.

SPVI 467 Education of Children with Impaired**Vision. 2 hrs**

Organization and administration of various plans for educating partially seeing children. Adaptation of the various teaching methods and materials to partially seeing children. A comparison of various vision testing methods and devices. Visits to classes for visually impaired children.

Prereq: SPGN 251; admission to the teacher education program.

SPVI 469 Electronic Communication for the Visually Impaired. 3 hrs

This course is designed to expose the student to a variety of tools available for use by visually impaired persons. The tools or devices covered include those designed to provide assistance in travel, reading, braille, low vision (such as the Optacon, Kurzweil Reading Machine, Versabrailler, Stereo Toner, and Computer Braille Programs). Proficiency of five words per minute on the Optacon is expected.

Prereq: Admission to the teacher education program.

SPVI 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

TEACHER EDUCATION

James D. Riley
Department Head
 234 Boone Hall
 487-3260

Professors: Leah D. Adams, Irene A. Allen, Ranjit S. Bajwa, Mary G. Bigler, John Blair, Trevor Gardner, Bert I. Greene, Thomas M. Gwaltney, Sarah Huyvaert, Louise F. Jernigan, Georgea Langer, Marvin Pasch, Jeanne Pietig, Valerie Polakow, Quirico S. Samonte, Alane Starko, Kishor N. Wahi, Jerome A. Weiser, Warren S. Williams, Judy Williston

Associate Professors: Kathleen Jeakle Beauvais, Anne K. Bednar, Barbara Diamond, Jan Collins-Eaglin, Martha Kinney-Sedgwick, Edward Lederman, Rebecca Martusewicz, Maureen McCormack, Olga G. Nelson, Karen Paciorek, Patricia Pokay

Assistant Professors: Betty L. Barber, Peggy Daisey, Jane Gordon, Sue Grossman, Elizabeth Johnson, Sylvia Jones, Michael Walker

Emeritus: Thomas Bushey, Wallace D. LaBenne, Judith McKee

The Teacher Education department provides undergraduate courses in orientation to the University, psychological and social foundations of education, methods, reading, and educational media, among others. These courses, along with courses in other University departments, comprise the programs for preparing elementary, secondary, and K-12 teachers.

Curricula

The department provides coordination of and a portion of the coursework for programs for persons seeking to become elementary teachers, elementary teachers with early childhood endorsement, secondary teachers, and teachers of K-12 subjects.

Prospective elementary teachers

The general program of studies and other information for prospective elementary teachers is found on page 436. Each program includes a major and a minor (or three minors). Many majors and minors are offered through colleges other than the College of Education. A list of approved majors and minors is on page 363.

However, the Teacher Education department ad-

ministers these majors for prospective elementary teachers: Arts Group; Elementary Science Group; Social Science Group Major for Elementary Education.

The Teacher Education department administers these minors for prospective elementary teachers: Arts Group; Early Childhood Education; Elementary Science Group; French Language; German Language; Social Science Group (Elementary); and Spanish Language.

Prospective elementary teachers with early childhood endorsement

The program of studies and other information for prospective elementary teachers with early childhood endorsement is found on page 436. See also information for prospective elementary teachers above.

Prospective secondary and K-12 teachers

Programs of studies and other information for prospective secondary and K-12 teachers are found in regular department listings. A list of approved majors and minors is on pages 362-363.

Advising

Advising Coordinator for Elementary Certification: Olga Nelson

Advising is required for all students so that each can pursue both personal and professional goals in a timely and satisfying manner.

Elementary education and early childhood education students are required to attend open advising session before being assigned an adviser. Students should visit the Teacher Education office in 234 Boone to pick up a copy of the open advising schedule as part of the advising process pursuant to the declaration of intent.

Graduate study leads to the master's degree in early childhood education, elementary education, middle school/junior high and secondary school teaching, common learnings, reading, social foundations, and educational psychology (development and personality, research and measurement, or educational technology concentrations). For descriptions of graduate courses and programs, consult the Graduate Catalog.

TEACHING PROGRAMS

EARLY CHILDHOOD

(ELEMENTARY WITH EARLY CHILDHOOD MINOR)

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the

Michigan Department of Education Elementary Provisional Certificate, which is valid for teaching all subjects kindergarten through grade 5, for teaching in self-contained classrooms in grades 6-8, and for teaching in one's major or minor subject areas of concentration in grades 6-8. In addition, the student is qualified for recommendation for endorsement in early childhood, certification code "ZA." Depending on the major selected (or two other minors selected), the individual will be eligible for an additional endorsement(s). The certification tests for this field are #81, "Early Childhood," #83, "Elementary," and those needed for subject area endorsements.

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 I-B-2. Basic Studies requirement. See inside back cover
 I-B-3. Basic Studies requirement. See inside back cover
 I-B-4. *Both:*
 MATH 108 Mathematics for Elementary Teachers I (3)
 MATH 109 Mathematics for Elementary Teachers II (3)
 I-B-5. Basic Studies requirement. See inside back cover
 II-B-1. PHY 100 Science for Elementary Teachers (3)
 II-B-2. Basic Studies requirement. See inside back cover
 II-B-3. *All of:*
 CHEM 101 Science for Elementary Teachers (3)
 GESOC 202 Science for Elementary Teachers (3)
 ESCI 303 Science for the Elementary Teacher (3)
 III-B-1. Basic Studies requirement. See inside back cover
 III-B-2. Basic Studies requirement. See inside back cover
 III-B-3. *Both:*
 GEOG 110 World Regions (3)
 SOCL 105 Introductory Sociology (3)
 III-B-4. *One of:*
 SOCL 202 Social Problems (3)
 *SOCL 205 Minority Women in the United States (3)
 *SOCL 214 Racial and Cultural Minorities (3)
 *SOCL 344 Sociology of Sex Roles (3)
 IV-B-1. Basic Studies requirement. See inside back cover
 IV-B-2. Basic Studies requirement. See inside back cover
 IV-B-3. Basic Studies requirement. See inside back cover
 IV-B-4. MUSC 104 Elements of Music (2)
 Physical education, military science, or equivalent (2)
Credit hours in Basic Studies:..... 57

Specialty Studies

One of:

- A major from the approved list (see page 362) (30³)
 Two minors other than early childhood education from the approved list (see page 362) (40³)

- CURR 214 The Developing Child in ECE (3)^f
 CURR 215 The Developing Professional in ECE (1)^f
 **CURR 303 Implementing the Curriculum in ECE (2)^f

One of:

- CURR 314 Infants and Toddlers in ECE (3)
 EDPS 318 Play and Creativity in ECE (3)
 PHED 281 Motor Behavior (3)

Subtotal, Specialty Studies:..... 33

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
 SPGN 251 Education of Exceptional Children (3)^f
 PHED 257 Physical Education for the Classroom Teacher (2)
 EDTC 300 Introduction to Computer Applications in Education (1)
 EDPS 322 Human Development and Learning (4)
 MATH 381 The Teaching of Mathematics K-6 (3)

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

- SOFD 328 Schools in a Multicultural Society (3)
 CURR 302 Methods of Integrating Curriculum and Resources in ECE (3)^c
 CURR 304 Curriculum and Methods: Elementary (3)
 RDNG 314 Teaching Reading in the Elementary School (6)
 FA 300 Art Integration for the Elementary Teacher (4)
 EDMD 345 Media for the Classroom Teacher (1)
 EDPS 341 Assessment of the Young Child (3)^f
 EDUC 496 Student Teaching (6)
 EDUC 497 Student Teaching (6)

Credit hours in Professional Studies:..... 48

Total credit hours required:..... 150

^aCourse required for and applicable to major.

^bIndicated courses constitute the early childhood minor.

^cAdmission to the teacher education program required.

^dCould be less, depending on the minor and the possible application of basic studies courses to the minor.

^eCould be less, depending on the major and the possible application of Basic Studies courses / hours to the major.

ELEMENTARY EDUCATION

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate, which is valid for teaching all subjects kindergarten through grade 5, for teaching in self-contained classrooms in grades 6-8, and for teaching in one's major or minor areas of concentration in grades 6-8. Depending on the major and minor selected (or three minors selected), the individual will be eligible for additional endorsements. The certification tests for this field are #81, "Early Childhood," #83, "Elementary," and those needed for subject area endorsements. The certification tests for this field are #83, "Elementary," and those needed for subject area endorsements.

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 I-B-2. Basic Studies requirement. See inside back cover
 I-B-3. Basic Studies requirement. See inside back cover
 I-B-4. *Both:*
 MATH 108 Mathematics for Elementary Teachers I (3)
 MATH 109 Mathematics for Elementary Teachers II (3)
 I-B-5. Basic Studies requirement. See inside back cover
 II-B-1. *All of:*
 PHY 100 Science for Elementary Teachers (3)
 GESC 202 Science for Elementary Teachers (3)
 ESCI 303 Science for the Elementary Teacher (3)
 II-B-2. Basic Studies requirement. See inside back cover
 II-B-3. CHEM 101 Science for Elementary Teachers (3)
 III-B-1. Basic Studies requirement. See inside back cover
 III-B-2. Basic Studies requirement. See inside back cover
 III-B-3. GEOG 110 World Regions (3)
 III-B-4. Complete a course from one of the following options:
 a. Basic Studies requirement. See inside back cover
 b. GEOG 111 (follows 110) Regions and Resources (3)
 c. Basic Studies requirement. See inside back cover
 IV-B-1. Basic Studies requirement. See inside back cover
 IV-B-2. Basic Studies requirement. See inside back cover
 IV-B-3. Basic Studies requirement. See inside back cover
 IV-B-4. MUSC 104 Elements of Music (2)
 Physical education, military science, or equivalent (2)
 Additional requirement: LITR 207 Introduction to Children's Literature (3)
Credit hours in Basic Studies:..... 60

Specialty Studies

One of:

A major from the approved list (see page 362) (30³)
 and a minor from the approved list (see page 362) (20³)

Three minors from the approved list (See page 362) (60³)

Subtotal, Specialty Studies:..... 50

Professional Studies

100 clock hours of approved prestudent teaching field experiences (0)

INED 253 Technology Education for Children (3)

PHED 257 Physical Education for the Classroom Teacher (2)

EDTC 300 Introduction to Computer Applications in Education (1)

HLED 320 Health Education in the Elementary Grades (2)

MUSC 320 Elementary Music Education (2)

EDPS 322 Human Development and Learning (4)

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

FA 300 Art Integration for the Elementary Teacher (4)

SPGN 300 Exceptional Children in the Regular Classroom (1)

CURR 304 Curriculum and Methods: Elementary (3)

RDNG 314 Teaching Reading in the Elementary School (6)

SOFD 328 Schools in a Multicultural Society (3)

EDPS 340 Introduction to Assessment and Evaluation (3)

EDMD 345 Media for the Classroom Teacher (1)

MATH 381 The Teaching of Mathematics K-6 (3)

EDUC 492 Student Teaching (12)

Credit hours in Professional Studies:..... 50

Total credit hours required:..... 160

³Could be less, depending on the major and minor (or three minors) selected and the possible application of Basic Studies courses/hours to the major and minor (or three minors)

TEACHING MAJORS ADMINISTERED BY THE DEPARTMENT

Majors and minors for prospective elementary teachers may be selected from, but are limited to, those on the approved list on page 362. The majors and minors given below are administered by the Teacher Education department.

ARTS GROUP MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in fine arts, certification code "OX." The certification test covering this field is #53, "Fine Arts."

FA 101 Introduction to Art (3)

CTAD 222 Drama and Play in Human Experience (3)

INED 354 Experiences in Technology for Children (2)

17 credits from fine arts, industrial education, music, drama/theatre for the young, or theatre arts courses

25 hours, not counting hours applicable to Basic Studies or professional studies.

The following courses, required in the general education or professional studies for elementary education, are considered part of this major and must be included if this major is selected:

MUSC 104 Elements of Music (2)

INED 253 Technology Education for Children (3)

FA 300 Art Integration for the Elementary Teacher (4)

MUSC 320 Elementary Music Education (2)

CHILDREN'S LITERATURE AND DRAMA/ THEATRE FOR THE YOUNG, INTERDISCIPLINARY MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in language arts, certification code "BX." The certification test covering this field is #01, "Language Arts."

Two of:

*LITR 100 The Reading of Literature (3)

*LITR 101 The Reading of Literature: Fiction (3)

*LITR 102 The Reading of Literature: Poetry (3)

*LITR 103 The Reading of Literature: Drama (3)

*LITR 204 Native American Literature (3)

LITR 210 Introduction to Shakespeare (3)

LITR 251 The Bible as Literature (3)

*LITR 260 African American Literature (3)

*LITR 207 Introduction to Children's Literature (3)

ENGL 450 Children's Literature: Criticism and Response (3)

One of:

LITR 351 World Mythology (3)

LITR 352 Folk Literature: Ballads and Folk Tales (3)

One of:

*CTAS 121 Fundamentals of Speech (2)

*CTAS 124 Fundamentals of Speech (3)

CTAD 222 Drama and Play in Human Experience (3)

CTAD 323 Improvising and Role-Play (3)

CTAD 324 Oral Interpretation of Literature for the Young (3)

If CTAS 121 is in the program, choose 10 credits from this list; if CTAS 124 is in the program, choose 9 credits from this list:

CTAD 322 Theatre for the Young (3)

CTAD 327 Plays for the Young (3)

CTAD 497/498/499 Independent Study (1/2/3)

CTAO 210 Interpretative Reading (3)

CTAA 168/268/368/468 Interpretation (1 each)

ENGL 451 Writing about Controversy in Literature for the Young (3)

*LITR 204 Native American Literature (3)

LITR 210 Introduction to Shakespeare (3)

LITR 251 The Bible as Literature (3)

LITR 351 World Mythology (3)

LITR 352 Folk Literature: Ballads and Folk Tales (3)

LITR 401 Modern British and American Poetry 1914 to Present (3)

Approved minors are those for the elementary program as given on page 362.

24 hours, not including the minor and not including requirements that may be satisfied through Basic Studies (*).

*May be satisfied in Basic Studies.

ELEMENTARY SCIENCE GROUP MAJOR**ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in science, certification code "DX." The certification test covering this field is #16, "Science." At catalog press time, a revision of this program was in process. Please see adviser.

A. **One of:*

#PSY 101 General Psychology (3)

PSY 102 General Psychology (4)

B. **CHEM 101 Science for Elementary Teachers (3)*C. **ESCI 303 Science for the Elementary Teacher (3)*D. **GESC 202 Science for Elementary Teachers (3)*E. **PHY 100 Science for Elementary Teachers (3)*

F. If PSY 101 is in the program, choose 21 credits from the entire list of courses below in all options. If PSY 102 is in the program, choose 20 credits from the entire list of courses below in all options. The selections must include two of the following options and must include at least nine hours of courses at the 300-level or higher. Not more than 18 hours may be taken from any one department.

Option 1. Two courses from the following list, at least one of which must be at the 300-level or above:

#BIOL 105 Biology and the Human Species (4)

BIOL 205 Field Biology (4)

BIOL 207 Elements of Ecology (2)

BIOL 224 Principles of Conservation (4)

BIOL 232 Nature Interpretation (3)

BIOL 412 Biogeography (3)

BIOL 413 Animal and Plant Preservation Techniques (1)

BOTN 209 Ornamental Plants (2)

BOTN 215 Economic Botany (3)

BOTN 221 General Botany (4)

BOTN 354 Trees and Shrubs (3)

BOTN 497/498/499 Independent Study (1/2/3)

ESCI 377/378/379 Special Topics (1/2/3)

ZOOL 222 General Zoology (4)

ZOOL 223 Field Bird Study (1)

ZOOL 336 Economic Zoology (2)

ZOOL 497/498/499 Independent Study (1/2/3)

Option 2. Two choices from the following list, at least one of which must be at the 300-level or above:

A. One of:

CHEM 105 Survey of Chemistry (5)

CHEM 119 Fundamentals of Chemistry (4)

#CHEM 115 Chemistry and Society and CHEM 116 Chemistry and Society Laboratory (4)

B. #CHEM 120 Fundamentals of Organic and Biochemistry (4)

C. #CHEM 121 General Chemistry I and CHEM 122 General Chemistry I Laboratory (4)

Option 3. Two choices from the following list, at least one of which must be at the 300-level or above:

GESC 114 National Parks and Monuments (2)

GESC 208 Natural Environmental Hazards (3)

GESC 227 Topographic Maps (2)

GESC 250 Introduction to Coastal Processes (3)

GESC 303 Field Geography (3)

GESC 309 Plate Tectonics (3)

GESC 320 The Oceans (3)

GESC 324 Weather (3)

GESC 325 Severe and Unusual Weather (3)

GESC 327 Soil Science (3)

GESC 378/479 Special Topics (2/3)

GESC 401 Cartography (3)

GESC 424 Climatology (3)

GESC 476 Geographic Information Systems (3)

GEOL 120 The Fossil Record (3)

GEOL 160 Physical Geology (4)

GEOL 161 Historical Geology (4)

GEOL 229 Rocks of Michigan (2)

GEOL 325 Geomorphology (3)

GEOL 331 Paleontology (3)

GEOL 378/478 Special Topics (2/2)

Option 4. Two choices from the following list, at least one of which must be at the 300-level or above:

ASTR 203 Exploration of the Universe (3)

ASTR 204 Astronomical Investigations (1)

PHY 110 Physical Science (4)

PHY 221 Mechanics, Sound, and Heat (4)

PHY 222 Electricity and Light (4)

PHY 311 Elementary Physical Science (3)

21 hours, not including coursework satisfied through Basic Studies or professional studies.

Required in Basic Studies in the elementary program.#Could be taken in Basic Studies in the special education program.***LITERATURE, LANGUAGE,
COMMUNICATION, AND THEATRE ARTS
GROUP MAJOR****ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in language arts, certification code "BX." The certification test covering

this field is #01, "Language Arts."

- *ENGL 121 English Composition (3)
- LITR 210 Introduction to Shakespeare (3)
- *LITR 207 Introduction to Children's Literature (3)

Two of:

- *LITR 100 The Reading of Literature (3)
- *LITR 101 The Reading of Literature: Fiction (3)
- *LITR 102 The Reading of Literature: Poetry (3)
- *LITR 204 Native American Literature (3)
- LITR 251 The Bible as Literature (3)
- *LITR 260 African American Literature (3)

One of:

- *ENGL 225 Intermediate English Composition (3)
- ENGL 328 Writing: Style and Language (3)
- ENGL 335 Imaginative Writing (3)

Two of:

- LING 201 An Introduction to Linguistics (3)
- LING 401 Introduction to Linguistic Science (3)
- LING 402 Modern English Grammar (3)
- LING 421 The History of the English Language (3)

One of:

- *CTAS 121 Fundamentals of Speech (2)
- *CTAS 124 Fundamentals of Speech (3)
- CTAO 210 Interpretative Reading (3)
- CTAD 222 Drama and Play in Human Experience (3)

If CTAS 121 is in the program, take 4 hours in communication and theatre arts; if CTAS 124 is in the program, take 3 hours in communication and theatre arts.

18 hours, not including the minor and not including requirements that may be satisfied through Basic Studies (*).

SOCIAL SCIENCE GROUP MAJOR FOR ELEMENTARY EDUCATION

ELEMENTARY TEACHER CERTIFICATION

Note: Changes are pending. Students must attend group advising. Contact the Department of Teacher Education.

Recommendation for endorsement in social science (certification code "CX") requires a group major of 36 hours from economics, geography, history, political science, psychology, sociology, anthropology, cultural studies, government, and behavioral studies. The certification test covering social sciences is #06, "Social Sciences."

Choose at least 12 credits, but no more than 18

credits from one of the following five areas: economics, geography, history, political science, sociology. Geography and geology applicable in the science and technology courses do not count on this major.

Choose three credits in each of the remaining four social science areas.

12 hours, not including the minor and not including requirements that may be satisfied through Basic Studies.

TEACHING MINORS ADMINISTERED BY THE DEPARTMENT

ARTS GROUP MINOR

ELEMENTARY AND SPECIAL EDUCATION-
ELEMENTARY TEACHER CERTIFICATION
(NOT AVAILABLE WITH ART MAJOR OR WITH
MUSIC MAJOR)

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in fine arts, certification code "OX." The certification test covering this field is #53, "Fine Arts."

- FA 101 Introduction to Art (3)
- **MUSC 104 Elements of Music (2)
- #INED 253 Technology Education for Children (3)
- #FA 300 Art Integration for the Elementary Teacher (4)
- #MUSC 320 Elementary Music Education (2)
- INED 354 Experiences in Technology for Children (2)

8 hours from:

- CTAD 222 Drama and Play in Human Experience (3)
- CTAD 322 Theatre for the Young (3)
- CTAD 323 Improvising and Role-Play (3)
- CTAD 324 Oral Interpretation of Literature for the Young (3)
- CTAD 497/498/499 Independent Study (1/2/3)
- CTAO 210 Interpretative Reading (3)
- CTAR 106 Introduction to the Performing Arts (3)
Not open to those with credit in MUSC 106.
- CTAR 150 Introduction to Theatre (3)
- *CTAR 151 African American Theatre: An Introduction (3)
- CTAR 153 Technical Theatre: Costume and Makeup (2)

CTAR 251 African American Theatre: Creative Problems (3)

CTAA 168/268/368/468 Interpretation (1 each)
Applied Music Lessons at the 101-300 level (1-4)

FA 100 Art Appreciation (3)

FA 107 Art History Survey I (3)

FA 108 Art History Survey II (3)

FA 421 History of Oriental Art (3)

FA 122 Two-Dimensional Design (3)

FA 123 Drawing I (3)

FA 124 Drawing II (3)

*FA 222 African and African American Art (3)

FA 231 Three-Dimensional Design (3)

FA 302 Graphic Design (3)

FA 436 Women in Art (3)

INDT 121 Graphic Communication (3)

INED 105 History of Industrial Technology (3)

INED 118 Energy Technology (3)

INED 152 Arts and Crafts (3)

MUSC 106 Introduction to the Performing Arts (3)

MUSC 107 Music Appreciation (2)

MUSC 151 Class Piano (2)

MUSC 152 Class Piano (2)

MUSC 232 Voice Class (1)

MUSC 131 University Choir (1)

MUSC 134 University Women's Chorus (1)

MUSC 135 University Men's Chorus (1)

MUSC 249 Band (1)

MUSC 248 Orchestra (1)

MUSC 274 Functional Guitar (2)

MUSC 224 Recreational Music (2)

Other courses in fine arts, industrial education, music, or theatre arts

13 hours for elementary program, not counting hours in Basic Studies and professional studies. 21 hours for special education program, not counting hours that could be taken in Basic Studies.

*Satisfies multicultural/international studies requirement.

**Included in Basic Studies for elementary program.

#Included in professional studies for elementary program.

EARLY CHILDHOOD EDUCATION MINOR

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in early childhood, certification code "ZA." The certification test covering this field is #82, "Early Childhood."

UNDERGRADUATE CATALOG

CURR 214 The Developing Child in ECE (3)

CURR 215 The Developing Professional in ECE (1)

**CURR 303 Implementing the Curriculum in ECE (2)

#SPGN 251 Education of Exceptional Children (3)

**CURR 302 Methods of Integrating Curriculum and Resources in ECE (3)

**EDPS 341 Assessment of the Young Child (3)

**EDUC 496 Student Teaching (6)

One of:

CURR 314 Infants and Toddlers in ECE (3)

EDPS 318 Play and Creativity in ECE (3)

PHED 281 Motor Behavior (3)

23 hours for those in elementary programs; 20 hours for those in special education programs.

**Requires formal admission to the teacher education program.

#Included in the special education programs.

ELEMENTARY SCIENCE GROUP MINOR

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in science, certification code "DX." The certification test covering this field is #16, "Science." At catalog press time, a revision of this program was in process. Please see adviser.

A. *One of:

#PSY 101 General Psychology (3)

PSY 102 General Psychology (4)

B. *CHEM 101 Science for Elementary Teachers (3)

C. *ESCI 303 Science for the Elementary Teacher (3)

D. *GESC 202 Science for Elementary Teachers (3)

E. *PHY 100 Science for Elementary Teachers (3)

F. If PSY 101 is in the program, choose 9 credits from the entire list of courses below in all options. If PSY 102 is in the program, choose 8 credits from the entire list of courses below in all options. The selections must include two of the following options and must include at least six hours of courses at the 300-level or higher. Not more than 18 hours may be taken from any one department.

Option 1. Two courses from the following list, at least one of which must be at the 300-level or above:

#BIOL 105 Biology and the Human Species (4)

BIOL 205 Field Biology (4)

BIOL 207 Elements of Ecology (2)

BIOL 224 Principles of Conservation (4)

BIOL 232 Nature Interpretation (3)

BIOL 412 Biogeography (3)
 BIOL 413 Animal and Plant Preservation
 Techniques (1)
 BOTN 209 Ornamental Plants (2)
 BOTN 215 Economic Botany (3)
 BOTN 221 General Botany (4)
 BOTN 354 Trees and Shrubs (3)
 BOTN 497/498/499 Independent Study (1/2/3)
 ESCI 377/378/379 Special Topics (1/2/3)
 ZOOL 222 General Zoology (4)
 ZOOL 223 Field Bird Study (1)
 ZOOL 336 Economic Zoology (2)
 ZOOL 497/498/499 Independent Study (1/2/3)

Option 2. Two choices from the following list, at least one of which must be at the 300-level or above:

A. One of:

CHEM 105 Survey of Chemistry (5)
 CHEM 119 Fundamentals of Chemistry (4)
 #CHEM 115 Chemistry and Society and CHEM
 116 Chemistry and Society Laboratory (4)

B. #CHEM 120 Fundamentals of Organic and Biochemistry (4)

C. #CHEM 121 General Chemistry I and CHEM 122 General Chemistry I Laboratory (4)

Option 3. Two choices from the following list, at least one of which must be at the 300-level or above:

GESC 114 National Parks and Monuments (2)
 GESC 208 Natural Environmental Hazards (3)
 GESC 227 Topographic Maps (2)
 GESC 250 Introduction to Coastal Processes (3)
 GESC 303 Field Geography (3)
 GESC 309 Plate Tectonics (3)
 GESC 320 The Oceans (3)
 GESC 324 Weather (3)
 GESC 325 Severe and Unusual Weather (3)
 GESC 327 Soil Science (3)
 GESC 378/479 Special Topics (2/3)
 GESC 401 Cartography (3)
 GESC 424 Climatology (3)
 GESC 476 Geographic Information Systems (3)
 GEOL 120 The Fossil Record (3)
 GEOL 160 Physical Geology (4)
 GEOL 161 Historical Geology (4)
 GEOL 229 Rocks of Michigan (2)
 GEOL 325 Geomorphology (3)
 GEOL 331 Paleontology (3)
 GEOL 378/478 Special Topics (2/2)

Option 4. Two choices from the following list, at least one of which must be at the 300-level or above:

ASTR 203 Exploration of the Universe (3)

ASTR 204 Astronomical Investigations (1)
 PHY 110 Physical Science (4)
 PHY 221 Mechanics, Sound, and Heat (4)
 PHY 222 Electricity and Light (4)
 PHY 311 Elementary Physical Science (3)

9 hours for elementary program; 13 hours for special education programs.

**Required in Basic Studies in the elementary program.*

#Could be taken in Basic Studies in the special education program.

FRENCH LANGUAGE MINOR

ELEMENTARY AND SPECIAL EDUCATION-
 ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in French, certification code "FA." The certification test covering this field is #23, "French."

FRNH 343 French Composition (3)

FRNH 344 French Conversation (3)

14 credits from any level French courses

20 hours

GERMAN LANGUAGE MINOR

ELEMENTARY AND SPECIAL EDUCATION-
 ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in German, certification code "FB." The certification test covering this field is #24, "German."

GERN 343 German Composition (3)

GERN 344 German Conversation (3)

14 credits from any level German courses

20 hours

SOCIAL SCIENCE GROUP MINOR (ELEMENTARY)

ELEMENTARY AND SPECIAL EDUCATION-
 ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in social science, certification code "CX." The certification test covering this field is #06, "Social Sciences."

#SOCL 105 Introductory Sociology (3)

**9 credits in social science courses

One of:

- *#HIST 123 The United States to 1877 (3)
- *#HIST 124 The United States, 1877 to the Present (3)
- *#GEOG 110 World Regions (3)

One of:

- ECON 200 The American Economy (3)
- ECON 201 Principles of Economics I (3)
- *#PLSC 112 American Government (3)

12 hours, not including hours taken through Basic Studies.

*Can be satisfied in Basic Studies requirements for elementary program.

#Can be satisfied in Basic Studies requirements for special education programs.

**3 hours can be satisfied in Basic Studies requirements.

SPANISH LANGUAGE MINOR

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in Spanish, certification code "FF." The certification test covering this field is #28, "Spanish."

SPNH 343 Spanish Grammar and Composition (3)

SPNH 344 Spanish Conversation and Composition (3)

14 credits from any level Spanish courses

20 hours

CURRICULUM COURSES

CURR 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CURR 214 The Developing Child in ECE. 3 hrs

Developmental patterns of children in various settings. Physical, mental, social, and emotional components of growth through the first five stages of the family life cycle, with emphasis on the child from two to five years. Impact of the family resources, attitudes, and values on young children. Concurrent registration in CURR 215 required.

Prereq: PSY 101 and sophomore standing.

CURR 215 The Developing Professional in ECE. 1 hr

An orientation to the profession of early childhood education. Students will learn communication skills, how to interpret child and adult behaviors, and how to build relationships. Students will begin to apply effective teaching practices and to use a reflective inquiry approach to understand child development theories as the bases for early childhood programs. Concurrent registration in CURR 214 required.

Prereq: PSY 101 and sophomore standing.

CURR 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CURR 302 Methods of Integrating Curriculum and Resources in ECE. 3 hrs

To help students design and implement developmentally appropriate curricula and programs for children prekindergarten through third grade. An inquiry approach will be used to assist the student in broadening the scope of curriculum to provide for individual interests and needs.

Prereq: EDPS 322 or 325; CURR 214 and CURR 215.

Taken concurrently with CURR 303. Admission to the teacher education program.

CURR 303 Implementing the Curriculum in ECE. 2 hrs

This course is divided into two parts, the first being a 1 1/2 hour class each week. The content of the class will focus on implementing a developmentally appropriate curriculum in the practicum setting. The second part is a three hour per week practicum experience in a program serving one of the following age groups of children: infants/toddlers, preschoolers, or kindergartners.

Prereq: EDPS 322 or 325; CURR 214 and CURR 215.

Taken concurrently with CURR 302. Admission to the teacher education program.

CURR 304 Curriculum and Methods: Elementary. 3 hrs

The concept of curriculum and its relationship to differing philosophies of education and styles of teaching. The instructional process and multiple teaching strategies examined and applied through lesson planning and demonstration. Social studies content used in lesson planning by students seeking elementary certification. Classroom management principles and techniques considered in the light of a curriculum and instruction perspective.

Includes a planned practicum experience in public schools in addition to the regularly scheduled hours.

Prereq: Admission to the teacher education program prior to registration.

CURR 305 Curriculum and Methods: Secondary. 3 hrs

The concept of curriculum and its relationship to differing philosophies of education and styles of teaching. The instructional process and multiple teaching strategies examined and applied through lesson planning and demonstration. Classroom management principles and techniques considered in the light of a curriculum and instruction perspective. Includes a planned practicum experience in public schools in addition to the regularly scheduled hours.

Prereq: Admission to the teacher education program prior to registration.

CURR 314 Infants and Toddlers in ECE. 3 hrs

The home as a center for the nurture and development of infants and toddlers (conception to 2 1/2 years) with particular emphasis on the dynamics of the parent-child relationship.

Prereq: CURR 214 and CURR 215.

CURR 372 Methods and Resources in Child Development Centers. 4 hrs

Curriculum and program planning for guiding groups of young children; planning for the secondary pupil or the paraprofessional to work with preschool children. Concurrent registration in CURR 303 required.

Prereq: CURR 214 and CURR 314.

CURR 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CURR 387 Cooperative Education. 13 hrs

One semester of supervised work in concentration area. An evaluation is required at the end of the employment period.

Prereq: Nine credit hours in concentration, approval by Cooperative Education Office, and department permission.

CURR 407 Administration and Supervision in Child Development Centers. 3 hrs

The administrator's role in child development/child care programs. Applications of philosophy and management

skills to preschool programs. Supervision, safety, licensing, and other regulations.

Prereq: CURR 214 and department permission.

CURR 413 Experiences with Children. 5 hrs

Supervised participation with young children in home and group settings. Selection, presentation, and evaluation of learning experiences for young children. Emphasis on interpreting these experiences to secondary pupils.

Prereq: CURR 302 and CURR 303.

CURR 422 Seminar in Child Development. 2 hrs

Critical analysis of selected readings and research in child development, with interpretations for implementation in child development centers.

Prereq: CURR 214.

CURR 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CURR 486/488/489 Internship. 1/2/3 hrs

Directed experience involving a field placement in curriculum.

Prereq: Department permission.

CURR 487 Cooperative Education. 13 hrs

One semester of supervised work in concentration area. An evaluation is required at the end of the employment period.

Prereq: Nine credit hours in concentration, approval by Cooperative Education Office, and department permission.

CURR 490/491 Special Work (Honors Courses). 1/2 hrs

Additional experiences for exceptionally promising students who are seeking certification. Work based on problem or research interest with written and/or oral report.

Prereq: Senior standing, 3.5 average, permission of department head.

CURR 497/498/499 Independent Study. 1/2/3 hrs

Advanced study on an individual basis in areas in which the department does not offer a formal course.

Prereq: Department permission.

EDUCATIONAL MEDIA COURSES

EDMD 101 Use of Books and Libraries. 2 hrs
Practical instruction in the use of the library's tools and materials. Given on demand.

EDMD 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

EDMD 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

EDMD 345 Media for the Classroom Teacher. 1 hr
A methods course in which students will produce instructional materials in their teaching area and demonstrate the use of these materials in the classroom environment. The selection, utilization, and evaluation of teaching materials. Various types of media production and utilization equipment.
Prereq: Admission to the teacher education program.

EDMD 377/378/379 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

EDMD 402 General Reference. 3 hrs
The selection, critical examination, evaluation, and use of general reference materials, and the techniques of reference service.

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

EDMD 497/498/499 Independent Study. 1/2/3 hrs
Advanced study on an individual basis in areas in which the department does not offer a formal course.
Prereq: Department permission.

EDUCATIONAL PSYCHOLOGY COURSES

EDPS 106 Introduction to University Studies. 3 hrs
Orientation to the role and function of the university; career orientation; improvement of study skills; university services and diagnostic testing and counseling. Credit awarded and normal tuition charges apply.
Prereq: Special permission of the Academic Advising Center.

EDPS 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

EDPS 206 Mental Hygiene. 2 hrs
A study of the facts, conditions, techniques, and policies that further mental health and prevent mental illness. Skills and knowledge pertaining to effective interpersonal relationships and current concepts and approaches to mental health. Not open to freshmen.
Prereq: PSY 101/102.

EDPS 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

EDPS 307 Young Children in Peril: Educational Implications. 3 hrs
This course analyzes the critical conditions of young children living in poverty and the social-psychological development of all children whose families are in crisis. Educational implications for teachers are emphasized with a focus on child advocacy and early educational interventions which promote understanding of family, ethnic, cultural, and socioeconomic diversity.
Prereq: CURR 214 and CURR 215, or instructor permission.

EDPS 318 Play and Creativity in ECE. 3 hrs
An overview of approaches to play and creative expression in the education of young children. Applications will be made to the fields of early childhood, elementary education, special education, and extended day programs. Students will conduct observations and interviews on play and experiment with a variety of play materials and media with children.
Prereq: CURR 214, CURR 215, and admission to the teacher education program.

EDPS 322 Human Development and Learning. 4 hrs
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 101/102.

EDPS 325 Life Span Human Growth and Development. 4 hrs
An exploration of the biological, cognitive, social, and affective domains of human growth and development from the prenatal period until death; the relationship of growth and development to behavior through the life span.
Prereq: PSY 101/102.

EDPS 340 Introduction to Assessment and Evaluation. 3 hrs
Basic principles in evaluation and assessment. Students will construct and interpret tests and alternative assessments; critique standardized tests; assess social, affective, and behavioral factors; use computer applications; and examine assessment issues.
Prereq: Admission to the teacher education program.

EDPS 341 Assessment of the Young Child. 3 hrs
Procedures and practices used in the evaluation and assessment of young children from birth through the elementary years, with emphasis on children up through age eight.
Prereq: EDPS 322, CURR 214, CURR 215, and admission to the teacher education program.

EDPS 377/378/379 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

EDPS 402 Learning in the Later Years. 3 hrs
Introduction to the nature of age-related changes and differences among age groups found in the teaching-learning process. Learning in later years, including processes, strategies, and variables associated with the older learner.
Prereq: PSY 101 or equivalent.

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

EDPS 497/498/499 Independent Study. 1/2/3 hrs
Advanced study on an individual basis in areas in which the department does not offer a formal course.
Prereq: Department permission.

EDUCATIONAL TECHNOLOGY COURSES

EDTC 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

EDTC 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

EDTC 300 Introduction to Computer Applications in Education. 1 hr
An introductory course in educational technology with an emphasis on the emergence of technology in schools. Technology and its applications in schools past, present, and future. How to operate a microcomputer and run commercially prepared educational software. Instructional applications of microcomputers, programming languages, communications, and educational information. Basic concepts concerned with information processing, systems design, and artificial intelligence.
Prereq: None. Although the emphasis is educational applications of computers, the course has appeal for any student interested in an introduction to the operation and uses of the microcomputer. Required for all students pursuing a teacher education curriculum.

EDTC 377/378/379 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

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

READING COURSES

RDNG 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

RDNG 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

RDNG 311 Teaching Reading in the Secondary School. 3 hrs

The developmental sequence for reading skills at the junior and senior high school levels and methods for teaching the sequence, including teaching programs for both the normal and retarded reader. Providing reading instruction within the context of the various areas. Required for all students who seek certification to teach in secondary schools.

Prereq: Admission to the teacher education program.

RDNG 314 Teaching Reading in the Elementary School. 6 hrs

The developmental aspects of reading and language arts programs from preschool through elementary school. Theoretical and research knowledge pertinent to child growth and development and fundamental skills appropriate for the teaching of reading and language arts. Field-based experiences. Required for all students who seek certification to teach in elementary schools.

Prereq: Admission to the teacher education program.

RDNG 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

RDNG 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SOCIAL FOUNDATIONS COURSES

SOFD 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SOFD 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SOFD 328 Schools in a Multicultural Society. 3 hrs

A study of the interactive relationship between schools and society, and the development of a culturally responsible pedagogy. Special emphasis on educational equity and the theoretical foundations of multicultural education.

Prereq: Admission to the teacher education program.

SOFD 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SOFD 402 Sexism and Education. 3 hrs

How sexist attitudes and behaviors affect and are affected by school policies and practices; educational aims, staff relations, teaching styles, decision-making, treatment of pupils, instructional materials, antisexist programs.

SOFD 403 Endangered Children. 3 hrs

Multi-disciplinary analysis of the conditions of children and youth; a consideration of the rights of children and examination of such phenomena as myths about adolescents; dropouts and runaways; infanticide, homicide, and suicide among the young; the abuse and exploitation of children; the political meaning of the economic deprivation of youth.

SOFD 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

SOFD 497/498/499 Independent Study. 1/2/3 hrs

Advanced study on an individual basis in areas in which the department does not offer a formal course.

Prereq: Department permission.

COLLEGE OF HEALTH AND HUMAN SERVICES

ELIZABETH C. KING, DEAN
JENNIFER LENWAY, ASSISTANT TO THE DEAN
212 KING HALL
487-0077

DEPARTMENTS

ASSOCIATION HEALTH PROFESSIONS
HUMAN, ENVIRONMENTAL AND CONSUMER RESOURCES
NURSING EDUCATION
SOCIAL WORK

COLLEGE OF HEALTH AND HUMAN SERVICES

The College of Health and Human Services prepares professionals with the appropriate combination of knowledge and skills that will enable them to enhance the quality of life and facilitate social change to meet societal needs.

The programs in the College focus on the preparation of professionals for a unique combination of health and human services disciplines. As a result, curricula are built around an integration of knowledge with practice. Experiential education that is community based strongly links theory and practice. The curricula focus on a holistic view of individuals, groups, families, communities and the process of change. The interrelationships of people, institutions and services are also included. A unique contribution is the preparation of students for professional roles within the service delivery system.

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
 William Beaumont Hospital, Royal Oak
 Beyer Memorial Hospital, Ypsilanti
 Bixby Hospital, Adrian
 Borgess Hospital, Kalamazoo
 Bortz Health Care
 Botsford Hospital, Farmington Hills
 Robert B. Brigham Hospital, Boston, MA
 Brighton Hospital, Brighton
 Business/Education Alliance, Detroit
 Chelsea Community Hospital, Chelsea
 Children's Hospital of Michigan, Detroit
 Cincinnati General Hospital, Cincinnati, OH
 Citizen's for Better Care, Traverse City
 Comfort Inn, Ypsilanti
 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 Health Care for the Homeless, Detroit
 Detroit Medical Center, Detroit

Detroit Memorial Hospital, Detroit
 Detroit Orthopedic Clinic, Detroit
 Detroit Psychiatric Institute, Detroit
 Easter Seal Society of Wayne County, Inkster
 Flower Hospital, Sylvania, OH
 W.A. Foote Hospital, Jackson
 Henry Ford Estate, Dearborn
 Henry Ford Home Health Care
 Henry Ford Hospital, Detroit
 Henry Ford Hospital, Fairlane
 Flint Osteopathic Hospital, Flint
 Garden City Hospital, Garden City
 Glacier Hills Nursing Center, Ann Arbor
 Gorman's, Southfield
 Grace Hospital
 Heritage Hospital, Taylor
 University of Indiana Medical Center, Indianapolis, IN
 Institute of Living, Hartford, CT
 Institute of Rehabilitation Medicine, New York, NY
 Jacobson's, Jackson
 JC Penney Company, Southfield
 Jewish Home for the Aged, Detroit
 Klenczar Linda Korbesoja, ASID, Ypsilanti
 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
 Milan Federal Correctional Institution Infirmery, Milan
 Monroe County Health Department
 Muskegon Public Schools, Muskegon
 Normal Street House, Ypsilanti
 North Carolina Memorial Hospital, Chapel Hill, NC
 Northville Public Schools, Northville
 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
 Residence Inn, Ann Arbor
 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
 Saline Public Schools, Saline
 Sinai Hospital of Detroit, Detroit
 Springfield Hospital, Springfield, VT
 SOS Community Crisis Center, Ypsilanti
 Southwest Detroit Hospital, Detroit
 St. John's Hospital, Detroit
 St. Joseph Hospital, Flint
 St. Joseph Mercy Hospital, Ann Arbor
 St. Mary's Hospital, Livonia
 St. Vincent's Hospital, Toledo, OH
 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
 Veterans Administration Medical Center, Ann Arbor
 Visiting Nurse Association of Huron Valley
 Washtenaw County Community Mental Health Program, Ann Arbor
 Washtenaw County Health Department, Ann Arbor
 Washtenaw County League for Planned Parenthood, Ann Arbor
 Wayne-Westland Schools
 Wayne County Head Start Program, Wayne
 Weber's Inn, Ann Arbor
 Whitmore Lake Convalescent Center, Whitmore Lake
 Willow Run Community Schools, Ypsilanti
 Winkelman's, Detroit
 Wyandotte General Hospital, Wyandotte
 Ypsilanti Public Schools, Ypsilanti
 Zingerman's, Ann Arbor

COLLEGE OF HEALTH AND HUMAN SERVICES COURSES

IHHS 177/178/179 Special Topics. 1/2/3 hrs
 This course focuses on the multiple career options within the health care delivery system. Issues related to career selection, education, costs, and manpower needs are explored. Concepts related to all health careers are also examined: health and illness; beliefs and values; people; the health care delivery system and communication in health care. This is an introductory course for all freshman and sophomore majors in the College of Health and Human Services.

IHHS 226 Computers for Health and Human Services. 3 hrs

This interdisciplinary computer literacy course will introduce students to computers and their applications in health and human services. Students will learn about computers and computer languages. This course will include applications of computer technology to direct services for clients as well as the use of computers to manage work.

IHHS 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

IHHS 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

IHHS 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

ASSOCIATED HEALTH PROFESSIONS

Stephen A. Sonstein
Department Head
328 King Hall
487-4094

The Associated Health Professions department offers programs that lead to the baccalaureate degree in clinical laboratory sciences, health administration, and occupational therapy. The department also offers a minor in Health Administration and a certificate program in phlebotomy. In addition, the department offers several interdisciplinary courses relating to the health services and the health care specialties.

INTERDISCIPLINARY COURSES

AHPR 177/178/179 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

AHPR 196 Introduction to Health Careers. 2 hrs
 An introductory course designed to familiarize the student with careers in the health sciences. Various careers such as medical technology, nursing, dietetics, health administration, occupational therapy, medicine, clinical psychology, physical therapy and others will be presented by individuals in the respective disciplines. Educational requirements, career opportunities, and clinical experience requirements will be highlighted.

AHPR 200 Medical Terminology. 1 hr
 A detailed study of medical terminology, through which students will achieve a working medical vocabulary. Anatomical terms, terminology relating to diseases and disease processes will be presented. This course is designed for students entering a health related educational program, and is a prerequisite for admission to the Occupational Therapy program. *Credit/no credit.*

AHPR 208 Ethical Dimensions in Health Care Delivery. 2 hrs
 This course presents information which students interested in the health professions may use to identify ethical situations and to resolve dilemmas they may face in their professional lives.

AHPR 277/278/279 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other

departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

AHPR 305 Data Analysis for the Health Sciences. 3 hrs
 Introduction to the application of statistical methods and research design to a range of practice and research problems in the health sciences.
Prereq: College algebra.

AHPR 377/378/379 Special Topics. 1/2/3 hrs
 An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

AHPR 401 Legal Issues in Health Care. 3 hrs
 This is a survey of the laws that govern the health care system. Litigation, malpractice, contract, regulatory, health care personnel, and the use of human subjects in medical research are among the topics discussed.

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

ACADEMIC PROGRAMS

CLINICAL LABORATORY SCIENCES PROGRAM

Sandra Drake/Assistant Professor
Program Director
327 King Hall
487-0154
Clifford Renk
Honors Advisor
328 King Hall
487-4094

Professor: Clifford Renk
Assistant Professor: Gary Hammerberg

Degree: Bachelor of Science
Programs of Study
Curriculum:

Clinical laboratory sciences
 (Clinical certification tracks include: medical technology, cytogenetics, cytotechnology,

histotechnology, and phlebotomy.)

The clinical laboratory sciences program offers two tracks, the clinical certification track that includes submajors of medical technology, cytogenetics, cytotechnology, and histotechnology; and the professional track. Each leads to the Bachelor of Science degree. Successful completion of a three-course sequence in phlebotomy qualifies students to take a national certification examination in phlebotomy. The tracks are designed to prepare graduates for employment in hospitals, physician's offices, private laboratories, public health agencies, pharmaceutical companies, and academic or industrial research. The professional track is the preferred course of studies for students considering graduate school or advanced studies in the clinical sciences. The professional track also can be used as preparation for careers in medicine, dentistry, and veterinary science.

Advising is available by faculty through the clinical laboratory sciences program. To assess progress, students should meet with their adviser each semester in which they are enrolled in classes.

Advising Coordinators:

Students are assigned to a faculty adviser upon declaring clinical laboratory sciences as a major.

CLINICAL LABORATORY SCIENCES

CLINICAL CERTIFICATION TRACK AND PROFESSIONAL TRACK

This curriculum is a four-year program at Eastern Michigan University with two options or tracks:

1. *Clinical certification track:* The medical technology option consists of seven semesters of coursework in basic studies, basic sciences, and clinical sciences and includes 23 weeks of rotation through an accredited clinical laboratory. The cytogenetics, cytotechnology, and histotechnology options consist of six semesters of coursework, and 12 months of clinical rotations through an accredited clinical laboratory. These clinical laboratories include the University of Michigan, Ann Arbor; Veteran's Administration Hospital, Ann Arbor; St. Joseph Mercy Hospital, Ann Arbor; Providence Hospital, Southfield; Henry Ford Hospital, Detroit; and Wm. Beaumont Hospital, Royal Oak. These programs are accredited by the National Accrediting Agency for Clinical Laboratory Sciences.
2. *Professional track:* This option consists of eight

semesters of coursework in the basic studies, basic and advanced sciences, and clinical sciences. Included will be a strongly recommended cooperative education experience in industry or academia. Graduates will be prepared for careers in pharmaceutical, clinical diagnostics or other health care industries. Additionally, graduates will be eligible for entry into a master's or doctoral level program in the basic or clinical sciences. Students also would be eligible for one-year hospital rotations and subsequent certification as a registered medical technologist.

The major in clinical laboratory sciences follows an interdisciplinary format comprised of courses in clinical laboratory sciences, biology, chemistry, 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 2.7 mandates warning students of their ineligibility for acceptance into the clinical track.
- b. No grade below "C" in any mathematics or science course.
- c. A grade of "D" (including "D-" and "E") in two courses in the clinical laboratory sciences major may, upon recommendation by the Program Review Committee, result in dismissal from the CLS program.
- d. Freedom from any kind of probation, administrative, academic or social, must be maintained. While on academic probation, no student may register for, remain in, or receive credit for science courses or practicum courses within the clinical laboratory sciences program.

Successful completion of the clinical track and the Bachelor of Science degree qualifies students to take the national registry examination in medical technology. The two certifying agencies recommended are the American Society of Clinical Pathologists and the National Certifying Agency for Clinical Laboratory Personnel.

CLINICAL TRACK REQUIREMENTS

Students must first be accepted to Eastern Michigan University before they can be considered by the Clinical Laboratory Science Program Screening Committee. However, admission to EMU does not guarantee admission into the clinical track program.

Students entering the program will be classified initially as clinical laboratory sciences "intent." Application for full admission to the clinical track program should be made during the winter semester of the junior year.

Application packets can be obtained from the Associated Health Professions department office. Completed applications must be in the office by March 15 in order to be considered for acceptance for the winter semester.

Selection criteria include overall EMU GPA, letters of recommendation, overall science 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 2.7 on a 4.0 scale with no grade below "C" in any science, mathematics, or preprofessional course. The prerequisite courses may be taken at this university, any four-year college/university, or at a community college.
2. A minimum science GPA of 2.7.
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:

Detroit Medical Center, Detroit
Garden City Osteopathic, Garden City
St. John Hospital, Detroit
Genesys-St. Joseph, Flint

PROFESSIONAL TRACK REQUIREMENTS

The professional track is designed for students with an interest in the clinical sciences, whose career goals may not include working as a registered medical technologist in a hospital laboratory setting.

Students electing the professional track of the clinical laboratory sciences program complete eight semesters of academic 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. The clinical practicum is not required for the professional track.

Formal application into the professional track is not required. Students must maintain an overall GPA of 2.0 in the major and satisfy University requirements for graduation. Registration for cooperative courses requires a 2.5 overall GPA and 2.5 in the sciences.

These curricula lead to a Bachelor of Science in the clinical laboratory sciences program.

