

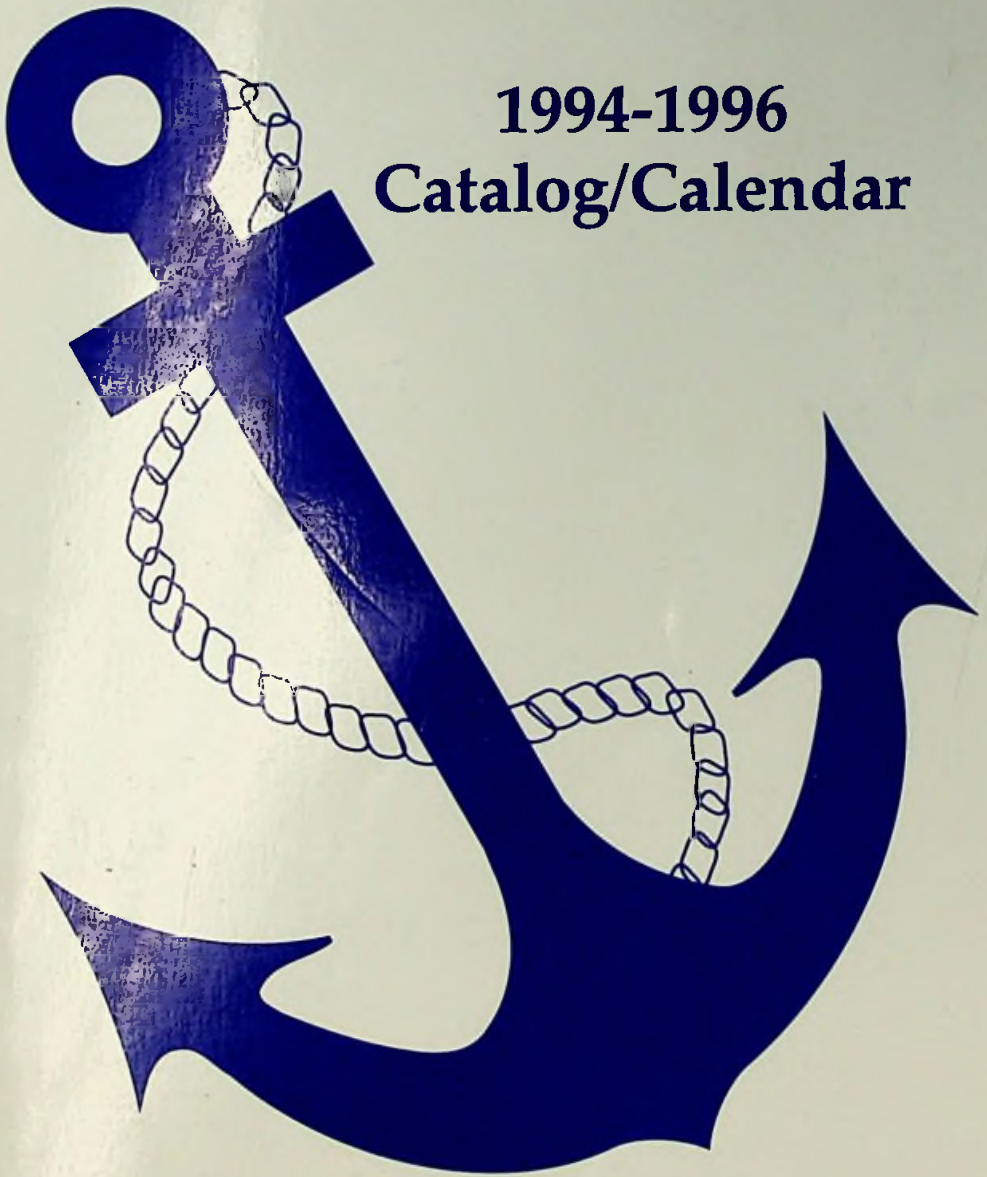
**Lake Superior State**

**UNIVERSITY**

**Sault Sainte Marie, Michigan**

**1994-1996**

**Catalog/Calendar**

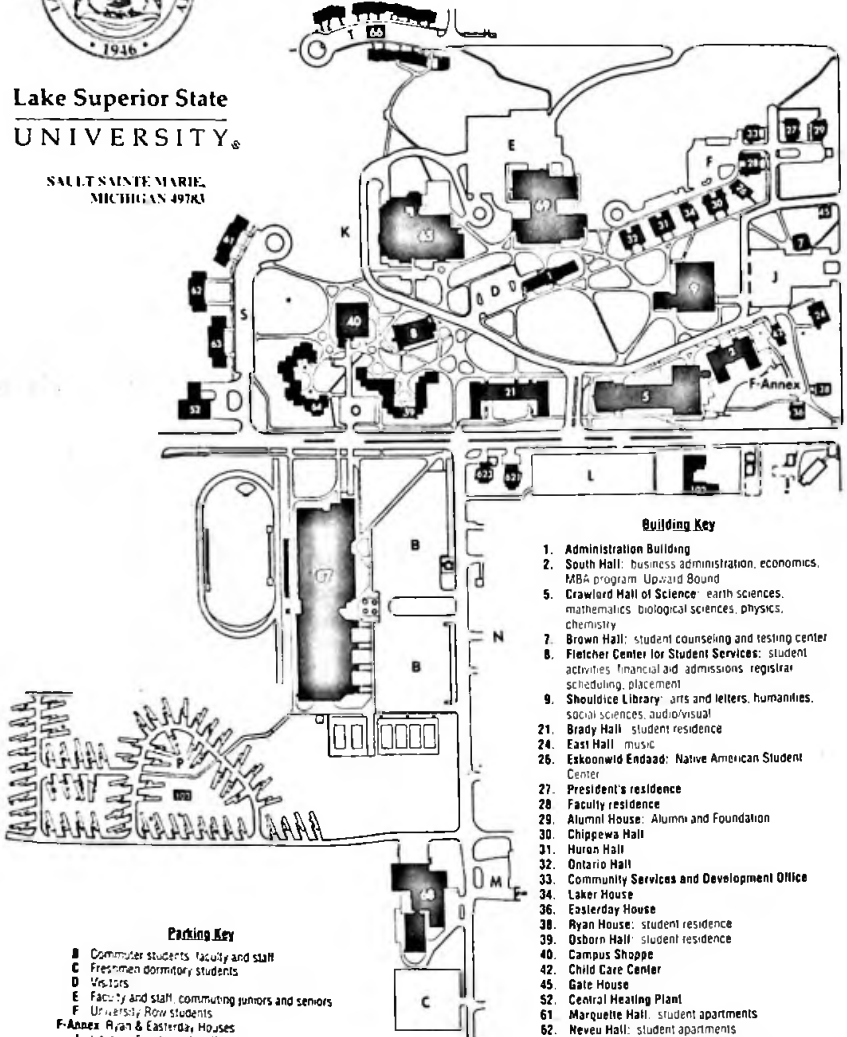




# ANCHOR CAMPUS MAP

Lake Superior State  
UNIVERSITY

SAULT SAINT-MAIRIE,  
MICHIGAN 49783



### Building Key

1. Administration Building
2. South Hall: business administration, economics, MBA program Upward Bound
5. Crawler Hall of Science: earth sciences, mathematics, biological sciences, physics, chemistry
7. Brown Hall: student counseling and testing center
8. Fletcher Center for Student Services: student activities, financial aid, admissions, registrar, scheduling, placement
9. Shoultice Library: arts and letters, humanities, social sciences, audio/visual
21. Brady Hall: student residence
24. East Hall: music
26. Eskoonwid Endsoad: Native American Student Center
27. President's residence
28. Faculty residence
29. Alumni House: Alumni and Foundation
30. Chippewa Hall
31. Huron Hall
32. Ontario Hall
33. Community Services and Development Office
34. Laker House
36. Easterday House
38. Ryan House: student residence
39. Osborn Hall: student residence
40. Campus Shoppe
42. Child Care Center
45. Gale House
52. Central Heating Plant
61. Marquette Hall: student apartments
62. Neveu Hall: student apartments
63. Meloney Hall: student apartments
64. The Village: Senior Cheberg, Kemp, and Youngs Houses: student residences
65. Walker Sister Center
66. Townhouses: student residences
67. James Norris Physical Education Center
68. Maintenance Building
69. Center for Applied Sciences and Engineering Technology
102. Newman Center
103. Blair Hastings Park: mobile home/trailer park
621. Edna M. Youngs Student Health Center
623. Faculty Residence

### Parking Key

- B Commuter students, faculty and staff
- C Freshmen dormitory students
- D Visitors
- E Faculty and staff, commuting juniors and seniors
- F University Row students
- F-Annex Ryan & Easterday Houses
- J Library: Faculty and staff
- K Visitors and faculty staff
- L Upperclass dormitory students
- M Motor Pool & Maintenance staff
- N Overflows for Lot B
- O Upperclass dormitory students
- P Motte-Morris residence
- S 61-62-63 student apartments
- T Townhouse parking
- X 30-minute parking

NO PARKING ON ANY UNIVERSITY DRIVE.