	Sem hours
Symbolics and communication (Five courses) ..	14-17
Science and technology	3
Biology courses	12-16
BIOL 105 Biology and the Human Species (or waiver)	4
MICR 329 General Microbiology (elective)	5

BIOL 301 Genetics (elective).....	3
BOTN 446 Medical Mycology (professional track only).....	4
Chemistry courses.....	20-24
CHEM 119 Fundamentals of Chemistry (if no high school chemistry).....	4
CHEM 121 General Chemistry I.....	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II.....	3
CHEM 124 General Chemistry II Laboratory ..	1
CHEM 270 Organic Chemistry.....	4
CHEM 281 Quantitative Analysis.....	4
CHEM 451 Biochemistry I.....	3
Mathematics and computer science courses.....	9
MATH 105 College Algebra (or waiver).....	3
MATH 170 Elementary Statistics or PSY 205 Quantitative Methods in Psychology or SOCL 250 Social Statistics I.....	3
IHHS 226 Computers for Health and Human Services.....	3
Clinical laboratory sciences courses.....	53-57
CLSC 101 Introduction to Clinical Laboratory Sciences.....	1
AHPR 200 Medical Terminology.....	1
CLSC 200 Clinical Laboratory Techniques.....	2
CLSC 307 Urinalysis, Body Fluids, and Hemostasis.....	3
CLSC 335 Clinical Immunology.....	4
CLSC 401 Laboratory Management/Education/Quality Assurance.....	3
CLSC 402 Applications of Clinical Chemistry to Pathophysiology.....	3
CLSC 407 Hematology.....	4
CLSC 432 Clinical Microbiology.....	3
CLSC 433 Clinical Microbiology Laboratory....	2
CLSC 434 Advanced Immunohematology.....	3
*CLSC 450 Hematology/Coagulation Practicum ..	5
*CLSC 452 Clinical Immunology/Immunohematology Practicum.....	5
*CLSC 454 Clinical Chemistry Practicum.....	5
CLSC 455 Clinical Chemistry Laboratory.....	2
*CLSC 456 Clinical Microbiology Practicum....	5
*CLSC 457 Clinical Methods Practicum.....	1
*CLSC 459 Clinical Mycology Practicum.....	1
Electives (professional track only).....	2
<i>*Required for clinical track only.</i>	
Social science: (four courses).....	8-12
Arts and humanities: (four courses).....	8-12
Physical education and health.....	2
Physical education activity courses.....	2

(Any two courses in military science may be applied.)

Total: minimum hours required for graduation ... 124

CYTOTECHNOLOGY/ HISTOTECHNOLOGY TRACK

SPECIALIZATION IN CYTOTECHNOLOGY

PROGRAM DIRECTORS: SUSAN DINGLER

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. The program includes an integrated presentation of didactic material, microscopic study, specimen preparation, clinical observation, cytogenetics, laboratory management, and a research project.

SPECIALIZATION IN HISTOTECHNOLOGY

PROGRAM DIRECTOR: PEGGY WENK

Histotechnologists perform a variety of diagnostic and research procedures in the anatomic sciences. Basic histologic techniques involve the processing and staining of tissue specimens that have been removed from humans or animals by biopsy or autopsy. Advanced techniques involve the use of the electron microscope, immunofluorescence microscopy, autoradiography, cytogenetics, and medical photography.

Students may be accepted into the histotechnology specialization after completing the required science, mathematics, and clinical laboratory science courses. University general education requirements must also be met. The senior year consists of a 12 month internship at William Beaumont Hospital School of Histotechnology.

Cytotechnology/Histotechnology Curricula

Sem hours

Symbolics and communication (same as clinical/professional track).....	14-17
Science and technology.....	3
Biology courses.....	17-21
BIOL 105 Biology and the Human Species (or waiver).....	4
ZOOL 201 Human Anatomy and Physiology I .	3
ZOOL 202 Human Anatomy and Physiology II	3
BIOL 301 Genetics (elective).....	3

MICR 329 General Microbiology (elective)	5
ZOOL 404 Mammalian Histology	3
Chemistry courses	18-22
CHEM 119 Fundamentals of Chemistry (if no high school chemistry)	4
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
CHEM 270 Organic Chemistry	4
CHEM 271 Organic Chemistry Laboratory	1
CHEM 451 Biochemistry I	3
CHEM 453 Biochemistry Laboratory	2
Mathematics and computer science courses	9
MATH 105 College Algebra (or waiver)	3
MATH 170 Elementary Statistics	3
IHHS 226 Computers for Health and Human Services	3
Clinical laboratory sciences courses	43
CLSC 101 Introduction to Clinical Laboratory Sciences	1
AHPR 200 Medical Terminology	1
CLSC 200 Clinical Laboratory Techniques	2
CLSC 300 Molecular Diagnostics	3
CLSC 307 Urinalysis, Body Fluids, and Hemostasis	3
CLSC 335 Clinical Immunology	4
CLSC 407 Hematology	4
CLSC 432 Clinical Microbiology	3
CLSC 433 Clinical Microbiology Laboratory ...	2
CLSC 410-411 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

SPECIALIZATION IN CYTOGENETICS

PROGRAM DIRECTOR: JIM ZABAWSKI (HENRY FORD HOSPITAL)

Cytogenetic technologists work independently under general supervision and can interpret and implement established procedures to prepare biological specimens for cytogenetics analysis, perform the analysis, and construct and interpret karyotypes.

Students may be accepted into the cytogenetics specialization after completing the required science, mathematics, and clinical laboratory science courses. University general education requirements must also be met. The senior year consists of a 12 month intern-

ship at Henry Ford Hospital in the Cytogenetics department. The program consists of an integrated presentation of didactic material and intensive laboratory study in the area of cytogenetics that includes specimen preparation, cell culture, chromosome analysis, microscopy, and photography.

Cytogenetics Curricula

	Sem hours
Symbolics and communication (same as clinical/professional track)	14-17
Science and technology	3
Biology courses	7
BIOL 105 Biology and the Human Species (or waiver)	4
ZOOL 404 Mammalian Histology	3
Chemistry courses	18-22
CHEM 119 Fundamentals of Chemistry (if no high school chemistry)	4
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
CHEM 270 Organic Chemistry	4
CHEM 271 Organic Chemistry Laboratory	1
CHEM 451 Biochemistry I	3
CHEM 453 Biochemistry Laboratory	2
Mathematics and computer science courses	9
MATH 105 College Algebra (or waiver)	3
MATH 170 Elementary Statistics	3
IHHS 226 Computers for Health and Human Services	3
Clinical laboratory sciences courses	47
CLSC 101 Introduction to Clinical Laboratory Sciences	1
AHPR 200 Medical Terminology	1
CLSC 200 Clinical Laboratory Techniques	2
CLSC 300 Molecular Diagnostics	3
CLSC 335 Clinical Immunology	4
CLSC 407 Hematology	3
CLSC 432 Clinical Microbiology	3
CLSC 433 Clinical Microbiology Laboratory ...	2
CLSC 410-411 Cytogenetics Internship	28
Social science	8-12
Same as clinical/professional track	
Art and humanities	8-12
Same as clinical/professional track	
Physical education	2
Recommended electives	9
BIOL 301 Genetics	(3)
BIOL 320 Introduction to Cell Physiology	(4)

MICR 329 General Microbiology (5)
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 three courses. 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 AHPR 200, CLSC 201, and CLSC 202, students will qualify to take a national certification examination in phlebotomy, such as the examination given by the American Society of Phlebotomy Technicians.

CLINICAL LABORATORY SCIENCES COURSES

CLSC 101 Introduction to Clinical Laboratory Sciences. 1 hr

An overview of the profession highlighting the various areas of clinical laboratory sciences: medical technology, phlebotomy, cytology, histology, cytogenetics, and tissue typing. The course provides information on employment opportunities including wage and salary benefits, legal issues, and certification in the profession. The course also highlights the benefits of a clinical laboratory science degree for individuals contemplating advanced degrees in medicine or graduate school.

CLSC 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CLSC 200 Clinical Laboratory Techniques. 2 hrs

Basic skills necessary to function in a clinical laboratory; i.e., phlebotomy, use of the microscope, specimen collection and preparation, pipetting, and lab safety.

Prereq: AHPR 200.

CLSC 201 Phlebotomy Techniques. 2 hrs

Phlebotomy Techniques is presented in a lecture-laboratory format. The course is designed to present the theory of blood collection and the practical techniques for venipuncture and skin puncture. Topics included in

the course will cover the phlebotomist's role, professionalism and ethics, laboratory and hospital organization, specimen collection techniques, various blood drawing equipment, patient interaction, and some medical and laboratory terminology.

Prereq: AHPR 200 or department permission.

CLSC 202 Clinical Phlebotomy Practicum. 2 hrs

The Clinical Phlebotomy Practicum is the second course in a two-course sequence designed to prepare students for entry level positions as phlebotomists. The practicum will generally consist of forty hours of training at an affiliated institution. Graded on a credit/no credit basis.

Prereq: Permission of instructor and CLSC 201.

CLSC 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CLSC 300 Molecular Diagnostics. 3 hrs

This course covers molecular diagnostic techniques in the clinical laboratory. Topics will include laboratory diagnosis of infectious and genetic diseases through cytogenetic, molecular cytogenetic, and DNA molecular technology.

Prereq/coreq: CLSC 335

CLSC 307 Urinalysis, Body Fluids, and Hemostasis.

3 hrs

Lecture and laboratory covering urines, body fluids, and hemostasis. Specimen collection and handling, physical examination, chemical testing, and microscopic evaluation of urines and body fluids; evaluation of hemostasis testing and hemostasis theory.

Prereq: CLSC 200, CHEM 270-271.

CLSC 335 Clinical Immunology. 4 hrs

Lecture and laboratory presenting theory, basic principles, and practical experience in clinical immunology. The correlation of basic principles to human disease state.

Prereq: CLSC 200 or permission of instructor.

CLSC 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CLSC 387 Cooperative Education. 3 hrs

Three or four months of full time employment at a clinical, research or industrial laboratory or related area chosen for providing a practical educational experience in clinical laboratory sciences. The program consists of two work experiences alternated with full-time attendance at the University. Offered on a graded or credit/no credit basis.

Prereq: CHEM 270, 271; permission of program director.

CLSC 401 Laboratory Management/Education/Quality Assurance. 3 hrs

Basic management skills for laboratory personnel and laboratory. Personnel practices, equipment and reagent purchase, and laboratory information systems including computer applications, laboratory statistics, and evaluation of methods are covered in this lecture course.

Prereq: MATH 170 or equivalent.

CLSC 402 Applications of Clinical Chemistry to Pathophysiology. 3 hrs

This lecture course covers the relationship of clinical chemistry to diagnosis, prognosis, and treatment of disease. Focus will be on testing procedures, instrumentation, and controlling the functions in order to provide correct information to the medical staff.

Prereq: CHEM 451 or permission of instructor.

CLSC 405 Cytotechnology Clinical Internship. 14 hrs

Microscopic study of cellular alterations indicative of cancer and precancerous conditions, bacterial, viral and parasitic infections, and hormonal abnormalities; cytogenetics; and a research project.

Prereq: program approval.

CLSC 406 Cytotechnology Clinical Internship. 14 hrs

Continuation of CLSC 405.

Prereq: program approval.

CLSC 407 Hematology. 4 hrs

This lecture and laboratory course covers the theory and application of hematological test procedures, interpretation of results, problem solving, and correlation of laboratory findings with disease states. Not open to those with credit in BIOL 407.

Prereq: CLSC 200 or department permission.

CLSC 410 Cytogenetics, Clinical Internship I. 14 hrs

CLSC 410 and CLSC 411 cytogenetics clinical rotation

I and II will be used for the clinical practice for the cytogenetics track in the CLS program. The student will set up tissue cultures, harvest cells, prepare slides for analysis, and prepare analysis for a broad spectrum of genetic abnormalities. This will include photograph and computer assisted chromosome analysis. Procedures will include chronic villus, fragile X, and sister chromatid exchanges.

Prereq: Program approval.

CLSC 411 Cytogenetics, Clinical Internship II. 14 hrs

Continuation of CLSC 410.

Prereq: Program approval.

CLSC 416 Basic Histotechnology and Histochemical Staining Methods. 12 hrs

Didactic and practicum experience in preparing histologic sections for light microscopy, including the study of more than 50 different histologic staining methods and their specific applications.

Prereq: Program approval.

CLSC 417 Basic Electron Microscopy. 8 hrs

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.

CLSC 418 Immunohisto-Cytochemistry. 4 hrs

A course designed to teach basic and advanced procedures of fluorescent and enzyme labeled antibody techniques. The course includes the preparation of tissues, staining with labeled antibodies, and the use of fluorescence microscope in clinical medicine and research.

Prereq: Program approval.

CLSC 419 Special Histotechnology Techniques. 4 hrs

A course designed to present didactic and practicum experience in molecular pathology, including in situ hybridization and DNA analysis. Cytogenetics will be presented with emphasis on preparing karyotypes and chromosome identification. A research project will be required on a related topic, formalized and presented as a lecture. Management and education methodologies will be presented.

Prereq: Program approval.

CLSC 432 Clinical Microbiology. 3 hrs

Course covers mechanisms of pathogenesis associated with specific bacterial, viral, fungal, and parasitic etiological agents of human disease.

Prereq: CLSC 335 or permission of the instructor.

CLSC 433 Clinical Microbiology Laboratory. 2 hrs

Laboratory will cover methods of detection, isolation, enumeration, and identification of human pathogenic microorganisms encountered in the clinical microbiology laboratory.

Prereq: CLSC 335 or permission of the instructor. Coreq: CLSC 432.

CLSC 434 Advanced Immunohematology. 3 hrs

Principles and procedures used in the blood bank. The laboratory is designed to simulate problem situations in the clinical laboratory. Not open to those with credit in BIOL 434.

Prereq: CLSC 307 and CLSC 335.

CLSC 450 Hematology/Coagulation Practicum. 5 hrs

An intensive hands-on clinical experience in routine hematology, coagulation, and special techniques at an advanced level.

Prereq: Acceptance into clinical track.

CLSC 452 Clinical Immunology/Immunohematology Practicum. 5 hrs

An intensive hands-on clinical experience at an advanced level of instruction in blood banking, immunology, and serology.

Prereq: Acceptance into clinical track.

CLSC 454 Clinical Chemistry Practicum. 5 hrs

An intensive hands-on clinical experience at an advanced level of instruction in automated chemistry, radioimmunoassay, electrophoresis, and toxicology.

Prereq: Acceptance into clinical track.

CLSC 455 Clinical Chemistry Laboratory. 2 hrs

This laboratory course includes theory, instrumentation, and current procedures used in clinical chemistry laboratories. Analysis will be done on clinical specimens and a clinical chemistry quality control program will be integrated throughout the semester.

Prereq or coreq: CLSC 402.

CLSC 458 Clinical Microbiology Practicum. 5 hrs

An intensive hands-on clinical experience at an ad-

vanced level of instruction in clinical microbiology.

Prereq: Acceptance into clinical track.

CLSC 457 Clinical Methods Practicum. 1 hr

This one-week intensive course includes an orientation to hospitals training students, a one-day experience at the American Red Cross, and a combined urinalysis/phlebotomy experience at the hospital affiliates.

Prereq: Acceptance into clinical track.

CLSC 459 Clinical Mycology Practicum. 1 hr

This is an intensive introductory lecture and laboratory course highlighting medically important fungi, disease states, and laboratory methods of isolation and identification. Credit/no credit.

Prereq: Acceptance into clinical track or permission of instructor.

CLSC 477/478/479 Special Topics. 1/2/3 hrs

Advanced level courses covering specific topics in clinical laboratory sciences not discussed in other clinical laboratory sciences courses.

Prereq: Permission of instructor.

CLSC 487 Cooperative Education. 3 hrs

Three to four months of full-time employment at a clinical, research or industrial laboratory or related area chosen for providing a practical educational experience in clinical laboratory sciences. The program consists of two work experiences alternated with full-time attendance at the University. Offered on a graded or credit/no credit basis.

Prereq: CLSC 387, permission of program director.

CLSC 497/498/499 Independent Study. 1/2/3 hrs

Independent original endeavors involving library and/or laboratory work under the guidance of a clinical laboratory program faculty member or clinical associate faculty member.

Prereq: Permission of the instructor.

ACADEMIC PROGRAM

HEALTH ADMINISTRATION PROGRAM

Richard L. Douglass
Program Director/Associate Professor
 328 King Hall
 487-0460

Associate Professor: Roberto Torres

Degree: Bachelor of Science

Programs of Study

Curricula:

Health administration

Health services management (degree completion track)

Advising is available by the faculty in the health administration program offices.

Honors Adviser: Richard L. Douglass

The program in health administration emphasizes the rapidly changing forms of health care delivery, health care reform, health care for the indigent, and services to special populations, such as migrant workers, the homeless, and prisoners. Student writing, publication, and opportunities for research are central to the program's mission.

CLINICAL AFFILIATIONS

The Health Administration program is one of only 29 undergraduate programs in the United States with full membership in the Association of University Programs in Health Administration (AUPHA) and the only full member among Michigan's colleges and universities. In addition, the Program is closely affiliated with the American Academy of Medical Administrators (AAMA) and the American College of Health Executives (ACHE). The Health Administration Student Association is a Student Chapter of the American College of Health Care Executives. Internship opportunities are an important component in the curriculum of the Program. The following organizations are representative of those in which Health Administration majors acquire field experience:

Alzheimer's Disease and Related Disorders Association,
 Southfield
 Beyer Hospital, Oakwood Health Services, Ypsilanti
 Catherine McAuley Health Center, Ann Arbor

Chelsea Community Hospital, Chelsea
 City of Detroit, Bureau of Substance Abuse Services,
 Detroit
 Detroit Health Care for the Homeless, Detroit
 Detroit Osteopathic Hospital Corporation, Detroit
 Detroit Receiving Hospital, Detroit
 Garden City Osteopathic Hospital, Garden City
 Health Alliance Plan of Michigan, Detroit
 Henry Ford Hospital, Detroit
 Hospice of Washtenaw, Ann Arbor
 Hospice of Livingston County, Howell
 Institute of Women's Medicine, Hutzel Hospital, Detroit
 Laurel Home Health Care Centers, Ypsilanti
 M-Care, Ann Arbor
 McAuley-McPhearson Health Care, Howell
 Michigan Blue Shield and Michigan Blue Cross, Detroit
 Michigan Insurance Bureau, Lansing
 Michigan Department of Corrections
 Michigan Department of Mental Health
 Michigan Department of Public Health
 Munson Hospital, Traverse City
 Milan Federal Correctional Institution, Milan
 Oakland County Department of Public Health
 Packard Community Clinic, Ann Arbor
 Saline Community Hospital, Saline
 St. John Hospital, Detroit
 St. Joseph Mercy Hospital, Ann Arbor
 St. Mary's Hospital, Saginaw
 Seaway Hospital, Trenton
 Springfield Hospital, Springfield, VT
 Traverse City Osteopathic Hospital, Traverse City
 University of Michigan Hospitals, Ann Arbor
 Visiting Nurse Association of Huron Valley, Ann Arbor
 Washtenaw County Community
 Wayne County Medical Examiner's Office, Detroit

HEALTH ADMINISTRATION CURRICULUM

The curriculum concentrates on the principles and processes utilized in the field of health administration and management. The program is designed to prepare those seeking a career in the administrative sector of the health care delivery system in any of its forms. It also is appropriate for those already working in the health care field in some other capacity but wishing to redirect their career toward the area of health administration. Practicing health administrators without previous formal education in the field also may find this program beneficial for career advancement.

All students must take a one-semester internship during their senior year unless waived by the program director due to significant administrative experience. Courses denoted with an asterisk (*) complete the requirements for a degree. No outside minor is required, however, many students elect the gerontology minor.

A degree completion track, Health Services Management, has been established for persons with clinical associate degrees from accredited community colleges who have had five or more years of experience subsequent to that degree completion. Associate degree trained nurses, respiratory therapists, and others interested in the degree completion option in health services management should contact the program director. Successful completion of the degree completion track leads to the same degree as the regular program major.

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.

Sem hours

Symbolics and communication 10-15

Five courses as required by the basic studies program: Must include MATH 118 Mathematical Analysis for Social Sciences I

Science and technology 7-10

Three courses as required by the basic studies program: Must include BIOL 105 Biology and the Human Species

Social science 8-12

Four courses as required by basic studies: must include ECON 201-202 Principles of Economics I-II

Arts and humanities 8-12

Four courses as required by the basic studies program: No restrictions.

Cross-cultural or international studies 3

One course approved as described by the basic studies program: No restrictions.

Physical education and health 2

As required for all undergraduate degree candidates.

Required courses in Health Administration (HLAD)*

HLAD 305 Introductory Seminar in the US Health Care System 3
HLAD 310 Administration of Health Care

Organizations 3
HLAD 311 Management of Health Services 3
HLAD 416 Health Planning 3
HLAD 417 Health Regulation 3
HLAD 420 Financial Management of Health Institutions 3
HLAD 421 Managed Care 3
HLAD 425 Decision Making for Health Administrators 3
HLAD 480 Internship Seminar in Health Administration 3
HLAD 488 Internship 6

Required courses in Associated Health Professions (AHPR)*

AHPR 200 Medical Terminology 1
AHPR 208 Ethical Dimensions in Health Care Delivery 2
AHPR 305 Data Analysis for the Health Sciences (or MKTG 360 Principles of Marketing) 3
AHPR 401 Legal Issues in Health Care (or LAW 293 Legal Environment of Business, or PLSC 301 The American Legal System) 3

Required courses in business administration and liberal arts*

MATH 119 Mathematical Analysis for Social Sciences II 3
ECON 436 Health Economics 3
ACC 240 Principles of Accounting I 3
ACC 241 Principles of Accounting II 3
MGMT 384 Human Resource Management 3
DS 265 Business Statistics I (or any of the following basic statistics courses: PSY 205 Quantitative Methods in Psychology, ECON 310 Economic Statistics, SOCL 250 Social Statistics I) 3
BEDU 201 Microcomputers for Business Applications (or any other computer literacy course) 3

Electives 6-15

The following courses are suggested as possible electives:

HLAD 479 Special Topics: Health Care for the Homeless (Honors only)
ACC 342 Managerial Cost Accounting
ECON 322 American Labor Unions
LAW 403 Employment Law
NURS 380 Health and Illness Problems Throughout the Life Span
POM 374 Introduction to Production/Operations Management
PHIL 221 Business Ethics

PLSC 332 Intergovernmental Relations and Federalism

PSY 351 Industrial Psychology

PSY 360 Abnormal Psychology

SOCL 307 Industrial Sociology

SOCL 311 Social Gerontology

SOCL 462 Complex Organizations

For permissible College of Business courses (maximum 30 credit hours), see a program adviser.

Total 124

HEALTH SERVICES MANAGEMENT TRACK CURRICULUM

This is a degree completion track leading to the BS in health administration for persons holding an accredited associate's degree in a recognized health services or clinical discipline. Such disciplines include nursing, respiratory therapy, or other specialized two-year programs of study.

For degree completion students in this curriculum, up to 22 semester hours may be awarded and credited towards the BS obligation of 124 semester hours on the basis of supervised clinical coursework taken in the associate degree curriculum. These credits may be based on supervised clinical courses that have no exact equivalence at Eastern Michigan University. This is determined in consultation with the program director of the health administration program.

The curriculum for such degree candidates includes:

1. Completion of all Basic Studies requirements for Eastern Michigan University
2. Electives
3. Completion of the minor in management (for nonbusiness majors)
4. Completion of the following courses:
 - AHPR 200 Medical Terminology 1
 - AHPR 208 Ethical Dimensions in Health Care Delivery 2
 - AHPR 305 Data Analysis for the Health Sciences ... 3
 - AHPR 401 Legal Issues in Health Care 3
 - HLAD 305 Introductory Seminar in the US Health Care System 3
 - HLAD 310 Administration of Health Care Organizations 3
 - HLAD 311 Management of Health Services 3
 - HLAD 420 Financial Management of Health Institutions 3

HLAD 425 Decision Making for Health Administrators 3

HLAD 416 Health Planning or HLAD 417 Health Regulation 3

HEALTH ADMINISTRATION MINOR CURRICULUM

Students must complete these course requirements for the health administration minor:

Minor in health administration

1. Required Courses Sem hours

Group I 15-16

HLAD 300 Health Care Issues or HLAD 305 Introductory Seminar in the US Health Care System 2-3

HLAD 310 Administration of Health Care Organizations 3

HLAD 311 Management of Health Services 3

HLAD 420 Financial Management of Health Institutions 3

AHPR 401 Legal Issues in Health Care 3

AHPR 200 Medical Terminology 1

2. Restricted electives

Group II 5-6

Students must elect two of the following:

AHPR 401 Legal Issues in Health Care (3)

HLAD 479 Special Topics (3)

AHPR 208 Ethical Dimensions in Health Care Delivery (2)

AHPR 305 Data Analysis for the Health Sciences (3)

NURS 380 Health and Illness Problems Throughout the Life Span (3)

SWRK 431 Substance Abuse (3)

SWRK 438 The Interdisciplinary Health Care Team (3)

GERT 404 Gerontology Interdisciplinary Seminar (3)

AAS 351 The Social Context of African American Health (3)

Total 20-22

HEALTH ADMINISTRATION COURSES

HLAD 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

HLAD 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

HLAD 287 Cooperative Education. 3 hrs

Employment for pay in a work setting chosen to provide practical experience related to health administration. The cooperative education sequence consists of two work experiences (HLAD 287 and HLAD 387) alternated with full-time attendance at the University.

Prereq: Sophomore standing and health administration major.

HLAD 300 Health Care Issues. 2 hrs

This survey of the organization, traditions, professional stratification, and current issues of the US 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.

HLAD 305 Introductory Seminar in the US Health Care System. 3 hrs

A survey of important issues facing the health field. The US 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).

HLAD 310 Administration of Health Care Organizations. 3 hrs

Analysis of modern health care organizations with emphasis on management structure, boards of trustees, administration, physicians, and others. Delivery of institutional patient care, role of professionals and other personnel, and departmental interrelatedness.

Prereq: HLAD 305.

HLAD 311 Management of Health Services. 3 hrs

A continuation of HLAD 310, emphasizing quantitative methods in program implementation, control, and evaluation. The administrative role in financial control, the legal aspects of control, and the control of human resources.

Prereq: HLAD 310.

HLAD 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than

once provided different topics are studied.

Prereq: Department permission.

HLAD 387 Cooperative Education. 3 hrs

Employment for pay in a work setting chosen to provide practical experience related to health administration. The cooperative education sequence consists of two work experiences (HLAD 287 and HLAD 387) alternated with full-time attendance at the University.

Prereq: Department permission.

HLAD 416 Health Planning. 3 hrs

This course examines in detail the essence of health planning as practiced in the health care industry. Topics include the history of health planning, planning theory and conceptual foundations, public sector planning and policy-making, private sector planning and health planning methods. Special emphasis is placed on health planning as an ongoing process which should be developed by health care organizations in order to be successful.

Prereq: HLAD 310, and one course in statistics or AHPR 305

HLAD 417 Health Regulation. 3 hrs

This course will provide an overview of health care regulation from the perspective of providers, the government regulator, and the general citizenry. Topics of discussion will include licensing and private accreditation, the regulation relating to cost containment, alternative delivery systems, health care reform, rate regulation, and health planning.

Prereq: HLAD 310, and one course in law (AHPR 401, LAW 293, or PLSC 301).

HLAD 420 Financial Management of Health Institutions. 3 hrs

The application of generic concepts and tools to the health field.

Prereq: HLAD 310.

HLAD 421 Managed Care. 3 hrs

This course will provide an overview of the managed care industry. It will discuss the origins of managed care, the mechanics of managed care, and the effects of managed care across the various constituencies involved (purchaser, provider, and patient). The role of managed care in the area of health reform will also be treated in some detail.

Prereq: HLAD 310 and HLAD 420.

HLAD 425 Decision Making for Health Administrators. 3 hrs

The integration of many knowledge areas into health administration. A capstone course utilizing case studies, role playing, simulation, and games.

Prereq: HLAD 310.

HLAD 477/478/479 Special Topics. 1/2/3 hrs

For seniors. Topics included will depend upon the interests of the students and the faculty member's field of specialization. Topics generally include planning, regulation, and issues of special populations such as the homeless and prisoners.

Prereq: Department permission.

HLAD 480 Internship Seminar in Health Administration. 3 hrs

Seminar for those students taking an internship to provide a forum for the exchange of ideas and experiences.

Prereq: Program permission, and enrolled in internship program. Departmental GPA of 2.5 or higher.

HLAD 487/488/489 Internship. 3/6/9 hrs

Internship to provide formally structured and directed work experience to assist in integrating classroom learning with professional perspectives and working requirements.

Prereq: Program permission, concurrent enrollment in HLAD 480.

HLAD 497/498/499 Independent Study. 1/2/3 hrs

Under the supervision of a health administration faculty member, study in subjects not covered in other course offerings, or advanced study in areas of special interest to the student.

Prereq: Program permission.

OCCUPATIONAL THERAPY PROGRAM

Ruth A. Hansen
Program Director
328 King Hall
487-0461

Professor: Ruth A. Hansen
Associate Professor: Sherry Sayles-Folks
Assistant Professors: Ben Atchison, Normajean Bennett, Virginia Dickie
Instructors: Elizabeth Francis-Connolly, Judith Olson, LaDonn People

Degree: Bachelor of Science
Program of Study
Curriculum
 Occupational therapy

Advising for occupational therapy-intent students is performed by the Academic Advising Center. After acceptance into the occupational therapy program, students are assigned a faculty adviser.

All students in the professional program must meet with their advisers before registering each semester.

Special Requirements**Admission**

1. Students must first be accepted to the University by the Admissions Office before they can be considered by the Occupational Therapy Screening Committee. However, admission to EMU does not guarantee admission to occupational therapy. After acceptance by the University, a separate application must then be made to the occupational therapy program. Applications are available from occupational therapy in King Hall or from the Admissions Office.
2. Admission to the occupational therapy curriculum is competitive and based on the following:
 - a. A minimum grade point average of 2.7 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
 BIOL 105 Biology and the Human Species

Combined anatomy/physiology with lab or human physiology course

CHEM 119 Fundamentals of Chemistry or equivalent.

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 three of these courses and at least a "C" in the other one: a psychology course at the 200 level or above; a course in art, music, theatre, or dance; life span human growth and development, or psychology of development, or child psychology; and a course in medical terminology.

The prerequisite courses may be taken at this University, at another four-year college/university. Individuals with fewer than 75 semester hours of transferrable credits may take courses at a junior or community college.

d. Completed information on the application form with emphasis on work/volunteer experiences with individuals having special needs.

e. Three references required: at least one from a supervisor of work or volunteer experience with individuals having special needs. Personal references are not acceptable (e.g., relatives, friends, neighbors.)

f. Application deadlines are December 1 for the following fall semester and June 1 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 (OCTH 300, 301, 302, 303, 304, 308, 400, 403, 418, 420, 421, 488, 489, gerontology; ZOOL 317, 326, 417; HLAD 300; and INED 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. OCTH 488 and OCTH 489 Fieldwork are full-time placements of a minimum of three months each. All fieldwork experiences must be completed within 24 months of completion of the academic portion of the program.

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.

The Occupational Therapy Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. AOTA'S phone number is (301) 652-AOTA. Graduates of the program will be able to sit for the national certification examination for the occupational therapist administered by the American Occupational Therapy Certification Board (AOTCB). After successful completion of this exam, the individual will be an Occupational Thera-

pist, Registered (OTR). Most states require licensure in order to practice; however, state licenses are usually based on the results of the AOTCB Certification Examination.

The professional segment of the program requires four semesters of academic courses 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. Completion of courses identified by an asterisk (*) satisfies all major and minor requirements for a degree. No outside minor is needed.

	Sem hours
Symbolics and communication	10-15
Requirements 1-5 (page 41)	
Science and technology	32
PSY 101 General Psychology	3
BIOL 105 Biology and the Human Species	4
CHEM 119 Fundamentals of Chemistry	4
*ZOO 317 Human Gross Anatomy	5
*ZOO 326 Human Physiology	3
*ZOO 417 Neuroanatomy	3
A second psychology course	3
AHPR 200 Medical Terminology	1
*OCTH 303 Conditions I	3
*OCTH 403 Conditions II	3
Social science	12
Requirements 1 and 2 (page 44)	6
Any two-course sequence offered in sociology/ cultural anthropology	6
Arts and humanities	12
Requirements 1, 2, 3, and 4 (page 45)	12
Cross-cultural or international studies	
Education	4
EDPS 325 Life Span Human Growth and Development (in designated section for occupational therapy and nursing students)	4
Practical arts	45-50
SPMD 200 Anatomy and Physiology	5
*HLAD 300 Health Care Issues	2
*INED 358 Tools and Materials	3
*OCTH 300 Introduction to Occupational Therapy ...	2
*OCTH 301 Practicum in Occupational Therapy ...	1
*OCTH 302 Developmental Activities I	2
*OCTH 304 Developmental Activities II	2
*OCTH 308 Programming for Early Childhood	6

*OCTH 400 Seminar in Health Care Issues	1
*OCTH 418 Programming for Childhood and Adolescence	5
*OCTH 419 Programming for Adulthood and Aging	5
*OCTH 420 Fieldwork (part-time)	2
*OCTH 421 Fieldwork (part-time)	2
*OCTH 488 Fieldwork (full-time)	6
*OCTH 489 Fieldwork (full-time)	6

Physical education and health

Physical education activity courses	2
(Any two courses in military science may be applied.)	

Electives

Electives	0-12
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Total

Total	130
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OCCUPATIONAL THERAPY COURSES

OCTH 177/178/179 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

OCTH 200 Orientation to Occupational Therapy. 2 hrs
An overview of roles and functions of occupational therapists in a variety of settings. Career information is explored including helping skills, comparison to other fields, salaries, outlook, and application process.

OCTH 277/278/279 Special Topics. 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.
Prereq: Department permission.

OCTH 287 Cooperative Education. 3 hrs
A two-course sequence that provides a work position designed to offer experience related to occupational therapy while the student receives academic credit and financial support. Available to students pursuing the profession of occupational therapy at the freshman, sophomore, or junior levels. Consists of either full-time work experience alternated with full-time attendance at the University, or a combination of part-time work and academic courses. Cooperative education does not substitute for occupational therapy Fieldwork I or II.
Prereq: Approval of the Cooperative Education Office and program permission.

OCTH 300 Introduction to Occupational Therapy. 2 hrs

The roles and functions of occupational therapy in providing direct and indirect health care service. A foundation for the advanced professional courses. To be taken concurrently with OCTH 301 Practicum, and with or after ZOOL 317 and ZOOL 326.

Prereq: Admission to the program. Coreq.: OCTH 301

OCTH 301 Practicum in Occupational Therapy. 1 hr

An opportunity for students to develop skills in observing and interacting with individuals requiring occupational therapy intervention. To be taken concurrently with OCTH 300 Introduction to Occupational Therapy.

Prereq: Admission to the program. Coreq.: OCTH 300

OCTH 302 Developmental Activities I. 2 hrs

The theory, analysis, and application of developmental activities used in occupational therapy intervention. May be taken concurrently with OCTH 303 Conditions I and OCTH 308 Programming for Early Childhood.

Prereq: INED 358, OCTH 300.

OCTH 303 Conditions I. 3 hrs

Health and illness and selected conditions that affect occupational performance and require OCTH intervention.

Prereq: For OT majors: OCTH 300, ZOOL 317, and ZOOL 326. For non-OT majors: department permission.

Prereq. or coreq.: ZOOL 417

OCTH 304 Developmental Activities II. 2 hrs

Theory, analysis, and application of developmental activities used in occupational therapy intervention with adults and aged persons. May be taken concurrently with OCTH 403, OCTH 418.

Prereq: OCTH 302, OCTH 303, OCTH 308.

OCTH 308 Programming for Early Childhood. 6 hrs

The rationale and methods of evaluating the developmental status of the young child in relation to the performance of life tasks. Includes methods of translating the evaluation data into program plans appropriate for the young child. To be taken concurrently with or after OCTH 302, OCTH 303, ZOOL 417.

Prereq: OCTH 300. Prereq. or coreq.: OCTH 302, 303, ZOOL 417

OCTH 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

OCTH 387 Cooperative Education. 3 hrs

A two-course sequence that provides a work position designed to offer experience related to occupational therapy while the student receives academic credit and financial support. Available to students pursuing the profession of occupational therapy at the freshman, sophomore, or junior levels. Consists of either full-time work experience alternated with full-time attendance at the University, or a combination of part-time work and academic courses. Cooperative education does *not* substitute for occupational therapy Fieldwork I or II.

Prereq: OCTH 287.

OCTH 400 Seminar in Health Care Issues. 1 hr

The issues covered in HLAD 300 as they pertain to occupational therapy.

Prereq. coreq.: OCTH 419, HLAD 300.

OCTH 403 Conditions II. 3 hrs

Conditions that interrupt development and performance in later childhood and adolescence and necessitate intervention.

Prereq: For OT majors: OCTH 303, OCTH 308. For non-OT majors: department permission.

OCTH 418 Programming for Childhood and Adolescence. 5 hrs

Methods of evaluating the developmental status and performance of the older child and adolescent. Results of evaluation methods are used to determine program plans using specific approaches. May be taken concurrently with OCTH 403.

Prereq: OCTH 303, OCTH 308. Prereq. or coreq.: OCTH 403

OCTH 419 Programming for Adulthood and Aging. 5 hrs

Methods of evaluating the developmental status and performance of the adult. Students plan intervention programs based on the results of the evaluation, using specific occupational therapy approaches.

Prereq: OCTH 304, OCTH 403, OCTH 418.

OCTH 420 Fieldwork (part-time). 2 hrs

An experience with children and/or adolescents in evaluating, planning, and implementing supervised occupational therapy intervention programs. May be taken concurrently with OCTH 403, OCTH 418.

Prereq: OCTH 303, OCTH 308. Coreq.: OCTH 403 and OCTH 418

OCTH 421 Fieldwork (part-time). 2 hrs

Experience with young, middle, and/or older adults in evaluating, planning, and implementing supervised occupational therapy intervention programs.

Prereq: OCTH 418 and OCTH 420 To be taken concurrently with or after OCTH 419.

OCTH 477/478/479/480 Special Topics. 1/2/3/4 hrs

Experimental courses or special topics in occupational therapy may be offered (to be announced).

Prereq: Department permission.

OCTH 488/489 Fieldwork (full-time). 6 hrs each

A full-time three month experience in a selected health services agency, where the student will gain in-depth experience in evaluation and programming for occupational therapy intervention. *Credit/no-credit.*

Prereq: Department permission; completion of all courses in major.

OCTH 490 Fieldwork (full-time elective). 6 hrs

A fieldwork experience with special populations or in special settings other than those completed in the required placements. *Credit/no-credit.*

Prereq: OCTH 488 and OCTH 489; department permission.

OCTH 497/498/499 Independent Study. 1/2/3 hrs

Independent work following approved plan to develop knowledge in specialized areas.

Prereq: Department permission.

HUMAN, ENVIRONMENTAL, AND CONSUMER RESOURCES

George Liepa
Department Head
 210 Roosevelt Hall
 487-1218 or 487-3303

Professors: George Liepa
Associate Professors: Polly W. Buchanan, Deborah L. deLaski-Smith, Virginia A. North, Gwendolyn M. Reichbach
Assistant Professors: Louise Jones, Abraham Kadushin, Sarah E. Moore, N. Annette Peel, Deborah A. Silverman

The Human, Environmental, and Consumer Resources Department provides students with concepts and competencies in preparation for professional roles in dietetics, fashion merchandising, hospitality management, and interior design. Emphasis is placed on improving the quality of life for individuals. Career opportunities are available in private and public institutions, in educational systems, in businesses and industry, and with federal, state, and local governmental agencies.

The dietetics program is accredited by the American Dietetic Association. The interior design program is accredited by the Foundation for Interior Design Education Research (FIDER).

Degree: Bachelor of Science

Programs of Study

Curricula:

Dietetics
 Fashion Merchandising
 Hospitality Management
 Interior Design

Minors:

Clothing and Textiles
 Human Environments
 Human Nutrition
 Occupational Foods
 Occupational Foods for Secondary Education Majors.

Advising is arranged by calling 487-2490 for an appointment. Specialized advising may be obtained according to the following list. Faculty members may be contacted directly.

Advising Coordinators:

Dietetics: N. Annette Peel

Fashion merchandising: Sarah Moore
 Hospitality management: Polly Buchanan
 Interior design: Virginia North
 Nutrition: N. Annette Peel
 Occupational foods: Polly Buchanan

Graduate study leads to the master's degree in Human, Environmental, and Consumer Resources; see the Graduate Catalog.

ACADEMIC MAJORS

CURRICULUM FOR DIETETICS

This specialized educational program, accredited by The American Dietetic Association, integrates academic study with practice experience in a coordinated 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 program 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: DTC 202 Principles of Human Nutrition, DTC 211 Experimental Foods, BIOL 105 Biology and the Human Species, CHEM 121-122 General Chemistry I with lab, CHEM 123-124 General Chemistry II with lab, CHEM 270 Organic Chemistry, ECON 201 Principles of Economics I, and SOC 105 Introductory Sociology.

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 Human, Environmental, and Consumer Resources department 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 professional phase of the program are as follows:

1. Students receive a "C-" grade or better in any required course in science and major courses after being admitted to the program.
2. A letter grade of "D" ("D+", "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), or,
 - "D's" ("D+", "D", "D-") in two (2) required science and management courses,
 - "D's" ("D+", "D", "D-") in one (1) dietetics course and one (1) required science or management course or,
 - "E's" in one (1) dietetics course or one (1) required science or management course.
3. Opportunity to continue in the Dietetics Program is contingent upon:
 - retaking the dietetics, science or management courses in which a letter grade of "D" was earned and receiving a final grade of at least a "C-"
 - retaking the dietetics science or management 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 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, practice 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.

Sem hours

Symbolics and communication	14-15
ENGL 121 English Composition	3
CTAS 121/124 Fundamentals of Speech	2-3
A second course in ENGL (page 26) or CTAC 225 Listening Behavior, CTAC 226 Nonverbal Communication, or CTAC 227 Interpersonal Communication)	3
SOCL 250 Social Statistics I	3
HHS 226 Computers for Health and Human Services	3
Science and technology	28
PSY 101 General Psychology	3
BIOL 105 Biology and the Human Species	4
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
CHEM 270 Organic Chemistry	4
CHEM 451 Intro. Biochemistry	3
MICR 328 Introductory Microbiology	3
ZOOL 326 Human Physiology	3
Social science	15
PLSC 112 American Government	3
History course 101/102/103/106/123/124	3
ECON 201 Principles of Economics I	3
SOCL 105 Introductory Sociology	3
A second course in history, economics or sociology sequence or a course in cross cultural or international studies	3
Arts and humanities	12
LITR 100 The Reading of Literature	3
A second course in literature or oral interpretation (page 26)	3
A philosophy course	3
A course in art, music, dance or theatre arts ...	3
Practical arts	62
<i>Specialization courses</i>	57
CLS 403 Nutrient Metabolism Laboratory	2

DTC 202 Principles of Human Nutrition	3
DTC 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
DTC 393 Food Systems Management I Experience ..	2
DTC 394 Food Systems Management I	2
DTC 402 Nutrient Metabolism	3
DTC 403 Nutrient Metabolism Laboratory	2
DTC 435 Seminar in Dietetics	2
DTC 481 Ambulatory Nutrition Care Experience ..	2
DTC 482 Ambulatory Nutrition Care	1
DTC 483 Clinical Nutrition II Experience	4
DTC 484 Clinical Nutrition II	1
DTC 485 Clinical Nutrition III	5
DTC 492 Food Systems Management II Experience	4
DTC 494 Food Systems Management II	1
DTC 496 Food Systems Management III	5
MGMT 384 Human Resource Management	3
MGMT 386 Organizational Behavior and Theory ...	3
Core Courses	3
DTC 412 Nutrition of Life Cycle (Other Department Course)	
Physical education and health	2
Physical education activity courses	2
(Any two courses in Military Science may be applied)	
Electives	0
Total	133-134

CURRICULUM FOR FASHION MERCHANDISING

The fashion merchandising curriculum offers practical career-oriented knowledge and skills as well as theoretical foundations of marketing fashion apparel and accessories. A marketing or management minor is required.

In addition to meeting the basic studies requirements (pp. 41-46), 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.

	Sem hours
Social science	8-12
A course in US 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 46).	
Major in fashion merchandising	43-45
FM 105 Integrated Arts	3
FM 135 Cultural Study of Fashion	3
FM 145 Introduction to Merchandising	3
IDE 208 Introduction to Basic Design	3
FM 235 Textiles for Consumers	3
FM 255 Apparel Analysis	3
FM 345 Theories and Practices in Fashion Merchandising I	3
FM 355 Theories and Practices in Fashion Merchandising II	2
FM 356 Theories and Practices in Fashion Merchandising II Laboratory	1
FM 380 Fashion of the Haute Couture	3
FM 390 Visual Merchandising	3
FM 404 Textile Testing	3
FM 437 Professional Seminar	3
FM 443 Merchandising of Interior Furnishings	3
HECR 487 Field Experience	3
FM elective approved by adviser	1-3
Physical education and health	2
Physical education activity courses	2
(Any two courses in military science may be applied)	
Minor in marketing or management	21
Required	
ACC 240 Principles of Accounting I	3
MKTG 360 Principles of Marketing	3
MGMT 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 that 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 is required.

Sem hours

Symbolics and communication	14-15
ENGL 121 English Composition	3
CTAS 121/124 Fundamentals of Speech	2-3
A course in mathematical reasoning	3
A computer course	3
Elective	3-5
<i>Recommended:</i>	
ENGL 226 Intermediate English Composition	
ENGL 324 Principles of Technical Communication	
CTAC 225 Listening Behavior	
CTAC 226 Nonverbal Communication	
CTAC 374 Intercultural Communication	
FRNH/GERN/SPNH/JPNE 121 Beginning French/German/Spanish/Japanese	
Science and technology	10
BIOL 105 Biology and the Human Species	4
CHEM 115 Chemistry and Society	3
PSY 101 General Psychology or INTE 240 Science, Technology, and People	3
Social science	15
PLSC 112 American Government	3
HIST 103 Twentieth Century Civilization or HIST 124 The United States, 1877 to the Present	3
ECON 201 Principles of Economics I	3
ECON 202 Principles of Economics II	3
Any cross-cultural/international studies course	3
Arts and humanities	12
Two courses in literature or foreign language literature	6
One course in philosophy or religion	3
(Suggest PHIL 221 Business Ethics)	
One course in art, music, or theatre arts	3
Practical arts	66
<i>Specialization courses</i>	34
HM 103 Introduction to the Hospitality Industry	2

HM 180 Foundations of Food Preparation	4
HM 204 Sanitation in the Hospitality Industry	1
HM 376 Legal Aspects of the Hospitality Industry ..	2
HM 430 Seminar in Hospitality Management ..	2
HM 440 Financial Management in Hospitality Management	3
HM 441 Commercial Purchasing	3
HM 470 Hospitality Industry Marketing	3
HM 496 Hospitality Management Internship ..	5
HECR 277/288/289 Cooperative Education 1/2/3	
HECR 377/388/389 Cooperative Education 1/2/3	
HECR 393 Food Systems Management I Experience	2
HECR 394 Food Systems Management I	2
HECR 494 Food Systems Management II	1
<i>Required Specialization Electives:</i>	9
Select 3 courses from:	
GEOG 113 Foundations of Guest Service	
DTC 201 Nutrition Perspectives	
HM 251 Meal Service Management	
IDE 364 Facility Management	
HM 368 Hospitality Information Systems	
HECR 492 Food Systems Management II Experience	4
<i>Select 1 course from the list below not in the major:</i> 2-3	
FCS 109 Interpersonal Relations in the Family,	
IDE 111 Human Factors and Special Needs,	
IDE 221 Environmental Systems for Interiors	
<i>General Elective</i>	2-3
Select one course from list below:	
HLED 210 Standard American Red Cross First Aid	
GEOG 110 World Regions	
RECR 100 Introduction to Recreation and Leisure	
COSC 136 Computers for the Nonspecialist	
Required minor	21
Management, College of Business	
MGMT 202 Business Communications	3
ACC 240 Principles of Accounting I	3
MKTG 360 Principles of Marketing	3
MGMT 384 Human Resource Management	3
MGMT 386 Organizational Behavior and Theory ..	3
Electives	6
Physical education	2
Total	123-126

CURRICULUM FOR INTERIOR DESIGN

The interior design curriculum, which is interdisciplinary in nature, prepares students to become professional interior designers. The integrated major includes courses in fine arts, management, marketing, construction, and textiles in addition to the courses in interior design. Creative problem solving in the area of human-environment relationships is emphasized. The focus of the program is on the theory, processes, and skills necessary for graduates of the program to reach the highest levels of professional achievement. The curriculum aims to prepare students to become professional interior designers. The interior design program is accredited by the Foundation for Interior Design Education Research (FIDER).

In addition to meeting basic studies requirements, all students on this curriculum must complete all other courses specified. Students completing this curriculum have met the major and minor requirements for a degree. No outside minor is needed.

Before students may enter studio courses at the 300-level or above in the Interior Design Major*, all of the following standards must be met.

1. The student must achieve a GPA of 2.70 or above as calculated from the grades in the following courses: IDE 110 Interior Design Studio I, IDE 111 Human Factors and Special Needs, IDE 120 Interior Design Studio II, IDE 121 Interior Design Materials and Components, FA 122 Two-Dimensional Design, FA 123 Drawing I, COSC 136 Computers for the Nonspecialist, 1 course in English composition, 1 course in Physical Science, PSY 101 or PSY 102 General Psychology, CNST 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.

Sem hours

Symbolics and communication	15
A course in English composition	3
CTAS 124 Fundamentals of Speech	3
Either ENGL 324 Principles of Technical Communication, or an upper level course in speech communication	3
A course in mathematical reasoning	3
COSC 136 Computers for the Nonspecialist.....	3
Science and Technology	11-12
A course in physical science	
PSY 101/102 General Psychology	3
A course in science or technology	
Social science	8-12
A course in US government	
A course in history	
A course in anthropology, economics, geography or sociology.	
<i>One of the following:</i>	
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 45).....	5-9
FA 122 Two-Dimensional Design	3
Cross-cultural or international studies	
<i>Requirement:</i> One course selected from basic studies areas I-IV.	
1. Required courses	74
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

CNST 201 Construction Systems	3
IDE 210 Interior Design Studio III	3
IDE 211 Lighting for Interiors	3
IDE 220 Interior Design Studio IV	4
IDE 221 Environmental Systems for Interiors	2
FA 231 Three-Dimensional Design	3
FM 235 Textiles for Consumers	3
IDE 310 Interior Design Studio V: Residential	4
IDE 311 History of Interiors: Ancient-1800	2
IDE 312 Computers for Interior Design	3
IDE 313 Space Planning and Specifications	3
IDE 320 Interior Design Studio VI: Contract	4
IDE 321 History of Interiors: 1800-Present	2
MKTG 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
MGMT 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

ACADEMIC MINORS

CLOTHING AND TEXTILES MINOR

	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
HECR 499 Independent Study	3
<i>Social-psychological-historical</i>	
FM 135 Cultural Study of Fashion	3
FM 380 Fashion of the Haute Couture	3
<i>Textiles application</i>	

FM 119 Early American Textiles	3
FM 404 Textile Testing	3
FM 443 Merchandising of Interior Furnishings	3

HUMAN ENVIRONMENTS MINOR

	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) (<i>May not be taken if IDE 208 was elected in core.</i>)	
FCS 109 Interpersonal Relations in the Family (3)	
IDE 211 Lighting for Interiors (3)	
IDE 221 Environmental Systems for Interiors (3)	
IDE 311 History of Interiors: Ancient-1800 (2)	
IDE 321 History of Interiors: 1800-Present (2)	
IDE 364 Facility Management (3)	

NUTRITION MINOR

This is a nonteaching minor which benefits students enrolled in the majors of Nursing, Sports Medicine, and Family and Consumer Sciences.

	Sem hours
Minor in nutrition	20
1. Required courses	12
DTC 201 Nutrition Perspectives	3
DTC 211 Experimental Foods	4
DTC 312 Community Nutrition	2
DTC 412 Nutrition of the Life Cycle	3
2. Restricted electives	8
DTC 402 Nutrient Metabolism, HECR 498 Independent Study, HECR 487 Field Experience, HLED 120 Healthful Living, HLED 402 Selecting Health Products and Services, HLED 420 Health and Aging	

TEACHING MINOR OCCUPATIONAL FOODS MINOR

(AVAILABLE ONLY TO BUSINESS EDUCATION
AND TECHNOLOGY EDUCATION MAJORS)
SECONDARY, K-12, AND SPECIAL EDUCATION-
SECONDARY TEACHER CERTIFICATION

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.

- HM 251 Meal Service Management (3)
- HECR 374 Methods of Teaching Occupational Foods (2)
- HECR 393 Food Systems Management I Experience (2)
- HECR 394 Food Systems Management I (2)
- HM 440 Financial Management in Hospitality Management (3)
- HM 441 Commercial Purchasing (3)
- HECR 487 Field Experience (3)
- DTC 492 Food Systems Management II Experience (4)
- DTC 494 Food Systems Management II (1)

23 hours

DIETETICS COURSES

- DTC 177/178/179 Special Topics.** 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.
- DTC 201 Nutrition Perspectives.** 3 hrs
Application of nutrition concepts and recommendations for health maintenance. Not open to students who take DTC 202, DTC 203, or DTC 204.
- DTC 202 Principles of Human Nutrition.** 3 hrs
Study of functions, sources, digestion, absorption, and metabolism of nutrients. Introduction to nutrient needs during physiological stages of the life cycle. Open to dietetics-intent majors. Not open to students who take DTC 201, DTC 203, or DTC 204.
Prereq: CHEM 121-122.

- DTC 203 Nutrition for Health Professionals.** 3 hrs
Study of functions, digestion, absorption and metabolism in health and disease. Application of nutrition principles in provision of care to clients. For nursing majors.
Prereq: CHEM 120; Coreq.: ZOO 202

- DTC 204 Sports Nutrition.** 3 hrs
Study of sources, functions, digestion, absorption and metabolism of nutrients. Emphasis on diet in athletic training and exercise science.
Prereq: CHEM 120.

- DTC 211 Experimental Foods.** 4 hrs
Nature and reactions of food explained in terms of chemical composition, microbial flora, and manipulative practices.
Prereq: CHEM 120 or CHEM 121-122.

- DTC 277/278/279 Special Topics.** 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

- DTC 301 Orientation to Dietetics.** 2 hrs.
Orientation to dietetics profession by exploring its roles in the health care system, examining the different facets and specializations of the profession, and investigating future trends.
Co-prereq: DTC 202.

- DTC 311 Community Nutrition Experience.** 2 hrs
Supervised practice experiences in various community nutrition settings, with emphasis on nutrition education techniques and community organization process.
Coreq: DTC 312.

- DTC 312 Community Nutrition.** 2 hrs
Emphasis on nutrition education theories and techniques. Exploration of nutrition programs of federal, state, and local agencies. Assessing, planning, implementing, and evaluating nutrition programs in various community settings.
Prereq: DTC 202.

- DTC 321 Dietetic Skills.** 2 hrs
Principles of basic skills of interviewing and counseling techniques. Emphasis on nutritional assessment and use of medical terminology.
Prereq: DTC 301.

DTC 377/378/379 Special Topics. 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

DTC 383 Clinical Nutrition I Experience. 2 hrs
Supervised practice experiences in the clinical nutrition professional environment. Emphasis on nutrition assessment utilizing a review of systems approach.
Coreq: DTC 384.

DTC 384 Clinical Nutrition 2 hrs
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 202, DTC 321, and CHEM 451. Coreq.: ZOO 326

DTC 393 Food Systems Management I Experience. 2 hrs
Application of basic components of an operating quantity food service facility. Supervised practice experiences. Open only to dietetics majors.
Prereq: DTC 211. Coreq: DTC 394.

DTC 394 Food Systems Management I. 2 hrs
Introduction to food systems management with emphasis on sanitation, safety, equipment selection and operation, food purchasing, receiving and storage, and personnel management. Open only to dietetics majors.
Prereq: DTC 211, MGMT 386.

DTC 402 Nutrient Metabolism. 3 hrs
Biochemical and metabolic functions of nutrients with emphasis on cellular reactions and their relationship to health and disease.
Prereq: DTC 201 or DTC 202 and CHEM 451. Coreq: ZOO 326.

DTC 412 Nutrition of the Life Cycle. 3 hrs
Emphasis on nutrient needs and influencing factors for each of the physiological stages of the life cycle.
Prereq: DTC 201, DTC 202, DTC 203 or DTC 204.

DTC 435 Seminar in Dietetics. 2 hrs
Analysis and application of research topics and techniques as they apply to the field of dietetics.
Prereq: Senior dietetics student.

DTC 477/478/479 Special Topics. 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

DTC 481 Ambulatory Nutrition Care Experience. 2 hrs
Supervised practice experiences in various ambulatory care settings. Open only to dietetics majors.
Coreq: DTC 482.

DTC 482 Ambulatory Nutrition Care. 1 hr
Aspects of nutrition care applied to ambulatory care settings including the workplace and long term care facilities. Emphasis on marketing strategies, consultive practice areas, health care regulations, and payment mechanisms in nutrition care.
Prereq: DTC 312 and DTC 384. Coreq: DTC 484.

DTC 483 Clinical Nutrition II Experience. 4 hrs
Supervised practice experiences in the clinical nutrition professional environment. Open only to dietetics majors.
Coreq: DTC 484.

DTC 484 Clinical Nutrition II. 1 hr
Development, implementation, and evaluation of nutritional care plans for individuals requiring modified diets for disease intervention. Open only to dietetics students.
Prereq: DTC 384.

DTC 485 Clinical Nutrition III. 5 hrs
Formulation, implementation, and evaluation of nutritional care plans for individuals with abnormal nutrient metabolism. Supervised practice experiences. Open only to dietetics students.
Prereq: DTC 483 and DTC 484.

DTC 492 Food Systems Management II Experience. 4 hrs
Principles of food production procedures emphasizing financial and quality controls in institutional foodservice systems. Supervised practice experiences. Open only to dietetics majors.
Prereq: DTC 393, DTC 394. Coreq: DTC 494.

DTC 494 Food Systems Management II. 1 hr
Application of supervisory processes to food service systems with emphasis on cost and quality control in food production and labor management. Open only to dietetics students.
Prereq: DTC 393, DTC 394, MGMT 384, and MICR 328.

DTC 495 Food Systems Management III. 5 hrs

Administrative functions of food service departments such as assessing, planning, decision making, evaluating, and training. Communication, stress control, and behavior management. Supervised practice experiences. Open only to dietetics students.

Prereq: DTC 494.

FAMILY AND CONSUMER SCIENCE COURSES**FCS 109 Interpersonal Relations in the Family. 3 hrs**

The skills and attitudes essential for improving interpersonal relationships in groups: work or social networks. Insight into the behavior of self and others will be emphasized to help the student achieve competence in various types of interpersonal relationships.

FCS 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

FCS 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

FCS 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

FCS 450 Adult Role Transitions. 3 hrs

Investigation of changes during early, middle, and later adulthood. Normative and nonnormative role transitions related to work and family for women and men.

FCS 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

FASHION MERCHANDISING COURSES**FM 105 Integrated Arts. 3 hrs**

The application of design elements and principles to human and contemporary environmental needs. Laboratory required.

FM 118 Apparel Studio. 3 hrs

Apparel construction using a commercial pattern. Emphasis is placed on fabric selection, fit, techniques.

FM 119 Early American Textiles. 3 hrs

Survey of textiles used in early history of North America; laboratory experiences allow students to develop skills in spinning wool and flax, traditional weaving, and natural dyeing.

FM 135 Cultural Study of Fashion. 3 hrs

A study of the social, psychological, and physical aspects of fashion as related to culture, society, and the individual.

Prereq: PSY 101/102 or equivalent.

FM 145 Introduction to Merchandising. 3 hrs

Analysis of the fashion industry from designing to distribution through major domestic and foreign markets. Emphasis is placed on fashion trends and cycles, history of merchandising, and careers. Field trip required.

FM 177/178/179 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

FM 210 Display Techniques. 2 hrs

The techniques, resources, and evaluation of effective displays for use in educational, commercial, and informational exhibits. Participation experiences in all phases of display work.

Prereq: FM 105.

FM 235 Textiles for Consumers. 3 hrs

The analytical study of fibers, yarns, fabrics, and finishes with emphasis on the performance of apparel and interiors fabrics. Laboratory required.

FM 255 Apparel Analysis. 3 hrs

A study of the components of apparel at the various price and quality levels. Emphasis placed on standard terminology necessary to describe/evaluate apparel. Laboratory required.

Prereq: FM 135 and FM 235.

FM 277/278/279 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

FM 302 Fashion Manufacturing Techniques. 3 hrs

Experiences and analysis of fashion production. Includes selection of commercial equipment and textiles.

Prereq: FM 118.

FM 345 Theories and Practices in Fashion Merchandising I. 3 hrs

Applications of merchandising mathematical concepts to buying functions and activities. Major focus on problem solving. Field trips required.

Prereq: FM 145.

FM 355 Theories and Practices in Fashion Merchandising II. 2 hrs

Adaptation of fashion merchandising concepts (FM 345) to computer systems. Development of processing tasks using specific merchandising information.

Prereq: FM 345 and COSC 136 or equivalent. Coreq: FM 356.

FM 356 Theories and Practices in Fashion Merchandising II Laboratory. 1 hr

Implementation and analysis of fashion merchandising functions utilizing computer. Simulation problem solving.

Coreq: FM 355.

FM 377/378/379 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

FM 380 Fashion of the Haute Couture. 3 hrs

A detailed study of 20th-century American and European fashion and its relationship to identifiable costumes of the past with emphasis on haute couture. Field trip required.

Prereq: FM 135 and FM 145.

FM 390 Visual Merchandising. 3 hrs

Analysis of visual media and techniques used in presentation of merchandise in a variety of settings. Laboratory participation integrates theory and practice.

FM 392 Pattern Design. 3 hrs

Principles of pattern making and special problems in clothing construction and design.

Prereq: FM 118.

FM 404 Textile Testing. 3 hrs

Chemical and physical testing of textile products with emphasis on laboratory techniques, standards, and interpretation of data for consumer use.

Prereq: FM 235 and one laboratory science course.

FM 437 Professional Seminar. 3 hrs

Exploration of professional aspects of merchandising. Emphasis on career preparation. Presentation of fashion related enterprises. Lectures by specialists. Field trips required.

Prereq: Senior standing, FM 355, and FM 356.

FM 439 Fashion Markets. 3 hrs

Comprehensive overview of the world fashion markets with emphasis on their development, operation, and contribution; includes a trip to one fashion-related market.

Prereq: Completion of 85 hours and department permission.

FM 443 Merchandising of Interior Furnishings. 3 hrs

Study of fashion marketing practices, buying techniques, and promotional activities as they relate to home furnishings industries. Field trips required.

FM 460 Tailoring. 3 hrs

Fundamental construction processes and special techniques applied to the construction of tailored garments; alterations and adaptations.

Prereq: FM 118.

FM 477/478/479 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

FM 487 Field Experience. 3 hrs

Supervised field experiences working with family social agencies and/or businesses in the area of specialization emphasizing professional competencies and self-evaluation. Sections of course offered for specialization areas as needed. Foreign students need work permit before registration.

Prereq: Department permission—senior standing.

HOSPITALITY MANAGEMENT COURSES

HM 103 Introduction to the Hospitality Industry. 2 hrs

Orientation to the lodging and foodservice industry by tracing the industry's growth and development; reviewing the organization of lodging, food service, and tourism operations; and by focusing on industry opportunities and future trends.

HM 177/178/179 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

HM 180 Foundations of Food Preparation. 4 hrs

Study of basic food preparation including principles of food selection, storage, and preparation. Includes sanitation issues, food acceptance factors, food regulations, and the recognition of quality standards.

Prereq: CHEM 115 or high school chemistry.

HM 204 Sanitation in the Hospitality Industry. 1 hr

Management of basic sanitation in foodservice and lodging facilities. Meets specifications required for National Institute for the Food Service Industry certification.

HM 251 Meal Service Management. 3 hrs

Theories, principles and skills for food and beverage service in institutional, commercial and resort properties. Supervisory techniques and training styles effective for food service.

HM 277/278/279 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

HM 368 Hospitality Information Systems. 3 hrs

A systematic approach to front office procedures, including record keeping, the reservation processes, collection procedures, and customer relations.

Prereq: COSC 136 or CHHS 226.

HM 376 Legal Aspects of the Hospitality Industry.

2 hrs

Introduction to the rights and responsibilities that the law grants to or imposes upon hospitality managers. Illustration of possible consequences of failure to comply with legal obligations.

Prereq: Three courses in major.

HM 377/378/379 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

HM 430 Seminar in Hospitality Management. 2 hrs

Current external topics influencing the internal operation of a food service or hospitality facility. Participation in professional and community projects.

Prereq: Senior hospitality management major; HM 496 (or coreq).

HM 440 Financial Management in Hospitality Management. 3 hrs

Techniques used by hospitality managers to control food, equipment, labor, and operating costs. Purchasing, labor, and pilferage controls and fiscal management.

Prereq: HEC 394

HM 441 Commercial Purchasing. 3 hrs

Study of principles and techniques applicable to purchasing with emphasis on selection and specification requirements for food, supplies, equipment, and contract services.

Coreq: HEC 394

HM 470 Hospitality Industry Marketing. 3 hrs

Basic knowledge for developing, implementing, and evaluating strategic marketing plans for hospitality properties. Includes forecasting procedures, needs assessments, and presentation formats.

Prereq: HEC 394 and MKTG 360.

HM 477/478/479 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

HM 496 Hospitality Management Internship. 5 hrs
Practical experience in managing a hospitality operation including assessing, planning, implementing, evaluating, and training.

Prereq: Senior hospitality management major.

HUMAN, ENVIRONMENTAL, AND CONSUMER RESOURCES COURSES

HECR 177/178/179 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

HECR 220 Seminar in Lighting. 1 hr
Development of interior design lighting knowledge through hands-on demonstrations of and laboratory experiences with lighting sources, controlling devices, and lighting solutions. Student financed off-campus experience required.
Prereq: Sophomore standing.

HECR 221 Seminar in Contract Design Products. 2 hrs
Examination of contract interior design products through product seminars and hands-on examination of products at the annual contract design conference, NEOCON, held at the Merchandise Mart in Chicago, Ill. Student financed off-campus experience required.
Prereq: Sophomore standing.

HECR 271 Household Equipment and Technology. 3 hrs
Selection factors, basic principles, new technology, and trends in household equipment.

HECR 277/278/279/280 Special Topics. 1/2/3/4 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

HECR 287/288/289 Cooperative Education. 1/2/3 hrs
Employment in an appropriate setting, chosen to provide supervised practical experience. Credit hours determined by program area and academic adviser. Offered on credit/no credit basis only.
Prereq: Approval of the Cooperative Education Office and department permission.

HECR 374 Methods of Teaching Occupational Foods. 2 hrs
Responsibilities of occupational home economics teachers, selection of appropriate resources and learning strategies for secondary level occupational programs, relationship of evaluation techniques to total program.
Prereq: FCS 370.

HECR 377/378/379 Special Topics. 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

HECR 387/388/389 Cooperative Education. 1/2/3 hrs
Employment in an appropriate setting, chosen to provide supervised practical experience. Credit hours determined by program area and academic adviser. Of-

ferred on credit/no credit basis only.
Prereq: Approval of the Cooperative Education Office and department permission.

HECR 477/478/479/476 Special Topics. 1/2/3/4 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

HECR 490/491 Special Work (Honors). 1/2 hrs
Additional experiences for promising seniors making a more detailed study of some phase of home economics. Work will be based on a problem of research interest with written and/or oral report. Regulations regarding honors courses will be observed.
Prereq: Senior standing.

HECR 497/498/499 Independent Study. 1/2/3 hrs
Opportunity for qualified senior students to carry on an intensive study or project in their area of specialization.
Prereq: Department permission.

INTERIOR DESIGN COURSES

IDE 110 Interior Design Studio I. 4 hrs
Introduction to technical drawing techniques, interior construction processes, and construction materials used in interior design. Emphasis on graphic communication.
Prereq: Interior design majors only.

IDE 111 Human Factors and Special Needs. 3 hrs
Introduction to the principles of ergonomics and anthropometrics as they influence the design of interior environments. Emphasis on how human factors and special user needs impact interior design.

IDE 120 Interior Design Studio II. 3 hrs
Introduction to interior design theory, philosophy, and process. Emphasis on creativity, design analysis, programming, concept development, space planning, and communication skills for introductory level residential and contract designs.
Prereq: IDE 110.

IDE 121 Interior Design Materials and Components. 3 hrs
Investigation of characteristics, properties, and uses of materials and components specified by the interior designer. Emphasis on interior construction materials and components, surfacing materials, and furnishing materials.

IDE 131 Orientation to Interior Design. 1 hr
Introduction to the interior design field with a focus on specialization and career management.

IDE 177/178/179 Special Topics. 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

IDE 208 Introduction to Basic Design. 3 hrs
Application of the basic principles and concepts of design as they pertain to the relationship between contemporary human needs and environmental needs. Color theory; functional and creative interior design. Nonmajors only.

IDE 210 Interior Design Studio III. 3 hrs
Development of advanced interior design graphic presentation skills. Emphasis on delineation, axonometric and perspective drawing, and rendering techniques.
Prereq: FA 122, FA 123, and a minimum grade of 1.7 in IDE 120.

IDE 211 Lighting for Interiors. 3 hrs
Introduction to lighting design for interior environments with emphasis on lighting fundamentals, lighting design process and methods, and the physiological and psychological effects of light.

IDE 220 Interior Design Studio IV. 4 hrs
Execution of design problems using design process to integrate both physiological and sociopsychological user needs with the creative and functional design of interior environments. Emphasis on analysis, synthesis, creativity, and presentation of three dimensional solutions to intermediate level residential and contract design problems.
Prereq: IDE 111, IDE 121, IDE 210, IDE 211, FA 231.
Prereq or concurrent: CNST 201, IDE 221, FM 235.

IDE 221 Environmental Systems for Interiors. 2 hrs
Introduction to acoustics, noise control, climate control, plumbing, and electrical systems in interiors. Emphasis on environmental systems principles necessary for the solution of interior design problems.

IDE 269 Housing for Consumers. 3 hrs
Consumer housing as it relates to social, psychological, legislative, and economic conditions for individuals and families in society.
Prereq: Sophomore standing.

IDE 277/278/279 Special Topics. 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

IDE 310 Interior Design Studio V: Residential. 4 hrs
Application of the design process in solving advanced residential design problems focusing on physiological, sociopsychological, functional, and aesthetic elements and their relationship to user needs. Emphasis on medium-scale contract design problems.
Prereq: Meet criteria for enrollment in 300-level interior design studio courses. Department permission.

IDE 311 History of Interiors: Ancient-1800. 2 hrs
Chronological survey of interior design from ancient times through the mid-nineteenth century. Emphasis on design, function, construction, and evolution of interior environments and the sociological, psychological, and cultural factors that influenced historical interiors, furniture, accessories, and ornamental design.
Prereq: Junior standing or department permission.

IDE 312 Computers for Interior Design. 3 hrs
Introduction to the use of computers in interior design. Emphasis on computer-aided design.
Prereq: COSC 136. Meet criteria for enrollment in 300-level interior design studio courses. Department permission.

IDE 313 Space Planning and Specifications. 3 hrs
Space planning and specification techniques for interiors. Emphasis on corporate standards for furniture and finishes, CSI specifications format, performance standards for interior finishes and materials, and the code search process.
Prereq: IDE 110 or CNST 228.

IDE 320 Interior Design Studio VI: Contract. 4 hrs
Application of the design process to contract design focusing on physiological, sociopsychological, functional, and aesthetic elements and their relationship to user needs. Emphasis on medium scale contract design problems.
Prereq: IDE 310, IDE 312, IDE 313.

IDE 321 History of Interiors: 1800-Present. 2 hrs
 Chronological survey of interior design from the mid-nineteenth century through the present. Emphasis on design, function, construction, and evolution of interiors and the sociological, psychological, and cultural factors that influence interior environments.
Prereq: Junior standing or department permission.

IDE 364 Facility Management. 3 hrs
 An examination of principles for coordinating the physical workplace with the people and work of the organization. Integrates the principles of business administration, architecture, and the behavioral and engineering sciences.
Prereq: Two courses in major.

IDE 377/378/379 Special Topics. 1/2/3 hrs
 An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

IDE 410 Interior Design Studio VII: Contract. 4 hrs
 Application of the design process in solving advanced contract design problems in design specialization areas, including historic preservation, restoration, and adaptive reuse. Emphasis on physiological, sociopsychological, functional, and aesthetic elements and their relationship to user needs.
Prereq: A minimum grade of 1.7 in each of the following courses: IDE 311, IDE 320, IDE 321.

IDE 420 Interior Design Studio VIII: Contract. 4 hrs
 Application of the design process for the comprehensive solution of large scale, complex, contract design problems focusing on physiological, sociopsychological, functional, and aesthetic elements and their relationship to user needs.
Prereq: A minimum grade of 1.7 in each of the following courses: MGMT 386, IDE 410.

IDE 421 Field Experience in Interior Design. 2 hrs
 Supervised work experience in the interior design field. Emphasis on professional competency, professional ethics, and self-evaluation.
Prereq: A minimum grade of 1.7 in IDE 410.

IDE 422 Professional Practice in Interior Design. 3 hrs
 Examination of business principles and practices as applied in the interior design field. Emphasis on marketing interior design services, managing interior de-

sign firms, and managing interior design projects.
Prereq: A minimum grade of 1.7 in each of the following: MKTG 360, MGMT 386.

IDE 449 Facility Programming and Post Occupancy Evaluation. 3 hrs
 An examination of the techniques and concepts used in facility programming and post occupancy evaluation and the interrelatedness of these two processes. An emphasis of the use of programming and evaluation in facility management.
Prereq: IDE 111, IDE 313, and IDE 320.

IDE 469 Strategic Planning and Research for Facility Management. 3 hrs
 An introduction to strategic planning and research techniques in facility management with an emphasis on site and interior environment needs and evaluation.
Prereq: IDE 364.

IDE 477/478/479 Special Topics. 1/2/3 hrs
 An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

NURSING EDUCATION

Regina Williams
Department Head
 228 King Hall
 487-2310

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Associate Professors: Kathleen Hillegas, Carlee Lehna, Susan Pfoutz

Assistant Professors: Theresa Beckett, Linda Berry, Carol Grantham, Sharon Jackonen, Sandra Nelson, Jacquelyn Newsome, Nancy Prince, M. Gaie Rubenfeld, Barbara Scheffer

Lecturers: Linda Burgess

Degree: Bachelor of Science in Nursing

Program of Study

Curriculum:

Nursing

Nursing advisors 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 the following prerequisite courses with a 2.0 ("C") or better: PSY 101 General Psychology, either SOCL 105 Introductory Sociology or ANTH 135 Introduction to Cultural Anthropology, CHEM 120 Fundamentals of Organic and Biochemistry, ENGL 121 English Composition or equivalent, DTC 202 Principles of Human Nutrition, ZOOL 201 Human Anatomy and Physiology I, ZOOL 202 Human Anatomy and Physiology II, and EDPS 325 Life Span Human Growth and Development. Required prerequisite courses are subject to change.

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 the 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 NURS 270 Pharmacology and NURS 260 Pathophysiology, with a grade of "C" or better within a period of six calendar years to be considered eligible for graduation.

The University may give credit for nursing courses taken at a four year college/university; however, the department reserves the right to make the final decision on course substitution based on examination of course materials.

Academic and professional integrity

In preparing to assume professional nursing careers, students are expected to assume responsibility for their learning, to support the ethics and goals of their profession, and to value honesty in the fulfillment of scholarly and professional endeavors. Students must abide by the University code of conduct as outlined in the University Catalog. Students who violate the University code of conduct will be subject to appropriate disciplinary action.

The Nursing department recognizes its responsibilities to the public and the nursing profession. Students and faculty must promote academic and professional integrity and take action when a violation of such integrity occurs. **The department reserves the right to retain only those students who, in the judgment of the faculty, satisfy the requirements of scholarship, clinical competence, and personal integrity suitable for nursing.**

Clinical learning experience

Fieldwork in nursing is provided through clinical learning experiences under the supervision of faculty in a variety of health agencies such as ambulatory care settings, acute care medical centers, community hospitals, public schools, nursing homes, county health agencies, and home health care agencies. Students are expected to provide their own transportation.

Nursing students are assessed \$15.00 per credit hour on all clinical laboratory courses. Fifty percent of these funds go to the department to help defray the cost of updating, replacing, and maintaining equipment and supplies used in the classroom laboratories (skills lab,

health assessment, and computer labs).

Following receipt of the Bachelor of Science in Nursing degree (BSN), students are eligible to sit for the national nursing licensure examination (NCLEX-RN).

This nursing program is approved by the State of Michigan Board of Nursing and is accredited by the National League for Nursing.

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 show 1) a valid Michigan Nurse License; 2) achievement of at least 45 on the ACT-PEP examination or successful completion of the National League of Nursing Mobility Profile II exams with a minimum decision score of 90. Credit hours from the student's junior or community college are awarded as equivalent to sophomore baccalaureate nursing credits after completion of requirement 2 above.

All information related to academic and professional integrity and clinical learning experiences also apply to RN/BSN completion students.

ACADEMIC PROGRAM

NURSING CURRICULUM

This curriculum leads to the Bachelor of Science in Nursing (BSN) degree and requires the following courses to complete the 124 semester hours needed for graduation. Curriculum revisions may result in changes in nursing courses listed below as well as prerequisite courses. Potential nursing students should consult with the Nursing department for the most accurate information.

Sem hours

Symbolics and communication	14-15
ENGL 121 English Composition	3
CTAS 121/124 Fundamentals of Speech	2-3
Upper level writing composition or speech communication or foreign language	3-5
Recommend MATH 170 Elementary Statistics or SOCL 250 Social Statistics I	3
Recommend IHHS 226 Computers for Health and Human Services	3
Science and technology	16
CHEM 120 Fundamentals of Organic and Biochemistry	4
PSY 101 General Psychology	3

ZOOL 201 Human Anatomy and Physiology I-3, ZOOL 202 Human Anatomy and Physiology II-3, and MICR 328 Introductory MICRO 328, Introductory Microbiology	3
Social science*	12
See basic studies requirements (page 44).	
*Students must select their second level social science course in the same area as the introductory level course selected.	
Arts and humanities	11-12
See basic studies requirements (page 45).	
Required supportive courses	7
DTC 202 Principles of Human Nutrition	3
EDPS 325 Life Span Human Growth and Development	4
Required nursing courses for generic students	
60	
NURS 207 Critical Thinking in Nursing	1
NURS 208 The Art and Science of Nursing I ..	2
NURS 209 The Art and Science of Nursing I Laboratory	3
NURS 220 Health Assessment	3
NURS 250 The Art and Science of Nursing II ..	2
*NURS 251 The Art and Science of Nursing II Laboratory	3
NURS 260 Pathophysiology	4
NURS 270 Pharmacology	3
NURS 304 Nursing Care of Childbearing Families ..	2
*NURS 305 Nursing Care of Childbearing Families Laboratory	3
NURS 306 Nursing Care of Childrearing Families ..	2
*NURS 307 Nursing Care of Childrearing Families Laboratory	3
NURS 308 A Theoretical Basis for Nursing Care of Childbearing Families, Childrearing Families, and Groups	1
NURS 330 Adult Health Nursing I	2
*NURS 331 Adult Health Nursing I Laboratory ..	3
NURS 350 Psychiatric/Mental Health Nursing ..	2
*NURS 351 Psychiatric/Mental Health Nursing Laboratory	3
NURS 372 Nursing Research	2
NURS 404 Adult Health Nursing II	2
*NURS 405 Adult Health Nursing II Laboratory ..	3
NURS 420 The Evolution of Professional Nursing ..	2
NURS 430 Health Care of Vulnerable Populations ..	2
NURS 450 Community Health Nursing	2
*NURS 451 Community Health Nursing Practice ..	3
NURS 460 Nursing Leadership and Management ..	2

Required nursing courses for registered nurse students	60
NURS 220 Health Assessment	3
NURS 260 Pathophysiology	4
NURS 270 Pharmacology	3
NURS 308 A Theoretical Basis for Nursing Care of Childbearing Families, Childrearing Families, and Groups	1
NURS 310 Concepts of Professional Practice ...	2
NURS 340 Concepts of Professional Practice II	1
*NURS 341 Concepts of Professional Practice II Clinical Laboratory	3
NURS 420 The Evolution of Professional Nursing ..	2
NURS 430 Health Care of Vulnerable Populations ...	2
NURS 450 Community Health Nursing	2
*NURS 451 Community Health Nursing Practice ..	3
NURS 460 Nursing Leadership and Management ..	2
NLN Mobility Profile Exam II.....	30
Physical education and health courses	2
(Any two courses in military science may be applied)	
Electives	2
Total	124

*A lab fee of \$15.00 per credit hour is assessed on each clinical laboratory course.

NURSING EDUCATION COURSES

NURS 177/178/179 Special Topics.	1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.	
<i>Prereq: Department permission.</i>	
NURS 207 Critical Thinking in Nursing.	1 hr
Provides exploration of critical thinking in the professional domain and its application to the nursing process.	
<i>Prereq: Admission to the nursing program. Coreq: NURS 208, 209, 220.</i>	
NURS 208 The Art and Science of Nursing I.	2 hrs
Presents an introduction to professional nursing theory, practice and research.	
<i>Prereq: Admission to the nursing program. Coreq: NURS 207, NURS 209, NURS 220, MICRO 328.</i>	
NURS 209 The Art and Science of Nursing I Laboratory.	3 hrs
This companion course to NURS 207 and NURS 208	

provides laboratory/clinical practice in nursing care of adults in predictable states of disharmony and harmony.
Prereq: Admission to the nursing program. Coreq: NURS 207, NURS 208, NURS 220, MICRO 328.

NURS 210 Use of the Nursing Process. **2 hrs**
Study of the four components of the nursing process and their implementation in nursing practice. Lecture: two hours per week.
Prereq: Department permission.

NURS 220 Health Assessment. **3 hrs**
Familiarizes students with health history taking and physical examination techniques. Laboratory sessions provide opportunities for doing assessments under the guidance of the nursing faculty. Lecture: Two hours per week. Laboratory: Two hours per week.
Prereq: Admission to the nursing program. RN/BSN students may register for this course prior to admission to the program.

NURS 250 The Art and Science of Nursing II. **2 hrs**
Continues the development of knowledge and skills basic to nursing care of adults in predictable states of disharmony and harmony.
Prereq: NURS 207, NURS 208, NURS 209, NURS 220. Coreq: NURS 251, MICR 328, NURS 260, NURS 270.

NURS 251 The Art and Science of Nursing II Laboratory. **3 hrs**
Students apply the concepts learned in theory and laboratory in providing care to culturally diverse adult clients who are in predictable states of harmony and disharmony.
Prereq: NURS 207, NURS 208, NURS 209, NURS 220. Coreq: NURS 250, MICR 328, NURS 260, NURS 270.

NURS 260 Pathophysiology. **4 hrs**
The dysfunctions created by major physical illnesses, theories of causation, and signs and symptoms of the more usual syndromes.
Prereq: Admission to the nursing program / permission of the department.

NURS 270 Pharmacology. **3 hrs**
The fundamental principles of pharmacology including the action of drug groups on the human body and how drugs are administered, metabolized and excreted.
Prereq: Admission to the nursing program / permission of the department.

NURS 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

NURS 304 Nursing Care of Childbearing Families.

2 hrs

Focuses on maternal-newborn nursing within a family centered approach. The course encompasses the entire childbearing process, from preconception planning through pregnancy, birth, and the postpartum period. Students use a scientific knowledge base and selected theories (e.g., family, nursing, systems, developmental, ethical, and coping/stress/adaptation) to promote harmony within the context of the childbearing families in predictable and less predictable health states with diverse populations.

Prereq: Completion of sophomore-level nursing courses, MICR 328. Coreq: NURS 305, NURS 308.

NURS 305 Nursing Care of Childbearing Families

Laboratory.

3 hrs

Focuses on the clinical application of maternal-newborn nursing theory and practice with selected maternity clients and their newborns. Clinical experiences will occur in prenatal, intrapartum, and postpartum settings of community hospitals.

Prereq: Completion of sophomore-level nursing courses, MICR 328. Coreq: NURS 304, NURS 308.

NURS 306 Nursing Care of Childrearing Families.

2 hrs

Focuses on assisting students to learn nursing care for children and their families in predictable and less predictable health phases of disharmony and harmony. Children and their families at different developmental ages, having altered health and well states, and in different clinical settings will be examined to promote harmony.

Prereq: Completion of sophomore-level nursing courses, MICR 328. Coreq: NURS 307, NURS 308.

NURS 307 Nursing Care of Childrearing Families

Laboratory.

5 hrs

Focuses on the clinical application of nursing knowledge from NURS 306 to the care of children and their families in various clinical settings.

Prereq: Completion of sophomore-level nursing courses, MICR 388. Coreq: NURS 306, NURS 308.

NURS 308 A Theoretical Basis for Nursing Care of Childbearing Families, Childrearing Families, and Groups.

1 hr

Focuses on students gaining an understanding of theories both in nursing and related disciplines in family, groups, and the impact of stress and illness for this population.

Prereq: Completion of sophomore-level nursing courses or departmental permissions.

NURS 310 Concepts of Professional Practice. 2 hrs

Explores the use of critical thinking and the concepts upon which professional nursing is based. Various nursing theories are introduced and applied to the concepts of the individual, family, groups, and community. Lecture: Two hours per week.

RN/BSN students may register for this course prior to admission to the program.

NURS 330 Adult Health Nursing I.

2 hrs

Focuses on caring for adult clients within families with predictable medical-surgical problems, both acute and chronic. The goal of the course is to provide a strong foundation of principles for the adult-health nursing care of clients from diverse populations with medical-surgical problems across the health care setting. Students will focus on the predictable phases of disharmony as well as concepts including cancer nursing, fluids and electrolytes, grieving, teaching/learning, stress and coping.

Prereq: Completion of sophomore-level nursing courses, NURS 308, and MICR 328. Coreq: NURS 331.

NURS 331 Adult Health Nursing I Laboratory. 3 hrs

Clinical application of nursing knowledge from NURS 330 to the care of adult clients in a variety of health care settings.

Prereq: Completion of sophomore-level nursing courses. Coreq: NURS 308 and NURS 330.

NURS 340 Community Mental Health Nursing. 1 hrs

This course is designed to provide the conceptual basis for professional nursing practice regarding states of disorganization and reorganization in the psychiatric/mental health care of individuals, families and groups in the community.

Prereq: NURS 270, NURS 310, NURS 220, EDPS 325. Coreq: NURS 341.

NURS 341 Community Mental Health Nursing 3 hrs

This course is designed to fulfill clinical nursing requirements in community mental health nursing. Both the on-campus lab activities and the onsite clinical patient contacts offer direct experiences with diverse populations across the life span. Clinical placements are available in a variety of mental health settings located in the community.

Prereq: NURS 270, NURS 310, NURS 220, EDPS 325
Coreq: NURS 340.

NURS 350 Psychiatric/Mental Health Nursing. 2 hrs

Designed to fulfill theory requirements in psychiatric/mental health nursing. Classroom content will cover the care of adults, children, and adolescents experiencing states of disharmony and reorganization.

Prereq: Completion of sophomore-level nursing courses.
Coreq: NURS 308.

NURS 351 Psychiatric/Mental Health Nursing Laboratory. 3 hrs

Designed to fulfill clinical nursing requirements in psychiatric/mental health nursing. Clinical practice will offer direct experiences with diverse groups of children, adolescents, and adults in states of disharmony and reorganization through placements in a variety of psychiatric/mental health clinical settings.

Prereq: Completion of sophomore-level nursing courses.
Coreq: NURS 308.

NURS 372 Nursing Research. 2 hrs

Analyzes existing research, and examines the potential for utilization of existing research to nursing practice. Theoretical nursing frameworks will be explored for their relevance to research and practice.

Prereq: Completion of sophomore-level nursing courses and departmental permission.

NURS 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than one provided different topics are studied.

Prereq: Department permission.

NURS 404 Adult Health Nursing II. 2 hrs

Includes the primary, secondary, and tertiary levels of prevention for the adult client with multiple complex alterations in health status. Students will provide for continuity of care across health settings. Students will focus on acute and chronic phases of disharmony as well

as concepts including stress and coping, grieving, and teaching/learning that relate to reorganization.

Prereq: Completion of junior-level nursing courses. Coreq: NURS 405.

NURS 405 Adult Health Nursing II Laboratory. 3 hrs

Clinical application of nursing knowledge from NURS 404 to the care of adult clients in a variety of health care settings.

Prereq: Completion of junior-level nursing courses. Coreq: NURS 404.

NURS 420 The Evolution of Professional Nursing. 2 hrs

Explores the historical development of the nursing profession and current issues and trends affecting nursing and health care.

Prereq: Completion of junior-level nursing courses or departmental permission.

NURS 430 Health Care of Vulnerable Populations. 2 hrs

Examines the health care needs of vulnerable populations.

Prereq: Completion of junior-level nursing courses. or departmental permission

NURS 450 Community Health Nursing. 2 hrs

Focuses on the community as client. Students will learn and apply concepts from the public health sciences to the assessment, diagnosis, planning, and intervention related to community health problems. Community health problems will be examined incorporating epidemiological analysis, all levels of prevention, available as well as needed health and community resources, and the role of nursing in interdisciplinary health care. Specific focus will be given to the role of the environment and its subsystems on the health and well-being of individuals, families, and communities. Efforts to prioritize health care needs and set health care goals, such as *Healthy People 2000*, will be examined.

Prereq: Completion of junior-level nursing courses. Coreq: NURS 451.

NURS 451 Community Health Nursing Practice. 3 hrs

The clinical course for community health nursing provides students with opportunities to apply community health nursing concepts with clients with individuals, families, and aggregates. Care will be provided at all levels of prevention to persons across the life span. Care to individuals and families will be analyzed from a community or aggregate perspective.

Prereq: Completion of junior-level nursing courses. Coreq: NURS 450.

NURS 460 Nursing Leadership and Management. 2 hrs

Students will learn and apply leadership and management concepts and theories to patient care. The health care system as well as the internal and external influences on this system will be studied.

Prereq: Completion of junior-level nursing courses.

NURS 477/478/479 Special Topics. 1/2/3 hrs

Experimental courses or special topics in nursing may be offered (to be announced).

Prereq: Department permission.

NURS 497/498/499 Independent Study. 1/2/3 hrs

A student may work with a faculty member independently to pursue a topic of interest to the student. Independent study is a student initiated project.

Prereq: Department permission.

SOCIAL WORK

Donald M. Loppnow
Department Head
 411 King Hall
 487-0393

Professors: Kaaren Brown, Don Ifill, Elvia Krajewski-Jaime, Linda F. Kurtz, Ronald Lewis, Donald M. Loppnow, Harrison Y. Smith, Marjorie Ziefert

Associate Professors: Laura Davis, Enos Massie, Crystal Mills, George Mink, Lynn Nybell, Sylvia Sims Gray

Assistant Professors: Elizabeth Kaufman, Elizabeth Schuster, Marilyn Wedenoja

The Social Work program offers students a generalist foundation of knowledge, values, and skills integral to entry level professional social work careers. It includes a fully accredited major in social work.

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

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

Advising responsibilities will be assigned to social work faculty members. Students should contact the Social Work department 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 Social Work department, 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

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 2.3 overall grade point average at the time of entering and during field placement (no probation).
2. At least a "C" in each required social work class.
3. Students must have completed all required social work courses through the 300 level before beginning field placement. In addition, students must have completed EDPS 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 (SWRK 408 Social Work Practice II, and SWRK 488 Field Experience I) to be eligible to continue in the second semester (SWRK 409 Social Work Practice III and SWRK 489 Field Experience II). Students who receive a grade of "E" in either semester of field placement (SWRK 488-489 Field Experience I-II) must obtain special departmental permission to repeat the course.
5. A field placement application must be obtained from the social work office, completed by the student, and

returned to the field placement coordinator by the date set by the field coordinator or by March at the latest if placement is desired fall/winter and by October for the following winter/spring/summer terms. Each student is required to attend an informational meeting at the announced time in the semester their field application is due. The field placement coordinator will arrange all field placements. Students may not recruit their own field placement sites.

6. Students must take field placement in consecutive semesters (i.e. fall and winter or winter and spring/summer terms). Students enrolling for the first semester of field placement (SWRK 488 Field Experience I) must take SWRK 408 Social Work Practice II concurrently. Students enrolling for the second term of field placement (SWRK 489 Field Experience II) must take SWRK 409 Social Work Practice III concurrently. In addition, students must take SWRK 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

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.

ACADEMIC MAJOR

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 (*).

	Sem hours
Symbolics and communication	14-15
Requirements 1, 2, 3, and 4 (page 41)	
*SOCL 250 Social Statistics I	3
Science and technology	13
Requirement 1-A course in physical science (page 43)	
Requirement 2-A course in life science	
*BIOL 105 Biology and the Human Species	4
*PSY 101 General Psychology	3
*PSY 360 Abnormal Psychology	3
Social science	63
Requirements 1 and 2 (page 44).....	6
1. Required courses	
*ANTH 135 Introduction to Cultural Anthropology	3
*SOCL 105 Introductory Sociology	3
*SOCL 462 Complex Organizations	3
*Two courses on statistics and research completed by taking either Option 1 or Option 2	6
<i>Option 1</i>	
SOCL 341 Quantitative Methods of Social Research I	3
SOCL 342 Quantitative Methods of Social Research II	3
<i>Option 2</i>	
SOCL 250 Social Statistics I (fulfills Area I-mathematical reasoning)	3
SOCL 304 Methods in Sociological Research ...	3
*SWRK 120 Introduction to Social Work Services and Professional Roles	3
*SWRK 222 Social Welfare Policies and Services ...	3
*SWRK 315 Theoretical Bases for Social Work Practice	3
*SWRK 317 Social Work Practice I	3
*SWRK 360 Practice Issues with People of Color ...	3
*SWRK 388 Preprofessional Practicum	3
*SWRK 403 Practice Issues with Women	3
*SWRK 405 Analysis and Change of Social Welfare Policies	3

*SWRK 408 Social Work Practice II	3
*SWRK 409 Social Work Practice III	3
*SWRK 488 Field Experience I	6
*SWRK 489 Field Experience II	6
2. Restricted electives	9
<i>*Choose two courses from the following:</i>	
AAS 101 Introduction to African American Studies	
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 379 Special Topics: Gender, Race, and Class	
AAS 441 Law in the African American Experience	
ANTH/SOCL 205 Minority Women in the United States	
ANTH/SOCL 214 Racial and Cultural Minorities	
ANTH 233 Peoples and Cultures of Mexico	
ANTH 236 Peoples and Cultures of Africa	
ANTH 237 Indians of North America	
ANTH 248 Peoples and Cultures of the Pacific	
CTAC 374 Intercultural Communication	
CTAC 375 Interracial/Interethnic Communication	
FLAN 215 The Culture of the Latino Groups in the United States (may also count in arts and humanities area.)	
ECON 321 Minority Workers in the Labor Market	
HIST 305 Indians of the United States	
HIST 315 History of Black Americans	
HIST 317 History and Geography of Spanish America	
HIST 341 The Middle East, 1798 to Present	
HIST 342 North Africa, 1798 to Present	
HIST 348 Twentieth Century Africa	
HIST 355 Latin America: Colonial Period	
HIST 356 Latin America: National Period	
HIST 375 Modern India	
LITR 204 Native American Literature (also may count in Area IV)	
LITR 260 African American Literature (also may count in Area IV)	
PSY 340 Psychological Perspectives on Prejudice and Discrimination	
<i>*Choose one course from the following:</i>	
WMST 200 Introduction to Women's Studies	
PSY 242 Psychology of Women	
SOCL 344 Sociology of Sex Roles	

ANTH 355 Anthropology of Women	
PLSC 365 Women and Politics	
Arts and humanities	12
Requirements 1, 2, 3, and 4 (page 45)	12
Education	4
*EDPS 325 Life Span Human Growth and Development	4
Physical education and health	2
Physical education activity courses	2
Electives	6-7
Total	124

ACADEMIC MINOR

SOCIAL WORK MINOR

	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
SWRK 120 Introduction to Social Work Services and Professional Roles	3
SWRK 222 Social Welfare Policies and Services ...	3
2. Electives	14-15
Choose 14-15 credits selected from social work courses (SWRK).	

SUPPLEMENTAL ELECTIVE PROGRAMS

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 SWRK 477 Special Topics: Policies and Issues in Services to Families and select any three additional courses from the following courses, which are a part of the program:

- SWRK 419 Family-Centered Practice
- SWRK 420 Working with Aging People
- SWRK 422 Specialized Services for Families with Children in Placement
- SWRK 424 Social Work with Physically and Mentally Handicapped
- SWRK 431 Substance Abuse

SWRK 435 Group Work with Children and Families

SWRK 460 The Law and Social Work with the Family

SWRK 465 Social Work, Sex, and the Family

SWRK 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
SWRK 419 Family-Centered Practice	3
SWRK 438 The Interdisciplinary Health Care Team	1
SWRK 439 Social Work Practice in Health Care Settings	3
HLAD 300 Health Care Issues	2
2. One of the following options	3
<i>Medical Option</i>	
NURS 380 Health and Illness Problems Throughout the Life Span	2
SWRK 457 Separation, Loss, and Grief	1
<i>Substance Abuse Option</i>	

SWRK 431 Substance Abuse	3
<i>Mental Health Option</i>	
SWRK 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

SWRK 120 Introduction to Social Work Services and Professional Roles. 3 hrs

An overview of the social work profession including its philosophy, values, professional roles, current trends, and models in varied practice arenas as criminal justice, mental health, child and family services, public welfare services, and medical and industrial settings.

SWRK 177/178/179 Special Topics. 1/2/3 hrs

Specialized topics integral to contemporary social work practice. Social work faculty members will select contemporary topics that are unique and different from existing social work courses. Since topics change, a student may take the course more than once.

Prereq: SWRK 120.

SWRK 222 Social Welfare Policies and Services. 3 hrs

A survey of welfare institutions and policies in their historical and modern contexts. American social welfare services as related to the economic, political and socio-cultural conditions, and prevailing ideologies.

Prereq: SWRK 120.

SWRK 251 Self Assessment and Development for Social Work. 1 hr

An experimental course helping students to self-assess their personal preparation for the social profession. Exercises will help students explore their own values, particularly with respect to culture, gender, and sexual orientation. Students will learn about the social work program sequence and requirements. Opportunities will be provided for learning about working in groups, being assertive, and developing skills for educational survival.

Coreq: SWRK 254.

SWRK 254 The Social Work Profession and Social Service Policies. 4 hrs

This course is an overview of the development of the social work profession, its distinguishing features, including social work values and ethics, and the historical development of social welfare policies and programs. In addition, students will learn about social work roles and settings. This course is designed for students who intend to be social work majors.

This course must be taken concurrently with SWRK 251. It is not open to students who have already completed SWRK 120 and/or SWRK 222.

SWRK 277/278/279 Special Topics. 1/2/3 hrs

Specialized topics integral to contemporary social work practice. Social work faculty members will select contemporary topics that are unique and different from existing social work courses. Since topics change, a student may take the course more than once.

Prereq: Department permission.

SWRK 287 Cooperative Education. 3 hrs

Employment for pay in a work setting chosen to provide practical experience related to social work. The cooperative education sequence is alternated with full-time attendance at the University. Students who wish to substitute a cooperative education course for the practicum component of SWRK 388 must enroll in SWRK 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: SWRK 120, sophomore standing, approval of the cooperative education office, and department permission.

SWRK 315 Theoretical Bases for Social Work Practice. 3 hrs

Integrating, supplementing, and translating into social work practice students' knowledge of human beings and their social environments. The purposes for which the social work professional intends to use the knowledge and the values that form the base of professional practice.

Prereq: SWRK 120, SWRK 222, PSY 101, SOCL 105, and EDPS 325; or department permission. ANTH 135 and PSY 360 recommended.

SWRK 317 Social Work Practice I. 3 hrs

The first course in a sequence of social work practice, designed to prepare the student for field experience.

Relationship building, information gathering and preliminary assessment, and contracting. Must be taken concurrently with SWRK 388.

Prereq: SWRK 120, SWRK 222, and SWRK 315. Nonsocial work majors must have department permission.

SWRK 360 Practice Issues with People of Color. 3 hrs

Examines social work methodology and techniques in the development and delivery of social work services to people of color. Focuses on expanding the range of perception, thought, and practice skills relative to race and culture. Personal values toward racial and cultural variation are examined in the context of social work values and practice.

SWRK 377/378/379 Special Topics. 1/2/3 hrs

Specialized topics integral to contemporary social work practice. Social work faculty members will select contemporary topics that are unique and different from existing social work courses. Since topics change, a student may take the course more than once.

Prereq: Department permission.

SWRK 387 Cooperative Education. 3 hrs

Employment for pay in a work setting chosen to provide practical experience related to social work. The cooperative education sequence is alternated with full-time attendance at the University. Students who wish to substitute a cooperative education course for the practicum component of SWRK 388 must enroll in SWRK 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: SWRK 120, sophomore standing, approval of the cooperative education office, and department permission.

SWRK 388 Preprofessional Practicum. 3 hrs

The student is assigned to a human services agency or organization for the semester for four hours weekly. The agency, in agreement with the faculty instructor, provides social work learning experiences and social work supervision. A two-hour weekly seminar relates practicum experience to theoretical knowledge. For students majoring in social work, students minoring in social work, and students pursuing related disciplines such as gerontology and criminal justice, who are interested in an introduction to practical aspects. Social work majors must take concurrently with SWRK 317.

Prereq: Nonsocial work majors must have junior standing, SWRK 120, and department permission.

SWRK 403 Practice Issues with Women. 3 hrs
Builds upon and integrates various theoretical frameworks to provide a basis for social work practice with women. An important theme in the course is the exploration of personal attitudes and beliefs as they effect social work practice with women.
Prereq: SOCL 344 or PSY 242, or department permission.

SWRK 405 Analysis and Change of Social Welfare Policies. 3 hrs
Current social policy and its intended and unintended effects on client populations. Policy analysis and strategies and methods for policy change. Social work majors must enroll concurrently in SWRK 408 and SWRK 488.
Prereq: SWRK 120, SWRK 222, and either PLSC 112 or PLSC 202.

SWRK 408 Social Work Practice II. 3 hrs
The generalist conceptual framework for social work practice. Practice values, models of assessment, and phases of planned sequential change. Must be taken concurrently with SWRK 405 and SWRK 488.
Prereq: SWRK 317, SWRK 360, and SWRK 388.

SWRK 409 Social Work Practice III. 3 hrs
A continuation of SWRK 408; examines in more depth a variety of social work practice models, interventive strategies, methods, roles, and skills. Must be taken concurrently with SWRK 489 Field Experience II.
Prereq: SWRK 405 and SWRK 408.