# CALENDAR/ CATALOG

1994-1996

Lake Superior State

UNIVERSITY

Sault Ste. Marie, Michigan

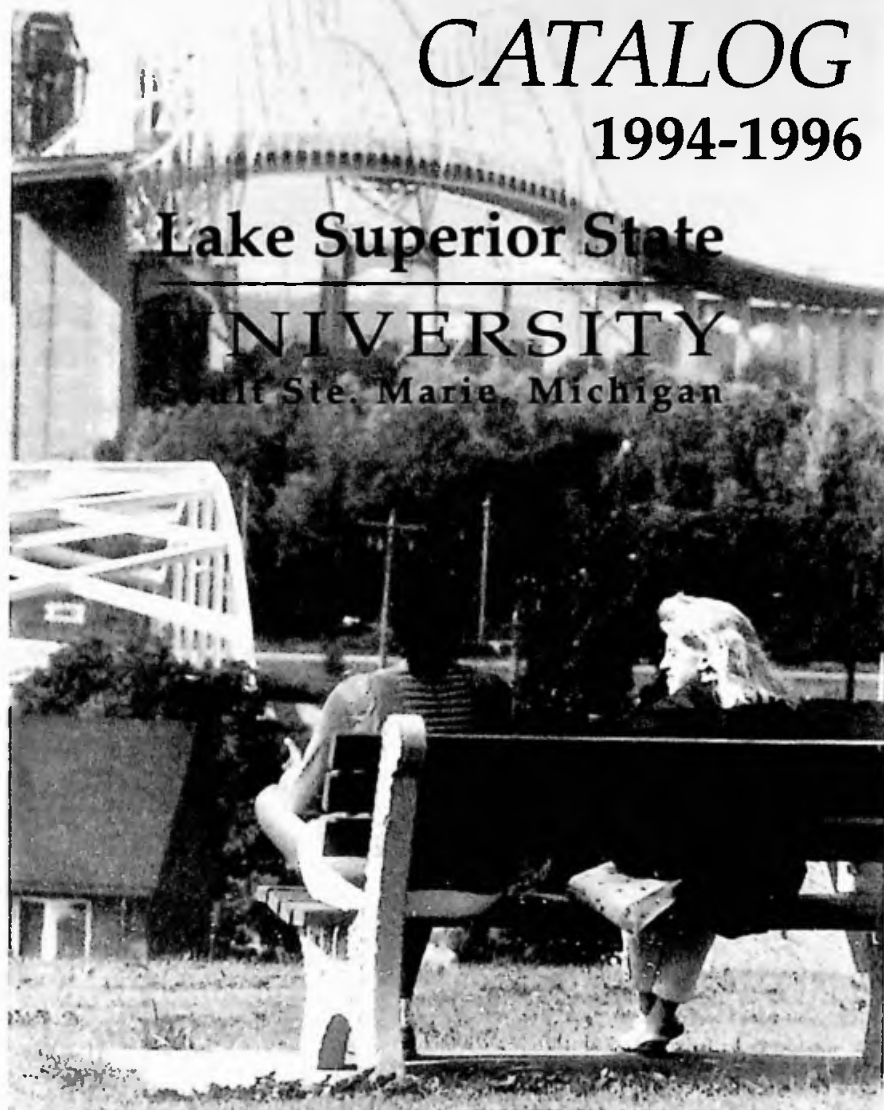


Photo by JOHN SHIBLEY

STELLA DEPLONTY, registrar: production, editor,  
and desktop publishing.

Contents are subject to change.

Consult school deans for details of such changes

ADMISSIONS PHONES: (906) 635-2231 or, toll-free, 1-800-682-4800, ext. 22



PRESIDENT · 2

## **WELCOME TO A BETTER TOMORROW**

Tomorrow will be better than today because the University community wills it. Excitement abounds as you begin to share the unique experience of Lake Superior State University. Our commitment to students and the personal approach to education has been our hallmark. We renew our pledge to treat each of you as our most precious resource and the development of your mind as our ultimate challenge and opportunity. Quality faculty and staff, state-of-the-art equipment, a tremendous library resource center, and telecommunications and its application to education are all necessary for the enhancement of your learning.

Here you will see visions of an exciting environment for learning and social interaction. Use this catalog as a guide to that better tomorrow. In it you will find answers to most of your questions regarding Lake Superior State. If you can't find the solution in these pages, just ask the nearest faculty or staff member. They will be glad to help you.

Yes, we really can't wait for tomorrow! It's an exciting time to be at Lake Superior State University! We are glad you are part of it!

**Robert D. Arbuckle, President**

# PROGRAMS

DETAILS concerning these offerings are in the "Programs" section in the center of this Catalog/Calendar, listed under the departments by which they are taught.

## Masters Degree

Business Administration (Executive MBA)

## Baccalaureate Degrees

(4 years)

Accounting, BS  
Biology, BA, BS  
Business Administration, BS  
Specialty in: Accounting, Management, and Marketing.  
Computer and Mathematical Sciences, BS  
Criminal Justice, BS  
Emphasis in: Corrections, Criminalistics, Generalist, Law Enforcement, Loss Control, Public Safety  
Engineering Technology, BS  
Degrees in: Automated Manufacturing Engineering Technology, Electrical/Electronics Engineering Technology, Environmental Engineering Technology, Mechanical Engineering Technology  
English Language and Literature, BA  
Environmental Chemistry BS  
Environmental Science, BS  
Exercise Science, BS  
Finance and Economics, BS  
Fire Science, BS  
Emphasis in: Engineering Technology, Generalist, Hazardous Materials  
Fisheries and Wildlife Management, BS  
Geology, BS  
Concentration in: Environmental  
History, BA, BS  
Human Services, BS  
Individualized Studies, BA, BS  
Legal Assistant Studies, BS  
Specialties in: Criminal Law, Labor Law, Personal Injury, Legal Administration, Legislative/Constitutional Law  
Mathematics, BS  
Medical Technology, BS  
Nursing, BS  
Political Science, BA, BS  
Concentrations in: General, Pre-Law, Public Administration  
Psychology, BA, BS  
Recreation Management, BA, BS  
Concentration in: Parks and Recreation Management  
Social Science, BA, BS  
Sociology, BA, BS  
Teacher Education in cooperation with Michigan State University  
Therapeutic Recreation, BS

## Associate Degrees

(2 years)

Business Administration  
Chemistry  
Criminal Justice/Corrections  
Criminal Justice/Law Enforcement  
Early Childhood Education  
Electronic-Computer Engineering Technology  
Fire Science  
General Engineering  
General Engineering Technology  
Legal Assistant Studies  
Liberal Arts  
Mechanical Engineering Technology  
Natural Resources Technology  
Office Administration  
Personal Computer Specialist  
Substance Abuse Prevention and Treatment  
Technical Accounting

## Certificate Program

(1 year)

Computer Drafting  
Information Processing  
Personal Computer Specialist

## Minors

Accounting-Finance, Art, Biology, Business French, Chemistry, Child Development, Communication, Computer Science, Corrections, Counseling, Economics, Economics/Finance, English Language and Literature, Fire Science, French Language and Literature, General Business, Geography, Geology, Geology Earth Science, Gerontology, History, Human Resource Management, Human Services Administration, Humanities, Institutional Loss Control, Japanese Study, Journalism, Journalism/Writing, Law Enforcement, Legal Assistant Studies, Loss Control, Marketing, Mathematics, Native American Studies, Office Administration, Personal Computer Specialist, Political Science, Psychology, Public Administration, Public Relations, Recreation Studies, Recreation Studies Skill, Sociology, Sociology/Social Welfare, Speech/Drama, Substance Abuse Counseling, Writing,

## Pre-Professional Transfer Programs

(1-4 Years)

Dentistry, elementary and secondary education, engineering, forestry, journalism, law, medicine, optometry, pharmacy, veterinary medicine, special education

# CONTENTS

## General

- 2 President
- 4 The University
- 10 University Talk
- 12 Equal Opportunity
- 16 Academic Policies
- 34 Standards of Behavior
- 39 Admissions
- 53 Student Services
- 53 Student Senate
- 57 Athletics

## Costs, Financial Aid

- 58 Tuition and Fees
- 62 Financial Aids
- 67 Scholarships, Grants
- 80 Loans
- 83 Student Employment
- 89 Native Americans
- 85 Veterans

## Programs of Study

- 86 Graduation Procedures
- 88 Degree Requirements
- 94 School of Arts, Letters and Social Sciences
- 142 School of Business
- 160 School of Engineering Technology & Mathematics
- 186 School of Health and Human Services
- 223 School of Science and Natural Resources
- 253 Community Services and Development

## Courses

- 255 Course Descriptions  
*in alphabetical order*

## Personnel and General Information

- 318 Distinguished Teachers
- 319 Faculty
- 326 Academic Deans
- 328 School Secretaries
- 329 Administrative Staff
- 330 Officers of Administration
- 333 Board of Regents
- 334 Advisory Committees
- 336 Computer Services
- 337 Foundation
- 337 Alumni Association
- 338 Library
- 339 Index
- 343 Calendar
- IFC Campus Map
- BC Goals
- BC Mission Statement

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LSSU admits and hires men and women, veterans, and disabled individuals of any race, color, national, or ethnic origin, or marital status in compliance with all appropriate legislation, including the Age Discrimination Act. The compliance officer is Beverly White.

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Natural Resources Technology  
Office Administration  
Personal Computer Specialist  
Substance Abuse Prevention and Treatment  
Technical Accounting

## Certificate Program

(1 year)

Computer Drafting  
Information Processing  
Personal Computer Specialist

## Minors

Accounting-Finance, Art, Biology, Business  
French, Chemistry, Child Development,  
Communication, Computer Science, Corrections, Counseling, Economics, Economics/Finance, English Language and Literature, Fire Science, French Language and Literature, General Business, Geography, Geology, Geology Earth Science, Gerontology, History, Human Resource Management, Human Services Administration, Humanities, Institutional Loss Control, Japanese Study, Journalism, Journalism/Writing, Law Enforcement, Legal Assistant Studies, Loss Control, Marketing, Mathematics, Native American Studies, Office Administration, Personal Computer Specialist, Political Science, Psychology, Public Administration, Public Relations, Recreation Studies, Recreation Studies Skill, Sociology, Sociology/Social Welfare, Speech/Drama, Substance Abuse Counseling, Writing.

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- 53 Student Services
- 53 Student Senate
- 57 Athletics

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- 80 Loans
- 83 Student Employment
- 89 Native Americans
- 85 Veterans

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# WHAT

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Lake Superior State University encourages in its students a desire to learn and a willingness to serve. The primary purpose of the University is to educate and train young people for rewarding careers and lives of meaning. We:

Regard students *as mature, responsible individuals* engaged in the processes of self government which are essential in a democratic society.

Teach individuals, *not groups*; with a close-working relationship between instructors and students. Each student has a faculty advisor and may also consult the counseling service.

Educate students *for well-rounded lives*; not only intellectual competence, but physical, social, and cultural development. The program of general education includes courses such as recreational activities, natural sciences, social sciences, English language and literature, and the humanities. Athletic events, clubs, dramatic and cultural presentations, and student self-government organizations offer a wide variety of co-curricular activities.

Teach fundamentals *and their application*. In modern society knowledge increases so rapidly that specific facts may become obsolete even before they are widely learned. Close attention to fundamentals is necessary. The University attempts to inculcate habits of learning, thinking and doing which, thoughtfully modified, will endure for a lifetime.

Encourage initiative, *self criticism, and intellectual curiosity*; learn by doing. Education in fundamental

knowledge should be supplemented by laboratory and field work in order that university preparation closely resembles conditions in professional careers. Students should develop lifelong intellectual curiosity and discovery, become constructive critics of themselves and of society, and learn to prize creative, original thinking.

## IN RETROSPECT

**HISTORIC:** Lake Superior State University is a hilltop campus, situated on the historic site of Fort Brady, a U.S. Army post dating back to 1822. The campus overlooks the St. Mary's River and the famous Soo Locks. After the fort was deactivated in 1944, the property was acquired by Michigan Technological University to establish a branch. Thus, the campus is a blend of historic and modern architecture. The University was accorded four-year status by the State Board of Education in 1966, and authorized to grant baccalaureate degrees.

The first baccalaureate class graduated in 1967. Autonomy, separating the University from Michigan Technological University, was granted January 1, 1970. On November 4, 1987, Governor James Blanchard signed legislation changing Lake Superior State from College to University.