SWRK 413 Women and Aging. 3 hrs
Designed to provide social work, women's studies, and gerontology students with the skills and sensitivity to understand the issues, needs, and positive attributes of women as they grow older. Students will examine the lives of women in special groups, such as older minority women, caregivers, widows, and institutionalized elderly women. Students will learn skills to provide effective services to older women in a variety of human service settings.
Prereq: Junior/senior or graduate standing.

SWRK 419 Family-Centered Practice. 3 hrs
A foundation course for the family and children's services program and an elective for students interested in social work with families. The family as a social/psychological system that meets the needs of both children

and adults. Practice knowledge and skill in delivering services and developing resources for families at risk.
Prereq: SWRK 120, SWRK 222, or department permission.

SWRK 420 Working with Aging People. 3 hrs
The role of social worker with aged people. The delivery of social services to the aged with a focus on practice approaches and techniques unique to various social service settings.
Prereq: SWRK 120, SWRK 222, or department permission.

SWRK 422 Specialized Services for Families with Children in Placement. 3 hrs
Practice knowledge and skills for working with families where out-of-home placement of children has become necessary. Issues of identity, ethnicity, and continuity in child welfare. The social worker's role in planning for permanence and working in a team approach with foster parents and other substitute care providers.
Prereq: SWRK 120, SWRK 222, or department permission.

SWRK 424 Social Work with Physically and Mentally Handicapped. 3 hrs
The impact of intellectual, emotional, and/or physical handicapping conditions upon the individual, the family, and the community, including public attitudes, policies, and programs. Social work practice knowledge, values, and skills in the planning and delivery of preventive and supportive services.
Prereq: SWRK 120, SWRK 222, or department permission.

SWRK 431 Substance Abuse. 3 hrs
Current approaches to the prevention and treatment of drug and alcohol abuse. Consideration of the physiological, psychological, and social impact of substance abuse on the individual, the family, and the community. The role of the social worker in prevention and treatment.
Prereq: SWRK 120, SWRK 222, or department permission.

SWRK 435 Group Work with Children and Families. 3 hrs
Social group work theory and practice as a relevant way to work with children and families. Group process as it occurs in natural groups and the effect of this process on individual behavior. Techniques that can be built into the group to effect client change.
Prereq: SWRK 120, SWRK 222, or department permission.

SWRK 498 The Interdisciplinary Health Care Team.

1 hr

The purpose and function of interdisciplinary teams in health care settings and the roles and collaboration of health care professionals such as doctors, dietitians, health administrators, nurses, psychologists, physical therapists, occupational therapists, and social workers. Instruction by an interdisciplinary team.

Prereq: SWRK 120 and SWRK 222 or department permission. No prerequisites for nonsocial work students who are majoring in health disciplines and who have at least junior standing.

SWRK 439 Social Work Practice in Health Care

Settings. 3 hrs

Social work roles and practice in health care settings with primary emphasis on their application in medical settings. The social work roles and practice intervention strategies in mental health settings and substance abuse services settings.

Prereq: SWRK 120 and SWRK 222 and Services or department permission.

SWRK 440 Issues in Mental Health Practice. 3 hrs

Issues in mental health practice with emphasis on deinstitutionalization, community mental health, and the role of the entry-level social worker.

Prereq: SWRK 120, SWRK 222, or department permission.

SWRK 457 Separation, Loss, and Grief. 1 hr

Separation, loss, and grief as integral aspects of the human experience. Practice issues and applications addressing the impact of loss, separation, and grief on client and societal systems.

Prereq: SWRK 120 and SWRK 222, or department permission.

SWRK 460 The Law and Social Work with the Family.

3 hrs

Social workers and lawyers frequently find themselves working together dealing with issues and problems involving individuals and families, such as in cases of divorce, child abuse and neglect, child custody, delinquency, and mental health. Legal and social work perspectives in terms of client rights, needs, and professional goals. Social work practice in the family court arena.

Prereq: SWRK 120, SWRK 222, or department permission.

SWRK 463 Social Work Practice with Legal Offenders. 3 hrs

Professional roles and appropriate practice skills utilized by social workers and allied professionals in working with legal offenders.

Prereq: SWRK 120, SWRK 222, or department permission.

SWRK 465 Social Work, Sex, and the Family. 3 hrs

Impact of sexual behavior and issues of sexuality on family relationships and the development of children. A broad view of human sexuality focusing on assessment and social work intervention in situations in which sexual issues are significant, including incest, adolescent sexual relationships, sexual preferences, birth control, venereal disease, and sexual functioning.

Prereq: SWRK 120, SWRK 222, or department permission.

SWRK 467 Crisis Intervention. 2 hrs

Systems in crisis including different types of crises, indications of a system in crisis and crisis intervention strategies.

Prereq: SWRK 120 and SWRK 222, or department permission.

SWRK 470 Supervising Staff and Volunteers. 3 hrs

Models of supervision and the roles of the social services supervisor. The basic knowledge, skills, and values required for effective supervision of bachelor's degree level staff, paraprofessional staff, and volunteers within family and children's services agencies.

Prereq: SWRK 120, SWRK 222, or department permission.

SWRK 477/478/479 Special Topics. 1/2/3 hrs

Specialized topics integral to contemporary social work practice. Social work faculty members will select contemporary topics that are unique and different from existing social work courses. Since topics change, a student may take the course more than once.

Prereq: SWRK 120, SWRK 222, or department permission.

SWRK 488 Field Experience I. 6 hrs

Field experience designed to meet the learning needs of students and the standards of professional social work education. Professional standards are fixed; however, learning needs of students may vary. The field placement agency, in consultation with the Social Work department, provides learning experiences and supervision at the senior level. Open only to social work majors with senior standing and an overall GPA of 2.3 or better in social work courses. Student may not be on academic probation. Must be taken concurrently with SWRK 405 and SWRK 408.

Prereq: SWRK 315, SWRK 317, SWRK 360, SWRK 388, and department permission.

SWRK 489 Field Experience II. 6 hrs

A continuation of SWRK 488. A student must receive a "C" or better in SWRK 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 SWRK 409.

SWRK 490 Senior Thesis Seminar. 3 hrs

This is the capstone course for students completing the honors program in social work. A senior thesis or project is completed in consultation with the faculty member. *Prereq: Senior standing, social work major, and course work on statistics and research methodology.*

SWRK 497/498/499 Independent Study. 1/2/3 hrs

Directed study in areas not provided in other course offerings or advanced study in areas of special interest to the student.

Prereq: Department permission.

GERONTOLOGY

Elizabeth Schuster

Coordinator

416 King Hall

487-2465

Lecturer: Anne Robinson

The gerontology minor is administered by the Social Work department 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.

ACADEMIC MINOR GERONTOLOGY MINOR

Sem hours

Minor in gerontology 20

1. Required courses 13-14

BIOL 239 Biology of Aging 2

SOCL 311 Social Gerontology 3

PSY 323 Psychology of Human Aging 3

SWRK 420 Working with Aging People 3

GERT 488/489 Gerontology Practicum 2-3

Note: Students who are required to complete a practicum in a setting serving older people as a part of their major may request that this experience fulfill the practicum component of GERT 488/489.

2. Electives 6-7

Students are required to complete elective requirements by choosing courses from the following three content areas:

Psychosocial and environmental aspects of aging

- EDPS 325 Life Span Human Growth and Development (4)
 EDPS 402 Learning in the Later Years (3)
 OTH 403 Conditions II (3)
 PSY 551 Psychology of Death and Dying (2)

Biological and health aspects of aging

- IDE 111 Human Factors and Special Needs (3)
 DTC 201 Nutrition Perspectives or DTC 202 Principles of Human Nutrition (3)
 IDE 269 Housing for Consumers (3)
 RECR 310 Leisure and the Older Adult (3)
 NURS 360 Gerontological Nursing (2)
 DTC 412 Nutrition of the Life Cycle (3)
 PHED 479 Special Topics: Health and Aging (3)

Policies and services for the aging

- HLAD 300 Health Care Issues (2)
 HLAD 310 Administration of Health Care Organizations (3)
 ECON 327 Inequality and Economic Justice (3)
 SWRK 413 Women and Aging (3)
 SWRK 424 Social Work with Physically and Mentally Handicapped (3)
 SWRK 457 Separation, Loss, and Grief (1)
 GERT 417 Work and Retirement (2)
 GERT 518 Issues in Caring for People with Alzheimer's Disease (3)

Gerontology

- Select from courses with a GERT prefix. (Selected 500-level courses are available with approval.)

GERONTOLOGY COURSES

GERT 177/178/179 Special Topics. 1/2/3 hrs
 Specialized topics integral to the field of gerontology. Gerontology faculty members will select contemporary topics that are unique and different from existing courses. Since topics change, a student may elect to take the course more than once.
Prereq: Department permission.

GERT 277/278/279 Special Topics. 1/2/3 hrs
 Specialized topics integral to the field of gerontology. Gerontology faculty members will select contemporary topics that are unique and different from existing courses. Since topics change, a student may elect to take the course more than once.
Prereq: Department permission.

GERT 377/378/379 Special Topics. 1/2/3 hrs
 Specialized topics integral to the field of gerontology. Gerontology faculty members will select contemporary topics that are unique and different from existing courses. Since topics change, a student may elect to take the course more than once.
Prereq: Department permission.

GERT 404 Gerontology Interdisciplinary Seminar. 3 hrs
Prereq: Senior standing, completion of two courses in the gerontology minor or equivalent.

GERT 417 Work and Retirement. 2 hrs
 Issues on the historical aspect of retirement, the realities of retirement, the necessity of preparing individuals for this significant part of their lifespan, and work past the age of 65.
Prereq: Junior/senior or graduate student.

GERT 477/478/479 Special Topics. 1/2/3 hrs
 Content will change from semester to semester. An experimental course for subject matter not yet provided in other program offerings. Students may elect this course more than once as long as different topics are covered.
Prereq: Department permission.

GERT 488/489 Gerontology Practicum. 2/3 hrs
 Integration of knowledge and skills gained from other gerontology courses and life experiences. Insights on aging available from the humanities disciplines.
Prereq: Senior standing, completion of two courses in the gerontology minor or advising coordinator's permission.

GERT 497/498/499 Independent Study. 1/2/3 hrs
 Directed study in areas not provided in other course offerings or advanced study in areas of special interest to the student.
Prereq: Department permission.

COLLEGE OF TECHNOLOGY

THOMAS K. HARDEN, DEAN
VICTORIA L. GOTTS, ADMINISTRATIVE ASSOCIATE
150 SILL HALL
487-0354

DEPARTMENTS

BUSINESS AND TECHNOLOGY 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 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 Technology 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: prearchitecture and preengineering. The Industrial Technology department 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 Business and Technology Education department.

BUSINESS AND TECHNOLOGY EDUCATION

Earl C. Meyer
Interim Department Head
 14 Sill Hall
 487-4330

Professors: Alice W. Callum, Thomas K. Harden,
 Gerald L. Jennings, Lewis D. Kieft, Earl C. Meyer,
 H. Ann M. Remp, James Rokusek, Rosetta C. Wingo

Associate Professors: James L. Barnes, Thomas L.
 McDole, Herbert H. Wilson

Assistant Professors: John R. Cordani, Konnie
 Kustron, David W. Leopard, Darcelle D. White

The Business and Technology Education department offers the following degree programs:

Degree:

Bachelor of Business Education

Business education curriculum

Majors:

Business services and technology education for secondary education

Marketing education for secondary education

Degree:

Bachelor of Business Education

Technology education curriculum

Majors:

Industrial-vocational education for secondary education

Technology education for secondary education

Minor:

Technology education for elementary and special education-elementary

Degree:

Bachelor of Science

Office technology curriculum

Majors:

Administrative management

Legal assistant

Office automation

Minor:

Office technology

Advising Coordinators:

Administrative management: Darcelle D. White

Business services and technology education: Ann M. Remp

Legal assistants: Alice W. Callum, Konnie G. Kustron

Marketing education: Earl C. Meyer

Office automation: John R. Cordani

Office technology minor: John R. Cordani

Technology education/industrial-vocational education:
 Gerald L. Jennings

Technology education minor: Lewis D. Kieft

Graduate study leads to the Master of Business Education degree and the Master of Arts degree in Industrial Education. For a description of the graduate program and courses, consult the Graduate Catalog.

ACADEMIC MAJORS

OFFICE TECHNOLOGY CURRICULUM

The Bachelor of Science degree is designed for individuals preparing for administrative management, legal assistant (paralegal profession), and office automation careers. Individuals who complete this professional curriculum should find many career opportunities open to them.

Students should follow the basic studies guidelines in the catalog under which they entered the University. Students following the new basic studies must include a course in cross cultural or international studies within the basic studies. Please follow general guidelines except for specific requirements as noted below.

Students without appropriate background or prerequisites which are identified for courses in the majors are responsible to take those prerequisites. Transfer students should see the program adviser in their major to determine where transfer credit will be used on the major.

OFFICE TECHNOLOGY/ADMINISTRATIVE MANAGEMENT MAJOR

The administrative management major focuses on the technical and management skills, concepts, and principles needed to assume responsibility for executive office administration. Administrative managers are vital members of executive teams and assume supervisory, organizational, and communicative roles in the coordination of administrative services.

Sem hours

Symbolics and communication	17-18
Requirements 1 and 2 (page 41)	5-6
ENGL 324 Principles of Technical Communication ...	3
MATH 118 Mathematical Analysis for Social Sciences I	3
MATH 119 Mathematical Analysis for Social Sciences II	3
BEDU 201 Microcomputers for Business Applications	3

Science and technology	9-10
Requirements 1 and 3 (page 43)	6-7
PSY 101 General Psychology	3
Social science	12
Requirements 1 and 2 (page 44)	6
ECON 201 Principles of Economics I	3
ECON 202 Principles of Economics II	3
Arts and humanities	12
Requirements 1, 2, 3, and 4 (page 45)	12
Physical education and health	2
Physical education activity courses	2

ADMINISTRATIVE MANAGEMENT MAJOR

Administrative management major	50
Administrative and information management concepts	21
BEDU 395 Office Administration	3
BEDU 396 Records Administration	3
BEDU 495 Office Automation	3
BEDU 496 Records Administration Using Database	3
MGMT 384 Human Resource Management	3
MGMT 485 Human Resource Development	3
<i>Restricted elective</i>	3
Choose one course: MKTG 374 Business to Business Marketing or from additional restricted elective list.	
Business foundations	21
BEDU 100 Contemporary Business	3
ACC 240 Principles of Accounting I	3
ACC 241 Principles of Accounting II	3
FIN 350 Principles of Finance	3
LAW 293 Legal Environment of Business	3
MKTG 360 Principles of Marketing	3
DS 265 Business Statistics I	3
Information processing	8
BEDU 123 Word Processing/Keyboarding Applications	2
BEDU 210 Concepts of Word/Information Processing	3
BEDU 224 Computer-based Business Mathematics	3

OFFICE TECHNOLOGY/LEGAL ASSISTANT (PARALEGAL) MAJOR

The legal assistant major focuses on the skills necessary for an individual to assist the attorney, under the supervision and direction of the attorney, and with the understanding that the practice of law by lay persons is strictly prohibited. Skills include proficiency in

legal research and analysis, drafting legal instruments and pleadings, interviewing clients and witnesses, doing discovery, preparing for trial, and using computer-assisted research tools. Employment opportunities are excellent in law firms, corporations, banks, human resources, hospitals, state and federal government, and court systems. This major offers professional training and lays a foundation for a career in the legal field. It also qualifies as a pre-law major. This program is accredited by the American Bar Association.

For students who have earned a prior degree, the Legal Assistant major can be pursued through a second bachelor's degree.

	Sem hours
Symbolics and communication	14-15
Requirements 1, 2, and 4 (page 41)	8-9
BEDU 201 Microcomputers for Business Applications	3
ENGL 324 Principles of Technical Communication ...	3
Science and technology	9-10
See University guidelines (page 43)	
Social science	12
Requirements 1 and 2 (page 44)	6
ECON 201 Principles of Economics I	3
ECON 202 Principles of Economics II	3
Arts and humanities	12
Requirements 1, 2, 3, and 4 (page 45)	
Physical education and health	2
Physical education activity courses	2
Legal assistant (paralegal) major	59
1. Required courses	33
BEDU 211 Introduction to Paralegalism and Legal Terminology	3
BEDU 220 Word/Information Processing Operations	3
BEDU 304 Legal Writing, Research, and Analysis I ...	3
BEDU 305 Advanced Legal Writing, Research, and Analysis II	3
BEDU 308 Personal Injury Law and Litigation	3
BEDU 311 Probate, Estates, and Wills	3
BEDU 313 Family Law	3
CTAC 357 Interviewing as Communication	3
BEDU 411 Civil Litigation, Investigation, and Procedure	3
BEDU 412 Court Rules, Forms, and Legal Drafting	3
BEDU 416 Legal Assistant Internship (Paralegal) ..	3
2. Restricted electives (minimum)	9
BEDU 414 Advanced Probate, Estates, and Trusts ...	3

BEDU 415 Bankruptcy Law	3
BEDU 497/498/499 Independent Study	1-3
PLSC 301 The American Legal System	3
PLSC 341 International Law	3
PLSC 456 Criminal Law I	3
RES 210 Real Estate Principles and Practices	3
LAW 293 Legal Environment of Business	3
LAW 393 Law of Business Enterprises	3
LAW 403 Employment Law	3
Business and information processing core: (all required)	17
BEDU 100 Contemporary Business	3
BEDU 123 Word Processing/Keyboarding Applications	2
BEDU 224 Computer-based Business Mathematics	3
ACC 240 Principles of Accounting I	3
BEDU 395 Office Administration	3
BEDU 396 Records Administration	3

OFFICE TECHNOLOGY/OFFICE AUTOMATION MAJOR

The major in office automation was created to meet the changing demands of the automated office. The program is designed to prepare individuals for positions in local area network administration, microcomputer and office systems administration, client liaison and training, customer support, and information center positions.

Sem hours

Symbolics and communication	17-18
Requirements 1 and 2 (page 41)	5-6
ENGL 324 Principles of Technical Communication ...	3
MATH 118 Mathematical Analysis for Social Sciences I	3
MATH 119 Mathematical Analysis for Social Sciences II	3
BEDU 201 Microcomputers for Business Applications	3
Science and technology	9-10
See University guidelines (page 43)	
Social science	12
Requirements 1 and 2 (page 44)	6
ECON 201 Principles of Economics I	3
ECON 202 Principles of Economics II	3
Arts and humanities	8-12
Requirements 1, 2, 3, and 4 (page 45)	
Physical education and health	2
Physical education activity courses	2

Office automation major	56
Systems and automation concepts	24
BEDU 310 Word/Information Processing Administration	3
BEDU 395 Office Administration	3
BEDU 396 Records Administration	3
BEDU 422 Office Systems	3
BEDU 495 Office Automation	3
BEDU 496 Records Administration Using Database	3
BEDU 387 Cooperative Education	3
<i>Choice of one:</i>	<i>3</i>
BEDU 487 Cooperative Education, INDT 305 Communication Transmission Systems, INDT 436 Electronic Publishing Technology	
Business foundations	21
BEDU 100 Contemporary Business	3
ACC 240 Principles of Accounting I	3
ACC 241 Principles of Accounting II	3
ACC 342 Managerial Cost Accounting	3
LAW 293 Legal Environment of Business	3
MKTG 360 Principles of Marketing	3
DS 265 Business Statistics I	3
Information processing	11
BEDU 123 Word Processing/Keyboarding Applications	2
BEDU 210 Concepts of Word/Information Processing	3
BEDU 220 Word/Information Processing Operations	3
BEDU 224 Computer-based Business Mathematics	3
Office Technology Restricted Electives	
Students should select restricted electives in consultation with their office technology program advisers.	
BEDU 122 Keyboarding for Office Technology (2)	
BEDU 205 Women in Business (3)	
BEDU 210 Concepts of Word/Information Processing (3)	
BEDU 211 Introduction to Paralegalism and Legal Terminology (3)	
BEDU 220 Word/Information Processing Operations (3)	
BEDU 222 Transcription Applications and Technology (3)	
BEDU 225 Notetaking Skills for Professionals (2)	
BEDU 310 Word/Information Processing Administration (3)	
BEDU 325 Advanced Notetaking and	

- Transcription for Professionals (2)
- BEDU 344 Administration of Computer Systems (3)
- BEDU 387 Cooperative Education (3)
- BEDU 412 Court Rules, Forms, and Legal Drafting (3)
- BEDU 422 Office Systems (3)
- BEDU 495 Office Automation (3)
- BEDU 496 Records Administration Using Database (3)
- BEDU 487 Cooperative Education (3)
- BEDU 497/498/499 Independent Study (1/2/3)

ACADEMIC MINOR

OFFICE TECHNOLOGY

	Sem hours
Office technology minor	21
Required courses	12
BEDU 201 Microcomputers for Business Applications	3
*BEDU 220 Word/Information Processing Operations	3
BEDU 224 Computer-based Business Mathematics	3
BEDU 395 Office Administration	3
*Students must take BEDU 123 Word Processing/Keyboarding Applications if they do not have appropriate background.	
Choose one option	9
<i>Option I Notetaking:</i>	
BEDU 225 Notetaking Skills for Professionals	2
BEDU 325 Advanced Notetaking and Transcription for Professionals	2
BEDU 222 Transcription Applications and Technology	3
Restricted elective	2
<i>Option II Information Processing:</i>	
BEDU 210 Concepts of Word/Information Processing	3
BEDU 222 Transcription Applications and Technology	3
BEDU 396 Records Administration	3

TEACHING MAJORS

BUSINESS EDUCATION CURRICULUM

The Bachelor of Business Education degree is designed for individuals preparing for careers as junior high school business teachers, high school teachers

of marketing or business services and technology education, or other positions requiring teacher certification. Students completing the professional program will find teaching and nonteaching careers in business open to them.

BUSINESS SERVICES AND TECHNOLOGY EDUCATION

SECONDARY TEACHER CERTIFICATION

The Business Services and Technology Education major leads to a Michigan Department of Education Secondary Provisional Certificate and, upon meeting the requirements according to the current Michigan State Plan, a vocational endorsement. The program prepares prospective teachers in the areas of information processing and management, administrative services, accounting and computing, and basic business such as economics, consumer economics, business law, business management, computer literacy, and introduction to business.

This major can be completed only in conjunction with the Bachelor of Business Education curriculum. Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in business education, certification code "GX," and, with appropriate work experience, certification code "VB." The certification test covering this field is #32, "Business Education."

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
- I-B-2.** *Basic Studies requirement. See inside back cover*
- I-B-3.** *Basic Studies requirement. See inside back cover*
- I-B-4.** MATH 118 Mathematical Analysis for Social Sciences I (3)
- I-B-5.** BEDU 201 Microcomputers for Business Applications (3)^a
- II-B-1.** *Basic Studies requirement. See inside back cover*
- II-B-2.** PSY 101 General Psychology (3)^b
- II-B-3.** *Basic Studies requirement. See inside back cover*
- Any other course listed in group II-B-1 above
- III-B-1.** *Basic Studies requirement. See inside back cover*
- III-B-2.** *Basic Studies requirement. See inside back cover* (Students are advised to select a course which also satisfies the multicultural requirement of Basic Studies)
- III-B-3.** ECON 201 Principles of Economics I (3)
- III-B-4.** ECON 202 Principles of Economics II (3)

- IV-B-1. *Basic Studies requirement. See inside back cover*
 IV-B-2. *Basic Studies requirement. See inside back cover*
 IV-B-3. *Basic Studies requirement. See inside back cover*
 IV-B-4. *Basic Studies requirement. See inside back cover*
Physical education, military science, or equivalent (2)
Credit hours in Basic Studies:..... 49

Teaching Major

See note "a" above for courses applicable to both Basic Studies and the major.

- BEDU 100 Contemporary Business (3)
 BEDU 123 Word Processing/Keyboarding Applications (2)
 BEDU 210 Concepts of Word/Information Processing (3)
 BEDU 220 Word/Information Processing Operations (3)
 BEDU 222 Transcription Applications and Technology (3)
 BEDU 224 Computer-based Business Mathematics (3)
 ACC 240 Principles of Accounting I (3)
 ACC 241 Principles of Accounting II (3)
 ACC 244 Personal Tax Accounting (2)
 Accounting concentration courses (6)
 BEDU 250 Personal Finance (3)
 LAW 293 Legal Environment of Business (3)
 BEDU 310 Word/Information Processing Administration (3)
 MKTG 360 Principles of Marketing (3)
 BEDU 395 Office Administration (3)
 BEDU 396 Records Administration (3)
 BEDU 496 Records Administration Using Database (3)
Subtotal, Teaching Major: 52

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
 BEDU 200 Principles of Marketing and Business Education (3)
 SPGN 300 Exceptional Children in the Regular Classroom (1)
 EDPS 322 Human Development and Learning (4)

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

- RDNG 311 Teaching Reading in the Secondary School (3)
 SOFD 328 Schools in a Multicultural Society (3)
 EDPS 340 Introduction to Assessment and

- Evaluation (3)
 BEDU 364 Methods of Teaching General Business Subjects (2)
 BEDU 365 Methods of Teaching Office Education (2)
 EDUC 492 Student Teaching (12)
Credit hours in Professional Studies:..... 33

Total credit hours required:..... 134

**Prerequisite for another course in program.*

**At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk (*).*

MARKETING EDUCATION

SECONDARY TEACHER CERTIFICATION

The Marketing Education major leads to a Michigan Department of Education Secondary Provisional Certificate and vocational endorsement qualifying the prospective teacher in such areas as sales, retailing, marketing, and advertising.

This major can be completed only in conjunction with the Bachelor of Business Education curriculum. Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in business education, certification code "GX," and, with appropriate work experience, certification code "VB." The certification test covering this field is #36, "Marketing (Distributive Education)."

Basic Studies

- I-B-1. ENGL 121 English Composition (3)
 I-B-2. *Basic Studies requirement. See inside back cover*
 I-B-3. *Basic Studies requirement. See inside back cover*
 I-B-4. MATH 118 Mathematical Analysis for Social Sciences I (3)
 I-B-5. BEDU 201 Microcomputers for Business Applications (3)
 II-B-1. *Basic Studies requirement. See inside back cover*
 II-B-2. PSY 101 General Psychology (3)^b
 II-B-3. *Basic Studies requirement. See inside back cover*
 III-B-1. *Basic Studies requirement. See inside back cover*
 III-B-2. *Basic Studies requirement. See inside back cover*
 (Students are advised to select a course which also satisfies the multicultural requirement of Basic Studies)
 III-B-3. ECON 201 Principles of Economics I (3)

III-B-4. ECON 202 Principles of Economics II (3)

IV-B-1. *Basic Studies requirement. See inside back cover*

IV-B-2. **Cross-cultural or international studies**

*FLAN 215 The Culture of the Latino Groups in the United States (3)

*LITR 204 Native American Literature (3)

*LITR 260 African American Literature (3)

IV-B-3. *Basic Studies requirement. See inside back cover*

IV-B-4. *Basic Studies requirement. See inside back cover*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:..... 49

Teaching Major

ACC 240 Principles of Accounting I (3)

ACC 241 Principles of Accounting II (3)

BEDU 100 Contemporary Business (3)

LAW 293 Legal Environment of Business (3)

MGMT 386 Organizational Behavior and Theory (3)

MKTG 360 Principles of Marketing (3)

MKTG 261 Contemporary Selling (3)

MKTG 363 Retailing (3)

MKTG 365 Buyer Behavior (3)

Two of:

LAW 393 Law of Business Enterprises (3)

MGMT 384 Human Resource Management (3)

MGMT 388 Introduction to Entrepreneurship (3)

MGMT 485 Human Resource Development (3)

MKTG 369 Advertising (3)

MKTG 374 Business to Business Marketing (3)

MKTG 461 Sales Management (3)

Eleven hours from:

BEDU 122 Keyboarding for Office Technology (2)

BEDU 123 Word Processing/Keyboarding Applications (2)

BEDU 224 Computer-based Business Mathematics (3)

BEDU 250 Personal Finance (3)

BEDU 387 Cooperative Education in Business Education (3)

BEDU 487 Cooperative Education in Business Education (3)

BEDU 497/498/499 Independent Study (1/2/3)

FM 145 Introduction to Merchandising (3)

FM 235 Textiles for Consumers (3)

FM 255 Apparel Analysis (3)

FM 439 Fashion Markets (3)

INED 452 Principles of Vocational-Technical Education (3)

4000 clock hours (or equivalent) of recent work

experience in the field of marketing (0)

Subtotal, Major: 44

Professional Studies

100 clock hours of approved prestudent teaching field experiences (0)

BEDU 200 Principles of Marketing and Business Education (3)

SPGN 300 Exceptional Children in the Regular Classroom (1)

EDPS 322 Human Development and Learning (4)

*BEDU 368 Management of Marketing Education Programs (2)

*BEDU 461 Projects and Simulations in Marketing Education (2)

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

RDNG 311 Teaching Reading in the Secondary School (3)

SOFD 328 Schools in a Multicultural Society (3)

EDPS 340 Introduction to Assessment and Evaluation (3)

BEDU 364 Methods of Teaching General Business Subjects (2)

BEDU 366 Methods of Teaching Marketing Education (2)

*BEDU 367 Curriculum in Marketing Education (2)

EDUC 492 Student Teaching (12)

Credit hours in Professional Studies:..... 39

Total credit hours required:..... 132

**Satisfy 6 additional hours in major to bring major requirements to 50 hours.*

^bPrerequisite for another course in program.

**At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk (*).*

TECHNOLOGY EDUCATION CURRICULUM

The Technology Education curriculum prepares teachers of technology education for the middle and senior high school, and teachers of industrial-vocational subjects for the senior high school and community college. It offers a broad-based description of modern industry and technology, and the opportunity to acquire specialized competencies in a number of technical areas.

INDUSTRIAL-VOCATIONAL EDUCATION**SECONDARY TEACHER CERTIFICATION**

The Industrial-Vocational major is designed to prepare teachers of industrial-vocational subjects for senior high school and community college vocational education programs. Graduates who complete this major and have a minimum of two years work experience in a certifiable occupational area will qualify for the Temporary Vocational Authorization to teach in a specific occupational area. Options for cooperative work experience studies are available to the student as partial credit toward the occupational requirement.

This major must be completed in conjunction with the Industrial Education curriculum. 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 the Occupational Education certificate.

This major provides favorable opportunities for community college transfer students who have completed a technical major at the community college and who wish to teach in a specific occupational subject area in the senior high school or community college. Individuals currently teaching in an industrial-vocational subject area under the Annual Vocational Authorization would also find this major to be a desirable option.

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in vocational trades, certification code "VT." The certification test covering this field is an occupational area test.

Basic Studies**I-B-1.** ENGL 121 English Composition (3)**I-B-2.** *Basic Studies requirement. See inside back cover***I-B-3.** *One of:*

ENGL 324 Principles of Technical Communication (3)

ENGL 326 Research Writing (3)

I-B-4. *One of:*

MATH 107 Plane Trigonometry

MATH 112 Topics in Precalculus Mathematics (4)

MATH 118 Mathematical Analysis for Social Sciences I (3)

MATH 120 Calculus I (4)

I-B-5. *One of:*

BEDU 201 Microcomputers for Business Applications (3)

COSC 136 Computers for the Nonspecialist (3)

COSC 137 Introduction to FORTRAN Programming (3)

INDT 201 Microcomputer Applications in Technology (3)

INTE 105 Computer Applications for Industry (3)

II-B-1. *One of:*

CHEM 119 Fundamentals of Chemistry (4)

CHEM 121 General Chemistry I and CHEM 122 General Chemistry I Laboratory (4)

II-B-2. *Basic Studies requirement. See inside back cover***II-B-3.** *One of:*

PHY 221 Mechanics, Sound, and Heat (4)

PHY 223 Mechanics, Sound, and Heat (5)

III-B-1. *Basic Studies requirement. See inside back cover, or:*

PLSC 202 State and Local Government (3)

III-B-2. *Basic Studies requirement. See inside back cover***III-B-3 and III-B-4.** *Either option:*

a. Principle courses

ECON 201-202 Principles of Economics I-II (6)

b. Other economics courses

ECON 200 The American Economy (3)

ECON 300 Contemporary Economics (3)

IV-B-1. *Two of:*

LITR 100 The Reading of Literature (3)

LITR 101 The Reading of Literature: Fiction (3)

LITR 102 The Reading of Literature: Poetry (3)

LITR 103 The Reading of Literature: Drama (3)

LITR 150 Humanity and Technology (3)

IV-B-2. *One of:*

*FLAN 215 The Culture of the Latino Groups in the United States (3)

*LITR 204 Native American Literature (3)

*LITR 260 African American Literature (3)

*PHIL 226 Philosophy of Women (3)

*FA 222 African and African American Art (3)

*CTAR 151 African American Theatre: An Introduction (3)

IV-B-3. *One of:*

PHIL 100 Introduction to Philosophy (3)

PHIL 130 Introduction to Logic (3)

PHIL 150 Humanity and Technology (3)

IV-B-4. FA 122 Two-Dimensional Design (3)**Physical education, military science, or equivalent** (2)*Credit hours in Basic Studies:..... 54*

Teaching Major

- INDT 150 Understanding Technology (3)
 INED 246 Safety in Technology and Industrial-Vocational Education (2)
 INED 452 Principles of Vocational-Technical Education (3)

Concentration (36)

The occupational specialization in which the student will seek vocational authorization. Approval may be sought for community college or other technical school course work as transfer credit if it properly represents a certifiable occupational area. Work experience also may be validated and credit awarded toward the area of concentration by successfully passing an occupational competency examination.

Subtotal, Major and minor: 44

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
 *INED 250 Foundations of Technology and Industrial-Vocational Education (3)
 SPGN 251 Education of Exceptional Children (3)
 EDPS 322 Human Development and Learning (4)

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

- RDNG 311 Teaching Reading in the Secondary School (3)
 SOFD 328 Schools in a Multicultural Society (3)
 EDPS 340 Introduction to Assessment and Evaluation (3)
 *INED 350 Curriculum in Technology and Industrial-Vocational Education (3)
 INED 460 Practicum in Technology and Industrial-Vocational Education (2)
 INED 461 The Teaching of Technology and Industrial-Vocational Education (2)
 EDUC 492 Student Teaching (12)

Credit hours in Professional Studies: 38

Total credit hours required: 136

*Satisfy 6 additional hours in major to bring major requirements to 50 hours.

At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk ().

TECHNOLOGY EDUCATION**SECONDARY TEACHER CERTIFICATION**

The technology education major is designed to prepare teachers of technology education for grades K-12. All graduates with this major qualify for a Michigan Department of Education Secondary Provisional Certificate with an endorsement in industrial arts. Graduates may qualify for vocational endorsement (Temporary Vocational Authorization) by completing two years of occupational experience in employment related to the area of study. Options for cooperative work experience are available to students as partial credit toward that occupational requirement.

This major must be completed in conjunction with the Technology Education curriculum. Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in industrial arts, certification code "IX." The certification test covering this field is #38, "Industrial Arts."

Basic Studies

- I-B-1.** ENGL 121 English Composition (3)
I-B-2. *Basic Studies requirement. See inside back cover*
I-B-3. *One of:*
 ENGL 324 Principles of Technical Communication (3)
 ENGL 326 Research Writing (3)
I-B-4. *One of:*
 MATH 107 Plane Trigonometry
 MATH 112 Topics in Precalculus Mathematics (4)
 MATH 118 Mathematical Analysis for Social Sciences I (3)
 MATH 120 Calculus I (4)
I-B-5. *One of:*
 BEDU 201 Microcomputers for Business Applications (3)
 COSC 136 Computers for the Nonspecialist (3)
 COSC 137 Introduction to FORTRAN Programming (3)
 INDT 201 Microcomputer Applications in Technology (3)
 INTE 105 Computer Applications for Industry (3)
II-B-1. *One of:*
 CHEM 119 Fundamentals of Chemistry (4)
 CHEM 121 General Chemistry I and CHEM 122 General Chemistry I Laboratory (4)
II-B-2. *Basic Studies requirement. See inside back cover*

II-B-3. One of:

- PHY 221 Mechanics, Sound, and Heat (4)
- PHY 223 Mechanics, Sound, and Heat (5)

III-B-1. Basic Studies requirement. See inside back cover, or:

- PLSC 202 State and Local Government (3)

III-B-2. Basic Studies requirement. See inside back cover**III-B-3 and III-B-4. Either option:****a. Principles courses**

- ECON 201 Principles of Economics I (3)
- ECON 202 Principles of Economics II (3)

b. Other economics courses

- ECON 200 The American Economy (3)
- ECON 300 Contemporary Economics (3)

IV-B-1. Two of:

- LITR 100 The Reading of Literature (3)
- LITR 101 The Reading of Literature: Fiction (3)
- LITR 102 The Reading of Literature: Poetry (3)
- LITR 103 The Reading of Literature: Drama (3)
- LITR 150 Humanity and Technology (3)

IV-B-2. One of:

- *FLAN 215 The Culture of the Latino Groups in the United States (3)
- *LITR 204 Native American Literature (3)
- *LITR 260 African American Literature (3)
- *PHIL 226 Philosophy of Women (3)
- *FA 222 African and African American Art (3)
- *CTAR 151 African American Theatre: An Introduction (3)

IV-B-3. One of:

- PHIL 100 Introduction to Philosophy (3)
- PHIL 130 Introduction to Logic (3)
- PHIL 150 Humanity and Technology (3)

IV-B-4. FA 122 Two-Dimensional Design (3)**Physical education, military science, or equivalent (2)***Credit hours in Basic Studies:..... 54***Teaching Major**

- INED 103 Structures and Design in Technology (3)
- INED 106 Processing Technology (3)
- INED 114 Information and Control Technology (3)
- INED 118 Energy Technology (3)
- INDT 121 Graphic Communication (3)
- INTE 123 Manufacturing Processes and Methods I (3)
- CNST 125 Introduction to Construction (2)
- INTE 200 Industrial Electricity and Controls I (3)
- INED 246 Safety in Technology and Industrial-Vocational Education (2)

INED 450 Solving Technological Problems (3)

Sixteen hours from one of the following concentrations determined in consultation with the program adviser:

Construction (16 hours from among:)

- CNST 201 Construction Systems (3)
- CNST 206 Surveying (3)
- CNST 229 Analysis of Commercial Prints (3)
- CNST 303 Electrical, Mechanical, and Equipment Systems (3)
- INED 387 Cooperative Education (3)
- CNST 402 Construction Materials (3)
- INED 487 Cooperative Education (3)

Manufacturing (16 hours from among:)

- INTE 103 Introduction to Automation (3)
- INTE 124 Manufacturing Processes and Methods II (3)
- INTE 202 Plastics (3)
- INTE 215 Machine Tool Metalworking (3)
- INTE 218 Industrial Electricity and Controls II (3)
- INTE 223 Engineering Graphics II (3)
- INTE 231 Industrial Computer Graphics (3)
- INTE 251 Material Analysis and Testing (3)
- INTE 306 Plastic Processing (3)
- INTE 316 Manufacturing Tooling (3)
- INTE 318 Fluid Power (3)
- INTE 361 Computer Numerical Control (3)
- INED 387 Cooperative Education (3)
- INTE 417 Industrial Robotics (3)
- INTE 425 Advanced Manufacturing Methods (3)
- INED 487 Cooperative Education (3)

*Graphic Communications (16 hours from among:)**Drafting Option*

- INTE 101 Introduction to Industrial Drawing (3)
- INTE 122 Engineering Graphics I (3)
- CNST 206 Surveying (3)
- INTE 223 Engineering Graphics II (3)
- CNST 228 Construction Drawing (3)
- INDT 231 Introduction to Computer Graphic Systems (3)
- INTE 231 Industrial Computer Graphics (3)
- INTE 324 Industrial Drawing (3)
- INED 387 Cooperative Education (3)
- INTE 431 Interactive Industrial Computer Graphics (3)
- INTE 432 3-D Computer-Aided Design (3)
- INTE 433 Advanced Computer-Aided Design (3)
- INED 487 Cooperative Education (3)

Graphic Arts Option

- INDT 104 Introduction to Communication Technology (2)
- INDT 204 Photographic Communication (3)
- INDT 205 Photo-Technology (2)
- INDT 207 Photographic Reproduction (3)
- INDT 304 Advanced Photographic Communication (3)
- INDT 305 Communication Transmission Systems (3)
- INDT 318 Graphic Arts Workshop (3)
- INED 387 Cooperative Education (3)
- INDT 404 Photo Communication Workshop (3)
- INDT 409 Emerging Technologies in Storage and Retrieval (3)
- INDT 421 Photographic Typesetting (3)
- INDT 425 Communication Technology and Social Change (3)
- INDT 436 Electronic Publishing Technology (3)
- INED 487 Cooperative Education (3)

Power (16 hours from among:)

Electronics option

- INTE 218 Industrial Electricity and Controls II (3)
- INTE 314 Integrated Circuits: Digital (3)
- INED 387 Cooperative Education (3)
- INTE 414 Integrated Circuits: Linear (3)
- INTE 415 Communication Circuits (3)
- INTE 434 Microcomputer Circuits (3)
- INED 487 Cooperative Education (3)
- Energy Systems option
- INTE 219 Techniques of Energy Control (3)
- INTE 318 Fluid Power (3)
- INTE 325 Applied Mechanics, Kinematics, and Design (3)
- INED 387 Cooperative Education (3)
- INTE 417 Industrial Robotics (3)
- INED 487 Cooperative Education (3)

Subtotal, Major and related areas: 44

Professional Studies

- 100 clock hours of approved prestudent teaching field experiences (0)
- *INED 250 Foundations of Technology and Industrial-Vocational Education (3)
- SPGN 251 Education of Exceptional Children (3)
- EDPS 322 Human Development and Learning (4)

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

- RDNG 311 Teaching Reading in the Secondary School (3)

- SOFD 328 Schools in a Multicultural Society (3)
- EDPS 340 Introduction to Assessment and Evaluation (3)
- *INED 350 Curriculum in Technology and Industrial-Vocational Education (3)
- INED 460 Practicum in Technology and Industrial-Vocational Education (2)
- INED 461 The Teaching of Technology and Industrial-Vocational Education (2)
- EDUC 492 Student Teaching (12)

Credit hours in Professional Studies:..... 36

Total credit hours required:..... 134

**Satisfy 6 additional hours in major to bring major requirements to 50 hours.*

**At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk (*).*

TEACHING MINOR TECHNOLOGY EDUCATION

ELEMENTARY AND SPECIAL EDUCATION- ELEMENTARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in industrial arts, certification code "IX." The certification test covering this field is #38, "Industrial Arts."

One of:

- *INED 253 Technology Education for Children (3) and INED 354 Experiences in Technology for Children (2)
- *INED 252 Prevocational/Vocational Special Needs Program (4)

11-12 credits from:

- INED 103 Structures and Design in Technology (3)
- INED 106 Processing Technology (3)
- INED 114 Information and Control Technology (3)
- INED 118 Energy Technology (3)
- INED 152 Arts and Crafts (3)
- INED 250 Foundations of Technology and Industrial-Vocational Education (3)
- INED 355 Seminar in Technology for the Elementary School (2)

Additional credits from:

- INDT 121 Graphic Communication (3)
- INDT 204 Photographic Communication (3)

INED 350 Curriculum in Technology and Industrial-Vocational Education (3)

INED 452 Principles of Vocational-Technical Education (3)

INED 497 Independent Study (1)

Hours from the requirements above must total at least 24. 21 hours for elementary program; 20 hours for special education programs.

**Satisfied in professional studies in elementary program.*

**Satisfied in professional studies in special education programs.*

BUSINESS EDUCATION COURSES

BEDU 100 Contemporary Business. 3 hrs

The American business enterprise and international business. Contemporary problems and future challenges. Career decision-making in terms of business careers. Open to all students except upper-division business majors.

BEDU 119 Keyboarding for Computers. 2 hrs

Basic touch keyboarding skills for persons who plan to work with modern information processors, all of which utilize a basic alphabet/figure keyboard and/or a 10-key numeric pad. Lab fee required. For nonmajors.

BEDU 122 Keyboarding for Office Technology. 2 hrs

Basic techniques and manipulative skills for efficient machine operation. Speed and control emphasized. Introduction to applications through centering, tabulating, and structuring keyboarded material for various purposes. Lab fee required.

BEDU 123 Word Processing/Keyboarding Applications. 2 hrs

Continued skill development. Application of skill to keyboarding special communication forms, letters, manuscripts and tabulated reports. Improved form and punctuation. Lab fee required.

Prereq: BEDU 119 or BEDU 122 or one year of high school word processing or keyboarding. No credit is given to students who have received credit for two years of high school word processing.

BEDU 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

BEDU 200 Principles of Marketing and Office Education. 3 hrs

An introduction to marketing and office education. The scope and importance of vocational education with emphasis on marketing and office education. Prestudent teaching experience will be initiated in conjunction with this course.

BEDU 201 Microcomputers for Business Applications. 3 hrs

Computer hardware and software for office use including both mainframe and microcomputer systems. "Hands-on" experience limited to microcomputers. Basic skills in using prepared software and developing programs for office applications using Microsoft BASIC. Requires no prior knowledge of computers or programming. Lab fee required.

BEDU 205 Women in Business. 3 hrs

Social and business conditions that support the entry of women to executive positions in business; career opportunities at the professional and executive levels of business.

BEDU 210 Concepts of Word/Information Processing. 3 hrs

The concepts and functions of word processing equipment, procedures, and career opportunities. Applications and the organization of word processing services; the extension of word processing through the use of peripherals.

BEDU 211 Introduction to Paralegalism and Legal Terminology. 3 hrs

An overview of the nature of the legal assistant (paralegal) program, with a look at the roles, opportunities, responsibilities and problems encountered. The student is introduced to areas of the law in which the legal assistant may work. Ethical considerations are addressed and legal terminology will be introduced and emphasized. Must be completed in the first 12 hours of the major.

BEDU 220 Word/Information Processing Operations. 3 hrs

Advanced document applications including merge and list processing, graphics, math operations, and database integration. Keyboarding speed and accuracy is also included, as well as refinement of proofreading and editing skills. Lab fee required.

Prereq: BEDU 123 or equivalent and BEDU 201.

BEDU 222 Transcription Applications and Technology. 3 hrs

Using automated office equipment to produce mailable office communications from dictated and other input. Building language arts, keyboarding and word processing skills into transcription skills required for word processing employment. Lab fee required.

Prereq: BEDU 220.

BEDU 224 Computer-based Business Mathematics. 3 hrs

Application of computer-based tools and procedures to the solution of mathematical problems encountered in the business office. Lab fee required.

Prereq: BEDU 201 or department permission.

BEDU 225 Notetaking Skills for Professionals. 2 hrs

Designed to provide skills for successful notetaking for a variety of academic and professional activities, including library and other text-based research; and meetings, interviews, and other audio/aural formats. Develops skill in rapid writing and reading systems along with related study, listening, and basic transcription skills.

Prereq: BEDU 123 or equivalent.

BEDU 250 Personal Finance. 3 hrs

The management of financial resources to satisfy personal or family goals. Budgeting, consumer credit, investments, insurance, real estate, wills and trusts and income taxes. Students learn to make decisions within the context of a realistic consumer-oriented environment. Open to all students.

BEDU 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

BEDU 304 Legal Writing, Research, and Analysis I. 3 hrs

This course is designed to develop basic skills in analyzing legal problems, researching those problems, and searching for legal authority. Students are also introduced to primary and secondary legal resources. Emphasis is given to preparing and writing legal memoranda. Extensive use of library law materials is required.

Prereq: ENGL 121.

BEDU 305 Advanced Legal Writing, Research, and Analysis II. 3 hrs

This course will build upon skills acquired in BEDU 304. Students will be introduced to computerized research sources with a special emphasis on LEXIS and Westlaw. Discussion will also focus on the state appellate process. Students will learn how to prepare an appellate brief and do on-line legal research to complete their brief. Special emphasis will be placed on students improving their legal writing techniques. Lab fee required.

Prereq: BEDU 304, and BEDU 201 or equivalent.

BEDU 308 Personal Injury Law and Litigation. 3 hrs

A study of the law and litigation techniques in personal injury cases. Students will become acquainted with such torts as assault, battery, false imprisonment, defamation and strict product liability. Study will be directed particularly to the fields of negligence and medical malpractice.

BEDU 310 Word/Information Processing Administration. 3 hrs

Techniques to utilize staff and equipment most effectively, record keeping, work flow, evaluating personnel, establishing policies and standards of operation as applied to word processing.

Prereq: BEDU 201, BEDU 210, BEDU 220.

BEDU 311 Probate, Estates, and Wills. 3 hrs

The student will study the Probate Code and probate procedures, descendants' estates, death and inheritance taxes, and other related problems. Special attention will be given to wills and how wills are drafted.

BEDU 313 Family Law. 3 hrs

A basic introduction to the areas of domestic law, including such subjects as divorce, adoption, abortion, parental rights, children's rights, child abuse, neglect and guardianship. The course will be directed toward the legal assistant's role in preparing course documents and other tasks of the paralegal in this area.

BEDU 325 Advanced Notetaking and Transcription for Professionals. 2 hrs

A continuation of BEDU 225 which develops higher speeds in notetaking and transcription skills for employment and professional use. Continues the development of related study and listening skills.

Prereq: BEDU 123 and BEDU 225, or equivalent.

BEDU 344 Administration of Computer Systems. 3 hrs

To provide an introduction to the principles and practices required to operate a computer operating system in the educational or small/medium institution environment. The course will deal with both the operating system in micro- and minicomputer forms as a program and as a complete system. The course will emphasize the daily tasks a small/medium system administrator must accomplish.

Prereq: BEDU 201, BEDU 224, BEDU 396, ENGL 324.

BEDU 364 Methods of Teaching General Business

Subjects. 2 hrs

Methods in teaching general business, business law and keyboarding with application to classroom situations. Objectives, lesson planning, techniques of teaching and sources of materials.

Prereq: RDNG 311 and EDPS 322. A 2.5 GPA in all business education subjects taken at EMU is required before enrollment, with no academic probation. To be taken semester before student teaching. Admission to the teacher education program.

BEDU 365 Methods of Teaching Office Education. 2 hrs

Methods of teaching shorthand, office block, bookkeeping, accounting, keyboarding, word processing and cooperative education classes. Objectives, lesson planning, techniques of teaching and sources of materials.

Prereq: EDPS 322 and BEDU 364. A 2.5 GPA in all business education subjects taken at EMU is required before enrollment, with no academic probation.

BEDU 366 Methods of Teaching Marketing Education. 2 hrs

Techniques and practices utilized in teaching marketing and cooperative education in secondary schools, community colleges and adult evening schools.

Prereq: EDPS 322. A 2.5 GPA in all business education subjects taken at EMU is required before enrollment, with no academic probation. Admission to the teacher education program.

BEDU 367 Curriculum in Marketing Education. 2 hrs

Overviews content bases and other factors affecting marketing education curriculum. Includes development of comprehensive curriculum plans for a variety of marketing education settings, utilization of nonclassroom curriculum delivery systems, and implementation of curriculum evaluation and revision procedures. Examines current trends in marketing education curriculum.

BEDU 368 Management of Marketing Education

Programs. 2 hrs

Examines the marketing educator roles of DECA adviser, public relations specialist, career counselor, program administrator/supervisor, and professional educator.

BEDU 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

BEDU 387 Cooperative Education. 3 hrs

Business education majors will be placed on a job that relates to their primary area of study for one semester. During this period regular employees' benefits may be received. *Credit/no credit. Credit applicable to the major in business education only.*

Prereq: Department permission.

BEDU 395 Office Administration. 3 hrs

Office problems from the point of view of the administrator. Office organization, physical facilities, nature of office work, personnel relations, and control of office output.

Prereq: BEDU 201.

BEDU 396 Records Administration. 3 hrs

Management methodology in records, control, costs, protection, retention, retrieval and disposal. Records administration as a management tool.

Prereq: BEDU 201.

Note: Students are expected to have taken ENGL 121 and BEDU 211 before taking the following legal assisting classes: BEDU 411, BEDU 412, BEDU 414, BEDU 415, BEDU 416.

BEDU 411 Civil Litigation, Investigation, and Procedure. 3 hrs

A comprehensive survey of civil litigation and procedure. The student will be introduced to every phase of litigation starting with the filing of the lawsuit through the appellate process. The student will be expected to draw up a complaint and a number of pleadings, as well as drafting interrogatories and digesting depositions. Legal investigation will be addressed.

BEDU 412 Court Rules, Forms, and Legal Drafting.**3 hrs**

Study will be made of Michigan Court Rules and court forms commonly used in the Michigan Court system. The student will learn the practical aspects of preparing court forms for a variety of legal actions. Drafting legal documents, such as contracts and papers of incorporation, will be included.

BEDU 414 Advanced Probate, Estates, and Trusts.**3 hrs**

This course will build upon the material covered in BEDU 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: BEDU 311.***BEDU 415 Bankruptcy Law.****3 hrs**

A study will be made of the Federal Bankruptcy Code, with emphasis on Chapters 7, 11, and 13. Students will learn how to prepare the necessary papers for filing for bankruptcy.

BEDU 416 Legal Assistant Internship.**3 to 6 hrs**

Placement for students will be arranged with law firms, courts, or corporations, etc., for on-the-job training as a legal assistant. Each student will have a supervisor on the job and a faculty supervisor. The latter will consult with students individually or in a group meeting. A written report is required at completion of the internship. Where appropriate criteria are met, Cooperative Education can be substituted for an Internship.

*Prereq: Permission of Instructor, BEDU 304, BEDU 305, BEDU 411, BEDU 412.***BEDU 422 Office Systems.****3 hrs**

Integration of automated office subsystems such as word processing, graphics, transcription, calendaring, scheduling, accounting, and records management into the office setting. Lab fee required.

*Prereq: BEDU 220, BEDU 224.***BEDU 481 Projects and Simulations in Marketing Education.****2 hrs**

Projects and simulations 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 de-

veloped. Small scale simulations and projects are also studied as well as procedures for developing simulations and projects.

BEDU 477/478/479 Special Topics.**1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

*Prereq: Department permission.***BEDU 487 Cooperative Education.****3 hrs**

Business education majors will be placed on a job that relates to their primary area of study for one semester. During this period regular employees' benefits may be received. *Credit/no credit. Credit applicable to the major in business education only.*

*Prereq: BEDU 387.***BEDU 495 Office Automation.****3 hrs**

Overview of office automation and its relationship to information, information technology, and the application of information technology to the office. Significant new technologies and systems, how to apply these effectively, how to organize for office automation and how to implement office automation. Lab fee required.

*Prereq: BEDU 201, BEDU 210, BEDU 220, BEDU 224, BEDU 395.***BEDU 496 Records Administration Using Database.****3 hrs**

Database as a tool of automated search and retrieval. Identifying information needs of users; design and development of records classification structures suitable for automated records systems; searching techniques; generation of reports such as records user listings, master record listings and records retention schedules. Extensive applications using database software. Lab fee required.

*Prereq: BEDU 201 and BEDU 396.***BEDU 497/498/499 Independent Study.****1/2/3 hrs**

Students pursue some special area of study or experimentation under the direction of a designated faculty member from the department.

*Prereq: Department permission.***TECHNOLOGY EDUCATION COURSES****INED 103 Structures and Design in Technology.****3 hrs**

The application of design elements, principles, and pro-

cedures in the development of solutions to structural problems in technology. Considers human and environmental factors in design solutions. Illustration and description of structures, shapes, and forms used in those solutions. Lab fee required.

Pre- or coreq: FA 122.

INED 105 History of Industrial Technology. 3 hrs

An introduction to the history of industrial technology. The development of industry and its impact on the other arts and culture in general. Basic principles of design in industrial and home arts, and the eotechnic, paleotechnic, neotechnic, and atomic periods of technology.

INED 106 Processing Technology. 3 hrs

An introduction to tools, materials, and processes and their application to discrete and integrated systems of technology. Interrelationships between humans and machines will be studied to develop the student's ability to transfer knowledge of processes from one environment to the other. Lab fee required.

Prereq: Course work in high school and / or college chemistry or physics recommended.

INED 114 Information and Control Technology. 3 hrs

Access, manage, and control information and technology through the application of technological systems. Design and construct models, devices and mechanisms that will process information and control technology through the use of machines and humans. Lab fee required.

INED 118 Energy Technology. 3 hrs

Forms, sources and uses of energy for application to technology. Description of past, present, and future systems that transform, transmit, store, control, and utilize energy. Considers energy conservation issues. Laboratory experiences focus on experimenting with energy conversions and measurement. Lab fee required.

INED 152 Arts and Crafts. 3 hrs

Experience in design and use of a wide variety of craft materials. Avocational and recreational use of craft media. Lab fee required.

INED 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

INED 246 Safety in Technology and Industrial-

Vocational Education. 2 hrs

Safety, health, and environmental factors and their implications for technology and industrial-vocational educators, students, laboratories, and instructional programs.

INED 250 Foundations of Technology and Industrial-

Vocational Education. 3 hrs

An introduction to the foundations and implementation of technology education and industrial-vocational education. Past, present, and future developments in the profession will be studied through lectures, discussion, seminars, micro-teaching, school visitations, and prestudent teaching activities.

INED 252 Prevocational/Vocational Special Needs

Program. 4 hrs

An examination of the role of special education personnel in providing career awareness, prevocational skill development, and vocational education support activities. Laboratory activities focus on the integration of these concepts on a broad continuum from elementary to secondary school programs. Lectures and field experiences will be used to illustrate a variety of programs and services. Lab fee required.

INED 253 Technology Education for Children. 3 hrs

Content and methods which enable the elementary teacher to assist children in learning about the concepts, processes, systems, and impacts of technology. Individual and group laboratory activities involve applications of technology with other subject areas through problem solving experiences. Lab fee required.

INED 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

INED 350 Curriculum in Technology and Industrial-

Vocational Education. 3 hrs

Curriculum bases, the derivation of content, the formulation of objectives, the selection and organization of learning activities, and the selection and development of procedures for evaluating technology and industrial-vocational education students and programs.

Prereq: INED 250.

INED 354 Experiences in Technology for Children.**2 hrs**

Laboratory experiences in the use of materials, tools, processes, and products of industry as utilized in the elementary and middle school. Emphasis is on individual and group learning situations relevant to integrated curriculum activities.

Prereq: INED 253. Lab fee required.

INED 355 Seminar in Technology for the Elementary School.**2 hrs**

Practical experiences in integrating concepts of technology with existing elementary and special education curricula. Students will design, conduct, and evaluate manipulative activities for and with children.

Prereq: INED 354.

INED 358 Tools and Materials.**3 hrs**

Experiences in the use of selected tools, machines and materials following contemporary therapeutic practices in occupational therapy and related professions. Lecture: two hours per week. Laboratory: two hours per week. Lab fee required.

Prereq: Occupational Therapy major or department permission.

INED 377/378/379 Special Topics.**1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

INED 387 Cooperative Education.**3 hrs**

Industrial education majors will be placed on a job that relates to their primary area of study for one semester. During this period regular employee benefits may be received. *Credit/no credit. Credit applicable to a major in industrial education only.*

Prereq: Department permission.

INED 450 Solving Technological Problems.**3 hrs**

A capstone experience in the technology component of the industrial education curriculum. Student applies problem solving techniques to arrive at the solution to a technological problem.

Prereq: INED 350; senior standing and department approval.

INED 452 Principles of Vocational-Technical Education.**3 hrs**

Concepts and principles of vocational-technical education; current issues in vocational education in Michigan.

Prereq: INED 350 or department permission.

INED 460 Practicum in Technology and Industrial-Vocational Education.**2 hrs**

Direct involvement in solving teaching/learning problems in technology and industrial-vocational education. Emphasis upon developing appropriate strategies for managing the classroom and laboratory environment. Concurrent with INED 461 and student teaching.

Prereq: INED 350.

INED 461 The Teaching of Technology and Industrial-Vocational Education.**2 hrs**

Examines the relationship between principles of effective learning and various methods of instruction in technology and industrial-vocational education. Emphasis upon the preparation of lessons and units of study and the evaluation of instruction. Taken concurrently with INED 460 and student teaching.

Prereq: INED 350.

INED 477/478/479 Special Topics.**1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

INED 487 Cooperative Education.**3 hrs**

The second in a two-course sequence for industrial education majors. The students will be placed on a job that relates to their primary area of study for one semester. Regular employee benefits may be received. *Credit applicable to a major in industrial education only. Credit/no credit.*

Prereq: INED 387 and department permission.

INED 497/498/499 Independent Study.**1/2/3 hrs**

Available to selected students who have demonstrated ability to profit from a directed study project. Intensive study of a problem appropriate to the student's area of concentration. Enrollment and selection of a project proposal must be approved by the department adviser-chair.

Prereq: Department permission.

INDUSTRIAL TECHNOLOGY

Everett N. Israel
Department Head
 118 Sill Hall
 487-2040

Professors: Daniel J. Fields, Jerald A. Griess, Everett N. Israel, John J. Jellema, Max E. Kanagy, Su-Chen (Jonathon) Lin, Walter W. Tucker, John A. Weeks

Associate Professors: Erik Lokensgard, Fuh-Cwo (Tony) Shiuie, Thomas G. Soyster, Pamela K. Speelman, Tracy S. Tillman

Assistant Professors: Robert E. Chapman, Bob (Behrooz) Lahidji, Alfred C. Roth

Instructors: Lawrence L. Darling, Peter J. Loughney, Philip Rufe, James J. Stein

The Industrial Technology department offers two curricula: construction management with one major and a minor, and manufacturing with two majors and a minor. In addition, two preprofessional programs are shared with the College of Arts and Sciences—prearchitecture and preengineering. Advising for these programs is provided by this department.

Degree: Bachelor of Science

Programs of Study

Construction curriculum

Major:

Construction management

Minor:

Construction management

Manufacturing curriculum

Majors:

Computer-aided design

Manufacturing

Concentrations:

Computer-aided manufacturing

Manufacturing technology

Plastics

Manufacturing (transfer)

Preprofessional programs:

Preengineering

Prearchitecture

The Construction Management program has been accredited by the American Council for Construction Education, and the Computer-Aided Design program and the Manufacturing program with concentrations in Computer-Aided Manufacturing, Manufacturing Technology, and Plastics have been accredited by the National Association of Industrial Technology.

The advising procedure is posted outside the department office. It is recommended that majors see their department adviser each semester to review their program. Majors are responsible for meeting the requirements for graduation. A new student in the department not assigned to an adviser should call the department office (487-2040) for an appointment.

Advisers:

Computer-aided design: Jerald Griess, Tony Shiuie

Computer-aided manufacturing: Max Kanagy, Jonathan Lin

Construction management: Larry Darling, Peter Loughney, James Stein, John Weeks

Manufacturing (transfer): Everett Israel, John Jellema

Manufacturing technology: Alfred Roth, Tracy Tillman, Walter Tucker

Plastics: Erik Lokensgard

Preengineering: Bob Lahidji, Pamela K. Speelman

Prearchitecture: Larry Darling

Graduate study leads to the Master of Science degree in industrial technology. Available areas of concentration are manufacturing, quality, and construction management. These degrees are described in the Graduate Catalog.

ACADEMIC MAJORS

CONSTRUCTION CURRICULUM

The construction curriculum includes course work in basic studies with specified science and mathematics courses, recommended business course selectives (a list of recommended course electives that require the prior approval of a construction management adviser), and technical courses. A minor is not required.

CONSTRUCTION MANAGEMENT MAJOR

The construction management major is designed to prepare men and women for middle- and upper-level management in general contracting. The major has been developed in cooperation with experts from the construction industry, guidelines established by major construction associations, and feedback from employers and graduates. The construction management major reflects the current needs and trends in the construction industry.

	Sem hours
Symbolics and communication	19
CTAS 121 Fundamentals of Speech	2
ENGL 121 English Composition	3
ENGL 324 Principles of Technical Communication ...	3
INTE 105 Computer Applications for Industry	3
MATH 107 Plane Trigonometry	2
MATH 118-119 Mathematical Analysis for Social Sciences I-II	6
Science and technology	11
CHEM 119 Fundamentals of Chemistry	4
PHY 221 Mechanics, Sound, and Heat	4
PSY 101 General Psychology	3
Social science	12
PLSC 112 American Government	3
A course in history	3
ECON 201 Principles of Economics I	3
ECON 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 construction management	67
CNST 125 Introduction to Construction	2
CNST 201 Construction Systems	3
CNST 206 Surveying	3
CNST 213 Construction Safety	3
CNST 228 Construction Drawing	3
CNST 229 Analysis of Commercial Prints	3
CNST 301 Planning and Scheduling	3
CNST 302 Contract Documents, Regulations, and Specifications	3
CNST 303 Electrical, Mechanical, and Equipment Systems	3
CNST 387 Cooperative Education	3
CNST 401 Construction Estimating and Bidding ..	3
CNST 402 Construction Materials	3
CNST 403 Production Control	2
CNST 406 Construction Law	2
CNST 450 Fundamentals of Construction Project Management	3
GEO 160 Physical Geology	4
ACC 130 Accounting for Nonbusiness Majors ..	3
LAW 293 Legal Environment of Business	3
MGMT 384 Human Resource Management	3
Construction management restricted elective ..	3
<i>(Adviser approval required)</i>	
Math/science restricted elective	3
<i>(Adviser approval required)</i>	

Business restricted elective	6
<i>(Adviser approval required)</i>	
FIN 350 Principles of Finance	3
FIN 352 Financial Management for Entrepreneurs	3
FIN 358 Analysis of Financial Statements	3
LAW 393 Law of Business Enterprises	3
LAW 403 Employment Law	3
MGMT 202 Business Communications	3
MGMT 386 Organizational Behavior and Theory ..	3
MGMT 460 Management Skills	3
MGMT 484 Management-Union Relations	3
MKTG 360 Principles of Marketing	3
IS 215 End-User Computing	3
DS 265 Business Statistics I	3
Physical education and health	2
Physical education activity courses	2
<i>(Military science courses may be substituted for physical education.)</i>	
Free electives	1-2
Total	124

MANUFACTURING CURRICULUM

The manufacturing curriculum includes course work in basic studies with specified science and mathematics course, manufacturing core courses, and major courses in computer-aided design (CAD), computer-aided manufacturing (CAM), manufacturing, and plastics technology. A minor is not required.

COMPUTER-AIDED DESIGN MAJOR

Men and women majoring in computer-aided design (CAD) are prepared for a wide range of computer related job opportunities. Graduates are employed in industry as CAD engineers, software development engineers, applications programmers, technical support engineers, systems managers, training consultants, entry-level designers, as well as in equipment sales and support. The applications of computer graphics are becoming more diverse and are found in many areas such as architecture, medicine, mapping, facilities management, and government.

The CAD major includes a core of manufacturing courses designed to provide a well-rounded graduate with hands-on experiences. Engineering graphics courses are included to provide an understanding of the process of producing models on the computer. In the CAD courses the students gain knowledge of graphics programming concepts involving interactive 2-D and 3-D

wireframe drawing, hidden surface removal, shaded surfaces, business graphics, animation, interfaces, menu and icon development, database management, and microcomputer applications.

Sem hours

Symbolics and communication	19
CTAS 121 Fundamentals of Speech	2
ENGL 121 English Composition	3
ENGL 324 Principles of Technical Communication ...	3
INTE 105 Computer Applications for Industry	3
MATH 107 Plane Trigonometry	2
MATH 118 Mathematical Analysis for Social Sciences I.....	3
MATH 119 Mathematical Analysis for Social Sciences II	3
Science and technology	15
CHEM 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
PLSC 112 American Government	3
A course in history	3
ECON 201 Principles of Economics I.....	3
ECON 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 CAD	60
COSC 137 Introduction to FORTRAN Programming	3
COSC 250 Programming for CAD/CAM	3
INTE 103 Introduction to Automation.....	3
INTE 106 Industrial Computer Applications for Manufacturing	3
INTE 122 Engineering Graphics I	3
INTE 123 Manufacturing Processes and Methods I ..	3
INTE 124 Manufacturing Processes and Methods II .	3
INTE 203 Industrial Operation	3
INTE 223 Engineering Graphics II	3
INTE 231 Industrial Computer Graphics	3
INTE 316 Manufacturing Tooling	3
INTE 324 Industrial Drawing	3
INTE 325 Applied Mechanics, Kinematics, and Design	3
INTE 387 Cooperative Education	3
INTE 431 Interactive Industrial Computer Graphics	3

INTE 432 3-D Computer-Aided Design	3
INTE 433 Advanced Computer-Aided Design ..	3
INTE 435 Finite Element Analysis	3
A course in technical management	3
Elective (must be approved by adviser)	3

Physical education and health	2
Physical education activity courses	2
(Military science courses may be substituted for physical education.)	

Free electives

Total

MANUFACTURING MAJOR

The manufacturing major consists of four concentrations: computer-aided manufacturing, manufacturing technology, plastics, and manufacturing (transfer). Majors must complete the Basic Studies requirements outlined below plus requirements in one of the concentrations.

The rapid increase in complexity of manufacturing technology and operations has caused the education of most engineers to become increasingly theoretical. This has produced a demand for manufacturing professionals who have applied technical skills. Our graduates, who are educated in applied technologies, help to meet that demand. Students majoring in Manufacturing are prepared for a wide range of professional positions in industry. Graduates are employed as: manufacturing engineers; manufacturing operations managers; computer applications integrators; product, process, and tool designers; and in many other technical and managerial positions.

Sem hours

Symbolics and communication	19
CTAS 121 Fundamentals of Speech	2
ENGL 121 English Composition	3
ENGL 324 Principles of Technical Communication ...	3
INTE 105 Computer Applications for Industry	3
MATH 107 Plane Trigonometry	2
MATH 118 Mathematical Analysis for Social Sciences I.....	3
MATH 119 Mathematical Analysis for Social Sciences II	3
Science and technology	15
CHEM 121 General Chemistry I.....	3
CHEM 122 General Chemistry I Laboratory ...	1
PHY 221 Mechanics, Sound, and Heat	4
PHY 222 Electricity and Light	4
PSY 101 General Psychology.....	3

Social science	12
PLSC 112 American Government	3
A course in history	3
ECON 201 Principles of Economics I	3
ECON 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
Physical education and health	2
Physical education activity courses	2
(Military science courses may be substituted for physical education.)	
Total	59-60

COMPUTER-AIDED MANUFACTURING CONCENTRATION

The computer-aided manufacturing concentration combines instructional experiences in robotics, control and power systems, and numerical control. The concentration is designed to prepare individuals for supervisory and management positions in automated plants and factories for both today and in the future.

Major in CAM	60
INTE 103 Introduction to Automation	3
INTE 106 Industrial Computer Applications for Manufacturing	3
INTE 122 Engineering Graphics I	3
INTE 123 Manufacturing Processes and Methods I	3
INTE 124 Manufacturing Processes and Methods II	3
INTE 200 Industrial Electricity and Controls I	3
INTE 203 Industrial Operation	3
INTE 218 Industrial Electricity and Controls II	3
INTE 223 Engineering Graphics II	3
INTE 316 Manufacturing Tooling	3
INTE 318 Fluid Power	3
INTE 324 Industrial Drawing	3
INTE 361 Computer Numerical Control	3
INTE 387 Cooperative Education	3
INTE 420 Industrial Quality Control	3
INTE 425 Advanced Manufacturing Methods	3
INTE 426 Manufacturing Communication Systems	3
INTE 485 Flexible Manufacturing Systems	3
Select two of three courses	6
ACC 130 Accounting for Nonbusiness Majors (3)	
INTE 427 Advanced Industrial Control (3)	
INTE 461 CAD/CAM NC Programming (3)	

Free electives	3-4
Total	124

MANUFACTURING TECHNOLOGY CONCENTRATION

The manufacturing technology concentration includes a core of fundamental manufacturing courses designed to produce a well-rounded graduate with hands-on experience. In advanced courses, students gain knowledge and skills in mechanical and tool design, fluid power systems, quality control, robotics, and control technologies for machines, processes, and manufacturing operations management. A number of our graduates have become certified as Manufacturing Technologists or Manufacturing Engineers by the Society of Manufacturing Engineers.

Major in manufacturing technology	60
INTE 103 Introduction to Automation	3
INTE 106 Industrial Computer Applications for Manufacturing	3
INTE 122 Engineering Graphics I	3
INTE 123 Manufacturing Processes and Methods I	3
INTE 124 Manufacturing Processes and Methods II	3
INTE 200 Industrial Electricity and Controls I	3
INTE 203 Industrial Operation	3
INTE 218 Industrial Electricity and Controls II	3
INTE 223 Engineering Graphics II	3
INTE 316 Manufacturing Tooling	3
INTE 318 Fluid Power	3
INTE 325 Applied Mechanics, Kinematics, and Design	3
INTE 361 Computer Numerical Control	3
INTE 387 Cooperative Education	3
INTE 420 Industrial Quality Control	3
INTE 421 Manufacturing Product and Process Analysis	3
INTE 425 Advanced Manufacturing Methods	3
INTE 490 Manufacturing Technology Laboratory	3
ACC 130 Accounting for Nonbusiness Majors	3
Restricted elective	3
Free electives	3-4
Total	124

PLASTICS CONCENTRATION

The plastics concentration is designed to prepare men and women for a wide range of technical positions in the plastics processing industry. Graduates have a general understanding of the plastics industry, polymer materials, common plastics processes, and finishing and decorating techniques. Graduates are employed as cost

estimators, sales and marketing representatives, production schedulers, mold designers, process engineers, product engineers, production supervisors, and quality control supervisors as well as in their related technical specialties.

Major in plastics	60
INTE 103 Introduction to Automation	3
INTE 106 Industrial Computer Applications for Manufacturing	3
INTE 122 Engineering Graphics I	3
INTE 123 Manufacturing Processes and Methods I ..	3
INTE 124 Manufacturing Processes and Methods II ..	3
INTE 200 Industrial Electricity and Controls I ..	3
INTE 202 Plastics	3
INTE 203 Industrial Operation	3
INTE 218 Industrial Electricity and Controls II ..	3
INTE 223 Engineering Graphics II	3
INTE 306 Plastic Processing	3
INTE 318 Fluid Power	3
INTE 387 Cooperative Education	3
INTE 409 Plastics Mold Design and Construction ..	3
INTE 410 Plastics Product Design	3
INTE 411 Plastics Fabricating and Decorating ..	3
INTE 420 Industrial Quality Control	3
CHEM 270 Organic Chemistry	4
CHEM 271 Organic Chemistry Laboratory	1
INDT 310 Polymers for Engineers and Technologists	3
Restricted elective	1
Free electives	3-4
Total	124

MANUFACTURING (TRANSFER) CONCENTRATION

The manufacturing transfer concentration is designed to serve those individuals who wish to continue their manufacturing-related community college education and seek a bachelor's degree. It is especially designed to accommodate the needs of students transferring from community colleges with a technical associate's degree. The concentration includes coursework in basic studies, some specified science and mathematics courses, and additional adviser-approved manufacturing-related technical coursework at the upper level.

Major in manufacturing (transfer)	55
Restricted electives at the 100-400 level	6
Restricted EMU INTE electives at the 300-400 level	15
Maximum of 34 transfer hours of technical courses ..	34
Note: 12 hours from above must be from approved technical management courses	

Free electives	9-10
Total	124

ACADEMIC MINORS

These minors are designed to provide a background in fundamental technical applications for students with majors outside the department who expect to work in industry. Employment opportunities are enhanced for persons with technical coursework.

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 Industrial Technology department. A maximum of six semester hours may be transferred from outside the department.

CONSTRUCTION MANAGEMENT

	Sem hours
Minor in construction management	21
1. Required courses	8
CNST 125 Introduction to Construction	2
CNST 201 Construction Systems	3
CNST 228 Construction Drawing	3
2. Restricted electives	13
CNST 229 Analysis of Commercial Prints (3)	
CNST 301 Planning and Scheduling (3)	
CNST 302 Contract Documents, Regulations, and Specifications (3)	
CNST 401 Construction Estimating and Bidding (3)	
CNST 402 Construction Materials (3)	

MANUFACTURING

	Sem hours
Minor in manufacturing	21
1. Required courses	6
INTE 103 Introduction to Automation	3
INTE 203 Industrial Operation	3
2. Restricted electives	15
Select an additional 15 hours from the following courses:	
*INTE 105 Computer Applications for Industry (3)	
INTE 106 Industrial Computer Applications for Manufacturing (3)	
INTE 122 Engineering Graphics I (3)	
INTE 123 Manufacturing Processes and Methods I (3)	
INTE 124 Manufacturing Processes and Methods II (3)	

- INTE 200 Industrial Electricity and Controls I (3)
 INTE 202 Plastics (3)
 INTE 218 Industrial Electricity and Controls II (3)
 INTE 223 Engineering Graphics II (3)
 INDT 231 Introduction to Computer Graphic Systems (3)
 INTE 231 Industrial Computer Graphics (3)
 INTE 318 Fluid Power (3)
 INTE 324 Industrial Drawing (3)

**Not open to students who have completed the computer literacy requirement of basic studies.*

PREPROFESSIONAL PROGRAMS

The Industrial Technology department is responsible for coordinating and advising students in two of the University's preprofessional offerings: prearchitecture and preengineering. 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. Students planning to transfer to four-year programs should not complete EMU's Basic Studies requirements.

PREENGINEERING 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 to complete a baccalaureate degree.

Sem hours

- Required courses** 35
 - ENGL 121 English Composition 3
 - MATH 120 Calculus I 4
 - MATH 121 Calculus II 4
 - MATH 122 Elementary Linear Algebra 3
 - MATH 223 Multivariable Calculus 4
 - CHEM 121 General Chemistry I 3
 - CHEM 122 General Chemistry I Laboratory ... 1
 - PHY 223 Mechanics, Sound, and Heat 5
 - PHY 224 Electricity and Light 5
 - One literature course 3
- Recommended courses** 21
 - COSC 137 Introduction to FORTRAN Programming or COSC 237 Computer

- Programming and Numeric Methods 3
- CTAS 121 Fundamentals of Speech 3
- ECON 201 Principles of Economics I 3
- ECON 202 Principles of Economics II 3
- ENGL 225 Intermediate English Composition 3
- Second literature course 3
- One humanities course 3

3. Optional courses 3

- INTE 103 Introduction to Automation (3)
- INTE 122 Engineering Graphics I (3)
- INTE 223 Engineering Graphics II (3)

PREARCHITECTURE 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 to complete a baccalaureate degree.

Sem hours

- Required courses** 57
 - ENGL 121 English Composition 3
 - CTAS 121 Fundamentals of Speech 2
 - MATH 120 Calculus I 4
 - MATH 121 Calculus II 4
 - COSC 137 Introduction to FORTRAN Programming 3
 - CHEM 119 Fundamentals of Chemistry 4
 - PHY 223 Mechanics, Sound, and Heat 5
 - PHY 224 Electricity and Light 5
 - PLSC 112 American Government 3
 - HIST 123 The United States to 1877 3
 - ECON 201 Principles of Economics I 3
 - ECON 202 Principles of Economics II 3
 - PHIL 130 Introduction to Logic or approved alternative 3
 - FA 123 Drawing I, dance, music, or theatre arts course 3
 - FA 231 Three-Dimensional Design 3
 - Two literature courses 6
- Recommended course** (course may not transfer) .. 2
 - CNST 125 Introduction to Construction 2

CONSTRUCTION MANAGEMENT COURSES**CNST 125 Introduction to Construction. 2 hrs**

Developing, planning, and scheduling of construction projects. Site development, material usage, specifications, estimating, and managing cost control are included.

CNST 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CNST 201 Construction Systems. 3 hrs

Structural systems, associated nonstructural components, and considerations appropriate to mechanical, electrical, plumbing, and support equipment. Lecture and laboratory course.

Prereq: CNST 125 and CNST 228. For Construction Management majors only.

CNST 206 Surveying. 3 hrs

The fundamental use of the transit and level. Linear measurement, angle measurements, extending straight lines, differential and profile leveling, a simple transverse survey, and the keeping of accurate notes. Lecture and laboratory course.

Prereq: MATH 107.

CNST 213 Construction Safety. 3 hrs

Philosophical, social, economic, and technological bases for safety related to the development of a construction job site safety plan. Emphasis is also placed on the OSHA and MIOSHA construction industry standards.

CNST 228 Construction Drawing. 3 hrs

Basic print reading skills. Symbols, terminology, print organization, and basic material take-off techniques. Sketching and some basic drawing skills required. Lecture and laboratory course.

CNST 229 Analysis of Commercial Prints. 3 hrs

Development of the ability to read and interpret prints. Actual commercial prints and project manuals are used for analysis and material take-off procedures. Preparation of field drawings using graph paper and sketching techniques. Lecture and laboratory course.

Prereq: CNST 228 or department permission.

CNST 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CNST 301 Planning and Scheduling. 3 hrs

The planning process of the construction industry. Various scheduling systems commonly used within the industry.

Prereq: INTE 105 and CNST 201.

CNST 302 Contract Documents, Regulations, and Specifications. 3 hrs

The different types of construction contracts, construction documents and regulations, the role of specifications, and the project manual in the construction process.

Prereq: CNST 201 and LAW 293, or department permission.

CNST 303 Electrical, Mechanical, and Equipment Systems. 3 hrs

This course provides an understanding of mechanical, electrical, plumbing, drain-waste-vent, equipment considerations, and other specialized nonstructural systems found in commercial buildings.

Prereq: CNST 201 and CNST 228.

CNST 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CNST 387 Cooperative Education. 3 hrs

Construction management majors will be placed on a job that relates to their primary area of study for one semester. During this period regular employee benefits may be received. *Credit/no credit. Credit applicable to the major in construction management only.*

Prereq: Department permission.

CNST 401 Construction Estimating and Bidding. 3 hrs

The principles and procedures for developing estimates, bids, and contracts for residential and commercial construction.

Prereq: CNST 201 and CNST 229.

CNST 402 Construction Materials. 3 hrs

The characteristics, specifications, and applications of basic construction materials such as stone, concrete, wood, glass, plastics, metals, and bituminous products. Lecture and laboratory course.

Prereq: CNST 201.

CNST 403 Production Control. 2 hrs

Methods of control used in the construction industry for production problems involving the estimate, bidding schedules, cost analysis, cost comparison, scheduling systems, evaluation, and debriefing.

Prereq: CNST 301, CNST 401, and ACC 130.

CNST 406 Construction Law. 2 hrs

Common basic legal problems associated with construction contracting. Current areas of concern and the significant implications are covered.

Prereq: CNST 302 and LAW 293.

CNST 450 Fundamentals of Construction Project Management. 3 hrs

Students combine many previous concepts and skills into a single comprehensive project which includes estimating, scheduling, production control techniques, and documentation procedures. Lecture and laboratory course.

Prereq: CNST 301, CNST 302, CNST 401, and MGMT 384.

CNST 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

CNST 487 Cooperative Education. 3 hrs

The second in a two-course sequence for construction management majors. The students will be placed on a job that relates to their primary area of study for one semester. Regular employee benefits may be received. Graded credit/no credit.

Prereq: CNST 387 and department permission.

CNST 494/495/496 Industry-Based Special Topics. 1/2/3 hrs

Course descriptions are formulated at the time of an industry's request and reflect the particular requirements of the client company.

CNST 497/498/499 Independent Study. 1/2/3 hrs

Available to selected students who have demonstrated ability to profit from a directed study project. Intensive study of a problem appropriate to the student's area of concentration. Enrollment and selection of a project proposal must be approved by the department adviser and chair.

Prereq: Department permission.

INDUSTRIAL TECHNOLOGY COURSES**INTE 101 Introduction to Industrial Drawing. 3 hrs**

An introductory mechanical drawing course emphasizing lettering, measuring, geometric construction, sketching, equipment usage, pictorials, orthographic projection, and dimensioning. This course is intended for students without previous drafting experience. Lecture and laboratory course. This course does not count towards an INTE major.

INTE 103 Introduction to Automation. 3 hrs

An introduction to the technology of discrete parts manufacturing. Topics include the contemporary manufacturing environment, new and emerging technologies, human-machine interfaces, and human resource issues. Course includes field trips.

INTE 105 Computer Applications for Industry. 3 hrs

Provides the theory, general applications, and specific applications of microcomputers. Students are exposed to software packages commonly used for general and specific applications in industry. Lecture and laboratory course.

INTE 106 Industrial Computer Applications for Manufacturing. 3 hrs

This course presents advanced DOS commands and concepts appropriate for microcomputers configured for CAD/CAM and other similar industrial applications. Lecture and laboratory course.

Prereq: A course in computer literacy.

INTE 122 Engineering Graphics I. 3 hrs

A mechanical drawing course emphasizing orthographic projection, pictorial representation, dimensioning, sectional and auxiliary views, computer-aided drafting, mechanical fasteners, and working drawings. Lecture and laboratory course.

Prereq: INTE 101 or one year of high school drafting.

INTE 123 Manufacturing Processes and Methods I.**3 hrs**

An introduction and survey of manufacturing processes and materials. Lectures, laboratory, and outside study assignments are an essential part of this course and are related to heat treating, properties of materials, casting, forming, and joining. Lecture and laboratory course.

INTE 124 Manufacturing Processes and Methods II.**3 hrs**

An introduction and survey of machines, tools, processes, and materials of industry. Includes conventional and nonconventional machining, theory of metal removal, cutting tool geometry and materials, fixturing, and measuring devices. Lecture and laboratory course.

Prereq: INTE 123 and MATH 107.

INTE 177/178/179 Special Topics.**1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

INTE 200 Industrial Electricity and Controls I.**3 hrs**

The application of fundamental concepts and principles of electricity. Topics include direct and alternating current, resistance, reactance, basic electrical machines, and controls. The use of meters and test equipment is emphasized. Lecture and laboratory course.

Prereq: One and one-half years of high school algebra and trigonometry.

INTE 202 Plastics.**3 hrs**

A study of the plastics industry: material properties and identification, processing techniques, and application of design to product manufacture. Lecture and laboratory course.

Prereq: INTE 123.

INTE 203 Industrial Operation.**3 hrs**

A survey course in the practices of manufacturing organizations. Units include careers, regulatory agencies, facilities management, group technology, problem solving, and quality decision-making.

Prereq: INTE 123.

INTE 215 Machine Tool Metalworking.**3 hrs**

Machine tools and metalworking processes including turning, drilling, shaping, milling, and grinding. Principles of tooling, precision measurement, identification of metals. Lecture and laboratory course.

INTE 218 Industrial Electricity and Controls II.**3 hrs**

The student of electrical principles related to power and control. Course content includes motors, instrumentation, and programmable logic controls. Lecture and laboratory course.

Prereq: INTE 200.

INTE 219 Techniques of Energy Control.**3 hrs**

An introduction to the use of tools, materials, machines, equipments, supplies, and mechanisms utilized in power mechanics for energy control. Lecture and laboratory course.

INTE 223 Engineering Graphics II.**3 hrs**

Engineering Graphics II is an advanced drawing course designed as a continuation of Engineering Graphics I. Units of instruction include fit classifications, geometric dimensioning and tolerancing, gears, cams, revolution, intersection, and development. Lecture and laboratory course.

Prereq: MATH 107 and INTE 122.

INTE 231 Industrial Computer Graphics.**3 hrs**

A series of computer graphics programs illustrate graphics algorithms and terminology. Students write similar FORTRAN programs on graphics terminals using PLOT-10 subroutines. Topics include graphics, multiview drawings, rotations, databases, plotting and display techniques, and interactive programming. Lecture and laboratory course.

Prereq: MATH 107 and COSC 137.

INTE 240 Science, Technology, and People.**3 hrs**

This course will help people to better understand the complementary relationship between science and technology in (a) creating technical devices, services and systems and (b) solving problems.

Prereq: A basic studies approved physics or chemistry laboratory course.

INTE 251 Material Analysis and Testing.**3 hrs**

Study of the structure, characteristics, and working qualities of common industrial materials. Lecture and laboratory course.

INTE 277/278/279 Special Topics.**1/2/3 hrs**

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

INTE 306 Plastic Processing. 3 hrs

A study of high polymers, basic resin types, and their application to molding and fabrication process. Analysis of chemical and physical properties, mold design, and problems of production. Experimentation and testing required. Lecture and laboratory course.

Prereq: INTE 202.

INTE 314 Integrated Circuits: Digital. 3 hrs

The study of combinational and sequential logic. Concepts of digital control and computer circuits. Lecture and laboratory course.

Prereq: INTE 200.

INTE 316 Manufacturing Tooling. 3 hrs

A study of manufacturing tooling systems with a focus on basic types, components, applications, and principles of design. Tooling for metallic and nonmetallic materials is included. Lecture and laboratory course.

Prereq: MATH 107, INTE 103, INTE 124, INTE 203, and INTE 223.

INTE 318 Fluid Power. 3 hrs

Industrial hydraulic and pneumatic power transmission. Emphasis is on components, system control techniques, logic, system analysis, and design. Lecture and laboratory course.

Prereq: PHY 221.

INTE 324 Industrial Drawing. 3 hrs

An examination and application of engineering design and drawing using three-dimensional wireframe and solids techniques. Computer-aided design systems will be used to produce designs and drawings. Lecture and laboratory course.

Prereq: INTE 223.

INTE 325 Applied Mechanics, Kinematics, and Design. 3 hrs

The study of mechanical devices, the forces to which they are subjected and systems design considerations. Topics include statistics, dynamics, and modification of mechanisms. Lecture and laboratory course.

Prereq: PHY 221 and INTE 223.

INTE 360 CIM Operations. 3 hrs

Concepts, components, and application of computer-based industrial automation. The integration and implications of CAD, CAM, and business functions into CIM are included. This course does not count towards an INTE major.

Prereq: INTE 103 and INTE 203.

INTE 361 Computer Numerical Control. 3 hrs

NC programming for both CNC mill and lathe. The transfer of part descriptions into a detailed process plan, tool selection, and finally into NC machine codes. Computer-assisted programming, APT, and CAD/CAM for 2-D machining is emphasized. Verification is accomplished by laboratory work.

Prereq: MATH 107, INTE 106, INTE 124, and INTE 223.

INTE 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

INTE 387 Cooperative Education. 3 hrs

Industrial technology majors will be placed on a job that relates to their primary area of study for one semester. During this period regular employee benefits may be received. *Credit/no credit. Credit applicable to the major in industrial technology or industrial teacher education only.*

Prereq: Department permission.

INTE 409 Plastics Mold Design and Construction. 3 hrs

Principles of mold design for a variety of plastic molding processes. Mold materials, machining, fabricating, and testing in appropriate processing equipment are required. Lecture and laboratory course.

Prereq: INTE 306.

INTE 410 Plastics Product Design. 3 hrs

The development of products through plastic materials selection and design includes the esthetics of design and the selection of engineering properties. Lecture and laboratory course.

Prereq: INTE 306.

INTE 411 Plastics Fabricating and Decorating. 3 hrs

Processes involved in forming and fastening of standard profile materials in plastics. Methods of joining, machining, and decorating of plastics materials and products are required. Lecture and laboratory course.

Prereq: INTE 306.

INTE 414 Integrated Circuits: Linear. 3 hrs

Fundamentals of discrete solid-state devices and linear integrated circuits. Concepts of instrumentation and control applications are included. Lecture and laboratory course.

Prereq: INTE 200 or department permission.

INTE 415 Communication Circuits. 3 hrs

Concepts and principles of electronics as applied to radio and television circuits. Concepts of instrumentation and control applications are required. Lecture and laboratory course.

Prereq: INTE 200 or department permission.

INTE 417 Industrial Robotics. 3 hrs

The nature and use of industrial robotics: capabilities, equipment and associated hardware, justification, preparation and installation, launching, and monitoring. Lecture and laboratory course.

Prereq: INTE 106, INTE 203, INTE 218, and INTE 318.

INTE 420 Industrial Quality Control. 3 hrs

An introduction to quality control systems and methods utilized in industry. Topics include quality policy and organization, data collection, and reporting, control charts, process and gauge capability, sampling plans, reliability, cost of quality, product liability, and problem analysis.

Prereq: MATH 118, MATH 119, and INTE 203.

INTE 421 Manufacturing Product and Process Analysis. 3 hrs

An advanced course in the analysis of manufacturing products and processes. Emphasis is placed on the identification and resolution of problems related to quality control and product reliability.

Prereq: MATH 119 and INTE 420.

INTE 424 Industrial Plant Facilities and Planning.

3 hrs

Planning procedures related to small plant and heavy industrial production. Mass production layout methods, machine and production equipment arrangements, types of plant architecture and related facilities, transportation and handling facilities, lighting, sewerage, ventilation, water supply, electrical power, personal facilities are included.

INTE 425 Advanced Manufacturing Methods. 3 hrs

The course emphasizes computerized methods of planning, material handling, machining cells, and inspection. Lecture and laboratory course.

Prereq: INTE 103, INTE 123, INTE 124, INTE 203, and INTE 218.

INTE 426 Manufacturing Communication Systems.

3 hrs

An overview of the computerization of information related to manufacturing production. Class will emphasize functional specification and installation problems of computer-integrated manufacturing communications systems. Lecture and laboratory course.

Prereq: INTE 106, INTE 123, INTE 124, INTE 203, and INTE 218.

INTE 427 Advanced Industrial Control. 3 hrs

The application of electricity, electronics, programmable logic controller, data acquisition, and analysis techniques to the open-loop and closed-loop control of machines and processes. Emphasis will be given to utilizations of computers and programmable logic controllers for industrial control purposes. Lecture and laboratory course.

Prereq: INTE 218 and INTE 318.

INTE 431 Interactive Industrial Computer Graphics.

3 hrs

Students develop a 2-D interactive graphics FORTRAN program. The use of graphics hardware and the generating, modifying, and transforming of graphics entities and databases are included. Lecture and laboratory course.

Prereq: INTE 231 and a course in FORTRAN programming.

INTE 432 3-D Computer-Aided Design. 3 hrs

Using a graphics "toolbox" on a microcomputer, students develop a 3-D interactive BASIC CAD program. Hidden surface removal, 3-D transformation surface shading, and 3-D databases are required. Lecture and laboratory course.

Prereq: INTE 431.

INTE 433 Advanced Computer-Aided Design. 3 hrs

Advanced computer-aided design course that focuses on menu modification, AutoLISP programming, and data interchange. Lecture and laboratory course.

Prereq: INTE 223 and INTE 431.

INTE 434 Microcomputer Circuits. 3 hrs

The microprocessor and its applications in the control of machines and industrial process. Lecture and laboratory course.

Prereq: INTE 314 and a computer programming course.

INTE 435 Finite Element Analysis. 3 hrs

Finite Element Analysis (FEA) is a powerful tool used by industries to solve many engineering problems. Basic concepts of this technique will be introduced and the students will have hands-on experiences to analyze heat transfer, beam deflection, and stress and strain problems by using several different software packages. Lecture and laboratory course.

Prereq: INTE 325 or instructor permission.

INTE 461 CAD/CAM NC Programming. 3 hrs

Study of conversion of part descriptions to numerical control programs for mill, lathe, and three-axis machining center. Advanced APT and CAD/CAM NC programming for producing the instruction codes necessary to manufacture parts with NC machine tools are emphasized. Verification of the computer assisted NC programs are accomplished by laboratory work.

Prereq: INTE 361.

INTE 477/478/479 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

INTE 485 Flexible Manufacturing Systems. 3 hrs

Design and implementation of a flexible manufacturing cell. Machining materials, material handling and storage, inspection, and inventory are emphasized. Part programming using numerical control, robotics/programmable automation programming, development of a manufacturing database, and hierarchical computer control. Lecture and laboratory course.

Prereq: INTE 316, INTE 324, INTE 361, INTE 420, and INTE 425.

INTE 487 Cooperative Education. 3 hrs

The second in a two-course sequence for industrial technology majors. The students will be placed on a job that relates to their primary area of study for one semester. Regular employee benefits may be received. Graded credit/no credit.

Prereq: INTE 387 and department permission.

INTE 490 Manufacturing Technology Laboratory. 3 hrs

This course is capstone for manufacturing technology majors and will focus on the development of the plans for a functioning manufacturing system. Student experiences will include the integration of a breadth of tech-

nical knowledge and skills as well as a significant degree of project management. Guided laboratory course.
Prereq: INTE 316, INTE 325, INTE 420, INTE 421, INTE 425, and ENGL 324.

INTE 494/495/496 Industry-Based Special Topics. 1/2/3 hrs

Course descriptions are formulated at the time of an industry's request and reflect the particular requirements of the client company.

Credit/no-credit.

INTE 497/498/499 Independent Study. 1/2/3 hrs

Available to selected students who have demonstrated ability to profit from a directed study project. Intensive study of a problem appropriate to the student's area of concentration. Enrollment and selection of a project proposal must be approved by the department adviser and chair.

Prereq: Department permission.

INTERDISCIPLINARY TECHNOLOGY

Paul D. Kuwik
Department Head
 122 Sill Hall
 487-1161

Professors: Taki Anagnostou, Carol Haddad, Wayne Hanewicz, Frank Jones, Paul D. Kuwik, Demo Stavros, Ronald M. Westrum

Associate Professors: John Boyless, Gerald Lawver, John Preston

Assistant Professors: David Gore, Benjamin Lee

Instructor: Timothy Doyle

Degree:

Bachelor of Science

The Interdisciplinary Technology department draws heavily from other disciplines throughout the University. Its undergraduate programs are listed below and are in addition to a Master of Liberal Studies in technology and a Master of Science in polymers technology, described in the Graduate Catalog.

Programs of Study

Curricula:

Aviation management technology
 Bilingual vocational teacher education
 Communication technology
 Facility management
 Industrial distribution
 Polymers and coatings technology

Minors:

Aviation flight technology
 Graphic communication
 Technology and society

The Aviation Management Technology, Communication Technology, Facility Management, Industrial Distribution, and Polymers and Coating Technology programs have been accredited by the National Association of Industrial Technology.

Advising or additional information is available within the department. Consult with an advising coordinator listed below.

Advising Coordinators:

Aviation management technology: Timothy Doyle
 Bilingual vocational teacher education: John Boyless
 Communication technology: David Gore
 Facility management technology: John Preston
 Industrial distribution: Demo Stavros

Polymers and coatings technology: Taki Anagnostou

Aviation flight technology: Timothy Doyle

Graphic communication minor: David Gore

Technology and society minor: Ronald Westrum

ACADEMIC MAJORS

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.

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 (MATH 109 Mathematics for Elementary Teachers II does not apply)
 INDT 201 Microcomputer Applications in Technology 3

Science and technology (three courses) 7-10

A course in physical science
 A course in life science
 INDT 150 Understanding Technology 3

Social science (four courses) 8-12

PLSC 112 American Government 3
 A course in history 3
 ECON 201 Principles of Economics I 3
 ECON 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 69

INDT 100 Introduction to Air Transportation .. 3
 INDT 110 Aircraft Maintenance I 3
 INDT 120 Flight Operations I 3
 INDT 170 Aviation Ground Instruction 3
 INDT 210 Aircraft Maintenance II 3
 INDT 220 Flight Operations II 3
 INDT 303 Aviation Law and Insurance 3

INDT 313 Aviation Industry Regulations	3
INDT 315 Airport Management	3
INDT 320 Aviation Safety, Accident Investigation, and Training	3
INDT 387 Cooperative Education	3
INDT 422 Senior Seminar in Aviation Management	3
MGMT 384 Human Resource Management	3
MGMT 386 Organizational Behavior and Theory ..	3
MATH 118 Mathematical Analysis for Social Sciences I	3
MATH 119 Mathematical Analysis for Social Sciences II	3
DS 265 Business Statistics I	3
ACC 240 Principles of Accounting I	3
ACC 241 Principles of Accounting II	3
FIN 350 Principles of Finance	3
MKTG 360 Principles of Marketing	3
IS 215 End-User Computing	3
LAW 293 Legal Environment of Business	3
Physical education and health	2
Physical education activity courses	2
(Any two courses in military science may be applied)	
Electives	5-9
Total	124

BILINGUAL VOCATIONAL TEACHER EDUCATION CURRICULUM

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

	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	
INDT 201 Microcomputer Applications in Technology	3
Science and technology	9
A course in physical science	
A course in life science	
INDT 150 Understanding Technology	3
Social science	12
A course in US government	
A course in history	
ECON 201 Principles of Economics I	3
ECON 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
EDPS 322 Human Development and Learning 4	
RDNG 311 Teaching Reading in the Secondary School	3
SOFD 328 Schools in a Multicultural Society ..	3
SPGN 251 Education of Exceptional Children ..	2
EDPS 340 Introduction to Assessment and Evaluation	3
<i>Student Teaching Sequence*</i>	
INED 460 Practicum in Technology and Industrial-Vocational Education	2
INED 461 The Teaching of Technology and Industrial-Vocational Education	2
EDUC 492 Student Teaching	12
Practical arts**	16
INED 246 Safety in Technology and Industrial- Vocational Education	2
INED 250 Foundations of Technology and Industrial-Vocational Education	3
INED 350 Curriculum in Technology and Industrial-Vocational Education	3
INED 452 Principles of Vocational-Technical Education	3

INDT 478 Special Topics: Teaching Methods in Bilingual Vocational Education	2
INDT 479 Special Topics: Seminar in Bilingual Vocational Education	3
Occupational specialty***	35
Physical education	2
Physical education activity or military science courses	2
Total	135-140

Note: Satisfactory completion of this program will result in the Bachelor of Science degree and issuing of the Michigan temporary vocational authorization for teaching in occupational specialty, grades 9-12.