**CAMPUS RESIDENCE** facilities include two traditional halls, a

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# WE ARE

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Student Village with eight-person apartments, townhouses, a mobile home park, several apartment buildings and unique family-style houses. The Quaraterdeck provides food service facilities. The Walker Cisler Center offers recreational facilities as well as a snack bar, student offices, and meeting rooms. The James Norris Physical Education Center provides ample opportunity for a variety of recreational activities, intramurals, courses and intercollegiate athletics. The Center for Applied Sciences and Engineering Technology offers students the latest in modern technological resources.

A seasoned faculty and high academic standards have earned Lake Superior State University a reputation for an enriched education in such areas as liberal arts, engineering technology, business administration, social sciences, biological sciences and their allied fields.

The need to provide continuing education for adults has not been overlooked. The University offers evening courses as well as conferences and cultural programs. Enrollment of part-time students in day classes is encouraged.

Students find the close relationship between faculty and the student body is extremely valuable in the first years of university work. No one is "lost in the crowd" here.

## THE CAMPUS

**ENVIRONMENT:** The campus provides a true university environ-

ment, with its own classroom and laboratory buildings, residence halls, library, auditorium, gymnasium, food services, and health center. It consists of 121 acres of spacious, wooded campus on the western heights of Sault Ste. Marie overlooking the St. Mary's River, Lake Superior and Sault Ste. Marie, Ontario.

Students find that the city of Sault Ste. Marie and its environs offer much of value to enhance their educational experiences. Sault Ste. Marie is one of the oldest cities in the United States. It was a fur trading center as early as the second quarter of the seventeenth century. In 1641, a Jesuit mission was established here, and 27 years later Father Marquette founded at the Sault the first permanent settlement within the limits of Michigan. The Sault celebrated its 300th birthday in 1968.

**ACCREDITATION:** How does this university rank with other educational institutions scholastically? Accreditation means the curricula, faculty, equipment, laboratories, and library of an institution have been inspected and approved. Lake Superior State University is accredited by the North Central Association of Colleges and Secondary Schools.

Fourth year instruction in medical technology is in hospitals approved by the Council on Medical Education and Hospitals of the American Medical Association.

Engineering Technology associate degree programs accredited by the

Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, include: electrical/computer and mechanical engineering technology. The Board has also accredited four-

year programs in electrical/electronics, mechanical and automated manufacturing engineering technology.

The nursing program is accredited by the National League for Nursing.



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# UNIVERSITY TALK

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Before reading this catalog it would be well to familiarize yourself with terminology you will encounter along the way; words and phrases which you might not have previously encountered but are peculiar to the academic world:

**ACADEMIC CREDIT** (or credit hours, or, simply, credit): One academic credit is generally earned for every 15 hours in a lecture during a semester.

**ACADEMIC PROBATION:** What you get when your grade point average falls below an acceptable level.

**ACADEMIC YEAR:** Two 15-week semesters plus a summer semester.

**ACCREDITED:** Quality of academic programs has been approved by an outside, rating agency.

**ADD:** You may change your schedule by adding courses after you schedule. Check schedule booklet for dates.

**ADMISSION:** Your acceptance for enrollment.

**ADVISOR:** Faculty member who offers you academic advice, explains requirements, and assists in scheduling. Ask your department head for an advisor.

**ASSOCIATE DEGREE:** Awarded for (generally) two-year programs.

**BACHELOR'S DEGREE:** (Baccalaureate): awarded for four-year program.

**CALENDAR:** Important dates of the academic year.

**CATALOG:** (In Canada, this is called "the Calendar"): Published every two years.

**CERTIFICATE:** Requires one year of study.

**COREQUISITE:** Course you must take during the same semester as another course.

**COGNATE:** A specified course, generally in field other than your major, which you must take for your program.

**COMPETENCY REQUIREMENTS:** You must pass tests in writing and mathematics before you receive your degree.

**COURSES:** Listed in the Academic section of this Catalog, generally show a course number, EN 110 followed by the course name, Freshmen Composition and the number of academic credits for the course (3) shown at the right of the column.

**CREDIT:** See academic credit.

**CURRICULUM:** (major, program) Courses required for specific degree or certificate.

**CUT:** Deliberately miss a class for no good reason. In high school you "skipped".

**DELETE:** (DROP) You may change your schedule by dropping classes after you schedule. See scheduling booklet for dates.

**DEPARTMENTS:** Sixteen academic departments, each administered by a "chair" and offering courses in one or more disciplines.

**DISCIPLINE:** Group of related courses such as mathematics.

**DROP (DELETE) AND**

**ADD:** You may change your schedule by dropping or adding courses after you schedule. Check scheduling booklet for dates.

**ELECTIVE:** Course distinguished from required course. You pick it from a number of specified courses.

**FIELD PLACEMENT:** See practicum.

**FINANCIAL AID:** Includes grants, loans, scholarships, or work-study.

**FULL-TIME STUDENT:** If you enroll for 12 or more credit in a semester.

**GENERAL EDUCATION REQUIREMENTS:** a group of courses you must take to earn a bachelor's degree or an associate in Liberal Arts Degree, provides you with broadly based education.

**GED EXAMINATIONS:** (General Education Development Examination): You take this if you didn't finish high school, but believe you learned enough in other ways to qualify for university.

**GRADE POINT AVERAGE (GPA):** Number of points divided by the hours of credit attempted.

**INTERNSHIP** (practicum, field placement, or clinical): Courses or activities you must take outside of classroom or lab.

**MAJOR** (Curriculum): Your concentration of courses in your specific area.

**MINOR:** Your lesser concentration (20 credits or more).

**PART-TIME STUDENT:** You, if you take less than 12 credits in a semester.

**PRACTICUM:** Another word for internship.

**PROFESSOR:** General term for all faculty; also, a specific rank of college teachers who progress from instructor, assistant professor and associate professor to full professor. Professors having a doctoral degree may also be referred to as "doctor".

**PREREQUISITE:** Certain courses you must successfully complete before you may enroll for

another specific course. Students must satisfy prerequisites, and any other stated conditions, before enrolling in a course, or have permission from an instructor to waive the prerequisites. Enrollment in a course may be revoked if it is found before the end of the drop period that the proper prerequisites have not been met. Responsibility rests with the student to be certain that he/she has the approved prerequisites.

**PROGRAM** (also curriculum): A group of courses you must take in order to earn a degree or certificate.

**REGISTRATION:** Each semester you must request specific classes for the next semester, pay tuition, etc.

**REQUIRED COURSES:** You must take these to earn your degree.

**SCHEDULE BOOKLET:** Published before scheduling period for next semester. Includes course details and scheduling procedures.

**SCHEDULING:** Period each semester when you must request courses for next semester.

**SCHOOLS:** Five academic schools comprised of 16 departments, each administered by a "Dean".

**SEMESTER:** Sometimes called term: See academic year.

**SYLLABUS:** Written description of course content.

**TERM:** Sometimes called semester: See academic year.

**TRANSCRIPT:** Record of all your courses kept by LSSU Registrar.

**TRANSCRIPT, OFFICIAL:** Mailed directly from principal's or registrar's office of issuing institution to LSSU admissions office. It must bear the seal of the institution and signature or stamp of school official.

**WITHDRAWAL:** Procedure when you drop a course or from school.

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# EQUAL OPPORTUNITY

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Notice of Lake Superior State University's policy of compliance with Federal and State Law

Lake Superior State University complies with all Federal and State laws and regulations prohibiting discrimination, and with all requirements and regulations of the U.S. Department of Education.

Lake Superior State University reaffirms its policy that no person shall be discriminated against, excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination in employment, or in any program or activity for which the University is responsible or for which it receives financial assistance from the Department of Education, on the basis of race, color, religion, national origin or ancestry, age, sex, marital status, height, weight, disability, or veteran status.

Inquiries or complaints concerning the application of Title VII of the Civil Rights Act of 1964 which deals with nondiscrimination on the basis of race, color, and national origin,

Title IX of the Educational Amendments of 1972 which deals with nondiscrimination in education programs on the basis of sex, and Section 504 of the Rehabilitation Act of 1973 which deals with nondiscrimination on the basis of disability, or the Americans with Disabilities Act, should be made to the following University officers who have been designated to coordinate these programs, and act as Grievance Officers.

Applicants for admission and students: Dr. Harry Pike, vice president for student programs and services, Fletcher Center, Lake Superior State University. Telephone: 635-2684

Applicants for employment and employees: Mrs. Beverly White, director of employee relations, office of employee relations, Administration Building, Lake Superior State University. Telephone: 635-2697.

Lake Superior State University grievance procedures for Title VII of the Civil Rights Act of 1964, Title IX of the Educational Amendment Act of 1972, Americans with Disabilities Act, and Section 504 of the Rehabilitation Act of 1973.

## POLICY

1. The University encourages students, faculty and staff to report promptly instances of discrimination and discriminatory harassment. Once the University has been informed of such behavior it will take

timely and appropriate steps to investigate the problem. At any step of the grievance process, time schedules as outlined in the process may be extended by mutual agreement in writing.



2. Individuals may discuss with the Grievance Officer concerns they may have regarding possible discrimination or harassment to learn what options are available.
3. **Nonretaliation:** The University not only prohibits discrimination, including harassment, but also strictly prohibits any retaliation against any individual, who, in good faith, has registered a complaint under this procedure. Any supervisor, agent, or employee of the University who, after investigation, has been determined to have retaliated against any employee or student for using the complaint procedure in this policy will be subject to appropriate discipline up to and including immediate discharge. If an employee or student believes he or she has been retaliated against for exercising his or her rights under this policy, this complaint procedure should be used.
4. All matters discussed in this process will be kept as confidential as possible.
5. Individuals have the right under the law to seek remedies from the Michigan Department of Civil Rights, the Equal Employment Opportunity Commission, the Office for Civil Rights, Department of Education or by court action. Individuals may file complaints of illegal discrimination on the basis of sex (Title IX) or disability (Section 504) with the Office for Civil

Rights, Department of Education, at the same time a grievance is filed under the University's procedure, during or after the use of the grievance process, or without using the grievance process at all. A Title IX, ADA, or Section 504 complaint must be filed in writing with the Office for Civil Rights or EEOC no later than 180 days after the occurrence of the possible discrimination.

### **STEP 1: INFORMAL COMPLAINT**

Any individual (complainant) with a discrimination or harassment complaint, may contact the Grievance Officer in person.

The Grievance Officer will speak with the complainant and try to resolve the matter on an informal basis. At Step 1, all information will be kept confidential to the extent possible.