**Must hold 2.25 overall at EMU and 2.5 in major before enrolling in student teaching sequence.*

***The completion of this 50-hour curriculum satisfies all requirements for the major and minor areas of study.*

****The occupational specialty must be in an accredited NES 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

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	
INDT 201 Microcomputer Applications in Technology	3
Science and technology	9
A course in physical science	
A course in life science	
INDT 150 Understanding Technology	3
Social science	12
A course in US government	
A course in history	
ECON 201 Principles of Economics I	3
ECON 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
BEDU 200 Principles of Marketing and Business Education	3
EDPS 322 Human Development and Learning	4
SOFD 328 Schools in a Multicultural Society ..	3
EDPS 340 Introduction to Assessment and Evaluation	3
RDNG 311 Teaching Reading in the Secondary School	3
SPGN 300 Exceptional Children in the Regular Classroom	1
EDUC 492 Student Teaching	12
Two business methods courses	4
BEDU 364 Methods of Teaching General Business Subjects and BEDU 365 Methods of Teaching Office Education or BEDU 366 Methods of Teaching Marketing Education	
Practical arts	50
Business education core	32
BEDU 100 Contemporary Business	3
BEDU 123 Word Processing/Keyboarding Applications	2
*BEDU 201 Microcomputers for Business Applications	3
BEDU 224 Computer-based Business Mathematics	3
ACC 240 Principles of Accounting I	3
ACC 241 Principles of Accounting II	3
BEDU 250 Personal Finance	3
LAW 293 Legal Environment of Business	3
MKTG 360 Principles of Marketing	3
BEDU 395 Office Administration	3
BEDU 396 Records Administration	3
INDT 478 Special Topics: Teaching Methods in Bilingual Vocational Education	2
INDT 479 Special Topics: Seminar in Bilingual Vocational Education	3
Business education/office education major ...	18
1. Required course	3
**BEDU 422 Office Systems	3
2. Required option	15
Choose one option from the following:	
Option I: Accounting	
ACC 340 Intermediate Accounting I	3

ACC 341 Intermediate Accounting II.....	3
ACC 342 Managerial Cost Accounting.....	3
ACC 344 Tax Accounting.....	3
ACC 346 Governmental Accounting.....	3
<i>Option II: Data processing</i>	
IS 219 File Processing and COBOL Programming ..	3
DS 265 Business Statistics I.....	3
<i>**Students electing business education/ accounting or data processing should take a three hour restricted elective instead of BEDU 422 Office Systems</i>	
DS 317 System Simulation.....	3
IS 413 Evaluation and Application of Computer Hardware.....	3
IS 417 Systems Analysis and Design.....	3
<i>Option III: Shorthand</i>	
BEDU 220 Word/Information Processing Operations.....	3
BEDU 222 Transcription Applications and Technology.....	3
BEDU 225 Notetaking Skills for Professionals	2
BEDU 325 Advanced Notetaking and Transcription for Professionals.....	2
BEDU 495 Office Automation.....	3
<i>Option IV: Word processing</i>	
BEDU 210 Concepts of Word/Information Processing.....	3
BEDU 220 Word/Information Processing Operations.....	3
BEDU 222 Transcription Applications and Technology.....	3
BEDU 310 Word/Information Processing Administration.....	3
BEDU 495 Office Automation.....	3
Business Education Restricted Electives	
BEDU 201 Microcomputers for Business Applications.....	3
BEDU 205 Women in Business.....	3
BEDU 210 Concepts of Word/Information Processing.....	3
BEDU 211 Introduction to Paralegalism and Legal Terminology.....	3
IS 219 File Processing and COBOL Programming ..	3
BEDU 220 Word/Information Processing Operations.....	3
BEDU 222 Transcription Applications and Technology.....	3
BEDU 225 Notetaking Skills for Professionals	2
BEDU 310 Word/Information Processing Administration.....	3

BEDU 325 Advanced Notetaking and Transcription for Professionals.....	2
MKTG 374 Business to Business Marketing....	3
BEDU 387 Cooperative Education.....	3
LAW 393 Law of Business Enterprises.....	3
BEDU 411 Civil Litigation, Investigation, and Procedure.....	3
BEDU 412 Court Rules, Forms, and Legal Drafting.....	3
BEDU 422 Office Systems.....	3
INED 452 Principles of Vocational-Technical Education.....	3
BEDU 495 Office Automation.....	3
BEDU 496 Records Administration Using Database.....	3
BEDU 487 Cooperative Education.....	3
BEDU 497/498/499 Independent Study.....	1-3
Physical education and health.....	2
Physical education activity courses.....	2
(Any two courses in military science may be applied)	
Electives.....	0-3
Total.....	133
<i>*Students electing the business education / data process- ing option must take IS 215 End-User Computing in place of BEDU 201, MATH 118, and MATH 119.</i>	
<i>Note: Satisfactory completion of this program will re- sult in the Bachelor of Science degree and issuing of the Michigan temporary vocational authorization for teach- ing in occupational specialty, grades 9-12.</i>	
<i>*Must hold 2.5 overall at EMU and 2.5 in major before enrolling in student teaching sequence.</i>	
<i>**The completion of this 60-hour curriculum satisfies all requirements for the major and minor areas of study.</i>	
<i>***The occupational specialty must be in an accredited NES 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 comple- tion of appropriate examinations (e.g. the Michigan Occupational Com- petency Assessment Center test).</i>	
BILINGUAL MARKETING TEACHER EDUCATION	
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	
INDT 201 Microcomputer Applications in Technology	3
Science and technology	9
A course in physical science	
A course in life science	
INDT 150 Understanding Technology	3
Social science	12
A course in US government	
A course in history	
ECON 201 Principles of Economics I	3
ECON 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
BEDU 200 Principles of Marketing and Business Education	3
EDPS 322 Human Development and Learning	4
SOFD 328 Schools in a Multicultural Society ..	3
EDPS 340 Introduction to Assessment and Evaluation	3
RDNG 311 Teaching Reading in the Secondary School	3
SPGN 300 Exceptional Children in the Regular Classroom	1
EDUC 492 Student Teaching	12
Business methods courses	4
BEDU 364 Methods of Teaching General Business Subjects	2
<i>Courses appropriate to major:</i>	
BEDU 365 Methods of Teaching Office Education or BEDU 366 Methods of Teaching Marketing Education	2
Practical arts	50
Business education core	15
BEDU 100 Contemporary Business	3
ACC 240-241 Principles of Accounting I-II	6
LAW 293 Legal Environment of Business	3
MKTG 360 Principles of Marketing	3
Major in marketing education	24
<i>Technical content courses</i>	
MKTG 261 Contemporary Selling	3
MKTG 363 Retailing	3
MGMT 386 Organizational Behavior and Theory ..	3
MKTG 365 Buyer Behavior	3

Select two of the following courses	6
MKTG 369 Advertising, MKTG 374 Business to Business Marketing, LAW 393 Law of Business Enterprises, MKTG 461 Sales Management, MGMT 384 Human Resource Management, MGMT 485 Human Resource Development.	

Professional marketing education courses

BEDU 367 Curriculum in Marketing Education ..	2
BEDU 368 Management of Marketing Education Programs	2
BEDU 461 Projects and Simulations in Marketing Education	2
INDT 478 Special Topics: Teaching Methods in Bilingual Vocational Education	2
INDT 479 Special Topics: Seminar in Bilingual Vocational Education	3

Restricted Electives 11

BEDU 119 Keyboarding for Computers, BEDU 123 Word Processing/Keyboarding Applications, BEDU 201 Microcomputers for Business Applications, BEDU 224 Computer-based Business Mathematics, BEDU 250 Personal Finance, BEDU 387 Cooperative Education, BEDU 487 Cooperative Education, BEDU 497/498/499 Independent Study	
INED 452 Principles of Vocational-Technical Education	
FM 145 Introduction to Merchandising, FM 235 Textiles for Consumers, FM 255 Apparel Analysis, FM 439 Fashion Markets	

Physical education and health	2
Physical education activity courses	2
(Any two courses in military science may be applied.)	

Electives	0-3
Total	129-133

COMMUNICATION TECHNOLOGY CURRICULUM

Communication technology is a joint program offered by the Interdisciplinary Technology department and the Communication and Theatre Arts department. 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.

	Sem hours
Symbolics and communication	15
A course in written communication	
A course in speech communication	
ENGL 324 Principles of Technical Communication or CTAC 227 Interpersonal Communication or CTAC 374 Intercultural Communication or any course in foreign language composition	3
MATH 118 Mathematical Analysis for Social Sciences I	3
INDT 201 Microcomputer Applications in Technology or IS 215 End-User Computing ..	3
Science and technology	7-10
A course in physical science	
PSY 101 General Psychology	3
INDT 150 Understanding Technology	3
Social science	8-12
A course in US government	
A course in history	
ECON 201 Principles of Economics I	3
ECON 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	
CTAT 130 Introduction to Telecommunications and Film	3
CTAT 141 Introduction to Radio-TV-Film Production	3
CTAT 331 Fundamentals of Radio Production and Direction or CTAT 332 Fundamentals of Television Production and Direction	3
Transmission systems	
INTE 200 Industrial Electricity and Controls I 3	
INDT 305 Communication Transmission Systems ..	3
Computer technology	
COSC 238 Computer Science II	3
COSC 239 Assembly and Machine Language Programming	3
COSC 338 Computer Organization	3
COSC 435 Introduction to Microprocessors	3

Communication theory and practice	
CTAC 227 Interpersonal Communication	3
CTAC 354 Organizational Communication	3
Business and investment skills	
MKTG 360 Principles of Marketing	3
PSY 205 Quantitative Methods in Psychology ..	3
Management skills	
ACC 240 Principles of Accounting I	3
MGMT 202 Business Communications	3
Industrial technology	
INDT 121 Graphic Communication	3
INDT 231 Introduction to Computer Graphic Systems	3
INDT 387 Cooperative Education	3
INDT 409 Emerging Technologies in Storage and Retrieval	3
INDT 425 Communication Technology and Social Change	3
INDT 470 Senior Seminar in Communication Technology	2
Physical education and health	2
Physical education activity courses	
(Any two courses in military science may be applied.)	
Electives	11-22
Total	124

FACILITY MANAGEMENT CURRICULUM

Facility management is the practice of coordinating the workplace with the people and work of the organization; it integrates the principles of business administration, architecture, and the behavioral and engineering sciences. Students completing this curriculum have met major and minor requirements for graduation. This major is currently undergoing revision; changes will be announced by the department.

	Sem hours
Symbolics and communication	15
A course in written composition	
A course in speech communication	
An upper-level course in written composition ..	
A course in mathematical reasoning	
INDT 201 Microcomputer Applications in Technology	3
Science and technology	11
A course in physical science	
A course in life science (biology or psychology) 4	
INDT 150 Understanding Technology	3
Social science	12
See basic studies requirements, page 44.	

Arts and humanities	12
See basic studies requirements, page 45.	
Physical education	2
Any two courses in Military Science may be applied.	
Cross-cultural or international studies	
See basic studies requirements, page 46.	
Major in facility management	54
IDE 111 Human Factors and Special Needs	3
CNST 201 Construction Systems	3
INDT 202 Introduction to Facility Management ..	3
CNST 228 Construction Drawing	3
CNST 229 Analysis of Commercial Prints	3
INDT 230 Facility Operations and Maintenance ..	3
LAW 293 Legal Environment of Business	3
CNST 301 Planning and Scheduling	3
CNST 302 Contract Documents, Regulations, and Specifications	3
IDE 313 Space Planning and Specifications	3
IDE 364 Facility Management	3
INDT 387 Cooperative Education	3
CNST 401 Construction Estimating and Bidding ..	3
INDT 416 Managing Utilities, Lighting Systems, and Code Compliance	3
INDT 417 Computer Aided Facility Management ..	3
INDT 418 Building Automation Systems	3
INDT 432 Senior Seminar in Facility Management	3
IDE 469 Strategic Planning and Research for Facility Management	3
Minor in management	21
<i>Required</i>	
RES 210 Real Estate Principles and Practices ..	3
ACC 240 Principles of Accounting I	3
MKTG 360 Principles of Marketing	3
MGMT 386 Organizational Behavior and Theory ..	3
<i>Restricted Electives</i> (See management minor) 12	
Total	127

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 nondurable 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.

	Sem hours
Symbolics and communication	14-15
ENGL 121 English Composition	3
CTAS 121/124 Fundamentals of Speech	2-3
An upper level course in speech communication... 3	
MATH 118 Mathematical Analysis for Social Sciences I or MATH 170 Elementary Statistics	3
INDT 201 Microcomputer Applications in Technology	3
Science and technology	10-11
Physical science elective	
Life science elective	3
INDT 150 Understanding Technology	3
Social science	12
PLSC 112 American Government	3
A course in History	
ECON 201 Principles of Economics I	3
ECON 202 Principles of Economics II	3
Arts and humanities	12
A course in literature	
A course in cross-cultural or international studies ... 3	
A course in philosophy or religion	
A course in art, dance, music, or theatre arts .. 3	
Major requirements	45
INDT 240 Profit Strategies in Distribution	3
INDT 340 Relationships in Wholesaling	3
INDT 387 Cooperative Education	3
INDT 391 Wholesale Account Development	3
INDT 440 Inventory Strategies in Distribution ..	3
INDT 444 Quality Planning in Distribution	3
<i>Concentrations</i>	27
Students may select concentrations from many subject areas, including Industrial technology, management, marketing, or other with adviser approval. Note: No more than 30 semester hours may be taken by nonbusiness majors.	
Minor	21
Industrial distribution majors may take a minor. Most majors select marketing as their minor. However, other minors are available with adviser approval.	
<i>Marketing minor</i>	
ACC 240 Principles of Accounting I	3
MKTG 360 Principles of Marketing	3
MGMT 386 Organizational Behavior and Theory ..	3
<i>Four classes from:</i>	12
MKTG 261 Contemporary Selling, MKTG 364 Logistics and Materials Management, MKTG 368 Marketing Strategy, MKTG 374 Business to Business Marketing, MKTG 375	

International Business Transactions, MKTG 460 International Marketing, MKTG 461 Sales Management, MKTG 464 Purchasing Management

Physical education and health	2
Two semester hours of military science may be substituted for physical education.	
General electives	7
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.

Sem hours

Symbolics and communication	15
ENGL 121 English Composition	3
CTAS 121 Fundamentals of Speech	2
ENGL 324 Principles of Technical Communication ...	3
MATH 120 Calculus I	4
INDT 201 Microcomputer Applications in Technology	3
Science and technology	12
CHEM 121 General Chemistry I	3
CHEM 122 General Chemistry I Laboratory ...	1
BIOL 105 Biology and the Human Species	4
PHY 221 Mechanics, Sound, and Heat	4
Social science	12
PLSC 112 American Government	3
A course in history	3
ECON 201 Principles of Economics I	3
ECON 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
CHEM 123 General Chemistry II	3
CHEM 124 General Chemistry II Laboratory ..	1
MATH 105 College Algebra	3

MATH 107 Plane Trigonometry	2
PHY 222 Electricity and Light	4
CHEM 381 Instrumentation for Chemical Technology	2

Academic major in polymers and coatings technology

Required courses	44
CHEM 281 Quantitative Analysis	4
INDT 310 Polymers for Engineers and Technologists	3
CHEM 361 Fundamentals of Physical Chemistry ...	3
CHEM 371 Organic Chemistry I	3
CHEM 372 Organic Chemistry II	3
CHEM 373 Organic Chemistry Laboratory	2
INDT 387 Cooperative Education	3
INDT 400 Polymers and Coatings Technology I3	
INDT 401 Polymers and Coatings Technology I Laboratory	3
INDT 402 Polymers and Coatings Technology II ..	3
INDT 403 Polymers and Coatings Technology II Laboratory	3
INDT 405 Coating Processes I	3
INDT 460 Advanced Coatings Topics	3
INDT 479 Special Topics: Statistical Process Control in Coatings	3
Electives	10-11
Choose 10-11 credits from the following:	
CHEM 241 Materials Science, CHEM 340 Introduction to Industrial Chemistry, CHEM 415 Environmental Chemistry, CHEM 478 Special Topics, INDT 487 Cooperative Education, INDT 478, Instrumental Analysis of Coatings	
Physical education and health	2
Physical education activity courses (any two courses in military science may be applied)	
General Electives	5-6
Total	124

ACADEMIC MINORS

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
 - INDT 170 Aviation Ground Instruction 3
 - INDT 251 Basic Flight 2
 - INDT 261 Basic Flight II 2
 - INDT 271 Basic Flight III 2
 - INDT 341 Advanced Ground Instruction 3
 - INDT 351 Advanced Flight I 2
 - INDT 361 Advanced Flight II 2
 - INDT 371 Advanced Flight III 2
 - INDT 320 Aviation Safety, Accident Investigation, and Training 3
2. **Elective** 3

Select one course from the following:

 - INDT 110 Aircraft Maintenance I (3)
 - INDT 120 Flight Operations I (3)
 - INDT 303 Aviation Law and Insurance (3)
 - INDT 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
 - INDT 104 Introduction to Communication Technology 2
 - INDT 121 Graphic Communication 3
 - INDT 204 Photographic Communication 3
 - INDT 207 Photographic Reproduction 3
2. **Electives** 12
 - INDT 201 Microcomputer Applications in Technology (3)
 - INDT 304 Advanced Photographic Communication (3)
 - INDT 318 Graphic Arts Workshop (3)
 - INDT 404 Photo Communication Workshop (3)
 - INTE 231 Industrial Computer Graphics (3)
 - FA 165 Graphic Design for Nonmajors (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 Interdisciplinary Technology department, 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
 - COSC 136 Computers for the Nonspecialist or COSC 137 Introduction to FORTRAN Programming 3
 - INDT 150 Understanding Technology 3
 - HIST 290 Introduction to the History of Technology 3
 - INDT 308 Seminar in Technological Impacts... 3
 - INDT 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:

Subgroup A:

- BIOL 224 Principles of Conservation
- CHEM 415 Environmental Chemistry
- ECON 337 Energy Economics and Policies
- GEOG 215 Introduction to Urban and Regional Planning, GEOG 310 Energy Awareness, GEOG 440 World Food Systems
- SOCL 334 Population

Subgroup B:

- CTAT 446 Contemporary Problems in Telecommunications
- ECON 386 Technology and Economic Growth
- GEOG 100 Future Worlds, GEOG 235 Economic Geography, GESC 495 Environmental Assessment and Planning
- INDT 420 Women and Technology
- INDT 201 Microcomputer Applications in Technology
- PHIL 380 Philosophy of Science
- PLSC 381 Public Policy Analysis, PLSC 382 Politics and the 21st Century
- PSY 350 Environmental Psychology, PSY 351 Industrial Psychology
- SOCL/ANTH 336 Social and Cultural Change, ANTH 379 Special Topics: Contemporary Issues in Developing and Modern Technological Societies, SOCL 307 Industrial Sociology

INTERDISCIPLINARY TECHNOLOGY COURSES**INDT 100 Introduction to Air Transportation. 3 hrs**

This course is designed to provide a basic understanding of the operational categories within civil aviation and the functions of state and federal government in its control and regulation. The history, scope, and diverse nature of aviation will be discussed, together with some of the many occupational opportunities available.

INDT 104 Introduction to Communication Technology. 2 hrs

An introduction to the field of communication technology. Communication theory and the graphic and telecommunication industries. Lecture: two hours per week.

INDT 110 Aircraft Maintenance I. 3 hrs

The functions and roles of maintenance personnel in an aviation maintenance organization structure. Lecture: three hours per week.

INDT 120 Flight Operations I. 3 hrs

The role of aviation in general aviation and the interface with regulatory agencies and parent organizations. Lecture: three hours per week.

INDT 121 Graphic Communication. 3 hrs

Preparation and design of graphic media. The theory and application of effective communications. Information collection, analysis, and dissemination; survey of the graphic communication industry. Lecture: two hours per week. Laboratory: two hours per week.

INDT 150 Understanding Technology. 3 hrs

A course to develop basic technological literacy by providing an introduction to technological concepts and problems and to the technology literature. Several concrete technological systems and their dynamics, particularly as they relate to society.

INDT 170 Aviation Ground Instruction. 3 hrs

Basic ground instruction in aerodynamics, navigation, federal aviation regulations, meteorology, and flight procedures directed toward preparation for the private pilot written examination.

INDT 177/178/179 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

INDT 201 Microcomputer Applications in Technology. 3 hrs

An introduction to microcomputers and their applications in technology. The course contains an introduction to word processing, spreadsheets, database management, and their applications.

Prereq: Basic keyboard skill is recommended; BEDU 119 is suggested.

INDT 202 Introduction to Facility Management. 3 hrs

The student will gain an overview of the facility management profession. The following topics will be introduced: history of the facility management profession, organizational structure, property management, facilities planning, maintenance and operations, managing support services, managing construction projects, strategic planning and budgeting, and conducting a facilities audit.

INDT 204 Photographic Communication. 3 hrs

Basic functions, principles, and applications of photography in graphic communication. Lecture: two hours per week. Laboratory: two hours per week. Students must furnish their own camera and photo materials.

INDT 205 Photo-Technology. 2 hrs

The applications of light sensitive materials used in industry to include photo-drafting, photofabrication. Lecture: one hour per week. Laboratory: two hours per week.

Prereq: INDT 121 and a chemistry course.

INDT 207 Photographic Reproduction. 3 hrs

Study and laboratory work in photomechanics, stripping, and platemaking as applied to offset presswork. Includes the preparation of layout materials for printing. Lecture: one hour per week. Laboratory: two hours per week.

Prereq: INDT 104 or INDT 121.

INDT 210 Aircraft Maintenance II. 3 hrs

The functions and organization of an aircraft maintenance facility and role of the supervisors within that structure. Lecture: three hours per week.

Prereq: INDT 110.

INDT 214 Rubber Technology I. 2 hrs

Lectures and laboratory experiments on the fundamentals of rubber chemistry, compounds and processing technology, and rubber testing methods.

Prereq: High school or college course in chemistry, or approval of instructor.

INDT 220 Flight Operations II. 3 hrs

In-depth study of the functions and organization of operations and the relationship with the other departments within an aviation organization.

Prereq: INDT 120.

INDT 230 Facility Operations and Maintenance. 3 hrs

This course provides the student with an introduction to the operation and maintenance of facility systems. These systems include: heating, ventilation, and air conditioning; elevators; grounds; building exterior and roof; interior walls and floors; plumbing; electrical; telecommunications; fire safety; and security.

Prereq: INDT 202, CNST 229.

INDT 231 Introduction to Computer Graphic Systems.

3 hrs

Students are provided with opportunities to work on a variety of CAD and paint systems. Students will learn terminology for graphics hardware and software, write short graphics programs, and explore applications of graphics to their own field of study. Course does not count for CAD majors. Lecture and laboratory course.

INDT 240 Profit Strategies in Distribution. 3 hrs

Explanation of the terms related to profits and markup, calculation of profit, discounts, markups, identification and interpretation of profitability ratios, and the distribution of financial resources.

Prereq: INDT 140.

INDT 250 Wire Technology I. 3 hrs

The fundamentals of wire manufacturing, steel production, wire joining, cleaning, descaling, coating, drawing, cooling, and lubrication. Lecture and demonstration. No previous wire manufacturing knowledge required.

INDT 251 Basic Flight. 2 hrs

The student will receive dual instruction in preflight procedures, ground reference maneuvers, takeoff, and landings, power-off and power-on stalls, local flight operations, and precision flight maneuvers. Remaining hours will be solo flight.

Prereq: INDT Student Pilot Certificate and Class II or III Medical.

INDT 255 Emergency Preparedness Planning. 3 hrs

An introduction to emergency planning, including assessment of community hazards and resources, for students responsible for civil defense or emergency pre-

paredness tasks. Provides a planning and analytical framework, hazard/vulnerability analysis, that can be applied to the local comprehensive emergency management context.

INDT 261 Basic Flight II. 2 hrs

The student will receive dual instruction and solo practice in extended cross-country flight operations, flight proficiency maneuvers, and all phases of flight specified by the Federal Aviation Administration. The student will be prepared to take the oral and flight examination for the Private Pilot Certificate.

Prereq: INDT 251.

INDT 271 Basic Flight III. 2 hrs

The student will receive an introduction to commercial maneuvers and instrument flying techniques, including dual instruction and solo practice in areas of ground reference maneuvers, flight precision maneuvers, radio navigation, and special cross-country flight operations.

Prereq: INDT 261.

INDT 277/278/279 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

INDT 303 Aviation Law and Insurance. 3 hrs

Overview of legal considerations in general aviation, government agencies exercising control, regulations, laws, advisory information, and insurance requirements and considerations.

INDT 304 Advanced Photographic Communication.

3 hrs

Photographic theory and techniques, with particular emphasis upon commercial and industrial applications. Lecture: two hours per week. Laboratory: two hours per week. The student must furnish a camera and photo materials.

Prereq: INDT 204.

INDT 305 Communication Transmission Systems.

3 hrs

Consideration of source, encoder (transmitter), channel, and receiver functions. Principles of line communication, a study of various systems, and future developments in communication transmission systems.

INDT 308 Seminar in Technological Impacts. 3 hrs

An undergraduate level introduction to technology assessment. Development of skills related to forecasting technological inventions and assessing their effect if adopted by society.

INDT 310 Polymers for Engineers and Technologists. 3 hrs

Introduction to polymer science, polymerization, polymer modifications, size and weight of polymer molecules, plastics, adhesives, silicones, foams, surface coatings, fibers, elastomers, transitions, and relaxations in polymers, theology, polymer fabrication techniques.

INDT 313 Aviation Industry Regulations. 3 hrs

The major significance of aviation regulations and policies including the development and enforcement of federal aviation regulations will be presented. The major elements of managing an aviation operation within the guidelines of international and federal aviation industry regulations together with the influence of local and state requirements will be presented.

INDT 315 Airport Management. 3 hrs

The major elements in the process of planning and managing airports are presented, including federal airport policy, the airport master planning process, capacity analysis, site selection, and funding. The historical development of and current practices in airport administration, operations management, maintenance, and safety will be presented.

INDT 318 Graphic Arts Workshop. 3 hrs

Selected topics in the field of graphic arts technology, such as composition, press work, screen process, and advanced photomechanics. May be repeated for additional credit.

Prereq: INDT 207 or department permission.

INDT 320 Aviation Safety, Accident Investigation, and Training. 3 hrs

In-depth study of aviation safety (flight and ground); accident prevention, accident investigation, and personnel training.

Prereq: INDT 170.

INDT 340 Relationships in Wholesaling. 3 hrs

Analysis of major industries and professional trade associations and their interaction within the marketing channel. Emphasis will be placed on the relationship

between trade associations and industry, elements of the marketing channel (manufacturer, distributor, customer, and the employer and employee).

Prereq: INDT 140 and INDT 240.

IDT 341 Advanced Ground Instruction. 3 hrs

Advanced ground instruction in aerodynamics, navigation regulations, and procedures directed toward preparation for the instrument rating and commercial pilot written examinations.

Prereq: IDT 170.

INDT 350 Wire Technology II. 3 hrs

An intermediate course designed to study contemporary concepts and practices of wire manufacturing.

Prereq: INDT 250 or approval of instructor.

INDT 351 Advanced Flight I. 2 hrs

The student will receive dual instruction and solo practice in advanced cross-country navigation, commercial maneuvers, and an introduction to instrument flying techniques.

Prereq: INDT 271.

INDT 361 Advanced Flight II. 2 hrs

The student will receive dual instruction and solo practice in commercial flight maneuvers and instrument flight procedures, including instrument approaches, holding patterns, and partial panel procedures.

Prereq: INDT 351.

INDT 371 Advanced Flight III. 2 hrs

The student will complete the dual instruction and solo practice in all phases of flight training specified by the Federal Aviation Administration for the insurance of the Commercial Pilot Certificate and the instrument rating. The student will complete the oral examinations and flight tests required for this certificate and rating.

Prereq: INDT 361.

INDT 377/378/379 Special Topics. 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once provided different topics are studied.

Prereq: Department permission.

INDT 380 Planning and Decision-Making for Public Safety. 3 hrs

The study of planning and decision-making techniques as applied to public safety operations; includes atten-

tion to concepts, e.g., the process of change in organizations, as well as particular skills and techniques; e.g., PERT, decision trees.

INDT 381 Public Relations and Public Safety. 3 hrs
An examination of the relationship between public safety agencies and the larger community, with particular emphasis on administrative and policy dimensions; the role of public safety agencies, the community's involvement in establishing that role, police-community relations programs, relationships with the media, and professionalization and accreditation movements in public safety agencies are addressed.

INDT 387 Cooperative Education. 3 hrs
A minimum of three to four months of full-time employment in a business or industry that provides experiences directly related to the major area of study. Work sites must be approved in advance by the Interdisciplinary Technology department. Regular employee benefits may be received during the employment period.
Prereq: Department permission.

INDT 391 Wholesale Account Development. 3 hrs
An in depth study into the processes and techniques involved in acquiring and developing industrial accounts from the distributor's and the manufacturer's point of view. The course will develop practical and effectual skills in the area of advanced industrial wholesale account development. Guest lectures by manufacturers representatives and from purchasing agents will augment the course.
Prereq: INDT 240 and INDT 340.

INDT 400 Polymers and Coatings Technology I. 3 hrs
Introduction to synthesis, film formation, structure, and properties of polymers commonly used in coatings. Polymer systems to be covered include acrylic, vinyls, polyesters, alkyds, oils, epoxies, epoxyesters, aminoplasts, urethanes, phenolics, hydrocarbons, cellulose.
Prereq: CHEM 270, 271.

INDT 401 Polymers and Coatings Technology I Laboratory. 3 hrs
Synthesis, characterization, and identification of polymers used in coatings. The synthesis of solution acrylic, vinyl, acrylic emulsion, polyester, alkyd, epoxyester, melamine formaldehyde, and urethane polymers with extensive use of physical techniques such as GIRT, GP, and calorimetry.
Coreq: INDT 400.

INDT 402 Polymers and Coatings Technology II. 3 hrs
Formulation in oil-based and waterborne coatings covering the use of solvents, pigments, and additives. Principles of adhesion and corrosion and the use of conversion coatings. Safety, health, government regulations, and paint production techniques.
Prereq: INDT 400.

INDT 403 Polymers and Coatings Technology II Laboratory. 3 hrs
Practical formulation in oil-based and waterborne systems including the preparation and evaluation of various topcoats and primers currently used in the coatings industry (e.g., oil based air dry enamel, thermosetting coating, epoxyester primer, two package urethane, acrylic latex, and ED primer).
Coreq: INDT 402.

INDT 404 Photo Communication Workshop. 3 hrs
Selected topics in photo communications, such as commercial and industrial photography, photo journalism, sensitometry and photography, photo journalism, and sensitometry and photo processing. The class schedule describes the specific topic being offered during a given semester. May be repeated for additional credit.
Prereq: INDT 304.

INDT 405 Coating Processes I. 3 hrs
Development of expertise in industrial coating processes. Substrate preparation, principles of adhesion, corrosion control, industrial coating materials, industrial coating systems, and regulatory compliance in the coatings industry.
Prereq: INDT 310 or INDT 400, or department permission.

INDT 406 Coatings Processes I Laboratory. 3 hrs
Hands-on experience in industrial coating processes. Substrate preparation, coatings application, and industrial coating systems design and operational control.
Coreq: INDT 405.

INDT 407 Coating Processes II. 3 hrs
Processes and equipment for coatings application, economic analysis of coating operations, paint defects, and line design for productivity and energy conservation.
Prereq: INDT 405 or department permission.

INDT 409 Emerging Technologies in Storage and Retrieval. 3 hrs

Conventional as well as emerging technologies of information storage and retrieval. Lecture and laboratory.

INDT 410 Mechanical and Physical Properties of Polymers. 3 hrs

Detailed study of the mechanical and physical properties of polymers from both theoretical and practical viewpoints. Polymer morphology, transitions and relaxations in polymers, mechanical properties of high polymers, reology and their relationship to polymer fabrication processes.

Prereq: INDT 310 or department permission.

INDT 411 Mechanical and Physical Properties of Polymers Laboratory. 1 hr

A laboratory course designed to supplement lecture material from INDT 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: INDT 410.

INDT 413 Computers in Aviation. 3 hrs

Applications of computers in aviation at various levels of hardware and software complexity. Basic programs appropriate to aviation operations and maintenance control.

Prereq: INDT 201.

INDT 414 Rubber Technology II. 2 hrs

Special topics related to rubber compounding, processing and testing, and problems in specific applications of rubber products. Guest lecturers, students and staff will cover topics.

Prereq: INDT 214 or department permission.

INDT 416 Managing Utilities, Lighting Systems, and Code Compliance. 3 hrs

This course covers utility rate structures and their effect on building operation strategies, building code requirements, and managing lighting systems for cost efficiency and code compliance.

Prereq: INDT 201, INDT 202, INDT 230.

INDT 417 Computer Aided Facility Management. 3 hrs

This course teaches the student how to use software which is dedicated to managing facilities.

Prereq: INDT 201, INDT 202, INDT 230, CNST 229, IDE 313.

INDT 418 Building Automation Systems. 3 hrs

This course teaches the student how computerized control systems work in a building. The principal systems covered will be: heating, ventilation, and air conditioning control; lighting systems—switching and dimming; elevators—optimum scheduling; security—access control and monitoring; and fire safety—air flow controls, alarms, sprinklers.

Prereq: INDT 201, INDT 230.

INDT 420 Women and Technology. 3 hrs

This course surveys gender issues surrounding technology development, transfer, and use. We will examine these issues from historical, contemporary, and global perspectives.

INDT 421 Photographic Typesetting. 3 hrs

Study of the fundamentals of phototypesetting technology. Document preparation, keyboard entry, file manipulation, and typeset copy output will be covered as well as word processor interfacing. Two hour lecture, two hour lab.

INDT 422 Senior Seminar in Aviation Management.

3 hrs

Current issues in aviation management will be explored using group and individual projects and analysis of case studies. Research, analysis, and application of skills and knowledge acquired in other coursework will be stressed.

Prereq: Department permission.

INDT 425 Communication Technology and Social Change. 3 hrs

The social implications of recent and future developments in communication technology. The effects upon education, research and scientific knowledge, business, and entertainment.

INDT 430 Senior Seminar in Energy Management Technology. 3 hrs

Projects coordinated with local firms to give the student practical experience. Selected topics not covered in previous courses.

IDT 431 Aviation Facilities. 3 hrs
The design of new aviation facilities and the retrofit of existing facilities to meet short and long term requirements of aviation operations.

INDT 432 Senior Seminar in Facility Management. 3 hrs
This course is a capstone experience which considers and integrates special problems in facility management.
Prereq: IDE 364, INDT 416, senior standing, completed or concurrent co-op.

INDT 433 Arson Investigation. 3 hrs
An examination of the nature and causes of suspicious and incendiary fires, their detection, and investigation; involves classroom lecture and field training. Students will conduct fire scene investigations, collect evidence, document findings, and participate in a mock trial. Assumes no previous experience in fire investigation. Students must provide own 35mm camera, safety shoes, gloves, and hard hat.
Prereq: CHEM 119 or PHY 221.

INDT 434 Hazardous Materials. 3 hrs
An examination of hazardous material incidents from the perspective of the public safety officer/manager charged with protecting people and property; identifying hazardous materials, assessing hazardous material accidents, planning and tactics for addressing hazardous material problems.
Prereq: CHEM 119 or PHY 221.

INDT 435 Incident Command. 3 hrs
The study of complex fire situations, including analysis of prefire planning, establishing and managing the command post, and effective management of complex fireground operations. Emphasizes the study of multiple company response and the efficient utilization of available and prospective resources in handling major fires.
Prereq: PLSC 450 or department permission.

INDT 436 Electronic Publishing Technology. 3 hrs
The application of electronic design and layout principles to publication and presentation documents. Develop skills in graphics, type, file creation and manipulation, word processing interface, and output of paginated, camera-ready copy through several software packages.

INDT 437 Aviation Cabin Safety. 2 hrs
The major elements of aircraft cabin safety, including the requirements for air carrier operations, will be presented in accordance with the requirements of the Federal Aviation Regulations. Topics will include emergency equipment, accident reviews, human factors, crew assignments and procedures, decompressions, fire fighting, ditching, land and water evacuations, hijacking and unusual situations, in-flight medical, passenger handling, safety briefings, leadership, and emergency commands.
Prereq: INDT 320 and INDT 422, or department permission.

INDT 440 Inventory Strategies in Distribution. 3 hrs
An examination of the wholesale inventory management problem. The interrelationship between physical inventory, profitability, and customer service will be explored.
Prereq: INDT 391.

INDT 444 Quality Planning in Distribution. 3 hrs
Wholesale distributors are moving toward a total commitment to the philosophy of continuous improvement with zero errors as their ultimate goal. The course explores the Quality Assurance movement as it applies to wholesalers.
Prereq: INDT 442 or permission of instructor.

INDT 450 Advanced Coatings Topics III. 3 hrs
Advanced wire technology; in-depth study of wire in manufactured products.
Prereq: INDT 350 or permission of instructor.

INDT 460 Advanced Coatings Topics. 3 hrs
Development of in-depth formulating skills; new technology areas in coatings and polymers.
Prereq: INDT 402, INDT 403, or department permission.

INDT 470 Senior Seminar in Communication Technology. 2 hrs
Guest speakers and/or site visitations will be used to illustrate the application of new communication technologies common to business, industrial, or governmental environments.

INDT 475 Managing Correctional Agencies and Facilities. 3 hrs

A study of administrative practices in correctional agencies and facilities, including attention to organization structure, management problems, financing, rights of offenders, intervention strategies, and community-based programs.

Prereq: PLSC 450 or department permission.

INDT 477/478/479 Special Topics. 1/2/3 hrs

An examination of topics in interdisciplinary technology not covered in other departmental offerings. Students may elect these courses more than once as long as different topics are studied.

Prereq: Department permission.

INDT 487 Cooperative Education. 3 hrs

A minimum of three to four months of full-time employment in a business or industry that provides experiences directly related to the major area of study. Work sites must be approved in advance by the Interdisciplinary Technology department. Regular employee benefits may be received during the employment period.

Prereq: Department permission.

INDT 495 Technology, Values, and the Future. 3 hrs

The development of modern technological society: major breakthroughs in the physical and life sciences, the influence of some of these breakthroughs on technological development, the consequent shaping of new world views and hence, values in contemporary and future societies. Interrelationships between technology and political, socioeconomic, and environmental systems; the relationship between technology and values.

INDT 497/498/499 Independent Study. 1/2/3 hrs

Individual work in some area of interdisciplinary technology under the direction of a faculty member. Preliminary draft of proposed study must be approved by the department prior to enrollment. May be selected more than once, after resubmission and approval.

Prereq: Department permission.

MILITARY SCIENCE

Lt. Col. David R. Klubeck
Department Head
18 Roosevelt Building
487-1020

Assistant Professors: Maj. Sean M. Brunetti, Capt. Peter J. White, Capt. Larry Chirio

The military science program provides students with 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 as an officer 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 \$150 per month subsistence allowance is paid for each school month during the period of the scholarship. Application can be made by contacting the Military Science department 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 MILT 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 MILT 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 \$300 per month. SMP is an excellent opportunity to learn applied management skills.

Veterans can qualify for advanced placement credit directly into MILT 300. Applicants should contact the department for acceptance into MILT 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, MILT 300 and 400 participants receive \$150 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 \$150 per month pay in addition to any other veterans benefits they are receiving.

Programs of Study

Minor:

A Military Science minor can be attained by completing Military Science 100, 101, 200, 201, 300, 301, 400 and 401.

Advising Coordinator: **Capt. Larry Chirio**

Special Requirements

Admission into the advanced program (MS 300, 301, 400 & 401) 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, and pass the army physical fitness test.

The fieldwork 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 an academic advisor within the department of their declared major.

ACADEMIC MINOR

Minor in military science 20

Required courses

	Sem hours
MILT 100 Fundamentals of Leadership and Management I	2
MILT 101 Fundamentals of Leadership and Management II	2
MILT 200 Applied Leadership and Management I ..	2
MILT 201 Applied Leadership and Management II ..	2
MILT 300 Advanced Military Leadership and Management I	3
MILT 301 Fundamentals and Dynamics of the Military Team I	3
MILT 400 Fundamentals and Dynamics of the Military Team II	3
MILT 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.

MILITARY SCIENCE COURSES

MILT 100 Fundamentals of Leadership and Management I. 2 hrs

An introduction to the US defense establishment with emphasis on the role and structure of the US Army. Students also participate in adventure mini-courses (rappelling, rifle marksmanship, etc.)

MILT 101 Fundamentals of Leadership and Management II. 2 hrs

An introduction to the role of the army officer, ethics, professionalism, leadership traits, and principles. As a part of the course, students receive a mini-course in first aid and land navigation.

MILT 200 Applied Leadership and Management I. 2 hrs

An introduction to basic military leadership skills to include: map reading, communications, military briefings, physical training, and individual leadership skills.

MILT 201 Applied Leadership and Management II. 2 hrs

A continuation of MILT 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.

MILT 300 Advanced Military Leadership and Management I. 3 hrs

Techniques of leadership and management with emphasis on the role of the small unit leader as a teacher. Theory and application of basic military skills: topography, close order drill, and weaponry.

MILT 301 Fundamentals and Dynamics of the Military Team I. 3 hrs

An examination of the leader's role as an organizer, decision-maker, and leader of a military team. Small unit leadership studied from the perspective of mission, capabilities, and management. Prepares students for the advanced summer camp experience.

MILT 302 Leadership Laboratory.

Conducted for both semesters of the 300-level courses. Field application of classroom theories and studies. Physical abilities strengthened and tested. All areas of classroom instruction, drill, military skills, leadership, and physical aptitude.

MILT 400 Fundamentals and Dynamics of the Military Team II. 3 hrs

The organization and functioning of command and staff in army organizations. The essentials of military correspondence, communications, and training.

MILT 401 Advanced Military Leadership and Management II. 3 hrs

The essentials of the army personnel and logistics management systems. An in-depth examination of ethics and professionalism as they apply to the military officer. Case study of small unit combat leadership.

MILT 402 Leadership Laboratory

A two-semester practicum conducted concurrently with 400-level courses. Exercise of organizational and leadership theory to which the student has been exposed. The cadet battalion command and staff structure is used as a vehicle to provide practical experience in the processes of leadership.

MILT 497/498/499 Independent Study. 1/2/3 hrs

Intensive study or project approved by the department head. Study or project is directly related to a military subject.

Prereq: Department permission.

CONTINUING EDUCATION

PAUL T. MCKELVEY, DEAN
NEETA M. DELANEY, DIRECTOR – SPECIAL PROGRAMS
GEORGE J. KLEIN, DIRECTOR – ACADEMIC PROGRAMS ABROAD
321 GOODISON HALL
487-0407 OR (800) 777-3521

PROGRAM AREAS

ACADEMIC PROGRAMS ABROAD
ADVENTURES IN EDUCATION
INDEPENDENT STUDY (DISTANCE EDUCATION)
REGIONAL LEARNING CENTERS
WEEKEND UNIVERSITY

CONTINUING EDUCATION

Paul T. McKelvey

Dean

304 Goodison Hall

487-0407 or (800) 777-3521

Continuing Education offers flexible, innovative, and exciting credit course and program options available to all EMU students. This includes full or part-time, residential or commuter, graduate or undergraduate. Courses offered through Continuing Education are available at times, locations, and in formats that are convenient for students balancing a full- or part-time job, co-curricular activities, and/or family responsibilities with their college education. Credit earned in Continuing Education courses and programs is regular university academic credit.

Course Listings

Each semester, Continuing Education publishes a Course Bulletin listing the courses available that semester. These bulletins are available at the Continuing Education Student Information Center in 321 Goodison Hall and in display racks in various locations around the EMU campus. Since some courses are scheduled after the Course Bulletin is published, you may also want to stop by the office to check the course listing update posted in the hallway. You can also call 487-0407 with questions about the availability of a particular course.

As with all EMU courses, your academic adviser is the person best equipped to guide you and answer specific questions about which courses will meet the requirements of your program of study.

SPECIAL PROGRAMS AND SERVICES

ACADEMIC PROGRAMS ABROAD

George J. Klein

Director

332 Goodison Hall

487-2424 or (800) 777-3541

E-mail: programs.aboard@emich.emu

In today's interconnected world, a global perspective is increasingly important and valuable for a student's personal growth and professional career. The Office of Academic Programs Abroad provides opportunities for students to diversify and enrich their university education through several kinds of study abroad

programs. Students earn Eastern Michigan University credit and may apply any EMU grants, scholarships, or loans toward the cost of the program.

Semester-Long Programs:

- 1) The European Cultural History Tour, offered fall semester, is a unique travel-study program that includes more than 40 cities in 16 countries throughout Europe, Russia, and the Mediterranean. Students and EMU professors visit major historic and cultural sites while pursuing in-depth academic studies in an interdisciplinary context. Up to 15 hours of credit are available in history, art, literature, and political science. Since its beginning in 1974, ECHT has grown to become one of the largest university-sponsored programs of its kind in the country, drawing students from EMU as well as other colleges and universities throughout the United States and Canada. ECHT is also offered in summer.
- 2) The Asian Cultural History Tour, offered winter semester, follows the travel and academic format of the European Cultural History Tour. It visits more than 40 cities in 11 Asian countries, including China, India, Nepal, Indonesia, and Thailand. Up to 15 credit hours are available in history, art, comparative religion, and political science, taught in an interdisciplinary context. In addition to studying the traditional cultures of Asia, participants focus on the contemporary problems of developing Asian countries.
- 3) An exchange program with the **University of Groningen in The Netherlands** brings Dutch students to the Eastern Michigan University campus and sends EMU students to The Netherlands. The core curriculum reflects The Netherlands' central location in Europe and the importance of internationalization as it offers a variety of courses focusing on The Netherlands and on Europe. Courses in the Dutch Studies Program are designed for international students and taught in English. Classes, such as political science and literature, are also offered in English by regular university departments. Participants live in university housing and get to know students from all over the world, mainly Europe. Tuition and housing costs are equivalent to a semester at EMU.
- 4) The **International Student Exchange Program (ISEP)** allows EMU students to choose from over 100 institutions in Europe, Asia, Africa, and Central and South America to spend a semester or a year,

while bringing students from these institutions to the EMU campus. ISEP offers the opportunity for total immersion as participants take classes and live like a local student at the host university. Classes are available in almost any field, including business, education, and science, taught both in English and in a number of foreign languages. Participants pay tuition and fees, room and board, health insurance, and a program fee directly to EMU so it is very affordable.

Summer Intensive Language Programs:

Intensive French, German, Spanish, and Japanese language programs are available in Canada, Mexico, Austria, and Japan respectively, in settings of cultural immersion. Classes are taught by host country instructors, with additional instruction and supervision by EMU faculty. All levels of instruction are available.

Other Summer Programs:

A version of the European Cultural History Tour is available in summer, along with a variety of travel and residence programs that carry credit in such fields as art, business, economics, education, history, political science, and social work. These study abroad programs have taken students to countries in Europe, Africa, Asia, and Latin America. Contact the Office of Academic Programs Abroad for current program details.

Additional Study Abroad Opportunities:

Eastern Michigan University students may also attend study abroad programs offered by other universities and transfer the credit back to EMU. A study abroad adviser is available to assist students in a number of ways: finding a program to suit their individual areas of interest, arranging for transfer of credit, and applying for financial assistance. Students are encouraged to take advantage of the library in the Office of Academic Programs Abroad, which houses information on hundreds of study abroad opportunities.

ADVENTURES IN EDUCATION

Karen Cline

Coordinator

325 Goodison Hall

487-0407 or (800) 215-3350

Adventures in Education programs are all built around the concept of intensive (1 to 2 weeks) shortened courses offered in beautiful resort-like or *adventurous* settings appropriate or relevant to the course content. Most Adventures in Education programs are held in the summer months or during other traditional breaks in the academic year. The students who take advantage of these programs do not fall into a stereotype. They include adult learners, traditional age undergraduates, teachers, and other seasoned professionals from many fields. The diversity of participants is a strength of the Adventures programs. For more information, call 487-0407 local or (800) 777-3521 toll free.

INDEPENDENT STUDY

(DISTANCE EDUCATION)

Michael McPhillips

Coordinator

327 Goodison Hall

487-1081

E-mail: distance.education@emich.edu

The Independent Study Program allows you to enroll anytime and earn university credit without classroom attendance. The time limit for course completion is six months. When you register for a course through our Independent Study Program, you receive study guides, instructions, and all required assignments. In addition, all courses incorporate audio and/or video materials. Assignments, papers, and proctored exams are an integral part of each course. Courses are academically rigorous; students on probation should not enroll. For course listings and additional information, contact the Independent Study Office by phone or e-mail.

REGIONAL LEARNING CENTERS

In order to make it more convenient for individuals to take courses through Eastern Michigan University, Continuing Education offers a wide range of courses at a number of off-campus locations. These courses are coordinated through three EMU Continuing Education Regional Learning Centers located in Detroit, Flint, Jackson, and Traverse City and are listed in the Continuing Education Course Bulletin. Registration for these courses is no different than for any other course. See the Course Bulletin for details. For more information, you can either call the Regional Center directly or our main campus office at (800) 777-3521 long distance or (313) 487-0407 local.

Regional Learning Centers

Detroit: (313) 831-5280

Flint: (810) 762-0303

Traverse City: (616) 922-1750

Jackson: (517) 787-7265

WEEKEND UNIVERSITY

Arthur Hoover

Coordinator

321 Goodison Hall

487-0407

Continuing Education's Weekend University program offers a wide range of undergraduate and graduate courses scheduled on the weekend. All Weekend University courses are held either on EMU's main campus or at the EMU Corporate Education Center. Among the many Weekend University offerings is a Weekend MBA program, Graduate Certificate in Business Administration and a second Bachelor's Legal Assistant Program all designed to meet the needs of students already in the workplace. For information about the Weekend University, call (313) 487-0407. For information about the Weekend MBA program, call the College of Business at (313) 487-4444.

For more information about EMU Continuing Education in general or about any of the specific programs or services, either call the appropriate numbers listed with each special program or the main office at (800) 777-3521 long distance or (313) 487-0407 local.

OFFICES, OFFICERS, AND OTHER
CAMPUS DEPARTMENTS
AND LOCATIONS

THE GRADUATE SCHOOL
UNIVERSITY ADVANCEMENT
STUDENT REFERENCES
UNIVERSITY CAMPUSES
ATHLETIC FIELDS
ADMINISTRATIVE OFFICERS
FACULTY AND STAFF
EMERITUS FACULTY

THE GRADUATE SCHOOL

Ronald E. Goldenberg
Dean
Starkweather Hall
487-0042

The Graduate School 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.

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 (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 so earned may be used for only one of two purposes:
 - a. to meet the requirements of the baccalaureate degree, thus receiving undergraduate credit;
 - b. to apply toward a master's degree, thus receiving graduate credit.
4. Permission to enroll in graduate courses as an advanced undergraduate should not prolong 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 desiring 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 examination scores 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 priority admittance to most degree programs 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 processed in the order received or moved to a subsequent semester; i.e., an application for fall semester received April 1 will be processed for winter semester, based on program requirements. All documents and supporting data required for admission 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 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 standardized examinations, 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

The purpose of graduate study at Eastern Michigan University is a planned program of study leading to an advanced degree. Students who are exploring graduate study opportunities may enroll in a non-degree status. Non-degree students may enroll under this status for any of the semesters or sessions (fall, winter, spring or summer). Students can apply to transfer from non-degree student status to degree status if they meet departmental and Graduate School requirements (see Transfer of Credit to Degree Programs from Non-Degree Student Status). **Policy states that a student must complete a minimum of 10 semester hours after admission to the degree program.** Subject to University policy, non-degree students can earn a graduate certificate in such programs as artificial intelligence, gerontology, quality, 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: Professional Certification are non-degree admission statuses granted to those seeking certification or to those who are already 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 courses to meet provisional and professional certification requirements. The academic courses that are elected via the non-degree admission status do not follow a prescribed graduate degree program and do not earn the student a graduate degree. Students seeking Provisional certification must hold a bachelor's degree from an accredited institution and have a minimum grade point average of 2.5 at the time of application. Conditional admissions are not allowed for this status.

Status 3: Continuing Education Division Enrollment is a non-degree admission status granted to students who enroll in courses through Continuing Education. Courses taken under this non-degree admission status do not automatically apply to a graduate degree. **Students who wish to use graduate-level courses offered through Continuing Education on a degree program must first seek formal admission to a graduate degree program by completing a Graduate School admission application and meeting all admission requirements of the program and university. The applicability of the courses to a degree program is subject to acceptance by and recommendation of the department offering the degree, and the approval of the Graduate School.**

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. A stipend (salary) is paid; the amount depends upon the terms of employment. 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, and regular fees.

The total assistantship package varies in value 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 assistantships may apply through the Graduate School.

A limited number of assistantships are funded through the Work-Study Program. Interested students should contact their major area department head or the Graduate School. Students need to submit the graduate assistantship application material, as well as the free application for federal student aid.

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. Applications are available in the Graduate School.