### **STEP 2: FORMAL COMPLAINT**

If the problem cannot be resolved at Step 1 within five (5) working days from the date of first contact with the Grievance Officer, the complainant may submit a written complaint on a form provided by the Grievance Officer. The Grievance Officer will help the complainant complete the form if the complainant requests.

Within five (5) working days of the receipt of the written

complaint, the Grievance Officer will send a Notice of Complaint, a copy of the complaint form, a response form and a copy of this procedure to the respondent. The respondent will submit the completed response within five (5) working days from the date the complaint is received by the respondent.

The Grievance Officer will conduct an investigation. The investigation should be completed within twenty (20) working days after receipt of the response. If the complaint is against the University as the Employer, the Grievance Officer will have thirty (30) days from the receipt of the written complaint to investigate the matter.

Within ten (10) working days of completion of the investigation, the Grievance Officer will issue to complainant a written Determination stating whether the allegations of the complaint are true and any remedial action recommended.

At Step 2, information will be kept confidential to the extent possible.

### **STEP 3: HEARING**

If either the complainant or the respondent is dissatisfied with the Grievance Officer's determination, he or she may request that the matter be referred to a Hearing Panel for a hearing by submitting the form obtained from the Grievance Officer. The request for hearing must be submitted in writing to the

Grievance Officer within five (5) working days after receipt of the Determination.

The President will appoint a permanent Hearing Panel composed of three members including, if possible, at least one female and one minority member. The vice-president for business and financial operations will be the chairperson and will conduct the hearing.

The Grievance Officer will send a Notice of Hearing and a copy of the Request for Hearing to the complainant, respondent (if any), and Hearing Panel, scheduling the hearing within fifteen (15) working days, unless the Panel Chairperson provides otherwise and so notifies those involved.

At the hearing the complainant and respondent will be allowed to give their own testimony, present the testimony of witnesses, documentary evidence or other evidence relevant to the proceedings and cross examine the other party's witnesses. The complainant and respondent may have an attorney or other advisor present. The Grievance Officer will present the findings of the investigation conducted at Step 2 and may present witnesses, if appropriate. To ensure the privacy of those involved, witnesses (other than the complainant and respondent) will be allowed in the hearing room only during their testimony. At the Chairperson's discretion, the hearing may be recorded.

Within fifteen (15) working days after completion of the hearing,

the Chairperson will issue the Decision and recommended order of the Hearing Panel. The Decision will be mailed to the complainant and respondent with a copy to the Grievance Officer. The Chairperson will implement any action recommended by the Panel.

**STEP 4:  
APPEAL**

The decision of the Hearing Panel will be final and binding.

If grievants wish to pursue the matter further, they may file with the outside agencies listed in Policy section, No. 5.

Section 5.02 of the by-laws of the Board of Regents, approved July 24, 1989, will not be invoked for grievances submitted for settlement under this procedure.

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## ***NOTES***

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# ACADEMIC

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The Academic Policies and regulations of Lake Superior State University which are intended to guide students through an orderly and successful pursuit of their academic goals, describe the necessary actions and procedures for which students are responsible. They outline the students' expectations and rights while enrolled as a university student. Advisors, department heads and personnel of university offices will help students to understand these policies and regulations; however, it is each student's individual responsibility to comply with them.

## THE ACADEMIC YEAR

Lake Superior State University is on a semester system. (Previous to Fall Semester 1991 it was on a quarter system.) The academic year consists of a Fall Semester (September through December) and a Spring Semester (January through April or early May). Fall and Spring semesters consist of fifteen weeks of instruction followed by a week for final examinations. During the Summer Semester (May through early August) most courses are conducted during an eight week period which includes two days for final examinations. Specific dates for each semester are found in the University Calendar located elsewhere in this book.

## ACADEMIC CREDIT

In a lecture/recitation type course students receive one credit for each fifteen hours of classroom instruction. (For example, a three-credit course of this type might be scheduled 9:00 to 9:50 AM Monday, Wednesday and Friday. An "hour"

period is usually only 50 minutes long, with ten minutes allowed for students to move from class to class.)

Courses including laboratory, field work or other non-lecture formats may be scheduled for more than one hour per week per credit. In general, one credit requires an average of three hours of the student's time per week for the semester. In lecture/recitation courses this would normally be accomplished with one hour of classroom attendance and two hours of preparation or study.

An average student credit load per semester is sixteen credits. One hundred twenty-four credits is the minimum number required for a baccalaureate degree. Some programs require more than this minimum.

## CLASSIFICATION OF STUDENTS

Students are assigned to one of four class levels as follows: 0 to 25 credits = Freshman; 26 to 55 credits = Sophomore; 56 to 87 = Junior; 88+ = Senior.

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# POLICIES

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## STUDENT CURRICULUM CHOICE AND ADVISING

Students are encouraged to select a major program upon admission to the University. The academic department offering the chosen program is called the "major department". The school dean of the major department assigns an academic advisor to each of the students. An advisor assists students in course selection each semester, in understanding program and university requirements and regulations, in evaluating academic progress, and in other matters related to successful academic achievement. Lake Superior State University is firmly committed to providing students personalized advising and support. Students are encouraged to actively seek help from their instructors, advisors, department chair, Division of General Studies, Counseling Center, and any other faculty, staff or office which they believe might be of assistance. The Division of General Studies provides academic tutoring as does the Native American Center and academic departments. These services are usually provided without charge to enrolled students. Additional information concerning advising services is listed under testing and counseling service in this catalog.

Students who are undecided about their choice of a major program are

classified as majoring in Liberal Arts, an associate degree program, and assigned a provisional academic advisor until another major is chosen.

Students may change their major curriculum by processing a Curriculum Change Card through the Registrar's Office. The Registrar's Office, Counseling Center and departmental offices can provide students with the card and instructions for processing it. Curriculum Change cards must be filed with the Registrar's Office each time a curriculum change is made so that advisor materials, grade reports and graduation information will be sent to the correct school and advisor. Students will be assigned a new advisor when a curriculum change is made. Students may request a change of advisor by asking the dean of their school to make such change.

Students who are provisionally admitted to Lake Superior State University through the Division of General Studies will be assigned to an academic advisor from within that Division until the student meets the exiting criteria which enables them to enter their chosen major unconditionally.

## SEMESTER COURSE SELECTION

Each semester the Registrar/Scheduling Office publishes a Course Schedule listing all courses

offered during the semester along with related information such as days and hour of course offering, instructor and the final examination time. This booklet is available several weeks before the semester begins and contains timely and important information for students. Students are responsible for reading each semester's Course Schedule and adhering to its instructions. Course Schedules and scheduling materials are available from all departmental offices and the Scheduling Office.

After academic advising, students schedule courses by submitting required materials to the Registrar/Scheduling Office according to the time schedule described in the Course Schedule. After scheduling courses, students have a limited period of time to pay tuition and related fees. At the end of this period students will be dropped from classes for non-payment.

Several factors assist or limit student course selections. Placement examinations for mathematics, English, and reading are administered by the Counseling and Testing Center located in Brown Hall. These examinations are required of all students before they schedule their first courses in mathematics or English.

**Maximum student credit load** is twenty credits per semester, with the exception that students having a 3.00 cumulative grade point average may take additional credit with written approval of the dean of their school. Students on academic probation and enrolled in Division of General Studies should not take more than fifteen credits per semester.

**Prerequisites:** Students must satisfy prerequisites, and any other stated conditions before enrolling in a

course or have permission from an instructor to waive the prerequisites. Enrollment in a course may be revoked (with an N grade) if it is found during the regular drop period that the proper prerequisites have not been met. Responsibility rests with students to be certain that they have the approved prerequisites.

Permission to take any course out of sequence is seldom granted even to exceptional students, since electing a course for which one is not prepared imposes an additional burden not reflected in the total number of credits being carried. Students must earn passing grades in a prerequisite course before taking the next course in sequence. For some courses a C (2.00) grade or better is required. Exceptions may be made only by school dean or the course instructor. Students who receive a D grade in a prerequisite course or a course in the major are strongly advised (and may be required) to repeat the course, and raise the D, before continuing.

**Repeats:** Students may not repeat a course by enrollment or examination if they have passed a course for which the repeated course is a prerequisite. Exceptions may be granted by the school dean with the concurrence of the Registrar.

**Changes in course schedule:** A period of time is provided at the beginning of each semester for students to add or delete courses. Courses deleted during this period will not appear on a student's permanent record (transcript). The add/delete period for a full semester course begins on the first day of the semester, and ends on the sixth university business day. For courses which span less than a full semester, a shorter add/delete period may be established. During the add/delete period schedule changes are initiated

at the Registrar/Scheduling Office which maintain current records of class availability. In some cases faculty permission will be required for course changes. Detailed information on adding or deleting classes is provided to students in the Course Schedule booklet each semester. A student's add or withdrawal from a course is not officially completed unless the appropriate form is filed with the Registrar/Scheduling Office. Students are advised to retain the official receipt they are given upon completion of an add or drop procedure.

**Late Adds:** Students requesting to add courses after the end of the add/delete period must obtain permission and a special form for this purpose from the Registrar's Office, obtain the written approval of the instructor, and then return the form to the Registrar's Office. A service charge will be charged for this procedure. Students are responsible for all class work missed previous to adding a class.

**Non-attendance at first class:** Students scheduled for a course, but not attending the first class meeting, may be deleted by the instructor during the delete period. In this case, the instructor shall submit a delete form and notify the student.

**Dropping courses after the add/delete period:** Students may drop a course during the first forty days of a full semester course. For courses running less than a full semester the semester Course Schedule booklet will contain official dates each semester. (The time period for dropping will be equal to 54 percent of the course instructional period.) A student's record shall indicate an N grade for each course officially dropped during this period.

Forms for the procedure are available in the Schools or Registrar/Scheduling Offices.

After the eight-week drop period, drops will be allowed only for extenuating circumstances. A student's record shall indicate a W grade for courses officially dropped during this period. The student must receive the instructor's recommendation and the approval of the Registrar. Forms may be obtained at the Registrar's Office.

## CLASS ATTENDANCE

Students at Lake Superior State University should be sufficiently mature to attend classes without being required to do so. Students must decide for themselves when it is necessary to be absent. In making such a decision, they must understand that instructors are authorized to lower grades if they believe a student's absence requires this action. The policy on attendance reads as follows:

1. Absences will be handled according to the instructor's discretion, consistent with school policy.
2. Instructors may report consecutive or excessive absences to the Vice President for Student Services.
3. Participation in an official University function shall be considered an excused absence when approved by the Provost. Students shall not be penalized for participation in such a function; but students are responsible for work missed and must confer with their instructor on this matter.

# COMPLETE WITHDRAWAL FROM THE UNIVERSITY

Full-time students who withdraw from the University during the first eight-weeks of the semester should report in person to the Counseling Center and complete a withdrawal form for the Registrar's office. The Registrar will authorize the appropriate refund, if any. Refunds will be mailed after the end of the refund period. After the eight-week drop period, students must report to the Registrar's Office for the Withdrawal Form.