The part-time and full-time graduate fellowship program is an honor awarded to selected graduate students for academic merit. The award is a \$500 tuition waiver per semester (fall and winter) for part-time with the provision that *the fellow must enroll in and complete at least six credit hours of graduate level course work in each of the semester of the award. Full-time fellows can receive up to \$4,000 per academic year and must be registered for a minimum of eight credit hours per semester of the award.* Undergraduate courses taken for graduate credit are *not* considered part of the required hours.

Both new and continuing graduate students may apply for graduate fellowships. New graduate students must present a minimum 3.6 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.

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 receive part-time fellowships, but can be considered for full-time fellowships.

Applications are available in the Graduate School, Starkweather Hall.

The Graduate Deans' Award for Research Excellence is a \$250 cash award made in the fall and winter semesters to reward excellence in the thesis project.

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 are in the final stages of completing, or have completed the thesis, and are in good academic standing are encouraged to apply.

The major criterion for the award is the exhibition of superior initiative and quality 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 School, Starkweather Hall.

The Barton Scholarship is a one-time competitive award of up to full 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 under-

graduate 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. Check with the Graduate School for applications and additional information.

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 FOR ALUMNI RELATIONS

George G. Beaudette
Director
15 Welch Hall
487-0250

Alumni are Eastern Michigan University's lifeline to every community in the state of Michigan, to business and industry across the country, and to the world-at-large. The continuing interest of graduates and former students is a major investment in the progress and future of EMU.

The Office for Alumni Relations is the coordinating body for all alumni activity and the means by which personal relationships established during student days can be maintained and renewed.

It is responsible for updating the computerized list of 87,000 known alumni, assisting in special reunions of various constituent groups of alumni, providing programs for special alumni meetings and giving staff support to the Alumni Association and various other alumni groups. Special activities include Homecoming, a yuletide program, a dinner dance honoring distinguished alumni, golf outings, concerts and other periodic activities.

In August 1983, it initiated a new alumni periodical, *Eastern Today*, published annually 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 monthly (academic year) newsletter *Connection* was added in 1992.

The Alumni Association plans programs of interest for alumni and serves as the vehicle for communicating to the University faculty and administration the concerns of EMU's alumni as they relate to the development of the University.

Active in fund raising campaigns, the association is responsible for the Memorial Chimes and Pierce Hall clocks given in former years, and more recently for gifts to the University Library, various established funds and scholarships, and additional scholarships and aid to student organizations. Charles McKenny Union, completed in 1931 and built through the cooperative efforts of alumni and the University, stands as a visible symbol of the association's ongoing service to EMU.

The association is governed by a 24-member board of directors elected in the spring of each year by a vote of all eligible association members. The president of the University and the executive vice president are ex-officio members of the board; the director of the Office for Alumni Relations serves as secretary.

OFFICE OF DEVELOPMENT

Russell B. Wright
Associate Executive Vice President
11 Welch Hall
487-3036

The Office of Development was established in 1976 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 fundraising activities undertaken in the name of Eastern Michigan University.

OFFICE OF RESEARCH DEVELOPMENT

Robert Holkeboer
Director and Associate Graduate Dean
Brian Anderson
Associate Director
Dorothy Spurlock
Research Associate
B-18 Goddard Hall
487-3090

The Office of Research Development's objectives are to stimulate, initiate, develop, and administer externally sponsored activities in the University by working with faculty, administration, and students interested in obtaining funds for research, demonstration programs, training, instruction, service, experimental projects, and other efforts directed toward expanding the scope and quality of the University.

Its activities include:

1. identification of funding sources through liaison with governmental and private agencies, screening of program announcements and requests for proposals, and personal contacts;
2. providing information on funding opportunities;
3. maintaining informational files on private, state and federal funding programs and updating changing priorities or funding levels of potential sponsors;
4. assisting faculty and staff in developing workable project plans and budgets;
5. assisting proposal writers in developing budgets and plans, editing 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, including negotiation and writing of grant and contract agreements;
7. exercise oversight of research and other projects to assure compliance with applicable federal regulations such as those covering the use of human subjects, the care and use of animals, and conflict of interest.

THE WORLD COLLEGE

Ray Schaub
 Director and Professor of German
Geoffrey M. Voght
 Associate Director and Professor of Spanish
Louis Saalbach
 Manager, Communication and Marketing
David Archbold
 Manager, International Cooperative Education
 Exchange Program
 307 Goodison Hall
 487-2414

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 Provost and Vice President for Academic Affairs 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 develop international programs through federal and state funding.
- To develop contract-based, non-credit, internationally-focused experiences and courses for the public and private sectors.

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

Bette White
 Dean of Students
 205 Goodison Hall
 487-3118

Official policies regarding student conduct and grade grievance procedures are established by the University's Board of Regents. Copies of the Student Conduct Code may be obtained in the Dean of Students' Office.

CONDUCT CODE AND JUDICIAL STRUCTURE FOR STUDENTS AND STUDENT ORGANIZATIONS

Section I.

A. University-Wide Regulations

The following conduct, should it take place on University owned or controlled property or at a University sponsored or supervised event, may result in disciplinary action by the University, including dismissal from the University.

1. Use of alcohol

Consumption or possession of alcoholic beverages by persons under 21 years of age. Consumption or possession of alcoholic beverages by any person at any place or at any time where not specifically permitted by University policy or regulation. NOTE: Transportation in sealed containers to and from an authorized area or place is permissible if the person in possession has attained the legal age as prescribed by Michigan law for the legal possession of alcoholic beverages.

2. Drugs

(a) Drug distribution. Distribution of narcotic or drug substance in violation of local, state, or federal drug or narcotic laws.

(b) Drug usage. Use or possession of any drug or narcotic in violation of local, state, or federal drug or narcotic laws.

3. Property

(a) Theft of University property or property of a member of the University or visitor.

(b) Damage, destruction, or defacement of University property or property of a member of the University or visitor.

(c) Wrongful appropriation of University property or property of a member of the University or visitor.

4. University facilities

(a) Unauthorized use: including entry to, occupation of, or blocking ingress or egress of University facilities such as but not limited to buildings, classrooms, hallways, entryways, conference rooms, campus grounds, as well as unauthorized use of vehicles, equipment, or services or University name or logo (including University Computing Center).

(b) Gambling: on campus for money or other things of value except as provided by law.

(c) Pets: Dogs, cats, reptiles, or other animals are prohibited in University buildings or on University grounds, except where properly authorized.

5. Disruptive conduct

(a) Active participation in or instigation of disruption or obstruction of any University activity.

(b) Disturbance of or harassment of any member of the University community or visitor.

6. Physical abuse

(a) Physical abuse or threat of physical abuse or

unwarranted inflammatory provocation to physical abuse against any member of the University community or any person on University property or conduct which threatens or endangers the mental or physical health or safety of any such person.

(b) Sexual harassment: Sexual harassment means unconsented physical contact of a sexual nature, unwelcome sexual advances, unwelcome requests for sexual favors, and other verbal or physical conduct or communications constituting sexual harassment.

7. Discrimination and discriminatory harassment

It is the policy of Eastern Michigan University to maintain an educational environment free from harassment, humiliation, and intimidation of students and other members of the University community. Discriminatory harassment, as defined herein, is prohibited and offenders are subject to disciplinary action under Section 3, *infra* (Judicial Structure for Students and Organizations). Speech or other expression constitutes discriminatory harassment under any of the following circumstances.

(a) If it:

1. is intended to insult or otherwise injure an individual on the basis of **personal characteristics such as, but not limited to**, race, ethnicity, color, national origin, creed, religion, ancestry, age, handicap, or sexual orientation, and
2. is addressed directly to the individual whom it insults, and
3. amounts to "fighting words."

"Fighting words" are those personally abusive epithets which, when directly addressed to any ordinary person are, in the context used and as a matter of common knowledge, inherently likely to provoke a violent reaction, whether or not they actually do. Such words include, but are not limited to, derogatory references to the personal characteristics described in Section 1 above.

4. This section (a) shall be construed as a prescription of all so-called "fighting words."

(b) If it:

1. constitutes a violation of MCL 750.147b, prescribing criminal and civil penalties for ethnic intimidation. See PA 1988 No. 371-1, effective March 30, 1989.

(c) If it:

1. presents a clear and present danger of substantial disorder, violence, interruption of classes, or material interference with the operation of the University.

(d) If it:

1. consists of extreme or outrageous acts or communications intended to harass, intimidate, or humiliate the person to whom it is directed on account of the personal characteristics described in Section A-1 and reasonably causes such person or persons to suffer severe emotional distress.

Severability

Any part of the foregoing provisions of Section 7 which shall be found by a court of competent jurisdiction to unconstitutionally abridge a person's rights to free speech and expression shall be severed, held for naught, and the balance of such Section 7 shall remain fully enforceable.

8. Falsification of records

- (a) Furnishing false information to the University.
- (b) Forgery, alteration, or improper use of University documents, records, or identification.

9. Firearms, weapons, and explosives

- (a) Possession or use of firearms and other weapons.
- (b) Possession or use of firecrackers, gunpowder, explosives or incendiary devices, or other materials which endanger health or safety.

10. Fires or fire alarm systems and equipment

- (a) Tampering with or misuse of fire alarm systems or firefighting equipment.
- (b) Intentionally or recklessly burning or setting fire to or in any building or starting unauthorized fire on University property.

11. Academic dishonesty

Students are not to engage in any form of academic dishonesty including, but not limited to, plagiarism, alteration of records, substitution of another's work representing it as the student's own, and knowingly assisting another student in engaging in any such activity.

For purposes of this section, plagiarism is defined as the knowing use, without appropriate approval, of published materials, expressions, or works of another with intent to represent the material(s) as one's own.

12. Other University regulations:

Violation of any of the following posted or published University regulations:

- (a) EMU policy manual(s);

(b) Terms and conditions of the residence hall contract;

(c) EMU published undergraduate and graduate catalogs;

(d) Rules and regulations specific to University buildings.

B. Off-Campus Conduct

Individual or group conduct described in the regulations in Part A which occurs off-campus also may result in disciplinary action by the University when:

1. such conduct has or tends to have a substantial adverse impact on the interest of the University or an individual within the University community, *and*
2. there is a showing to that effect to the satisfaction of a University hearing board to which the case is referred.

Section II. Conduct Code for Student Organizations

Recognized student organizations have considerable freedom to accomplish their goals. However, they must conform to the policies, regulations, and procedures for student organizations and the Code of Conduct. Any group in violation of these standards is subject to disciplinary action. Original jurisdiction for conduct cases for all recognized student organizations is held by the Dean of Students Office.

A. University-Wide Regulations

The following conduct, should it take place on University owned or controlled property or at a University sponsored or supervised event, may result in disciplinary action by the University, including separation from the University.

1. Non-discrimination by organizations

(a) Every student organization registered and approved by the University is expected to be free to select its membership upon the basis of 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 or otherwise injure an individual on the basis of **personal characteristics such as, but not limited to**, race, ethnicity, color, national origin, creed, religion, ancestry, age, handicap, or sexual orientation, and
 2. is addressed directly to the individual whom it insults, and
 3. amounts to "fighting words."

"Fighting words" are those personally abusive epithets which, when directly addressed to any ordinary person are, in the context used and as a matter of common knowledge, inherently likely to provoke a violent reaction, whether or not they actually do. Such words include, but are not limited to, derogatory references to the personal characteristics described in Section 1 above.

4. **This section (a) shall be construed as a proscription of all so-called "fighting words."**

(b) If it:

1. constitutes a violation of MCL 750.147b, prescribing criminal and civil penalties for ethnic intimidation. See PA 1988 No. 371-1, effective March 30, 1989.

(c) If it:

1. presents a clear and present danger of substantial disorder, violence, interruption of classes, or material interference with the operation of the University.

(d) If it:

1. consists of extreme or outrageous acts or communications intended to harass, intimidate, or humiliate the person to whom it is directed on account of the personal characteristics described in Section A-1 and reasonably causes such person or persons to suffer severe emotional distress.

Severability

Any part of the foregoing provisions of Section 7 which shall be found by a court of competent jurisdiction to unconstitutionally abridge a person's rights to free speech and expression shall be severed, held for naught, and the balance of such Section 7 shall remain fully enforceable.

8. **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 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 superintending and monitoring its implementation.

B. Penalties for Student Organizations

1. Reprimand

An official written statement of the University's disapproval of an individual or group action.

2. Administrative warning

Issued to student organizations for lesser offenses than those subject to administrative probation. Any breach of conduct will be viewed not only as the breach of conduct itself, but a violation of this warning, which may result in suspension of said organization's status as a student organization. The misconduct may be reported to said organization's national office, if applicable.

3. Administrative probation

Defines the student organization's status to be conditional and may require exclusion from campus activities, forfeiting of student monetary allocations, and withdrawal of Campus Life status for a minimum of one semester. Any breach of conduct while on administrative probation will be viewed not only as the breach of conduct itself, but a violation of probation that may result in suspension of said organization's status as a student organization.

4. Suspension or termination

The involuntary withdrawal of status of the student organization from the University permanently, for a specified period of time, and/or until a stated condition is met. During this period the University will not in any way recognize nor support the continued operation of said organization. The student organization must re-apply to the Office of Campus Life for renewed recognition following any period of suspension. The suspension action shall be reported to said organization's national office, if applicable. Action taken against a student organization also may result in separate action being taken against individual members of said group, when appropriate. In this case, the sections of the conduct code referring to student conduct will be applied.

Section V. Presidential Responsibility

A. Presidential Review

1. The authority to suspend or dismiss a student/student organization from the University for conduct in violation of University rules and regulations is vested in the president as the chief executive officer of the University or in his/her designated representative.
2. All disciplinary penalties assigned through the University judicial and review system that would result in suspension or dismissal of a student/student organization from the University shall be reviewed by the president or his/her designee.
3. The president or his/her designated representative may:
 - (a) Accept the decision of the judicial review system, or
 - (b) Reject the decision. If the decision rejected is:
 - 1) A dean of students decision, the rejection will constitute an automatic appeal to the University Judicial Board.
 - 2) A University Judicial Board decision, the rejection will constitute an automatic appeal to the Judicial Appeals Board.
 - 3) A Judicial Appeals Board decision, the procedure stated in Procedure of the Judicial Appeals Board, Item K, 3, b, c, will be followed.

B. Interim Suspension

The president, as the chief executive officer of the University, is directly responsible to the Board of Regents for the enforcement of the Univer-

sity 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

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) 637-1110
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 Business and Finance to administer the business operations of the University.

Richard G. Boone Hall, built in 1914 as an administration building, now houses the College of Education offices and classrooms. It is named for the ninth president of the Normal College (1893-1899).

Wilbur P. Bowen Field House, completed in 1955 and named for the founder and long-time head of the Department of Physical Education, is the home of the Eagle basketball teams. It also has an eight-laps-to-the-mile track, locker 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 pro-

vided the initial building was given by Briggs when he was owner of the Detroit Tigers baseball team. The building was recently renovated for the Art department.

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. A major renovation to the building was completed in Fall 1992.

The Olds-Robb 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, and former Regent Richard Robb. 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 being renovated.

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, Com-

puter 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. The Special Education department, a speech and hearing clinic, a diagnostic prescriptive clinic for learning-disabled children and their families, and facilities for physical therapy are located in the building.

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 and are located in the building.

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 the ceramics program.

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 and football playoffs.

Rynearson Stadium, named for Elton J. Rynearson, Sr., who coached football for 26 years, is the football stadium. Rynearson was renovated in 1992 when additional seats were added to bring the capacity to 30,000. A new locker room and an addition to the press box were also completed.

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.

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 Executive Director, University Planning,
 Budgeting, and Analysis George A. Johnston
 University Attorney Kenneth A. McKanders

UNIVERSITY PLANNING, BUDGETING, AND ANALYSIS

Director of Budget Management Alvin S. Levett
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 Associate Vice President for Academic Affairs
 and Director of Academic Assessment ... Donald H.
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Graduate School/Office of Research Development

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 Associate Dean Patrick K. Melia
 Assistant Dean Aiko Nakatani
 Associate Dean and Director, Office of
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 Associate Director Brian Anderson

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Dean Barry Fish
 Associate Dean, Interim Ellene Tratras Contis
 Associate Dean, Interim James Waltz
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Departments

African American Studies, Head Ronald C Woods
 Art, Head Roy E. Johnston
 Biology, Head Douglas Y. Shapiro
 Chemistry, Head Judith Levy
 Communication and Theatre Arts, Head Dennis M.
 Beagen
 Computer Science, Head George E. Haynam
 Economics, Interim Head Raouf S. Hanna
 English Language and Literature, Head Marcia A.
 Dalbey
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 History and Philosophy, Head Margot Duley
 Mathematics, Head Don R. Lick
 Music, Head Gordon D. McQuere
 Physics and Astronomy, Head Dan Trochet
 Political Science, Head Edward Sidlow
 Psychology, Head Kenneth Rusiniak
 Sociology, Anthropology, and Criminology, Head Gregg
 Barak

College of Business

Dean Stewart L. Tubbs
 Associate Dean, Interim Susan Moeller

Departments

Accounting, Interim Head S. Thomas Cianciolo
 Finance and Computer Information
 Systems, Head Asrat Tessema
 Management, Head Sahab Dayal
 Marketing, Head H. Robert Dodge

College of Education

Dean Jerry H. Robbins
 Associate Dean Robbie A. Johnson
 Associate Dean Martha Tack

Departments

Health, Physical Education, Recreation, and
 Dance, Head Michael Bretting
 Leadership and Counseling, Interim Head John
 Waidley
 Special Education, Head Kathleen S. Quinn
 Teacher Education, Head James D. Riley
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College of Health and Human Services

Dean Elizabeth C. King

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Associated Health Professions, Head Stephen A. Sonstein

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Occupational Therapy, Director Ruth Hansen

Human, Environmental, and Consumer

Resources, Head George Liepa

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Fashion Merchandising, Head Sarah Moore

Hospitality Management, Head Pauline Buchanan

Interior Design, Head Virginia North

Nursing Education, Head Regina Williams

Social Work, Head Donald M. Loppnow

College of Technology

Dean Thomas K. Harden

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Earl C. Meyer

Industrial Technology, Head Everett N. Israel

Interdisciplinary Technology, Head Paul D. Kuwik

Military Science, Head Lt. Col. David R. Klubeck

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FACULTY AND STAFF

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MA, Eastern Michigan University
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PhD, Michigan State University
- Delph, Ronald K.** (1993), Assistant Professor, History and Philosophy.
PhD, University of Michigan
- Delprato, Dennis J.** (1969), Professor, Psychology.
PhD, Michigan State University
- Dempster, Andrew C.** (1966), Associate Professor, Computer Science.
PhD, University of Michigan
- Denning, Keith** (1989), Associate Professor, English Language and Literature.
PhD, Stanford University

- Devers, James** (1968), Professor, English Language and Literature.
PhD, University of California at Los Angeles
- Devine, E.A.** (1976), Professor, Department of Accounting.
PhD, Louisiana State University
- Diallo, Alahassane** (1985), Associate Professor, Finance.
PhD, Ohio State University
- Diamond, Barbara J.** (1986), Associate Professor, Teacher Education.
PhD, Michigan State University
- Dionne, Craig** (1996), Assistant Professor, English Language and Literature.
PhD, Carnegie Mellon University
- Dickie, Virginia** (1988), Assistant Professor, Graduate Program Coordinator, Occupational Therapy.
MS, Wayne State University
- Dirlikov, Stoil** (1987), Professor, Interdisciplinary Technology.
PhD, Czechoslovak Academy of Science
- Ditzhazy, Helen** (1987), Professor, Leadership and Counseling.
PhD, University of Michigan
- Dodge, H. Robert** (1991), Department Head, Professor, Marketing.
PhD, Ohio State University
- Dotson, P. Steven** (1988), Laboratory Coordinator, Computer Science.
BA, Eckerd College; BS, Eastern Michigan University
- Douglass, Richard L.** (1987), Program Director, Associate Professor, Health Administration.
PhD, University of Michigan
- Doyle, Timothy** (1986), Instructor, Interdisciplinary Technology.
MA, Eastern Michigan University
- Doyle, Patrick J.** (1974), Interim Vice President, Business and Finance.
MA, Eastern Michigan University
- Dugan, J. Sanford** (1974), Professor, Foreign Languages and Bilingual Studies.
PhD, Washington University, Missouri
- Duley, Margot I.** (1992), Department Head, Professor, History and Philosophy.
PhD, University of London, England
- Duncan, Jeffrey L.** (1971), Professor, English Language and Literature.
PhD, University of Virginia
- Dunlap, Elaine** (1990), Assistant Professor, English Language and Literature.
PhD, University of Massachusetts
- Durant, Barbara T.** (1981), Senior Adviser, Special Populations, Academic Advising Center.
MA, Eastern Michigan University
- Durham, Lora J.** (1982), Assistant Professor, Mathematics.
MA, Eastern Michigan University

E

- Easto, Patrick C.** (1970), Professor, Sociology, Anthropology, and Criminology.
PhD, Syracuse University
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ReD, University of Nebraska

- Edgren, John A.** (1979), Associate Professor, Economics.
PhD, University of Michigan
- Edwards, Elizabeth A.** (1992), Assistant Professor, Marketing.
PhD, University of Michigan
- Eggers, Carter J.** (1967), Professor, Music.
MM, Ithaca College
- Ehrlich, Allen S.** (1968), Professor, Sociology, Anthropology, and Criminology.
PhD, University of Michigan
- Eide, Margaret A.** (1967), Associate Professor, Learning Resources and Technologies.
MALS, University of Michigan
- Eisenbach, Jamin** (1990), Associate Professor, Biology.
PhD, University of California-Berkeley
- Eiss, Harry E.** (1987), Associate Professor, English Language and Literature.
PhD, University of North Dakota
- Ellis, Wayne C.** (1979), Associate Professor, Department of Accounting.
PhD, University of Michigan
- England, Lizabeth T.** (1987), Associate Professor, Foreign Languages and Bilingual Studies.
PhD, University of Illinois-Champaign Urbana
- England, Robert W.** (1968), Director, Recreation/Intramurals.
MA, University of Michigan
- English, Ross R.** (1983), Coordinator, Business and Finance and Executive Divisions, University Computing.
BS, Wayne State University
- Erenburg, Sharon J.** (1987), Professor, Economics.
PhD, University of Illinois, Champaign
- Erwin, J. Michael** (1985), Director, Career Services Center.
PhD, University of Michigan
- Eshleman, Clayton** (1986), Professor, English Language and Literature.
MA, Indiana University
- Esposito, Alfredo G.** (1990), Associate Professor, Economics.
PhD, Temple University
- Esteva, Juan C.** (1990), Associate Professor, Computer Information Systems.
PhD, Wayne State University
- Ettington, Deborah** (1991), Assistant Professor, Management.
MBA, Harvard Business School
- Evans, Gary L.** (1964), Professor, Communication and Theatre Arts.
PhD, University of Michigan
- Ewell, Edna** (1988), Assistant Professor, Learning Resources and Technologies.
MSLS, Wayne State University
- F**
- Fairfield, Richard T.** (1963), Professor, Art.
MFA, University of Illinois
- Farah, Badie N.** (1982), Professor, Computer Information Systems.
PhD, Ohio State University
- Farley, Beverly** (1985), Associate Director (Acting), University Development.
MA, University of Michigan
- Ferrett, Robert** (1982), Manager, Center for Instructional Computing, Learning Resources and Technologies.
MS, MLS, Eastern Michigan University
- Field, Jan Michael** (1965), Professor, Art.
MFA, School of the Art Institute of Chicago
- Fields, Daniel J.** (1986), Professor, Industrial Technology.
PhD, Michigan State University
- Figart, Deborah** (1990), Associate Professor, Economics.
PhD, American University, Washington, D.C.
- Figura, Rebecca J.** (1991), Director, Housing.
MA, Indiana University of Pennsylvania
- Findley, Lynette** (1985), Director, Equity Programs.
PhD, Michigan State University
- Fish, Barry A.** (1970), Dean, College of Arts and Sciences; Professor, Psychology.
PhD, Wayne State University
- Fitzgerald, Brian** (1986), Manager, Residence Halls.
MS, Michigan State University
- Flanagan, Brenda P.** (1988), Professor, English Language and Literature.
PhD, University of Michigan
- Fleischer, Cathy** (1990), Associate Professor, English Language and Literature.
PhD, University of Michigan
- Flusche, Della M.** (1968), Professor, History and Philosophy.
PhD, Loyola University
- Folk, David B.** (1987), Associate Professor, Mathematics.
PhD, University of Michigan
- Folkerth, Jean E.** (1985), Associate Professor, Health, Physical Education, Recreation, and Dance.
ReD, Indiana University
- Foreman, Chris J.** (1994), Assistant Professor, Communication and Theatre Arts
PhD
- Foster, Daniel L.** (1987), Assistant Professor, Music.
MM, University of Michigan
- Foster-Davis, Judy** (1993), Assistant Professor, Marketing.
PhD, Michigan State University
- Francis-Connolly, Elizabeth** (1991), Instructor, Occupational Therapy.
MS, Boston University
- Franks, Thomas H.** (1967), Professor, History and Philosophy.
PhD, University of Michigan
- Freedman-Doan, Carol** (1995), Assistant Professor, Psychology.
PhD, Wayne State University
- Freeman, Lawrence L.** (1969), Professor, Art.
MFA, University of Oregon
- French, Dorothea** (1990), Associate Professor, Special Education.
PhD, Dalhousie University
- Freund, Allan P.** (1967), Assistant Professor, Health, Physical Education, Recreation, and Dance.
MA, Eastern Michigan University
- Friedman, Monroe P.** (1964), Professor, Psychology.
PhD, University of Tennessee
- Fulford, Charles B.** (1979), Assistant Director, Academic Advising Center.
MA, Eastern Michigan University
- Fullerton, Sam D.** (1982), Professor, Marketing.
PhD, Michigan State University

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- Gacioch, Frank R.** (1987), Employment/Affirmative Action Associate, Human Resources.
MA, University of Michigan
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MM, University of Michigan
- Gardiner, Christopher J.** (1984), Professor, Mathematics.
PhD, University of Illinois
- Gardner, Trevor A.** (1985), Associate Professor, Teacher Education.
PhD, Michigan State University
- Garg, Ramesh** (1978), Professor, Finance.
DBA, Kent State University
- Garland, John** (1963), Director, Public Safety.
- Geherin, David J.** (1969), Professor, English Language and Literature.
PhD, Purdue University
- Geldys-Zelnick, Suzanne M.** (1990), Assistant Professor, Health, Physical Education, Recreation, and Dance.
MA, University of Pittsburgh
- Geltner, Beverley** (1993), Associate Professor and Coordinator EdD Program, Leadership and Counseling.
PhD, University of Michigan
- Gendin, Sidney** (1970), Professor, History and Philosophy.
PhD, New York University
- George, Laura** (1994), Assistant Professor, English Language and Literature
PhD, Ohio State University
- Ghoshel, Najati S.** (1965), Professor, Biology.
PhD, University of Illinois
- Gimelli, Louis B.** (1966), Professor, History and Philosophy.
PhD, New York University
- Ginther, John L.** (1965), Professor, Mathematics.
PhD, University of Illinois
- Gledhill, Roger C.** (1976), Associate Professor, Department of Accounting.
PhD, Virginia Polytechnic Institute
- Glikin, J. Ronda** (1973), Associate Professor, Learning Resources and Technologies.
MALS, University of Michigan
- Glotfelty, Judith** (1972), X-Ray Technologist, Health Services.
RT, Mercy Hospital
- Glover, Barbara** (1991), Instructor, Learning Resources and Technologies.
AMLS, University of Michigan
- Goff, Richard D.** (1964), Professor, History and Philosophy.
PhD, Duke University
- Gold, Ellen R.** (1982), Director, Health Services.
MBA, Eastern Michigan University
- Goldenberg, Ronald E.** (1985), Dean, Graduate School, Professor of Education.
EdD, Oklahoma State University
- Gooden, John S.** (1993), Assistant Professor, Leadership and Counseling.
EdD, University of Massachusetts
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PhD, Wayne State University
- Gordon, Norman G.** (1975), Professor, Psychology.
PhD, Wayne State University

- Gordon, Jane** (1992), Assistant Professor, Teacher Education.
PhD, University of Miami
- Gore, David K.** (1983), Assistant Professor, Interdisciplinary Technology.
MS, Eastern Michigan University
- Gorenflo, Carol** (1988), Associate Professor, Special Education.
PhD, Michigan State University
- Gottwald, Henry L.** (1964), Professor, Special Education.
EdD, Wayne State University
- Gousseff, James W.** (1963), Professor, Communication and Theatre Arts.
PhD, Northwestern University
- Grady, Robert C., II** (1971), Professor, Political Science.
PhD, Vanderbilt University
- Graves, Pamela** (1995), Assistant Professor, History and Philosophy
PhD, University of Pittsburgh
- Gray, Sylvia Sims** (1988), Assistant Professor, Social Work.
MSW, Michigan State University
- Green, Geraldine A.** (1989), Professor, Mathematics.
PhD, University of Michigan
- Greene, Bert L.** (1963), Professor, Teacher Education.
PhD, University of Michigan
- Griess, Jerald A.** (1967), Professor, Industrial Technology.
EdD, Pennsylvania State University
- Grimes, George** (1988), Professor, Learning Resources and Technologies.
EdD, Wayne State University
- Grovogui, Siba** (1993), Assistant Professor, Political Science.
PhD, University of Wisconsin
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MS, Juilliard School
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PhD, University of Michigan
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PhD, Yale University
- Hall, Cindy** (1979), Associate Director, Public Safety.
JD, University of Toledo
- Halmhuber, Nancy** (1979), Assistant Professor, Special Education.
SpA, Eastern Michigan University
- Hamilton, Theophilus E.** (1967), Career Development Associate, Career Services Center.
SpA, Eastern Michigan University
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PhD, Western Michigan University
- Hammill, Geoffrey D.** (1987), Associate Professor, Communication and Theatre Arts.
PhD, Bowling Green University

- Hancock, Lee M.** (1984), Manager, Operations Services, University Computing.
BBA, Eastern Michigan University
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PhD, University of Michigan
- Hanna, Raouf S.** (1977), Associate Professor, Economics.
PhD, Indiana University
- Hannan, Gary L.** (1982), Professor, Biology.
PhD, University of California-Berkeley
- Hansen, Ruth A.** (1976), Associate Professor, Program Director, Occupational Therapy.
PhD, Wayne State University
- Hansen, Joanne J.** (1965), Associate Professor, Learning Resources and Technologies.
MSLS, Case Western Reserve University
- Harden, Thomas K.** (1993), Dean, College of Technology; Professor, Business and Industrial Education.
EdD, University of Cincinnati
- Harding, James** (1994), Assistant Professor, English Language and Literature
PhD, University of Maryland-College Park
- Harley, Rachel B.** (1969), Associate Professor, Music.
PhD, University of Michigan
- Harmon, Alison J.** (1990), Assistant Professor, Leadership & Counseling.
EdD, The University of Akron
- Harris, Arthur J.** (1967), Professor, English Language and Literature.
PhD, University of Birmingham, England
- Harris, Michael** (1994), Assistant Professor, Political Science.
PhD, Indiana University
- Hartmann, Donald** (1990), Associate Professor, Music.
MS, University of Oklahoma
- Hauer, William R.** (1969), Assistant Professor, English Language and Literature.
PhD, University of Illinois
- Hayden, Lucy** (1988), Professor, English Language and Literature.
PhD, University of Michigan
- Haynam, George E.** (1986), Department Head, Professor, Computer Science.
PhD, Case Institute of Technology
- Haynes, Susan M.** (1992), Assistant Professor, Computer Science.
PhD, University of Michigan
- Hayworth, Steven C.** (1977), Associate Professor, Economics.
PhD, Massachusetts Institute of Technology
- Hee, Christopher E.** (1969), Associate Professor, Mathematics.
PhD, University of Notre Dame
- Heezen, Alan** (1967), Associate Professor, Computer Science.
PhD, University of Michigan
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MA, Butler University
- Hendrickson, Lorraine U.** (1981), Professor, Management.
PhD, University of Michigan
- Hennings, Thomas P.** (1969), Professor, English Language and Literature.
PhD, University of Wisconsin
- Hendrix, Lolita** (1994), Assistant Professor, English Language and Literature.
MA
- Henry, Oscar M.** (1969), Professor, Music.
PhD, Ohio State University
- Henry, Stuart D.** (1987), Professor, Sociology, Anthropology, and Criminology.
PhD, The University of Kent
- Hermon, Mary E. Vielhaber** (1977), Professor, Management.
PhD, University of Michigan
- Heyl-Clegg, Deborah L.** (1992), Assistant Professor, Chemistry.
PhD, University of Michigan
- Higbee, Mark** (1994), Assistant Professor, History and Philosophy.
PhD, Columbia University
- Hill, Raymond E.** (1989), Department Head, Professor, Management.
PhD, Purdue University
- Hillegas, Kathleen M.** (1981), Assistant Professor, Nursing Education.
MS, University of Michigan
- Hockey, Randy J.** (1985), Assistant Director, Internal Operations, Housing and Dining Services.
BS, Eastern Michigan University
- Hodges, V. Kay** (1989), Professor; Director of Clinical Training, Psychology.
PhD, University of Maryland
- Höft, Hartmut F.W.** (1970), Professor, Computer Science.
PhD, University of Houston
- Hogan, Walter P.** (1984), Associate Professor, Learning Resources and Technologies.
AMLS, University of Michigan
- Hogan, Leola** (1979), Professor, Nursing Education.
PhD, University of Michigan
- Holbrook, Mark** (1983), Lead Programmer/Analyst, University Computing.
MA, Indiana University
- Holkeboer, Robert O.** (1971), Professor, English Language and Literature; Interim Associate Graduate Dean.
Director, Office of Research Development
PhD, Ohio University
- Holland, Rhonda** (1989), Instructor, Learning Resources and Technologies.
MALS, University of Michigan
- Holmes, Peter A.** (1968), Professor, Psychology.
PhD, University of Delaware
- Holoka, James P.** (1976), Professor, Foreign Languages and Bilingual Studies.
PhD, University of Michigan
- Homel, Michael W.** (1970), Professor, History and Philosophy.
PhD, University of Chicago
- Hoodin, Ronald** (1988), Professor, Special Education.
PhD, Pennsylvania State University
- Hortin, David W.** (1968), Associate Professor, Political Science.
JD, University of Michigan
- Hourani, Benjamin T.** (1968), Professor, Political Science.
PhD, Michigan State University
- Howard, Arthur** (1990), Professor, Chemistry.
PhD, Cambridge University

- Howard, Jennie Meyer** (1991), Associate Dean of Learning Technologies, Learning Resources and Technologies.
AM, University of Missouri-Columbia
- Howard, Paul E.** (1970), Professor, Mathematics.
PhD, University of Michigan
- Howay, Bryan** (1983), Senior Programmer/Analyst, Learning Resources and Technologies.
BS, Wayne State University
- Hoyer, Denise T.** (1986), Professor, Management.
PhD, University of Michigan
- Hubbard, John R.** (1969), Professor, Foreign Languages and Bilingual Studies.
PhD, Michigan State University
- Hunter, Frederick C.** (1967), Professor, Art.
MFA, University of Wisconsin
- Hurlahe, Kevin M.** (1986), Assistant Director, Academic Advising Center.
MPA, Eastern Michigan University
- Hurst, Edith M.** (1973), Professor, Biology.
PhD, University of Michigan
- Huszczo, Gregory E.** (1978), Professor, Management.
PhD, Michigan State University
- Hutchins, Ronald E.** (1977), Associate Professor, Finance.
PhD, University of Missouri-Columbia
- Huyvaert, Sarah H.** (1986), Associate Professor, Teacher Education.
EdD, Indiana University

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- Iannaccone, Anthony J.** (1971), Professor, Music.
PhD, Eastman School of Music
- Ifill, Don A.** (1985), Professor, Social Work.
EdD, University of Southern California
- Ikeji, Augustine C.** (1988), Instructor, Computer Science.
MS, Eastern Michigan University
- Illingworth-Ricco, Alfonso** (1994), Assistant Professor, Foreign Languages and Bilingual Studies
PhD, University of Arizona
- Ingram, Betty J.** (1967), Professor, English Language and Literature.
PhD, University of Pennsylvania
- Israel, Everett N.** (1986), Department Head, Professor, Industrial Technology.
EdD, West Virginia University
- Ivey, Suzanne** (1987), Assistant Professor, Nursing Education.
MS, Northern Illinois University

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- Jackonen, Sharon** (1983), Assistant Professor, Nursing Education.
MSN, University of Michigan
- Jackson, Dennis C.** (1967), Professor, Biology.
PhD, Michigan State University
- Jacobs, Diane A.** (1984), Associate Professor, Physics and Astronomy.
PhD, University of Texas
- Janardan, K.G.** (1986), Professor, Mathematics.
PhD, Pennsylvania State University
- Jaworski, Eugene** (1971), Professor, Geography and Geology.
PhD, Louisiana State University

- Jellema, John Jan** (1982), Professor, Industrial Technology.
PhD, Michigan State University
- Jennings, Gerald L.** (1963), Professor, Business and Technology Education.
PhD, Michigan State University
- Jernigan, E. Jay** (1965), Professor, English Language and Literature.
PhD, Kansas State University
- Jernigan, Louise F.** (1970), Professor, Teacher Education.
PhD, Kent State University
- Jhung, Stuart M.T., ASCP** (1967), Medical Technologist, University Health Services.
BA, Lander College
- Johnson, David C.** (1973), Associate Professor, Mathematics.
EdD, University of Georgia
- Johnson, James D.** (1968), Professor, Political Science.
PhD, University of Michigan
- Johnson, Judith A.** (1970), Associate Provost; Professor, English Language and Literature.
PhD, University of Michigan
- Johnson, Marvin J.** (1963), Professor, Health, Physical Education, Recreation, and Dance.
PhD, University of Michigan
- Johnson, Robbie A.** (1976), Associate Dean, College of Education; Associate Professor, Health, Physical Education, Recreation, and Dance.
EdD, Wayne State University
- Johnston, George A.** (1972), Chief Budget Officer; Executive Director of University Planning, Budgeting, and Analysis, University Planning, Budgeting, and Analysis.
MBA, University of Michigan
- Johnston, Roy** (1996), Department Head, Professor, Art
- Jones, Zenia** (1990), Instructor, Computer Science.
MA, Eastern Michigan University
- Jones, Louise** (1990), Assistant Professor, Human, Environmental, and Consumer Resources.
MS, Virginia Polytechnic Institute and State University
- Jones, Michael H.** (1967), Associate Professor, Health, Physical Education, Recreation, and Dance.
MS, Eastern Michigan University
- Jones, Frank** (1991), Professor, Interdisciplinary Technology.
PhD, Duke University-Durham
- Jones, Sylvia N.** (1992), Assistant Professor, Teacher Education.
PhD, University of Michigan
- Jones, Lydia** (1993), Coordinator, Multicultural Center.
BA, Memphis State University
- Jordan, Eunice L.** (1970), Professor, English Language and Literature.
PhD, Wayne State University
- Jorfi, Joseph** (1977), System and Budget Analyst, Admissions.
BS, Eastern Michigan University
- Jose-Kampfner, Christina** (1991), Assistant Professor, Teacher Education.
PhD, University of Michigan

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- Kadushin, Abraham** (1993), Assistant Professor, Human, Environmental, and Consumer Resources.
MS, University of Michigan
- Kalib, Sylvan S.** (1969), Professor, Music.
PhD, Northwestern University
- Kamler, Howard F.** (1967), Professor, History and Philosophy.
PhD, University of Michigan
- Kanagy, Max E.** (1986), Professor, Industrial Technology.
PhD, Ohio State University
- Karabenick, Stuart A.** (1966), Professor, Psychology.
PhD, University of Michigan
- Karle, Patrick N.** (1993), Assistant Professor, English Language and Literature.
MFA, University of Arizona
- Kasenow, Michael C.** (1989), Associate Professor, Geography and Geology.
MS, Western Michigan University
- Kattelus, Susan C.** (1990), Assistant Professor, Department of Accounting.
PhD, Michigan State University
- Kauffman, Janet** (1988), Professor, English Language and Literature.
PhD, University of Chicago
- Kaufman, Elizabeth** (1989), Assistant Professor, Social Work.
PhD, University of Michigan
- Keehr, Jeffrey L.** (1985), Senior Adviser, Special Populations, Academic Advising Center.
MA, Eastern Michigan University
- Keros, John W.** (1965), Associate Professor, Department of Accounting.
MBA, University of Michigan
- Kersten, Lawrence K.** (1966), Professor, Sociology, Anthropology, and Criminology.
PhD, Wayne State University
- Khailany, Asad S.** (1972), Professor, Computer Information Systems.
DSc, Washington University
- Khan, Zafar U.** (1989), Assistant Professor, Department of Accounting.
PhD, Louisiana State University
- Khorshid, Wafa** (1991), Associate Professor, Computer Information Systems.
PhD, Wayne State University
- Kidd, Kenneth** (1994), Assistant Professor, English Language and Literature.
PhD, University of Texas Austin
- Kieft, Lewis D.** (1971), Professor, Business and Technology Education.
PhD, Ohio State University
- Kimbrough, Pander** (1987), Academic Adviser, Academic Advising Center.
MA, Eastern Michigan University
- King, Elizabeth C.** (1983), Dean, College of Health and Human Services.
PhD, Pennsylvania State University
- King, H. Roger** (1967), Professor, History and Philosophy.
PhD, Vanderbilt University
- Kinney, Martha** (1987), Associate Professor, Teacher Education.
PhD, University of Iowa
- Kinney, Rhonda** (1994), Assistant Professor, Political Science.
PhD, University of Iowa
- Kirby, Steven D.** (1991), Department Head, Professor, Foreign Languages and Bilingual Studies.
PhD, University of Kentucky
- Kirkendall, Carolyn A.** (1986), Instructor, Learning Resources and Technologies.
AMLS, University of Michigan
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MA, Eastern Michigan University
- Kisor, Douglas R.** (1983), Professor, Art.
MFA, Western Michigan University
- Kiss, Robert** (1990), Assistant Professor, Finance.
PhD, Kent State University
- Klaus, Meredith M.** (1966), Associate Professor, English Language and Literature.
PhD, University of Michigan
- Klein, George J.** (1970), Director, Academic Programs Abroad, Continuing Education.
PhD, University of Oregon
- Klenczar, Daniel** (1970), Plant Engineer, Physical Plant..
- Klubeck, David R.** (1993), Lt.Col., United States Army; Department Head and Professor, Military Science.
MS, Eastern Michigan University
- Knapp, John R.** (1971), Professor, Psychology.
PhD, University of Denver
- Komblevitz, Doris A.** (1985), Director, State, Federal, and Community Relations.
MA, Michigan State University
- Kraft, Robert G.** (1969), Professor, English Language and Literature.
PhD, University of Washington
- Krajewski-Jaime, Elvia** (1985), Associate Professor, Social Work.
MSW, Temple University
- Kramer, Morrey** (1984), Associate Professor, Department of Accounting.
PhD, University of Michigan
- Krøger, Robert D.** (1990), Associate Professor, Special Education.
PhD, University of Michigan
- Krieger, Mary M.** (1964), Coordinator, Second Bachelor's Degree, Academic Advising Center.
PhD, University of Michigan
- Krienke, John** (1983), Mental Health Counselor, Counseling Services.
PhD, University of Florida
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MBA, University of Michigan
- Kurta, Allen** (1988), Associate Professor, Biology.
PhD, Boston University
- Kurtz, Linda F.** (1989), Professor, Social Work.
DPA, University of Georgia
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- Kuwik, Paul D.** (1982), Department Head, Professor, Interdisciplinary Technology.
PhD, Ohio State University

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- Lahidji, Bo (Behrooz).** (1994), Assistant Professor,
Industrial Technology.
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- Lake, Marylyn** (1967), Professor, Special Education.
PhD, University of Michigan
- Langer, Georgea M.** (1985), Associate Professor, Teacher
Education.
PhD, Stanford University
- LaPorte, Susan** (1993), Assistant Professor, Art.
MFA, California Institute of Arts
- LaRou, George** (1991), Assistant Professor, Art.
MFA, California Institute of Arts
- Larson, Russell R.** (1970), Professor, English Language
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PhD, University of Michigan
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PhD, University of Michigan
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Environmental, and Consumer Resources.
EdD, Columbia University
- Lawver, Gerald** (1987), Associate Professor,
Interdisciplinary Technology.
MS, Eastern Michigan University
- Leopard, David W.** (1992), Assistant Professor, Business
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PhD, University of South Carolina
- Lederman, Edward** (1970), Associate Professor, Teacher
Education.
EdD, Columbia University
- Lefond, Dennis C.** (1980), Associate Director, University
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PhD, Case Western Reserve University
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PhD, Wayne State University
- Levitt, Alvin S.** (1985), Director, Budget Management,
University Planning, Budgeting, and Analysis.
MA, Wayne State University
- Levy, Judith T.Z.** (1985), Department Head, Professor,
Chemistry.
PhD, Johns Hopkins University School of Medicine
- Lewis, Hildred J.** (1971), Director, Upward Bound.
MA, Eastern Michigan University
- Lewis, Ronald** (1992), Professor, Social Work.
PhD, University of Denver
- Lick, Don R.** (1985), Department Head, Professor,
Mathematics.
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- Liggett, Lucy A.** (1983), Professor, Communication and
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- Ligibel, Theodore** (1991), Associate Professor, Geography
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MA, Bowling Green State University
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Provost.
MA, EMU
- Lin, Jonathan S.** (1988), Professor, Industrial Technology.
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PhD, University of Oregon
- Lindke, Bernice** (1991), Associate Director, Financial Aid.
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- Liu, Juiquiang** (1986), Assistant Professor, Mathematics.
PhD
- LoDuca, Steven** (1992), Assistant Professor, Geography
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PhD, University of Rochester
- Lokensgard, Erik** (1986), Associate Professor, Industrial
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PhD, Iowa State University
- Long, Roger D.** (1990), Assistant Professor, History and
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PhD, University of California, Los Angeles
- Loppnow, Donald M.** (1976), Department Head, Professor,
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- Lottie, Adrian J.** (1992), Assistant Professor, Political
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- Loughney, Peter** (1986), Instructor, Industrial Technology.
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PhD, University of Michigan
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Communication and Theatre Arts..
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PhD, University of Oklahoma
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PhD, University of Michigan
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Heating Plant..
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Teacher Education.
EdD, University of Cincinnati
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Education.
PhD, Wayne State University
- Massenberg, Angela** (1988), Associate Professor, Special
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MA, Central Michigan University
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PhD, University of Michigan
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MBA, University of Michigan
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Computing.
PhD, Wayne State University
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EdD, University of Rochester
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PhD, University of Michigan
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PhD, Wayne State University
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PhD, Michigan State University
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Geology.
PhD, University of Illinois
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PhD, Rice University
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MM, State University of New York
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EdD, Columbia University
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EdD, Indiana University
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PhD, University of California at Berkeley
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PhD, Ohio State University
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Science.
PhD, Case Western Reserve University
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Physical Education, Recreation, and Dance.
PhD, Texas Woman's University
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- McSurely, Hugh B.** (1981), Professor, Marketing.
PhD, Syracuse University School of Management
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AMLS, University of Michigan
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PhD, Vanderbilt University
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Resources and Technologies.
AMLS, University of Michigan
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Education.
PhD, Georgia State University
- Meyer, Thomas O.** (1981), Supervisor of Printing Services,
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MA, Eastern Michigan University
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Career Services Center.
BS, Illinois State University
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PhD, Purdue University
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MM, University of Michigan
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PhD, University of Wisconsin
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MS, University of Michigan

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MA, Ball State University
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PhD, Northwestern University
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EdD, Temple University
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PhD, Iowa State University
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PhD, University of Zürich
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MSN, Wayne State University
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PhD, Kent State University
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PhD, University of Wisconsin
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MA, Central Michigan University
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MSN, Howard University
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MA, Michigan State University
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PhD, University of Iowa
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PhD, Michigan State University
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MA, California State University
- Pearson, Donald W.** (1969), Professor, Economics.
PhD, University of Texas
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PhD, Michigan State University
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PED, Indiana University
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DMA, University of Iowa
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MA, Oklahoma State University
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MA, University of Michigan
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MeD, Kent State University
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PhD, Northwestern University
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PhD, Cornell University
- Peters, Melvin T.** (1992), Assistant Professor, African American Studies.
PhD, Michigan State University
- Peterson, Roger A.** (1980), Professor, Marketing.
DBA, University of Tennessee
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PhD, University of Michigan
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MS, University of Michigan
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PhD, University of Iowa
- Phillips, Donald B.** (1973), Professor, Chemistry.
EdD, University of Georgia
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PhD, University of Illinois, Urbana
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PhD, University of Minnesota
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MA, University of Missouri
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PhD, University of Michigan
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PhD, University of Michigan
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PhD, University of Michigan
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PhD, Purdue University
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PhD, Purdue University

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PhD, University of Minnesota
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MS, Eastern Michigan University
- Preston, Aaron** (1985), Assistant Plant Engineer, Physical Plant.
BS, Eastern Michigan University
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PhD, Michigan State University
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DMA, University of Colorado
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MSN, Wayne State University
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PhD, University of Michigan
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PhD, University of Texas at Arlington
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PhD, University of Chicago
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MA, Indiana University
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PhD, University of Michigan
- Rankin, Joseph H.** (1984), Professor, Sociology, Anthropology, and Criminology.
PhD, University of Arizona
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PhD, Louisiana State University
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BS, Eastern Michigan University
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PhD, Michigan State University
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PhD, University of Minnesota
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BBA, Eastern Michigan University
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PhD, University of Michigan
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MS, Eastern Michigan University
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PhD, Duke University
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PhD, University of Michigan
- Remp, Ann M.** (1984), Professor, Business and Technology Education.
PhD, Michigan State University
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MLS, Wayne State University
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DMA, Michigan State University
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PhD, Cornell University
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PhD, Syracuse University
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EdD, University of Arkansas
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PhD, University of Michigan
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PhD, University of Michigan
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MS, Ohio University
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MSN, Ohio State University
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- S**
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PhD, University of Arizona
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PhD, Georgia State University
- Saker, Marilyn N.** (1993), Assistant Professor, Music.
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PhD, University of Michigan
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PhD, University of Michigan
- Sandall, James A.** (1975), Professor, Art.
MFA, Arizona State University
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PhD, University of Texas at Austin
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PhD, Michigan State University
- Saxon, Charles S.** (1977), Professor, Computer Information
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PhD, University of Michigan
- Sayegh, Matilda Y.** (1970), Associate Professor, Health,
Physical Education, Recreation, and Dance.
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Occupational Therapy.
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PhD, Northwestern University
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PhD, University of Iowa
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PhD, University of California-Berkeley
- Smith, John R.** (1969), Assistant Professor, Music.
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BA, Eastern Michigan University
- Stein, James J.** (1990), Instructor, Industrial Technology.
MSED, State University of New York-Buffalo
- Stevens, Suzanne J.** (1970), Professor, Biology.
PhD, University of Michigan
- Stevens, Kenneth W.** (1972), Professor, Communication
and Theatre Arts.
MA, University of Cincinnati
- Stickel, Sue A.** (1991), Assistant Professor, Leadership and
Counseling.
PhD, University of Wyoming
- Strand-Evans, Katherine E.** (1973), Professor,
Communication and Theatre Arts.
MFA, Ohio University