Proper clearance of University obligations assures that students can later receive transfer of credits. Students with a hold on their transcript will not receive a transcript of credits until clearance is complete.

## THE GRADING SYSTEM

**Grade point average (GPA).** To compute the grade point average for a semester, divide the total points earned by the total credits carried. Credits carried include those failed or earned but not credits for Credit/No Credit courses. To figure the cumulative grade point average divide the total points earned by the total credits carried in all semesters. When a course is repeated, count only the credits carried and the points of the last grade earned. Thus, successfully repeating courses in which students initially earned a D or F is an effective way for them to improve their cumulative GPA. A cumulative grade point average of 2.00 for all credits carried is required for graduation. Further,

the student must compile a 2.00 grade point average for all departmental courses required in the student's major and minor(s).

### GRADES AND GRADE POINTS

*Grades awarded are:*

Grade	Grade Points per Credit
A+	4
A Excellent	4
A-	3.7
B+	3.3
B Good	3
B-	2.7
C+	2.3
C Average	2
C-	1.7
D+	1.3
D Inferior	1
D-	.7
F Failure	0
I Incomplete	0
N No Grade	0
W Withdrawal	0
Z Deferred	0
CR Credit	0
NCR No Credit	0

**Incomplete grades (I):** An incomplete grade is given only when students, because of circumstances beyond their control, are unable to complete a segment of the course.

It must be made up by the date specified by the instructor which must be within a maximum of two semesters in residence, or else the incomplete grade becomes a failure. Summer semesters are not counted unless a student is enrolled for classes during the summer.

**No Grade (N) and Withdrawal (W) grades:** An N grade will be given for each course officially dropped during the first eight weeks and a W grade will be given for each course officially dropped after the eight week drop period.

**Deferred grades (Z):** Deferred grades are given in those special



courses where work is planned to extend beyond a single semester.

**Grade reports:** Reports concerning grades and credits are sent to each student after each semester. These reports are mailed to home addresses.

**Dean's list:** Students who complete twelve or more credits in a semester with a grade point average of 3.50 or higher will be placed on the dean's list for that semester, acknowledging their outstanding achievement.

## ACADEMIC PROBATION

Students at Lake Superior State University enjoy a considerable degree of self-determination; they decide for themselves when and how long to work on each assignment. The best way to succeed in this task is to work out a weekly schedule with two hours of study time earmarked as preparation for each one-hour class. (In a few cases, the instructor may suggest some other division of time.)

Most students are able to maintain good work in all their courses. A few fall short of satisfactory performance. For them, a system of academic probation is used.

Academic probation is considered a warning to students that their scholastic performance is below the University's minimum requirements. During this period, students should determine for themselves whether to continue their programs as planned. No student while on probation shall carry more than 15 credits per semester exclusive of band and recreational activities. The Vice President for Student Services, in consultation with the student's

advisor, may impose restrictions on the student's extra-curricular activities.

It is the responsibility of students to familiarize themselves with all academic regulations including those relating to probation, and to keep informed as to their academic standing. The rules governing academic probation, dismissal, and reinstatement follow.

1. Students will be on academic probation if their cumulative grade point average is in the "on probation" category.
2. Students whose cumulative grade point average at the conclusion of a semester falls into the dismissal range of the academic standing table will be dismissed.
3. After a first or second dismissal a student has the following options:
  - a. Allow two semesters (summer may be counted for one semester) to elapse before re-enrollment or
  - b. Petition the Scholastic Standards Committee for immediate readmittance. This action is initiated with the Registrar. The Committee can permit early readmittance with specific conditions required of the student or deny the student's request. Subsequent to the Committee's denial the student can further appeal to the Provost, whose decision is final.
4. Students who continue after a dismissal will be dismissed again after any semester in which their cumulative grade point average falls in the dismissal category. The Registrar may allow the

# Academic Standing Table

## Full and Part-time Students Academic Probation and Dismissal Policy

Cumulative Semester Credits Carried at LSSU	Minimum for Good Standing	Cumulative Grade Point Average On Probation	Dismissal
1 - 18	1.81 *	less than 1.81	Not subject to Dismissal
19 - 25	1.81	1.41 - 1.80	1.40 or less
26 - 40	1.86	1.51 - 1.85	1.50 or less
41 - 55	1.91	1.61 - 1.90	1.60 or less
56 - 72	1.93	1.71 - 1.92	1.70 or less
73 - 87	1.95	1.81 - 1.94	1.80 or less
88 +	1.97 **	1.91 - 1.96	1.90 or less

\*Students will not be dismissed for academic deficiencies until they have enrolled in at least 19 semester credits at Lake Superior State University.

\*\*A cumulative grade point average of 2.00 for all credits carried at Lake Superior State University, and a cumulative grade point average of 2.00 for all courses required in the student's major and minor is necessary for graduation.

student to continue "on probation" with the record showing "on probation" instead of "dismissal", if the student's record has shown improvement during the semester and student has a 2.00 grade point average in courses carried for that semester.

5. Students dismissed a third time will not be reinstated without the permission of the Provost. Three semesters must elapse from the time of dismissal before the student may petition for readmittance. Summer may be counted for one semester.
6. The Scholastic Standards Committee may, on the recommendation of a school dean require students to withdraw from any course or courses in which their preparation, progress, effort or conduct is deemed unsatisfactory and may on the recommendation of the Provost or Vice President for Student Programs and Services dismiss students from the

University if their background, overall academic accomplishment, conduct or attitude toward their work is deemed unsatisfactory.

## CREDIT/NO CREDIT COURSES

To encourage intellectual exploration, students may enroll in some courses on a credit/no credit basis for which either a grade of CR or NCR is given. To be eligible for this option students must be in good academic standing, not on academic probation. Only one such course per semester is permitted and no more than twelve semester credits in such courses may be presented toward a student's degree requirements. Additionally, this credit/no credit option may not be selected in courses which satisfy major, minor or general education requirements. Students must apply at the Registrar's Office during the six-day add period if they want to enroll in a graded course under the

credit/no credit policy. This option may not be changed after the six-day add period. Academic performance at the level of 2.00 or higher is required for the credit, CR, grade. Instructors are not advised of a student's option to be graded credit/no credit.

Certain courses are always offered with a credit/no credit grading format. Such courses have this information in their official course descriptions and course syllabi. The above policy and limitations do not apply to these courses.

## CREDIT BY EXAMINATION

There are three examination processes by which a student may earn credit for individual courses or general education requirements; Advanced Placement, CLEP and departmental examinations. Processes for taking Advanced Placement and CLEP examinations are described in the Admissions section of this Catalog. Students must be admitted to a degree program before being eligible to receive credit by examination. A maximum of 30 credits may be earned by examination. CLEP examinations, if available, will be used to determine whether credit shall be granted. Departments may provide their own examinations for certain courses. Students should inquire at the academic department offering the course whether a departmental examination is available. If an examination is available, the school dean's written approval to take the examination must be obtained.

An application form for credit by examination with explanation of the necessary procedural steps, may be obtained from the school dean. The

fee amount will be equivalent to that for CLEP exams and students will not be charged tuition for the credits earned. An examination grade of 2.00 or better is required for credit to be earned. Course and credit earned by examination shall be recorded on the student's transcript with the grade marked as CR. Some universities may not accept for transfer, credit earned by departmental examination.

## TRANSCRIPTS

Students desiring transcripts of their Lake Superior State University records must present or send a written request to the Registrar's Office. Information such as name (at enrollment), ID number, dates of attendance is necessary. A fee may be charged for each copy of the record.

The official record of the student's academic progress (transcript) will be forwarded only to those places or persons requested in writing by the student. Only "student copy" transcripts will be issued directly to a student. Students with financial or other obligations to the University will not receive a transcript until all obligations are cleared.

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## NOTES

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# THE PRIVACY ACT

**Section 438** of the General Education Provisions Act, as amended, sets forth the requirements to be met by an educational institution to protect the privacy of students. This Act is called the Family Educational Rights and Privacy Act and shall be referred to hereafter as the Act. The Act generally governs access to student educational records and the release of such records. The Act also requires that institutions of higher education must provide students access to official records directly related to the student and an opportunity for a hearing to challenge such records on the grounds that they are inaccurate, misleading or inappropriate. Educational institutions must also obtain written consent before releasing personally identifiable data about students from records to other than a specified list of exceptions. In addition, students must be notified of these rights.

In accordance with provisions of the Act and the regulations enacted by the Department of Health, Education and Welfare, Lake Superior State University has adopted the following policies and procedures:

## **Section 1.** General Policy on Access and Disclosure

Lake Superior State University shall not as a matter of policy or practice:

1. Deny or prevent students at the university the right to inspect or review the educational records of such students, or
2. Permit the release of educational records contrary to the provisions of the Family

Educational Rights and Privacy Act and the policies and procedures set forth in the following sections.

## **Section 2.** Notification to Students

Under the provisions of the Act, the university must annually notify students of their rights and the institution policies pertaining to the Act. In addition, notice must be given to the location where the policy can be obtained as well as to inform the students of the right to file complaints with the Department of Health, Education and Welfare concerning alleged failures by the University to comply with the Act. In accordance with these requirements the annual notice regarding students rights, the location of copies of the university's policies setting forth these rights, as well as the right to file complaints with the Family Educational Rights and Privacy Act Office, shall be published in the University Catalog. the annual letter to students will notify students of Directory information.

The Registrar, located in the Fletcher Center, is designated as the Hearing Officer for the Act and shall also be responsible for implementing the notification requirements and distribution of copies of the policies and procedures.

## **Section 3.** Education Records Defined

*"Education records"* means those records which:

1. Are directly related to a student
2. Are maintained by the university or its agent.

The term does not include:

1. Records of institutional, supervisory, and administrative personnel which
  - a. Are in the sole possession of the maker thereof, and
  - b. Are not accessible or revealed to any other individual except a substitute.

A "substitute" is defined as one who performs on a temporary basis the duties of the individual who made the record and does not refer to an individual who permanently succeeds the maker of the record in his or her position.

2. Records of the law enforcement unit of the university (Security Department) which are:
  - a. Maintained apart from the university's educational records;
  - b. Maintained solely for law enforcement purposes; and
  - c. Not disclosed to individuals other than law enforcement officials of the same jurisdiction; provided, that educational records maintained by the university are not disclosed to the personnel of the law enforcement unit.
3. Records relating to an individual who is employed by the university which:
  - a. Are made and maintained in the normal course of business;
  - b. Relate exclusively to the individual in that individual's capacity as an employee; and
  - c. Are not available for use for any other purpose.
  - d. This paragraph (3) does not apply to records relating to an individual in attendance at

the university who is employed as a result of his or her status as a student.

4. Records relating to an eligible student which are:
  - a. Created or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in his or her professional or paraprofessional capacity, or assisting in that capacity;
  - b. Created, maintained, or used only in connection with the provision of treatment to the student; and
  - c. Not disclosed to anyone other than individuals providing the treatment; provided, that the records can be personally reviewed by a physician or other appropriate paraprofessional of the student's choice. For the purpose of this definition, "treatment" does not include remedial educational activities or activities which are part of programs of instruction at the university.
5. Records of the university which contain only information relating to a person after that person is no longer a student at the university. (An example of these records would be information collected by the university pertaining to the accomplishments of its alumni.)

#### Section 4. Rights to Inspect and Review Education Records

A student who is or has been in attendance at Lake Superior State University shall have the right to inspect and review the educational records of the student subject to the

limitations set forth in Section 3 and 13.

The educational record recorded by the student will be provided within a reasonable period of time dependent upon the availability of the record and the workload of the department maintaining the record. In no case will the record be provided more than 45 days after the date of the receipt of the request.

The right to review educational records includes the right to a response from Lake Superior State University to reasonable requests for explanation and interpretations of the subject record.

### **Section 5. Procedures for Inspection and Review of Records**

A student must submit a written request for the inspection and review of educational records or the release of such records, where permitted, to third parties. (See Section 10A for release of records to third parties.) The request must be submitted to the appropriate officer responsible for the record. (See Section 7 for list of officials maintaining educational records.)

The written request under this section must contain:

1. A description of the information requested.
2. The date, if any, that the information is required.
3. The student's signature.
4. The date the request is filed.

### **Section 6. Copies of Records: Fees for Copies**

Copies of educational records will only be provided under the Act under the following conditions:

1. Where failure to provide a copy would effectively prevent a student from exercising the right to inspect and review the educational record. (Examples of when this provision would be effective would be absence from the State or a confining illness.) If the student will return to the residence occupied while in attendance at the university or be within 30 miles of the campus and is not physically incapacitated during the 45-day compliance period, copies shall not be provided but the right of inspection shall be exercised.

Under this provision, the student must submit a written request (see Section 10A) specifying the record to be disclosed, and the reason that a personal inspection of the record cannot be made during the 45-day compliance period. The university will review these requests on a case-by-case basis to determine if copies are required as opposed to personal inspection.

2. On request, under the provisions of Section 10B regarding records to officials of another educational institution in which the student is enrolled or seeks or intends to enroll.
3. On request, or with the consent of the student, under the provisions of Section 10A, regarding information released with the approval of the university to third parties. The university shall not charge a fee for copies of records provided under the Act. There shall not be a charge for search, retrieval or inspection of the record. Copies of grades provided under these provisions

will not carry the university seal or official signature of approval.

### **Section 7.** Listing of Location of Education Records

The following is a list of the records considered educational in nature under the Act and their locations listed by Office, Type of Record, Responsible Official, and Location.

Admissions; Academic file, Financial; Director of Admissions; Fletcher Center  
Career Advising and Placement; Academic, Personal, evaluations; Director; Brown Hall  
Continuing Education; Academic; Director;  
Employee Relations; Work Evaluation, Employment; Director; Administration Building  
Financial Aid; Financial, Academic, Personal evaluation, Employment; Director; Fletcher Center  
Graduate Office; Academic, Financial; Coordinator; South Hall  
Registrar; Academic (Complete and official academic record) Personal, Veterans' Affairs; Registrar; Fletcher Center  
Residence Halls; Personal; Housing Manager; Brady Hall  
Residence Halls and Student Life; Discipline; Vice-President for Student Services; Fletcher Center  
Student Accounts; Financial; Director Business Operation; Administration Building  
Academic Areas, Academic; School Deans and Department Chairs.

Note: All academic records are partial records with the exception of the Office of the Registrar as noted above.

### **Section 8.** Disclosure of Restricted Information to University Officials

Personally identifiable information from the education records of a student may be disclosed without the prior consent of the student to university officials who have a legitimate educational interest in the information. The university officials must demonstrate a need to obtain the information consistent with their official functions and the request must be consistent with normal professional practices and legal requirements.

The disclosure of personally identifiable student information under the above conditions will not be disclosed to any other party without the prior written consent of the student, except that such information may be used by the appropriate officials or agents of the university for the purpose for which the disclosure was made.

### **Section 9.** University Officials

For the purpose of those procedures and policies, "university officials" are defined to be those individuals who have demonstrated a need to require certain student records consistent with their official university responsibilities and consistent with professional practices.

University Officials include: Members of the faculty, members of the professional, executive and administrative staff, including all members of the Department of Security, departmental secretaries, students properly appointed as members of a hearing panel or screening committee, representatives

of the State Auditor General when performing their legally required duties, legal, insurance, or collection representatives of the university when performing their university-related duties requiring student record information in connection with a claim or legal matter.

**Section 10.** Disclosure of Personally Identifiable Information

**A. Prior Consent for Disclosure Required**

The university shall obtain the written consent of the student before disclosing personally identifiable information from the education records of a student to third parties other than directory information as set forth in Section 11 or as provided in Part B of this section. (Consent is not required where the disclosure is to the student.)

If the university consents to the release of personally identifiable student information to third parties under this section (10A) at the written request of the student, the university will provide the student with a copy of such record.

The written consent required under this section (10A) must be signed and dated by the student and shall include:

1. A specification of the record to be disclosed
2. The purpose of the disclosure
3. The party or class of parties to whom disclosure may be made
4. A statement granting consent for the release of the information.

**B. Prior Consent for Disclosure Not Required**

The university may transfer or disclose the educational records of a student, without prior written consent, on request to the officials of another educational institution in which the student is enrolled or seeks or intends to enroll.

The university, upon request, will provide the student with a copy of the transferred educational records.

Information from the educational records of a student may be disclosed, without prior written consent, if the disclosure is:

1. To Federal and State authorities as provided by the Act or other legal authority.
2. In connection with financial aid for which a student has applied or has received; provided that the information may be disclosed only:
  - a. To determine the eligibility of the student for financial aid, and
  - b. To determine the amount of aid,
  - c. To determine the conditions which will be imposed regarding financial aid,
  - d. To enforce the terms or conditions of the financial aid.
3. To organizations conducting studies on behalf of educational agencies or institutions for the purpose of developing, validating, or administering predictive tests, administering student aid programs; and improving instruction; provided that the studies are conducted in a manner which will not permit the personal identification of students by persons other than the representatives of the organization and that the



information will be destroyed which it is no longer needed for the purpose for which the study was conducted.

4. To accrediting organizations in order to carry out their accrediting functions.
5. To comply with a judicial order or lawfully issued subpoena; provided that Lake Superior State University will make a reasonable effort to notify the student of the order or subpoena in advance of compliance.
6. The appropriate parties in an emergency to protect the health or safety of the student or other individuals.

### **Section 11. Directory Information**

The Family Educational Rights and Privacy Act permits the disclosure of certain personally identifiable information from the educational record of a student if that information is designated as directory information as defined by the Act.

In order to release such information the university is required to provide public notice of the following:

1. The categories of personally identifiable information designated as directory information.
2. The right of the student to refuse to permit the designation of any or all of the categories with respect to that student.
3. The period of time within which the student must inform the university in writing that such directory information is not to be released.

In compliance with these provisions, the university will announce its intention to release directory information each fall in the annual letter. Students will be advised that written requests to prohibit or restrict the use of such directory information should be addressed by the last day to add classes to: Registrar's Office in the Fletcher Center.

The university considers the following to be directory information: Name, address, telephone number, date and place of birth, major field of study, participation in officially recognized activities and sports, height and weight of members of the athletic teams, dates of attendance, degrees, honors and awards received, including scholarships, and most recent previous educational agency or institution attended by student.

In the event that this list is altered or expanded, these provisions will be amended in accordance with the Act.

### **Section 12. Record of Disclosures Required to be Maintained**

Lake Superior State University shall for each request and each disclosure of personally identifiable information from the education records of a student maintain a record kept with the education records of the student which indicates:

1. The parties who have requested or obtained information.
2. The legitimate educational interests the parties had in obtaining the information.

A record is not required for disclosures to a student, disclosures pursuant to the student's written consent when such consent is

specific as to the party or parties, disclosures to university officials as set forth in Section 9, or to disclosures of directory information as provided in Section 11.

The record of disclosures may be inspected by: The student, the university official and his or her assistants responsible for the custody of the records, and university officials authorized in Section 9 and those persons outside the university as authorized in Section 10 for the purpose of auditing the record keeping procedures of the institution.

### **Section 13. Limitation on the Right to Inspect and Review Records**

The university is not required to permit a student to inspect or review the following records:

1. Financial records and statements of parents or any information contained therein.
2. Confidential letters and statements of recommendation placed in the student record prior to January 1, 1975; provided that such letters and statements were solicited with written assurance of confidentiality or sent and retained with a documented understanding of confidentiality. The documents must be used only for the purposes specifically intended.
3. Confidential letters and statements of recommendation and statements for which the student has waived the right to inspection as set forth in Section 16 and placed in a student's file after January 1, 1975 respecting:
  - a. Admission, or
  - b. An application for employment, or
  - c. The receipt of an honor or honorary recognition

4. Those records which are defined not to be education records as set forth in Section 3.

If the educational record of a student contains information on more than one student, the requesting student may review or inspect or be informed of only the specified information which pertains to the student making the inquiry.

### **Section 14. Request to Amend Educational Records**

A student who believes that information in the student's educational records is inaccurate or misleading or violates the privacy or other rights of the student may request that the university amend such records.

The procedures regarding an amendment to a student record are as follows:

1. The student must submit a written request to amend the record in question to the university office responsible for establishing the content of the record.
2. The written request must specify the information to be amended and the basis for requesting a change in the record.
3. The written request should also set forth the corrective action recommended.
4. The university official responsible for establishing the content of the record in question within 14 calendar days will inform the student, in writing, that the record will be amended or that the request has been denied. If additional times are required due to the circumstances of the case, the student will be advised of the time period required to resolve the issue.

5. If the record is to be amended, corrective action will occur within 14 calendar days of the date of notice to the students.
6. If the university official responsible for establishing the content of the educational record denies the request to amend the record, the written notice of this decision will advise the student of the right to a hearing.

### **Section 15. Right to a Hearing**

The Act provides an opportunity for a hearing in order to challenge the content of a student's educational record to insure that the record does not contain inaccurate or misleading information or is in violation of the privacy or other rights of the student. This procedure may not be utilized to challenge grades awarded to students. The following procedure will be implemented after the decision of denial is made by the official responsible for maintaining the record.