- Streeter, James L.** (1974), Manager, Sports Information, Athletics.
BS, Eastern Michigan University
- Stone, Julie** (1994), Assistant Professor, Music.
DMA, University of Maryland-College Park
- Sturgis-Hill, Judy A.** (1992), Instructor, Communication and Theatre Arts.
MA, Eastern Michigan University
- Sullivan, John M.** (1958), Professor, Chemistry.
PhD, University of Michigan
- Sutton, Robert E.** (1992), Assistant Professor, Geography and Geology.
MA, Western Michigan University
- Szabo, Edward J.** (1968), Professor, Music.
EdD, Columbia University

T

- Tabuse, Motoko** (1992), Assistant Professor, Foreign Languages and Bilingual Studies.
PhD, Ohio State University
- Tack, Martha W.** (1990), Associate Dean, College of Education, Professor, Leadership and Counseling.
PhD, University of Alabama
- Tammany, Rosina** (1988), Assistant Professor, Learning Resources and Technologies.
AMLS, University of Michigan
- Tammany, David D.** (1966), Professor, Art.
MFA, Tulane University
- Tanner, Sandra** (1974), Administrative Assistant, Center for Quality.
- Tatum, Judy B.** (1978), Director, Financial Aid.
BS, Appalachian State University
- Tayeh, Carla** (1989), Associate Professor, Mathematics.
PhD, Southern Illinois University
- Teal, Mary D.** (1968), Professor, Music.
PhD, University of Michigan
- Teehan, Robert E.** (1984), Coordinator, Veterans Affairs.
BA, Eastern Michigan University
- Tehranipour, Aby** (1990), Professor, Computer Science.
PhD, University of Nebraska
- Terry, Janice J.** (1968), Professor, History and Philosophy.
PhD, University of London
- Tessema, Asrat** (1985), Department Head, Professor, Finance and Computer Information Systems.
PhD, University of Iowa
- Tew, Michael** (1989), Assistant Professor, Communication and Theatre Arts.
MA, Eastern Michigan University
- Thalhofer, Nancy N.** (1969), Assistant Professor, Sociology, Anthropology, and Criminology.
PhD, University of Michigan
- Thayer, Louis C.** (1969), Professor, Leadership and Counseling.
EdD, University of Illinois
- Thompson, Thomas Bradley** (1988), Supervisor, Copy Services, Learning Resources and Technologies.
BS, West California Coast University
- Thomsen, J. Marshall** (1986), Associate Professor, Physics and Astronomy.
PhD, Michigan State University
- Thornton, James** (1991), Associate Professor, Economics.
PhD, University of Oregon

- Tillman, Tracy S.** (1990), Assistant Professor, Industrial Technology.
PhD, Purdue University
- Timko, Arthur** (1970), Director, WEMU.
MA, Eastern Michigan University
- Tinney, Kathleen D.** (1968), Assistant Vice President, University Relations Division.
MA, University of Michigan
- Todd, James T.** (1990), Associate Professor, Psychology.
PhD, University of Kansas
- Tomkins, Colleen** (1976), Manager, Customer Service Operations, Housing and Food Service.
MA, Eastern Michigan University
- Tornquist, Wade J.** (1986), Associate Professor, Chemistry.
PhD, University of Minnesota
- Torres, Roberto** (1991), Assistant Professor, Health Administration.
PhD, University of Michigan
- Tracy, Jaclynn R.** (1992), Assistant Professor, Leadership and Counseling.
PhD, Michigan State University
- Trochet, P. Daniel** (1968), Department Head, Professor, Physics and Astronomy.
PhD, University of Michigan
- Truzzi, Marcello** (1974), Professor, Sociology, Anthropology, and Criminology.
PhD, Cornell University
- Tubbs, Stewart L.** (1986), Dean, College of Business; Professor, Management.
PhD, University of Kansas
- Tucker, William** (1993), Assistant Professor, English Language and Literature.
MAT, Harvard University
- Tucker, Walter W.** (1979), Professor, Industrial Technology.
PhD, University of Michigan
- Tummala, V.M. Rao** (1981), Professor, Production/Operations Management.
PhD, Michigan State University
- Tuscany, William** (1986), Assistant Athletic Trainer, Athletics.
MS, Eastern Michigan University
- Tyler, Norman R.** (1990), Associate Professor, Geography and Geology.
DArch, University of Michigan

U

- Ueberroth, Karen** (1993), Laboratory Coordinator, Computer Science.
ALA, Oakland Community College
- Ullman, Nelly S.** (1963), Professor, Mathematics.
PhD, University of Michigan
- Upshur, Jiu Hwa** (1971), Professor, History and Philosophy.
PhD, University of Michigan

V

- Van Haren, John E.** (1960), Professor, Art.
MA, University of Wisconsin
- Van Pelt, Cynthia** (1976), Financial Aid Adviser, Financial Aid.
BS, Eastern Michigan University

- Van Voorhees, Florence E.** (1979), Associate Professor, Special Education.
PhD, University of Michigan
- Vanden Bosch, James L.** (1987), Associate Professor, Biology.
PhD, University of Michigan
- Vengroff, Linda P.** (1990), Associate Director, University Health Services.
MPA, Texas Tech University
- Venis, Ronald M.** (1966), Assistant Professor, Health, Physical Education, Recreation, and Dance; Athletic Trainer, Athletics.
MS, Indiana University
- Vick, James** (1973), Assistant Vice President, University Marketing and Student Affairs.
MA, Eastern Michigan University
- Victor, David A.** (1985), Associate Professor, Management.
PhD, University of Michigan
- Victor, Gary M.** (1974), Professor, Law.
JD, University of Toledo
- Vidas, Jerry** (1982), Pharmacy Supervisor, Health Services.
MS, University of Iowa
- Villegas, Jesse** (1988), Coordinator, Media Services Center, Learning Resources and Technologies.
- Vinyard, Jo Ellen** (1986), Professor, History and Philosophy.
PhD, University of Michigan
- Vites, José** (1991), Assistant Professor, Chemistry.
PhD, University of Notre Dame
- Voght, Geoffrey M.** (1971), Associate Director, World College; Professor, Foreign Languages and Bilingual Studies.
PhD, University of Michigan
- Vogt, Michael G.** (1978), Professor, Economics.
PhD, University of Wisconsin
- Volz, Paul A.** (1969), Professor, Biology.
PhD, Michigan State University
- von Kluge, Silvia** (1990), Associate Professor, Psychology.
PhD, Michigan State University
- Vosteen, Thomas R.** (1991), Associate Professor, Foreign Languages and Bilingual Studies.
PhD, University of Iowa
- W**
- Waffle, Elizabeth L.** (1968), Associate Professor, Biology.
PhD, Iowa State University
- Wagner, Fraya W.** (1982), Professor, Management.
DBA, Memphis State University
- Wagner, Robin** (1991), Budget Analyst III, University Planning, Budgeting, and Analysis.
BA, Sienna Heights College
- Wahi, Kishor N.** (1967), Professor, Teacher Education.
PhD, University of Michigan
- Waidley, John W.** (1968), Professor, Leadership and Counseling.
EdD, New York University
- Walker, Glenn K.** (1976), Professor, Biology.
PhD, University of Maryland
- Walker, Karen** (1992), Assistant Director, University Honors Program.
MA, Eastern Michigan University
- Walter, James R.** (1964), Assistant Professor, Mathematics.
PhD, Wayne State University
- Waltman, John L.** (1985), Professor, Management.
PhD, University of Texas
- Waltz, James C.** (1968), Acting Associate Dean, College of Arts and Sciences; Professor, History and Philosophy.
PhD, Michigan State University
- Ward, Robert M.** (1969), Professor, Geography and Geology.
PhD, University of Michigan
- Warren, Reino V.** (1992), Assistant Professor, Production/Operations Management.
PhD, Illinois Institute of Technology
- Warren, Bette** (1984), Professor, Mathematics.
PhD, Indiana University
- Warren, Bruce L.** (1969), Professor, Sociology, Anthropology, and Criminology.
PhD, University of Michigan
- Washington, Richard E.** (1970), Associate Professor, Art.
MA, Eastern Michigan University
- Wasik, Caludia B.** (1965), Associate Professor, Health, Physical Education, Recreation, and Dance.
MS, Eastern Michigan University
- Wasserman, Ira M.** (1969), Professor, Sociology, Anthropology, and Criminology.
PhD, University of Michigan
- Watson, Mary Ann** (1990), Professor, Communication and Theatre Arts.
PhD, The University of Michigan
- Watts, Leroy W.** (1969), Associate to the Provost for Faculty Recruitment, Associate Professor, Social Work.
MSW, University of Iowa
- Webb, Paul Dean** (1983), Coordinator, Foreign Student Services.
MT, North Park Theological Seminary
- Weber, Patricia** (1981), Director, Center for Entrepreneurship; Associate Professor, Marketing.
DBA, Indiana University
- Wedenoja, Marilyn** (1992), Assistant Professor, Social Work.
MSW, University of Michigan
- Weeks, John A.** (1968), Professor, Industrial Technology.
PhD, University of Michigan
- Weeks, C. Wayne** (1978), Associate Professor, Real Estate.
DBA, Kent State University
- Weinstein, Jay** (1986), Professor, Sociology, Anthropology, and Criminology.
PhD, University of Illinois-Urbana
- Weiser, Jerome A.** (1967), Professor, Teacher Education.
EdD, Wayne State University
- Weiber, Joel S.** (1984), Assistant Professor, Law.
JD, Wayne State University
- Welch, Bethann** (1974), Senior User Consultant, Learning Resources and Technologies.
- Westman, Alida S.** (1972), Professor, Psychology.
PhD, Cornell University
- Westrum, Ronald M.** (1972), Professor, Sociology, Anthropology, and Criminology.
PhD, University of Chicago
- Weymouth-Payne, Ariel** (1982), Assistant Professor, Health, Physical Education, Recreation, and Dance.
MFA, University of North Carolina

- White, Patrick T.** (1967), Professor, English Language and Literature.
PhD, University of Michigan
- White, Bette C.** (1970), Dean of Students.
PhD, Michigan State University
- White, Darcelle D.** (1995), Assistant Professor, Business and Technology Education
JD
- Wilce, Steven** (1982), Head Coach, Women's Gymnastics, Athletics.
BS, Eastern Kentucky University
- Wiley, Jacqueline** (1978), Benefit Programs Analyst, Human Resources.
MA, Eastern Michigan University
- Williams, Patricia L.** (1979), Associate Director, Academic Advising Center.
MA, Eastern Michigan University
- Williams, Patricia J.** (1979), Professor, Art.
MFA, Indiana University
- Williams, Roger L.** (1968), Professor, Health, Physical Education, Recreation, and Dance.
EdD, University of Missouri
- Williams, Regina** (1990), Department Head, Professor, Nursing Education.
PhD, University of Michigan
- Williams, Sandra** (1985), Associate Executive Director, Auxiliary Enterprises.
MBA, Wayne State University
- Williamson, Jerry R.** (1967), Associate Professor, Chemistry.
PhD, University of Iowa
- Williston, Judith C.** (1971), Professor, Teacher Education.
PhD, University of Michigan
- Wilson, Herbert H.** (1966), Professor, Business and Technology Education.
MA, West Virginia University
- Wilson, Lorraine** (1988), Associate Professor, Nursing Education.
PhD, Wayne State University
- Winder, Diane** (1988), Associate Professor, Music.
MM, Converse College
- Wingo, Rosetta F.** (1968), Professor, Business and Technology Education.
PhD, Michigan State University
- Winning, Robert S.** (1995), Assistant Professor, Biology.
PhD, University of Waterloo, Ontario
- Winterson, Sherry** (1979), Coordinator, Registration.
BBA, Eastern Michigan University
- Wisniewski, Lech** (1991), Assistant Professor, Special Education.
PhD, University of Missouri
- Witten, Charles X.** (1969), Professor, Health, Physical Education, Recreation, and Dance.
PhD, Ohio State University
- Witten, Winifred** (1979), Professor, Health, Physical Education, Recreation, and Dance.
MS, Eastern Michigan University
- Woike, David O.** (1990), Associate Professor, Music.
PhD, Ohio State University
- Wojcik-Andrews, Ian** (1990), Associate Professor, English Language and Literature.
PhD, University of Connecticut-Storrs
- Woodland, Linda M.** (1982), Associate Professor, Department of Accounting.
PhD, Purdue University
- Woodland, Bill M.** (1981), Professor, Economics.
PhD, Purdue University
- Woods, Ronald C.** (1978), Department Head, Professor, African American Studies.
JD, University of Michigan
- Wooley, Jon K.** (1967), Professor, Physics and Astronomy.
PhD, University of Michigan
- Work, Stewart D.** (1964), Professor, Chemistry.
PhD, Duke University
- Wu, Nesa L.J.** (1974), Professor, Production/Operations Management.
PhD, Purdue University
- Wylo, Bonnie L.** (1988), Associate Professor, Physics and Astronomy.
EdD, University of Michigan

Y

- Yager, Jay R.** (1968), Professor, Art.
MFA, University of Wisconsin
- Yamauchi, Masanobu** (1965), Professor, Chemistry.
PhD, University of Michigan
- Yeakle, Myrna A.** (1965), Professor, Health, Physical Education, Recreation, and Dance.
PhD, Ohio State University
- Yee, Sandra G.** (1982), Library Department Head, Professor, Learning Resources and Technologies.
EdD, University of Michigan
- Yichun, Xie** (1994), Assistant Professor, Biology.
PhD, SUNY at Buffalo
- Yorke, Mary F.** (1982), Assistant Professor, Mathematics.
MS, Kansas State University
- Yost, Mary Ida** (1968), Professor, Music.
DMA, University of Michigan
- Young, Kenneth C.** (1974), Associate Professor, Department of Accounting.
PhD, Purdue University
- Youssef, Zakhour I.** (1965), Professor, Psychology.
PhD, Wayne State University

Z

- Zabawa, Paul L.** (1966), Associate Registrar, Academic Records and Certification.
SpA, Eastern Michigan University
- Zahratka, Michael C.** (1966), Professor, Art.
MFA, Syracuse University
- Zeiger, Michael** (1979), Assistant Professor, Computer Science.
PhD, University of Michigan
- Ziefert, Marjorie** (1981), Professor, Social Work.
MSW, Columbia University
- Zimmer, Patricia M.** (1980), Associate Professor, Communication and Theatre Arts.
MFA, Florida State University
- Zirk, Willard D.** (1981), Professor, Music.
DMA, University of Michigan

EMERITUS FACULTY

A

- Abramson, Armand R.**, BM, MM (1967-95) Professor Emeritus, Music
- Albritton, Thelma**, BA, MA, MEd (1961-84) Associate Professor Emeritus, Special Education
- Anderson, Charles T.**, AB, PhD (1955-86) Professor Emeritus, Chemistry
- Anderson, Frederick**, BA, MA, PhD (1970-88) Professor Emeritus, History and Philosophy
- Anderson, Normajean I.**, AM, BS, BCS (1948-79) Associate Professor Emeritus, Administrative Services and Business Education
- Anderson, Robert L.**, BA, MA, PhD (1957-85) Professor Emeritus, Psychology
- Angelocci, Angelo A.**, BS, MA, PhD (1965-88) Professor Emeritus, Special Education
- Ashton, Charles R.**, AB, MBA (1964-80) Associate Professor Emeritus, Marketing

B

- Barnes, Geraldine K.** BA, MA (1964-94) Associate Professor Emeritus, Health, Physical Education, Recreation and Dance
- Barnes, James M.**, BS, MS, PhD (1958-88) Professor Emeritus, Physics and Astronomy
- Belcher, Robert O.**, BA, MS, PhD (1946-80) Professor Emeritus, Biology
- Bell, Margaret E.**, BS, MS (1968-85) Assistant Professor Emeritus, Health, Physical Education, Recreation and Dance
- Bell, Mary I.**, BS, MA (1949-83) Associate Professor Emeritus, Health, Physical Education, Recreation and Dance
- Belt, Gordon A.**, BS, MA, EdD (1968-92) Associate Professor Emeritus, Teacher Education
- Bensen, Alice R.**, AB, MA, PhD (1947-76) Professor Emeritus, English Language and Literature
- Berry, Leona P.**, AB, MS, MALS (1957-81) Associate Professor Emeritus, Center of Educational Resources
- Bidwell, Jean S.**, AB, MA, PhD (1962-89) Professor Emeritus, Foreign Languages and Bilingual Studies
- Bilsky, Manuel**, BA, MA, PhD (1960-80) Professor Emeritus, History and Philosophy
- Birleson, Clifford**, BA, MA (1951-80) Associate Professor Emeritus, Curriculum and Instruction
- Bishop, Nadean**, BA, MA, PhD (1968-92) Professor Emeritus, English Language and Literature
- Borusch, Barbara**, BS, AM, PhD (1950-79) Professor Emeritus, Curriculum and Instruction
- Boyd, Janet Scott**, BSN, MA, PhD (1976-88) Professor Emeritus, Department Head, Nursing Education
- Breedlove, Charles B.**, BS, MS, EdD (1964-77) Professor Emeritus, Physics and Astronomy
- Brower, George**, BS, MA, PhD (1954-83) Professor Emeritus, Educational Leadership
- Brown, Donald F.**, BA, MS, PhD (1956-83) Professor Emeritus, Biology
- Brown, Leland**, AB, MA, PhD (1964-83) Professor Emeritus, Management
- Brownrigg, William J.**, BS, AM (1932-64) Director Emeritus, Academic Advising

- Briggs, W. Donald**, BA, MA, PhD (1964-95) Professor Emeritus, History and Philosophy
- Bryan, William C.**, BS, MBA (1954-74) Associate Professor Emeritus, Accounting and Finance
- Brylowski, Walter M.**, BA, MA, PhD (1955-89) Professor Emeritus, English Language and Literature
- Bush, Russell L.**, BA, MPE (1957-93) Assistant Professor Emeritus, Health, Physical Education, Recreation and Dance
- Bushey, J. Thomas**, PhB, MA, EdD (1969-94) Associate Professor Emeritus, Teacher Education

C

- Cabrera, Haydee M.**, BS, MPH, AMLS (1966-88) Assistant Professor Emeritus, Center for Educational Resources
- Calkins, Kingsley**, BS, MA (1950-79) Professor Emeritus, Department Head, Art
- Canter, Francis M.**, BA, PhD, MPH (1967-88) Professor Emeritus, Psychology
- Caputo, George E.**, BS, MEd (1965-85) Assistant Professor Emeritus, Special Education
- Carpenter, Arthur L.**, BS, MA (1964-90) Assistant Professor Emeritus, Teacher Education
- Carter, Giles F.**, BS, PhD (1967-90) Professor Emeritus, Chemistry
- Caswell, Herbert H., Jr.**, SB, MA, PhD (1955-88) Professor Emeritus, Biology
- Cavanaugh, Patric L.**, BA, MS, PhD (1968-94) Professor Emeritus, Health, Physical Education, Recreation and Dance
- Chamberlain, Marjorie**, BS, MA (1967-94) Assistant Professor Emeritus, Special Education
- Cione, Jean**, BS, MS (1963-92) Associate Professor Emeritus, Health, Physical Education, Recreation and Dance
- Collins, W. Oscar**, BS, MEd, EdD (1957-79) Professor Emeritus, Accounting and Finance
- Compere, Edward L., Jr.**, BS, MS, PhD (1964-92) Professor Emeritus, Chemistry
- Cooper, Virginia A.**, BA, MA (1946-75) Associate Professor Emeritus, English Language and Literature

D

- Daly, Francis**, BS, MA, EdD (1964-87) Professor Emeritus, Leadership and Counseling
- Dart, Jane M.**, BFA, MA (1942-78) Associate Professor Emeritus, Art
- Decker, Bernard**, BS, MS (1971-95) Professor Emeritus, English Language and Literature
- Dellas, Marie, S.**, MEd, PhD (1969-91) Professor Emeritus, Teacher Education
- Disbrow, Donald W.**, AB, PhD (1956-79) Professor Emeritus, History and Philosophy
- Dornbos, Sanford J.**, BA, MA (1963-86) Assistant Professor Emeritus, Health, Physical Education, Recreation and Dance
- Drake, Raymond**, BS, MBA (1965-82) Associate Professor Emeritus, Marketing
- Duncan, Charles H.**, EdD, PhD (1965-84) Professor Emeritus, Business and Industrial Education
- Duvall, Elven E.**, BA, MA, EdD (1968-79) Professor Emeritus, Educational Leadership

E

- Early, Madeline**, BA, MA, PhD (1956-75) Professor Emeritus, Mathematics
- Einstadter, Werner J.**, AB, MCrim, DCrim (1967-92) Professor Emeritus, Sociology, Anthropology, and Criminology
- Erickson, Walfred E.**, BEd, BS, MA, PhD (1952-70) Professor Emeritus, Head, Library

F

- Fauman, S. Joseph**, BA, MA, PhD (1958-86) Professor Emeritus, Sociology
- Fennel, William E.**, BA, MA, PhD (1970-93) Professor Emeritus, Biology
- Fenwick, Ruth G.**, BSM, MA (1952-74) Associate Professor Emeritus, Music
- Fenz, Emanuel G.**, BA, MA, PhD (1969-91) Professor Emeritus, History and Philosophy
- Fielder, Anita L.**, BEd, MS, SpEd (1955-80) Professor Emeritus, Home Economics
- Fisher, Robert J.**, AB, MA, EdD (1955-89) Professor Emeritus, Teacher Education
- Fitch, William D.**, BS, MS, PhD (1944-76) Professor Emeritus, Music
- Foster, Milton P.**, AB, MA, PhD (1947-86) Professor Emeritus, English Language and Literature
- Found, R. Elaine**, BA, MS, PhD (1971-89) Associate Professor Emeritus, Human, Environmental, and Consumer Resources
- French, Sophie L.**, AB, MA (1948-76) Assistant Professor Emeritus, Special Education
- Fulton, C. Wayne**, AB, MA, PhD (1956-88) Professor Emeritus, Special Education

G

- Galetti, Jeannine M.**, BS, MA (1952-85) Associate Professor Emeritus, Health, Physical Education, Recreation and Dance
- Garfield, Juanita**, AB, MA, EdD (1968-85) Professor Emeritus, Teacher Education
- Gaston, Hugh P.**, AB, MS (1963-81) Assistant Professor Emeritus, Guidance and Counseling
- Geffen, Lawrence**, BEd, MA, PhD (1968-93) Associate Professor Emeritus, Special Education
- Gesler, Ralph A.**, BS, MA (1952-74) Associate Director Emeritus, Field Services
- Gessert, Walter L.**, BS, MS, PhD (1961-86) Professor Emeritus, Physics and Astronomy
- Gex, R. Stanley**, BS, MA, EdD (1954-77) Dean Emeritus, College of Education; Professor Emeritus, Teacher Education
- Gibbons, James R.**, BS, MS, PhD (1967-88) Associate Professor Emeritus, Economics
- Gilden, Ralph F.**, BS, MA (1942-82) Dean Emeritus, Student Activities and Admissions; Associate Professor Emeritus, Industrial Education
- Godfrey, Elaine**, BS, MA (1962-83) Associate Professor Emeritus, Art
- Goings, Edmond W.**, AB, MS (1946-76) Professor Emeritus, Mathematics, Instructional Computer Service

- Goldsmith, William E.**, BA, MA, EdD (1962-83) Assistant Professor Emeritus, Teacher Education
- Goosey, Bob L.**, BS, MA, PhD (1959-93) Associate Professor Emeritus, Mathematics
- Green, Edward**, AB, AM, PhD (1963-86) Professor Emeritus, Sociology
- Green, Mary A.**, BA, MA, PhD (1961-92) Professor Emeritus, Health, Physical Education, Recreation and Dance and Associate Dean, College of Education
- Green, Phyllis Young**, BA, MA (1972-92) Assistant Professor Emeritus, Human, Environmental and Consumer Resources
- Grinstead, L. Kenneth**, BA, MA, PhD (1964-90) Professor Emeritus, Leadership and Counseling

H

- Haddan, Eugene E.**, BA, MA, EdD (1965-88) Professor Emeritus, Teacher Education
- Hansen, B. Joy**, BS, MS (1972-92) Assistant Professor Emeritus, Human, Environmental and Consumer Resources
- Harris, Arthur Jack**, MA, PhD (1967-94) Professor Emeritus, English Language and Literature
- Haun, F. Eugene**, BA, MA, PhD (1966-88) Professor Emeritus, English Language and Literature
- Hause, James B.**, BM, MM, EdD (1971-94) Professor Emeritus, Department Head, Music
- Hebert, Catherine A.**, AB, MA, PhD (1947-83) Professor Emeritus, English Language and Literature
- Hefley, J. Theodore**, BS, MA, PhD (1956-88) Professor Emeritus, History and Philosophy
- Helbig, Alethea K.**, BA, MA (1966-93) Professor Emeritus, English language and Literature
- Hester, Kathleen B.**, BS, MA, PhD, LittD (Hon) (1945-70) Professor Emeritus, Education
- Hill, Helen**, BA, MA (1963-83) Professor Emeritus, English Language and Literature
- Hill, Rodney L.**, BME, MM, DM (1969-94) Professor Emeritus, Music
- Hislop, Robert I.**, LLB, LLM, PhD (1970-81) Professor Emeritus, Marketing and Law
- Hoitash, Charles F.**, BS, MBA, PhD (1973-91) Professor Emeritus, Management
- Howe, George M.**, BS, MA, PhD (1968-87) Professor Emeritus, Geography and Geology

I

- Irwin, Martha E.**, BA, MA, PhD (1961-91) Professor Emeritus, Teacher Education

J

- Jackson, Donald E.**, BA, MA, PhD (1967-89) Professor Emeritus, Psychology
- Jacobson, Elaine R.**, BM, MM (1968-89) Professor Emeritus, Music
- Johnson, Fred T.**, AB, PhD (1967-84) Professor Emeritus, Physics and Astronomy
- Jones, Edgar L., Jr.**, BS, MA (1957-92) Assistant Professor Emeritus, English Language and Literature
- Jones, Hebert**, BS, MA, EdD (1964-86) Associate Professor Emeritus, Teacher Education

- Jones, Vernon H.**, BEd, MA (1952-78) Associate Professor Emeritus, Pre-Student Teaching
Jordan, Hoover H., BA, MA, PhD, EdD (Hon) (1939-76) Professor Emeritus, English Language and Literature

K

- Kallenbach, Jessamine**, BA, MA, MALS (1962-83) Professor Emeritus, Center for Educational Resources
Kilanski, Doris M., BA, MA, SpA, PhD (1970-82) Associate Professor Emeritus, Educational Leadership
Klaus, Meredith, MA, PhD (1966-94) Professor Emeritus, English Language and Literature
Kloosterman, Winton A., BA, MA, EdD (1962-83) Professor Emeritus, Educational Leadership
Kornbluth, Martin L., AB, AM, PhD (1966-92) Professor Emeritus, English Language and Literature
Koste, Virginia Glasgow, BA, MA (1962-86) Professor Emeritus, Communication and Theatre Arts
Kraushaar, Donald C., BS, MBA, MD, MS (1982-87) Assistant Professor Emeritus, Associated Health Professions
Krebs, Robert E., BS, MA, EdD (1968-86) Professor Emeritus, Teacher Education
Krieger, Mary, MS, MA, PhD (1964-96) Professor Emeritus, Human, Environmental and Consumer Resources
Kureth, Elwood J.C., BA, AM, PhD (1968-92) Professor Emeritus and Department Head, Geography and Geology

L

- LaBounty, Raymond A.**, BS, MA, EdS (1945-81) Professor Emeritus, Industrial Education; Vice President Emeritus, Administration
Lamkin, Ervin G., BS, MS (1946-69) Associate Professor Emeritus, Chemistry
Laney, Maurice L., BA, MM, PhD (1968-90), Professor Emeritus, Music
Lansing, Marjorie J., BA, MA, PhD (1968-86) Professor Emeritus, Political Science
Larsen, Delmar, BA, MA, PhD (1964-84) Professor Emeritus, Business and Industrial Education
Lawniczak, Donald, BA, MS, PhD (1967-95) Professor Emeritus, English Language and Literature
Laws, Duane, BA, MA, EdD (1967-95) Professor Emeritus, Human, Environmental and Consumer Resources
Leinbach, Richard B., BS, MEd, EdD (1972-92) Associate Professor Emeritus, Human, Environmental and Consumer Resources
Linn, George, BA, MA, PhD (1955-86) Director Emeritus, Academic Records and Certification
Lowe, Emily Boyd, AB (1961-91) Professor Emeritus, Music

M

- MacDonald, Alistair**, BA, MA (1948-78) Associate Professor Emeritus, Curriculum and Instruction
MacDonald, Mary Lee, AB, MA, PhD (1965-88) Assistant Professor Emeritus, English Language and Literature
Madgett, Naomi Long, BA, MA (1958-83) Professor Emeritus, English Language and Literature

- Magoon, Donald W.**, BS, ME, MS, MBA (1965-80) Associate Professor Emeritus, Management
Marshall, Albert P., AB, BLS, MA (1969-80) Professor Emeritus, Center of Educational Resources
Marshall, Everett L., BEd, MA, PhD, LHD (Hon) (1938-79) Professor Emeritus, Education; Dean Emeritus, Academic Records and Certification
Maxfield, Grace K., AB, BSLS (1958-78) Associate Professor Emeritus, Center of Educational Resources
May, George S., AB, AM, PhD (1966-86) Professor Emeritus, History and Philosophy
McDaniel, Thelma, BFA, MA (1964-86) Professor Emeritus, Communication and Theatre Arts
McElya, Mitchel Roberts, BS, MFA (1967-92) Professor Emeritus, Communication and Theatre Arts
McGee, Charles (1969-87) Associate Professor Emeritus, Art
McHugh, Frank, AB, MA (1958-86) Professor Emeritus, English Language and Literature
McKee, Judy, BA, MA, EdD (1971-94) Professor Emeritus, Teacher Education
McWilliams, Robert O., AB, MPA, PhD (1956-86) Professor Emeritus, Political Science
Meis, Ruby L., BS, MA, EdD (1963-93) Professor Emeritus, Human, Environmental and Consumer Resources
Meisels, Murray, BA, PhD (1965-92) Professor Emeritus, Psychology
Menzi, Elizabeth A., BA, MA, PhD (1964-86) Professor Emeritus, Health, Physical Education, Recreation and Dance
Milske, Paul W., BS, MA, PhD (1967-94) Associate Professor Emeritus, Biology
Minzey, Jack D., BA, MA, EdD (1968-91) Professor Emeritus and Department Head, Leadership and Counseling
Moffett, Valerie T., BS, MA (1961-88) Associate Professor Emeritus, Health, Physical Education, Recreation and Dance
Monahan, Thomas, BA, MA, EdD (1953-83) Professor Emeritus, Teacher Education
Moore, Noel Sam, BA, MA, EdD (1965-84) Associate Professor Emeritus, Teacher Education
Morgan, Willie B., BA, MA (1967-92) Professor Emeritus, Communication and Theatre Arts
Muller, Brigitte D., BA, MA, PhD (1965-89) Professor Emeritus, Foreign Languages and Bilingual Studies
Myers, Allen, BM, MM, MA, PhD (1958-77) Dean Emeritus, College of Education; Professor Emeritus, Special Education

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ACADEMIC RECORDS	Office of the Registrar, 302 Pierce, 487-4111
Catalogs (undergraduate)	
Degree requirements	
Re-enrollment application	
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Transfer credit	
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ACADEMIC SERVICES	Academic Advising Center, 301 Pierce, 487-2170
Advising (undergraduate)	
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Evening advising and programs of study	
ADMISSION (UNDERGRADUATE)	Admissions Office, 401 Pierce, 487-3060
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New students	
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ADMISSION (GRADUATE)	Graduate School, Starkweather, 487-3400
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Catalogs	
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ALUMNI RELATIONS	Alumni Relations Office, 015 Welch, 487-0250
ATHLETIC TEAMS AND TICKETS	Athletics Office, 200 Bowen Field House, 487-0351
BILLING AND FEES	Student Accounting Office, 203 Pierce, 487-3335
BOOKS (NEW, USED AND SUPPLIES)	Barnes and Noble Bookstore, McKenny Union, 487-1000
CAMPUS VISITS (INDIVIDUALS OR GROUPS)	Admissions On-Campus Programs, 202 Pierce, 487-1111
CHILDREN'S INSTITUTE	Snow Health Center, Ground Floor, 487-1126
CLUBS AND ORGANIZATIONS	Campus Life, 221 Goodison, 487-3045
CONTINUING EDUCATION	321 Goodison, 487-0407
Conferences and workshops	
Correspondence courses	
In-house training	
Off-campus credit courses	
Professional development	
EDUCATIONAL CENTERS	
Center for Entrepreneurship	34 N. Washington, 487-0225
Corporate Education Center	1275 S. Huron St., 487-0600
Institute for Community and Regional Development	34 N. Washington, 487-0243
Institute for the Study of Children and Families	102 King, 487-0372
National Institute for Consumer Education	207 Rackham, 487-2292
EDUCATIONAL RESOURCES	Learning Resources and Technologies, 487-0020
Center for Instructional Computing	487-1347
Instructional Support Center	487-1380
Library	487-3316
Media Services Center	487-2220
FINANCIAL AID	Financial Aid Office, 404 Pierce, 487-0455
Loans and grants-in-aid	
Scholarships	
HEALTH SERVICES	Snow Health Center, 487-1122
Counseling Services	Snow Health Center, 487-1118
HONORS PROGRAM	Jones-Goddard Community of Scholars, 487-0341
LIVING ACCOMMODATIONS	Housing Office, Dining Commons #1, 487-1300
PARENTS ASSOCIATION	Fourth Floor Pierce, 487-0193
REGISTRATION FOR CLASSES	Registration Office, 303 Pierce, 487-2300
RECREATION AND INTRAMURAL SPORTS	Olds Student Recreation Center, 487-1338
VETERANS SERVICES OFFICE	Veterans Services Office, 201 Goodison, 487-3119

NOTES

COURSE SELECTIONS FOR BASIC STUDIES REQUIREMENTS

Basic Studies

I-B-1. ENG 121 English Composition (3)

I-B-2. *One of:*

CTA 121 Fundamentals of Speech (2)

CTA 124 Fundamentals of Speech (3)

I-B-3. **A course from one of the following options:**

a. Upper-level written composition, from among:

ANT 200 Writing for Anthropology

ENG 225 Intermediate English Composition (3)

ENG 324 Principles of Technical Communication (3)

ENG 326 Research Writing (3)

b. Upper-level speech communication, from among:

CTA 224 Public Speaking (3)

CTA 225 Listening Behavior (3)

CTA 226 Non-Verbal Communication (3)

CTA 227 Interpersonal Communication (3)

*CTA 374 Intercultural Communication

*CTA 375 Interracial/Interethnic Communication

c. Foreign language composition, from among:

FRN 121/122 Beginning French (5)

FRN 233/234 Intermediate French (Reading) (3)

GER 121/122 Beginning German (5)

GER 233/234 Intermediate German Reading (3)

GRK 121/122 Beginning Ancient Greek I/II (5)

LAT 121/122 Beginning Latin I/II (5)

JPN 121/122 Beginning Japanese (5)

JPN 211/212 Intermediate Japanese (3)

SPN 121/122 Beginning Spanish (5)

SPN 201/202 Intermediate Spanish (3)

I-B-4. *One of:*

MTH 109 Mathematics for Elementary Teachers II (3)

MTH 118 Mathematical Analysis for Social Sciences I (3)

MTH 119 Mathematical Analysis for Social Sciences II (3)

MTH 120 Calculus I (4)

MTH 121 Calculus II (4)

MTH 122 Elementary Linear Algebra (3)

MTH 150 Mathematical Reasoning (3)

MTH 270 Elementary Statistics (3)

MTH 341 College Geometry (3)

SOC 250 Social Statistics I (3)

I-B-5. *One of:*

BE 201 Microcomputers for Business Applications (3)

CSC 136 Computers for the Non-Specialist (3)

CSC 137 Introduction to FORTRAN Programming (3)

CSC 138 Computer Science I (3)

CSC 237 Computer Programming and Numeric Methods (3)

HHS 226 Computers for Health and Human Services (3)

IDT 201 Microcomputer Applications in Technology (3)

IT 105 Computer Applications for Industry (3)

IS 215 End-User Computing (3)

II-B-1. Physical Science, (at least one course must have a laboratory component (4 hours); no two courses may be from the same department) from among:

a. Physical science courses open to all students meeting course requirements

CHM 105 Survey of Chemistry (5)

CHM 115 Chemistry and Society (3)

CHM 115, 116 Chemistry and Society (4)

CHM 119 Fundamentals of Chemistry (4)

CHM 120 Fundamentals of Organic and Biochemistry (4)

CHM 121, 122 General Chemistry I (4)

PHY 110 Physical Science (4)

PHY 221 Mechanics, Sound, and Heat (4)

PHY 223 Mechanics, Sound, and Heat (5)

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

AST 203 Exploration of the Universe (3)

AST 204 Astronomical Investigations (1)

AST 205 Principles of Astronomy (4)

GES 108 Earth Science (4)

GLG 120 The Fossil Record (3)

GLG 160 Physical Geology (4)

II-B-2. *One of:*

PSY 101 General Psychology (3)

PSY 102 General Psychology (4)

II-B-3. *One of:*

BIO 105 Biology and the Human Species (4)

BOT 221 General Botany (4)

IDT 150 Understanding Technology (3)

IT 240 Science, Technology, and People (3)

PSY 102 General Psychology (4)

ZOO 222 General Zoology (4)

Any other course listed in group II-B-1 above

III-B-1. *One of:*

PLS 112 American Government (3)

PLS 113 American Government Honors (3)

III-B-2. *One of:*

HIS 101 Western Civilization to 1648 (3)

HIS 102 Western Civilization, 1648 to World War I (3)

HIS 103 Twentieth Century Civilization (3)

HIS 106 Asian and African Civilizations (3)

HIS 123 The United States to 1877 (3)

HIS 124 The United States, 1877 to the Present (3)

III-B-3. *One of:*

ANT 135 Introduction to Cultural Anthropology (3)

ECO 201 Principles of Economics I (3)

GEO 107 Introduction to Geography (3)

GEO 110 World Regions (3)

SOC 105 Introductory Sociology (3)

COURSE SELECTIONS FOR BASIC STUDIES REQUIREMENTS

III-E-4. Complete a course from one of the following options:

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

HIS 102 (follows 101) Western Civilization, 1648 to World War I (3)

HIS 103 (follows 102) Twentieth Century Civilization (3)

HIS 124 (follows 123) The United States, 1877 to the Present (3)

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

ANT 140 (follows 135) Introduction to Prehistoric Anthropology (3)

ECO 202 (follows 201) Principles of Economics II (3)

GEO 111 (follows 110) Regions and Resources (3)

SOC 202 (follows 105) Social Problems (3)

c. A course in cross-cultural or international studies

*AAS 101 Introduction to African American Studies (3)

*ANT 205 Minority Women in the United States (3)

*ANT 233 Peoples and Cultures of Mexico (3)

*ANT 236 Peoples and Cultures of Africa (3)

*ANT 237 Indians of North America (3)

*ANT 245 Culture of Japan (3)

*ANT 214 Racial and Cultural Minorities (3)

*ANT 355 Anthropology of Women (3)

*ECO 321 Minority Workers in the Labor Market (3)

*ECO 328 Economics of Women (3)

*HIS 305 Indians of the United States (3)

*HIS 315 History of Black Americans (3)

*HIS 336 History of Women in the United States and Great Britain, 1800 to the Present (3)

*HIS 341 The Middle East, 1798 to Present (3)

*HIS 342 North Africa, 1798 to Present (3)

*HIS 348 Twentieth Century Africa (3)

*HIS 356 Latin America: National Period (3)

*HIS 375 Modern India (3)

*SOC 205 Minority Women in the United States (3)

*SOC 214 Racial and Cultural Minorities (3)

*SOC 344 Sociology of Sex Roles (3)

*WMS 200 Introduction to Women's Studies (3)

IV-B-1. Complete a course from one of the following options:

a. English-language literature

LIT 100 The Reading of Literature (3)

LIT 101 The Reading of Literature: Fiction (3)

LIT 102 The Reading of Literature: Poetry (3)

LIT 103 The Reading of Literature: Drama (3)

b. Foreign-language literature

FRN 221/222 Intermediate French (Reading) (3)

FRN 341/342 Survey of French Literature (3)

GER 221/222 Intermediate German Reading (3)

GER 341/342 Survey of German Literature (3)

SPN 221/222 Intermediate Spanish Reading (3)

SPN 341/342 Survey of Spanish Literature (3)

SPN 351/352 Survey of Spanish American Literature (3)

IV-B-2. Cross-cultural or international studies

*FLA 215 The Culture of the Latino Groups in the United States (3)

*LIT 204 Native American Literature (3)

*LIT 260 African American Literature (3)

IV-B-3. One of:

HIS 100 The Comparative Study of Religion (3)

PHI 100 Introduction to Philosophy (3)

PHI 110 Philosophies of Life (3)

PHI 120 Introduction to Critical Reasoning (3)

PHI 130 Introduction to Logic (3)

PHI 212 Philosophy of Art (3)

PHI 215 Philosophy of Religion (3)

PHI 220 Ethics (3)

PHI 221 Business Ethics (3)

PHI 225 Political Philosophy (3)

*PHI 226 Philosophy of Women (3)

PSY 225 Psychology of Religion (3)

IV-B-4. One of:

CTA 222 Drama and Play in Human Experience (3)

CTA 106 Introduction to the Performing Arts (3)

CTA 150 Introduction to Theatre (3)

*CTA 151 African American Theatre.

An Introduction (3)

CTA 158 Fundamentals of Acting (3)

CTA 145 Introduction to Film Appreciation (3)

DAN 106 Introduction to the Performing Arts (3)

FA 100 Art Appreciation (3)

FA 101 Introduction to Art (3)

FA 107 Art History Survey I (3)

FA 108 Art History Survey II (3)

FA 122 Two-Dimensional Design (3)

FA 123 Drawing I (3)

FA 165 Graphic Design for Non-Majors (3)

FA 166 Ceramics for Non-Majors (3)

FA 167 Jewelry for Non-Majors (3)

*FA 222 African and African American Art (3)

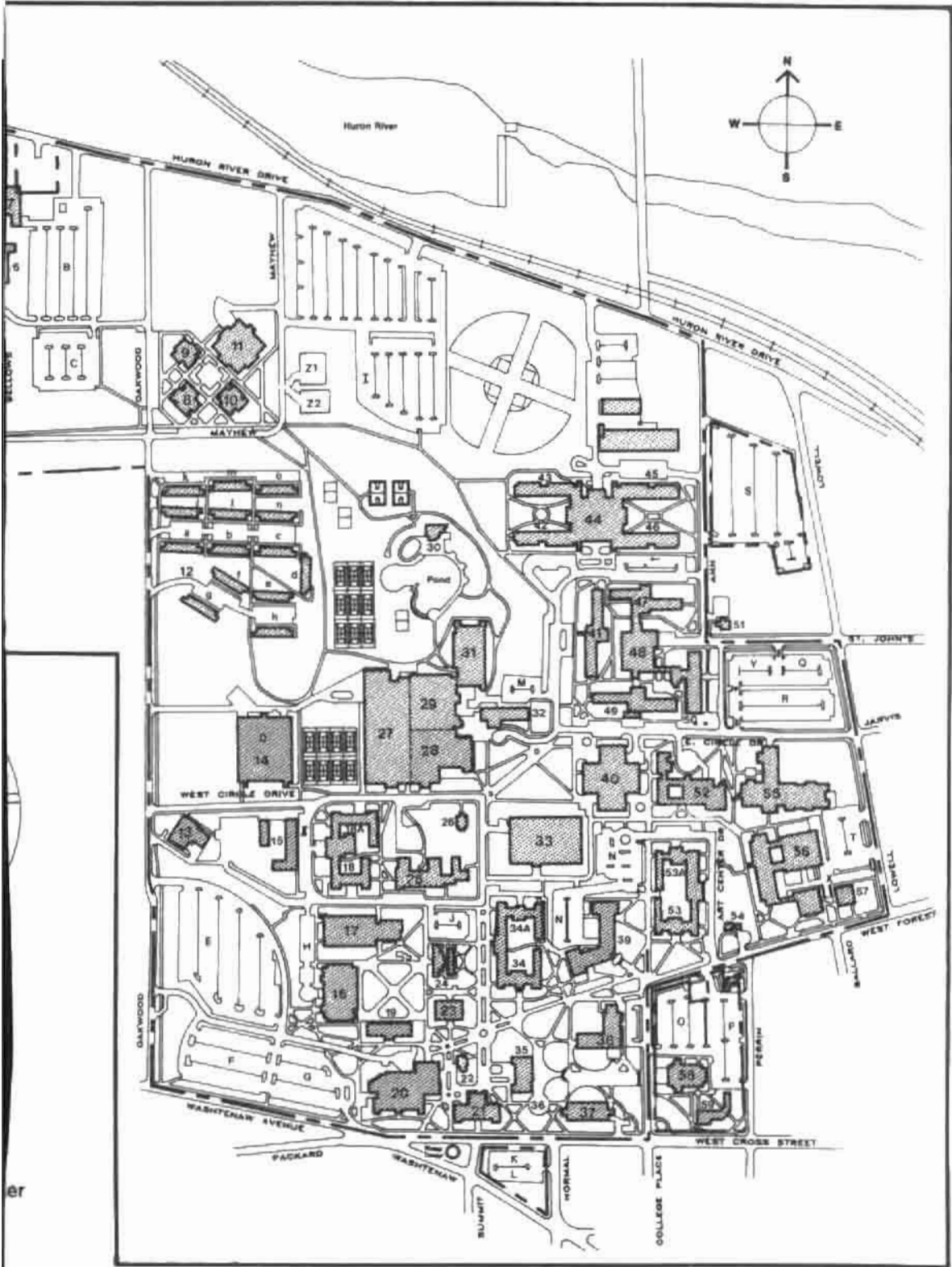
MUS 100 Introduction to Music Theory (3)

MUS 106 Introduction to the Performing Arts (3)

MUS 107 Music Appreciation (2)

Physical education, military science, or equivalent (2)

Main Campus



Eastern Michigan

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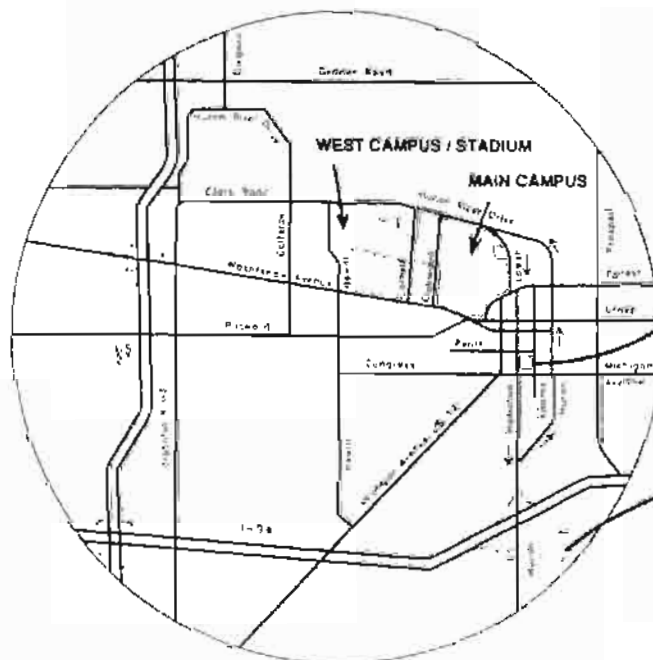
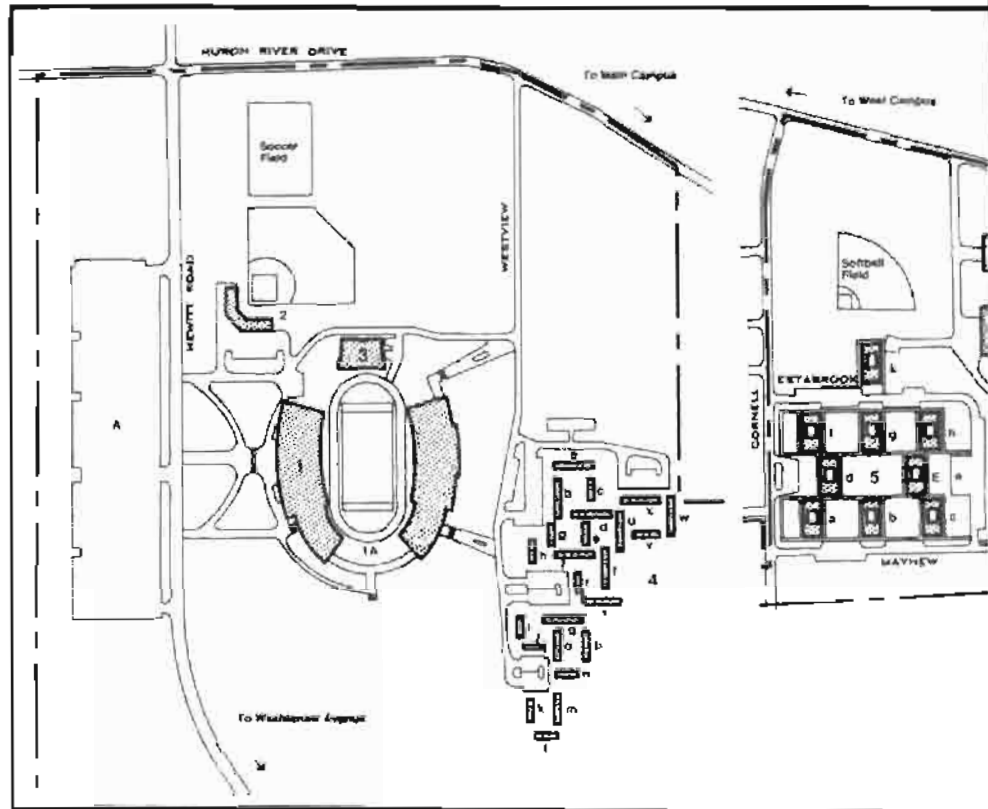
Parking Facilities Index

Commuter Decal Parking	
B	Ann Street Lot
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Q	Ford Lot A (after 7:30 p.m.)
J	Ford Lot B
C	Hoyle Lot
L	Normal Street Lot A (after 8:30 p.m.)
F	Normal Street Lot B (after 6:30 p.m.)
E	Oakwood Lot
D	Parking Structure
O	Pease Lot
T	SP Lot (after 5:00 p.m.)
H	South Lot (after 5:00 p.m.)
M	Snow Lot (after 7:30 p.m.)
U	Society Bank Lot (after 6:00 p.m.)
W	Washington Street Lot

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B	Ann Street Lot
N	Sherman-Roosevelt Lot
W	College of Business Structure
C3	Ford Lot A (gate card required)
H	Mark Jefferson Lot
F	McKain Lot A (gate card required)
L	Normal Street Lot A
E	Oakwood Lot
P	Parking Structure
D	Pease Staff Lot
F	Sill Lot
S	Smith Lot
N	Snow Lot (gate card required)
U	Society Bank Lot (after 6:00 p.m.)
W	Washington Street Lot

Special Parking Areas	
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K	Normal Street Lot B (special permit required)
1	North Campus 1 residence hall (permit required)
18	North Campus 2 residence hall (permit required)
K	Plant Research Lot (private)
10	Parking Structure (\$2 entry)
O	Pease Lot (\$2 entry)
A	Ryerson Lot of fee (permit required)
19	Washington Street Lot 1 (\$1.00 per hour)
V	Ford Lot C (\$1.00 per hour)
21	Wright Lot A residence hall (permit required)
21	Wright Lot B residence hall (permit required)

West Campus



All University Matters—\$1.00 per Hour
 Meter enforced 7:00 a.m.—10:00 p.m.
 Monday through Friday
 Lot signs take precedence