#### **Procedure of Hearing**

A student desiring a hearing on the decision of denial to amend the record by the official establishing such records must:

1. Submit a written request for a hearing to the Hearing Officer, the Registrar, Fletcher Center.
2. Designate in the request: Student's name and identification number, date request is made, specific information on the record challenged, basis for amending record, summary statement of previous action taken to amend record including names of individuals contacted and from whom communications have been received.

The Hearing Officer will within 7 calendar days of receipt of the request for hearing, notify the student of the date, time and location of the hearing. At least 72 hours notice will be provided to the parties prior to the hearing.

The student shall be afforded a full and fair opportunity to present evidence relevant to the question of whether the record in question is inaccurate, misleading or in violation of the privacy or other rights of the students.

The student may be assisted or represented by individuals of the student's choice and at the student's expense, including an attorney.

The Hearing Officer shall make a decision on the appeal within 7 calendar days of the last day of the hearing. The decision shall be in writing and shall be based solely upon the evidence presented at the hearing. The written decision to the student shall include a summary of the evidence and reasons for the decision.

If, as a result of the hearing, the Hearing Officer decides that the information is in whole or in part inaccurate, misleading or is in violation of any of the student's rights, the record in question will be amended within 7 calendar days of the decision.

If, as a result of the hearing, the Hearing Officer determines that the record should not be amended, the student shall be informed of the right to place in the education record a statement commenting upon the information and setting forth the reasons for disagreeing with the university's decision. Any explanation placed in the record of the student under this provision shall:

1. Be maintained as a part of the record as long as the record or

the contested portion thereof is retained by the university, and

2. Be disclosed by the university, along with the contested record to any party receiving such record.

### Section 16. Waivers

A student may waive any right under the Act. The waiver shall not be valid unless it is in writing and signed by the student. The University may not require that a student waive any right under the Act. This requirement does not, however, preclude the university from requesting such a waiver.

An applicant for admission or a student in attendance may waive the right to inspect and review confidential letters and statements of

recommendation. The waiver may apply to such letters or statements only if it is in writing and signed by the student regardless of age, and if:

1. The applicant or student is, upon request, notified of the names of all individuals providing the letters or statements;
2. The documents are used only for the purpose originally intended; and
3. Such waiver is not required as a condition of admission or receipt of any service or benefit from the university.

A waiver may be revoked but such action must be in writing and filed with the office in possession of the waiver.

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## NOTES

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# STUDENT

## OF BEHAVIOR

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Membership in the University Community carries with it both privileges and responsibilities. The University cannot accept acts that interfere with the basic process of the academic enterprise, nor acts which interfere with the rights of other members of its community. Following are the basic regulations which govern the behavior and conduct on the Lake Superior State University campus:

**1. ASSEMBLY:** No person, or persons, shall assemble in a manner which obstructs the free movement of persons about the campus, or the free and normal use of University buildings and facilities, or prevents or obstructs the normal operation of the University.

**2. ALCOHOL AND DRUGS:**

Any student found guilty of being under the influence of drugs, or possessing, or selling drugs or narcotics will be subject to immediate dismissal from the University. Any student who disregards the laws of the State regarding drinking as a minor is subject to disciplinary action including fines, or dismissal for repeated offenses. A student of 21 years of age who purchases alcoholic beverages for minors, or who participates in any way, faces not only legal action from the State but additional penalty from the University.

The laws of the State of Michigan prohibit the sale of alcoholic beverages on any unlicensed premise. No alcohol may be offered for sale on any unlicensed portion of the University campus, and no hidden fee (such as admissions charges, charges for food, etc.) may

be used to hide or conceal a charge for alcoholic beverages. Any organization, group, or individual offering alcohol to others anywhere on the campus shall be required to follow provisions of the University's alcohol policy, distributed annually to all campus residents. Violators may suffer loss of campus privileges, disciplinary action by the University, and prosecution by civil authorities.

**3. CHEATING AND PLAGIARISM:** The assumption of the academic contract is that the student does his or her own work: any breach of the contract is considered cheating. The faculty member who detects a student cheating may take appropriate action, such as assigning a failing grade for the entire course.

A student who cheats is subject to dismissal from the University. If, in the opinion of the faculty member involved, such action is warranted, he or she will notify the chairman of the scholastic standards committee and the student to that effect in writing. The scholastic standards committee will then conduct a hearing in such a manner that the student is given due process. If the committee decides that dismissal is warranted, the student shall have

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# STANDARDS

## AND CONDUCT

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five school days to appeal that decision to the provost of the University.

**4. COMPLIANCE WITH UNIVERSITY OFFICIALS:** Students are expected to comply with the directions of University officials who are acting in accordance with the performance of their duties. Failure to comply with such directions shall be considered a serious disciplinary violation.

**5. FINANCIAL OBLIGATIONS:** A student's fees, loans, fines, driving and parking penalties, etc. are his or her responsibilities and must be paid when due. Delay in attention to financial responsibilities may require some or all of the following actions by the University: it may withhold official transcripts, prohibit further registration, remove registration if already granted, withhold further forms of financial aid, and in severe cases, seek legal action from outside agencies, including the State of Michigan itself.

**6. FIREARMS AND EXPLOSIVES:** Explosives, firecrackers, concealed weapons and similar items are not permitted on campus. Firearms are permitted, but must be registered and stored by the office of campus security. Any student who keeps firearms anywhere in the dormitory system will face dismissal from the University.

**7. GUEST SPEAKERS:** Only student organizations formally recognized by the University may invite speakers to the campus. Reservations for rooms or lecture halls for guest speakers are made through the director of student activities.

**8. HOUSING:** University housing regulations are published annually in the Housing Handbook. Students failing to comply with these regulations may suffer a variety of disciplinary penalties, including separation from the housing system or separation from the University itself.

**9. I.D. CARDS:** All students enrolled in this institution are issued an identification card to facilitate recognition for the library, for cashing checks, for campus voting, for admission to campus activities, etc. Misuse or alteration of the University identification card, current or expired, is considered a serious offense subject to disciplinary action.

**10. PARKING:** All students who operate motor vehicles on campus must register them each year (normally accomplished during registration). Annual registration decals will be issued upon payment of fees and evidence of a valid operator's license. All vehicles (with decals attached) must be parked in areas assigned. Parking and traffic ordinances will be

enforced and violators will be assessed fines and may have their campus registration and campus driving privileges revoked. Special parking arrangements can be made for health and personal hardship reasons at the Administration Building Parking Office. Parking and traffic violations are civil infractions and may be referred to 91st District Court.

**11. RECORDS:** It is the specific responsibility of the student to give honest and complete replies to all questions included in application forms, financial aid forms, and in all other University documents. Failure to give correct and complete information can result in cancellation of the student's registration. Forgery or alteration on or of any University document or record can result in the separation of the student from the University.

**12. STUDENT NOTICES:**

Student notices, posters, etc. must be cleared for posting by the Center for Student Services before being placed on bulletin boards. Maintenance personnel have been instructed to remove all unauthorized material from bulletin boards each day. Normally posters and notices will not exceed 17" by 22" in size.

**13. STUDENT**

**ORGANIZATIONS:** No student organizations may use campus facilities to solicit funds, or schedule activities unless such organizations have been approved by the University. Approval of University clubs and their operations must be in accordance with University policies. No organization which practices either racial or sexual discrimination will receive support, either directly or indirectly from the University.

**14. THEFT:** Property of the University, as well as that of individuals, must be respected. Theft of any kind, whether of money or of other property, is prohibited. The destruction or mutilation of books, magazines, or other library material will not be tolerated. Theft of, damage to, or destruction of the property of others is considered a serious offense against the University community, and will result in the separation of the student from the University.

**15. TREATMENT OF OTHERS:**

Abuse, either physical or verbal, of any person on University-owned or controlled property, or at University-sponsored or supervised functions, will result in disciplinary action by the University. No conduct will be permitted which threatens or endangers the health or safety of any person on the University campus or at University related activities.

Lake Superior State University and its Board of Regents subscribe to the principles of equal opportunity and non-discrimination and complies with all applicable federal and state laws and regulations prohibiting discrimination, including harassment. The University is committed to the protection of the rights of all individuals within the University community, the equal and fair treatment of all individuals, and to the elimination of barriers that would prevent individuals from reaching their highest potential

It is the responsibility of all employees, students and members of the University community to uphold this commitment in the daily activities of University life.



Sexual harassment is a form of discrimination based on sex, and as such falls under the University's commitment to non-discrimination. Violations of this policy will receive prompt disciplinary action, up to and including dismissal, as warranted by the facts of the individual case. Sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, and other unwelcome verbal or physical conduct or communication of sexual nature.

## PENALTIES

ANY OR ALL of the following penalties may be assigned those few students who violate the University's standards of behavior and conduct:

1. Reprimand
2. Restitution
3. Monetary fines or work penalties
4. Loss of course credit or reduction in academic grades
5. Probation
6. Suspension
7. Expulsion

Generally, disciplinary actions do not become a part of the student's academic record. The exceptions are in cases of suspension or expulsion, which may be recorded on the student's permanent transcript.

## PROCEDURES

Possible violations of the University's standards of behavior and conduct shall be considered by either the University hearing officer, the vice-president for student services, or the All-Campus Judicial Committee. It is the responsibility

of the vice-president for student services to designate the appropriate hearing officer or group in such cases. Instances involving possible academic cheating or plagiarism will be considered by the appropriate instructor and/or the Scholastic Standards Committee.

Situations involving possible violations of the University's standards shall be handled according to the following process. At a minimum, the process will include:

1. A notice to the student of the charges involved and of the individual or office bringing those charges.
2. An opportunity for the student to respond to the charges, and to request a formal hearing on them if desired.
3. A hearing at which the student has the right to examine any evidence against him, confront and question those bringing the charge, and introduce any persons he or she wishes to speak on his or her behalf. While students may bring those persons they wish to a disciplinary hearing, they may not be actively represented by legal counsel. University hearings are fact-finding procedures, not courts of law, and are not governed by either courtroom rules or courtroom procedures.
4. A notification to the student of the hearing body's or hearing officer's decision. It is the responsibility of the hearing officer to originate such notification, except when the Scholastic Standards Committee

is the hearing body. In these cases, notification is the responsibility of the chairman of that committee.

5. A notification to the student of his or her right of appeal to the President of the University. Such appeals must be made within forty-eight hours of the time notification is received.

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## *NOTES*

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# ADMISSIONS

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## FRESHMEN

Prospective freshmen still in high school may make application to Lake Superior State University any time during the final year of high school. Applications for admission are processed continuously and students are notified as quickly as possible. A final transcript of courses completed during the final year must be submitted to the Admissions Office promptly after completion of the school year. Failure to provide a final transcript will result in the withdrawal of an offer of admission. An official score report from American College Testing (ACT) must also be submitted prior to class registration.

Prospective freshmen who have already graduated from high school but not attended any college or university must have an official transcript sent directly from their high school to the Admissions Office. The transcript must include all courses taken, starting with grade nine, and graduation certification. Admitted applicants who graduated from high school fewer than 26 months prior to the date they wish to enter the University must submit their scores from American College Testing (ACT) prior to registering for classes.

The primary factor in evaluating an application for admission is the individual's grade point average starting with grade nine. All courses are included in the average.

Seventy-five percent of the freshmen admitted to LSSU have an overall high school grade point average of 2.50 or higher. The top 25 percent of the admitted freshmen have an overall high school grade point \*average of 3.22 or higher. The

average overall high school grade point average for admitted freshmen is 2.98 on a scale of 4.0. Secondary factors which may also influence the admission decision are the number of academic courses an applicant has completed, the trend from year to year of the applicant's grades, class rank, and recommendations. ACT scores are rarely a factor in the admissions decision.

All credentials should be submitted to the Admissions Office at least three weeks before the semester of entry. However, if available spaces become filled, application processing will end at an earlier date.

To qualify for admission as freshmen, applicants are expected to be graduates of accredited secondary schools. Any student graduating from a non-accredited school should contact the Director of Admissions for an explanation of the testing procedure used to evaluate an applicant who has attended a non-accredited school.

Students denied regular admission have at least two alternatives:

1. Apply for possible enrollment within the Division of General Studies. For more information on this enrollment option refer to the description of the Division of General Studies located later within this section.
2. Reapply for admission after attending another accredited college of their choice and earning at least 30 semester (45 quarter) hours of transferable credit. The evaluation for admission is then based upon the college record rather than the high school record.

### Freshman Admissions File

Application materials from prospective freshmen to complete their admission applications include:

A completed *application* for admission, which is available at the Admissions Office of Lake Superior State University or at your school guidance office.

A non-refundable *application processing fee* of \$20 (U.S. funds) must be submitted before an application will be processed. Make check or money order (not cash) payable to Lake Superior State University.

A complete, *official transcript* of your high school credits or GED score report.

A report of your scores from *American College Testing (ACT)*, which should be taken before graduation from high school. ACT registration materials are available at your guidance office. ACT scores are generally used for counseling and placement purposes.

All veterans must submit an official, certified copy of *separation form DD214* with their applications.

The *health history questionnaire*, sent to admitted students must be completed by the student or by the student's parent and returned to the University's Health Services Office.

Enter your *social security* number in the appropriate space in your application. It will serve as your permanent student number. If you do not wish to provide this number, an alternate student number will be assigned. However, please be aware the agency processing financial aid applications will not process any aid application which does not include the student's social security number. Students who do not have social security numbers or have lost their social security card should contact the Social Security Administration promptly. Canadian applicants should not use their Social Insurance number. A 9-digit student number will be assigned to Canadians and other foreign students.

## TRANSFER STUDENTS

Transfer students must possess a 2.00 cumulative college grade point average and be eligible to return to their former college(s) unless they have completed their required course work.

In order to comply with the recently enacted federal regulation commonly referred to as "Ability to Benefit" the University requires all transfer applicants who are U.S. residents and have not completed an associate degree prior to applying for admission to provide any one of the following:

1. an official high school transcript including evidence of graduation
2. satisfactory GED scores
3. a satisfactory score on one of the tests approved by the U.S. Department of Education to meet the terms of the "Ability to Benefit" regulation. Contact the University's Financial Aid Office or Admissions Office for a listing of the approved tests.

Along with an application for admission, students who have completed less than 30 semester or 45 quarter hours of credit must have sent to our Admissions Office an official high school transcript or GED scores. Also an official transcript must be sent from each school where college or university credit has been earned or attempted. Official transcripts may be obtained from the appropriate high school's guidance office and college or university Registrar's Office. Transcripts must be mailed to the Admissions Office at Lake Superior State University directly from the issuing institution to be considered

official. Transcripts sent via facsimile machine are not considered official. All transcripts become the property of Lake Superior State University and are not returnable. Students whose names have changed since they attended another institution must indicate this when requesting transcripts from high schools or colleges. Each transcript should bear the student's current name.

The application and all transcripts should be submitted at least 30 days prior to the beginning of the semester of entry. However, if available spaces become filled, processing of applications will end at an earlier date.

A transfer applicant denied admission because the college grade point average is less than adequate is encouraged to either

1. Apply for enrollment with the Division of General Studies; (for more information on this enrollment option refer to the description of the Division of General Studies located later within this section following, Part-time Enrollment or
2. Reapply if, after taking additional college course work, the cumulative grade point average improves to greater than 2.0.

### **CREDIT EVALUATIONS:**

Because the process is very time consuming, evaluation of transfer credit is not made until an applicant is accepted for admission. However, every effort is made to provide an evaluation of transfer credit as quickly as possible after admission.

Students planning to transfer to Lake Superior State University can, by

reviewing the course descriptions included in the Lake Superior State University catalog, arrive at a reasonably close approximation of the amount of transfer credit they may expect to receive. While making this informal evaluation, students should keep in mind transfer credit is granted for courses which are substantially equivalent in content, length, and prerequisites to the courses offered at this University.

D grades will be transferred only for individuals meeting both of the following conditions:

1. having a 2.00 or greater cumulative grade point average; and
2. upon initial application being eligible for, or being granted, unconditional admission as a full-time student on the basis of their college or university academic records elsewhere.

Courses with D grades accepted as transfer credit may not apply to all departments. Some academic departments do not accept transferred D grades as replacements for courses required as part of the departmental major. In those cases, the departmental major courses involved must be repeated. However, courses not accepted by a department may be applied as elective credit where possible.

Initial transfer credit evaluations indicating which Lake Superior State University courses and how many credits will be granted to the student are completed by either the Admissions or Registrar's offices. These initial evaluations are subject to review and possible modification by the dean of the academic school offering the equivalent course. The dean's decision on courses and

## AMERICAN COLLEGE TESTING (ACT)

All freshmen who enroll within 26 months of high school graduation and have not attended another college must take the American College Test. The results should be forwarded to Lake Superior State University (code number 2031) prior to registering for classes.

United States residents applying for academic scholarships at Lake Superior State University must take the ACT no later than February of their senior year and have results forwarded to Lake Superior State University prior to the April 1 scholarship application deadline.

Transfer students entering Lake Superior within 26 months of high school graduation and having less than 15 semester or 23 quarter hours of credit must also take the ACT prior to the beginning of classes in August. Transfer students required to take the ACT are encouraged to take it early enough for the results to be available to the University when they schedule their first semester's classes.

Canadian students who enter the University within 26 months of high school graduation are required to take the ACT. Completion of OAC credits does not exempt Ontario students from this requirement.

ACT scores are used primarily for counseling and placement purposes and are not ordinarily used as admissions criteria. However, the ACT may be required prior to making an admissions decision if additional information is deemed necessary.

The ACT is given nationally five times a year at many locations, including our campus. Information bulletins and registration forms for the ACT are available at high school counseling offices by writing American College Testing Program, P.O. Box 168, Iowa City, Iowa 52243, or by contacting the Lake Superior State University Counseling and Testing Center.

Entering students required to submit their ACT results who have not taken the ACT during one of the five national test dates will take the ACT during orientation in September.

amounts of transfer credit granted may be appealed by the student to the Provost.

**ELECTIVE CREDIT:** If a course taken at another institution is not offered at the University, elective credit may be granted for that course. Elective credits may be applied toward the number of credits required to receive a degree but may not be used to satisfy any specific course requirement.

**PROVISIONAL CREDIT:** Credit earned at any institution not listed as accredited in the American Council of Education's publication, *Accredited Institutions of Post-secondary Education*, is granted

provisionally. Only after students demonstrate satisfactory progress in their chosen academic programs at Lake Superior State University do provisional credits become part of students' permanent records.

**MACRAO AGREEMENT:** Community college graduates granted admission to the University who possess baccalaureate-oriented associate degrees, with the MACRAO stamp on their transcripts, will be recognized as having completed the general education requirements at Lake Superior State University.

Students who transfer to Lake Superior State University will be

required to satisfy all conditions of their selected majors and minors as well as degree requirements.

The minimum number of credits to complete an academic major at Lake Superior State University is 30 semester hours. Some departments require more. The minimum amount of credits in a major that must be earned at Lake Superior State University varies. Before enrolling, students should contact the academic school which includes the intended major to determine this amount.

### **RESIDENCY**

**REQUIREMENT:** There is no limit on the number of transfer credit from other institutions. However, bachelor's degree candidates must earn at least 32 of their final 40 credits and at least 50 percent of their departmental required 300/400 level credits in Lake Superior State University courses. Regional Center students must earn at least 32 of their final 64 credits and at least 50 percent of their departmental required 300/400 level credits in Lake Superior State University courses. Associate degree and certificate candidates must earn 16 of their final 20 credits in Lake Superior State University courses.

### **FORMER STUDENTS**

Former full-time Lake Superior State University students who interrupted their enrollments for one or more semesters, except summer, must apply for readmission prior to the semester of intended reentry. Students apply by obtaining a re-admission application from the

Admissions Office. There is no application processing fee for students seeking readmission. However, applicants who have attended another college since leaving Lake Superior State University must have official transcripts sent from the college attended and meet the terms of the University's transfer student admissions policy.

### **GUEST STUDENTS**

A student who is regularly enrolled at another college or university may be admitted to Lake Superior State University as a guest student. A guest admission is valid for only one semester. However, under extenuating circumstances this may be extended for one additional semester by submitting another guest application. Any student intending to enroll for more than one semester must submit an application for admission as a transfer student. Guest student applications may be obtained from the Admissions Office at Lake Superior State University or any other college or university in Michigan. Guest students assume full responsibility for determining whether courses taken at Lake Superior State University will apply to their programs of study at the college from which they intend to graduate.

### **CANADIAN STUDENTS**

Lake Superior State University welcomes applications from Canada.

Ontario students applying on the basis of their high school records are evaluated on their grade point

## Grading Scales for Evaluation

### A Level & OAC      G Level      Equivalent Letter Grade

80-99	90-99	A
70-79	80-89	B
60-69	70-79	C
50-59	60-69	D
	50-59	F

average for all courses taken starting with grade nine.

The Admissions Office uses two grading scales, shown below, when evaluating an Ontario secondary school applicant. OAC and A level courses are considered more demanding and their content more appropriate preparation for university-level courses than are G level courses. B level courses are never included in the grade point average.

Secondary factors which may also influence the admission decision are the number of academic courses an applicant has completed, the trend from year to year of the applicant's grades, and recommendations.

Students denied regular admission have at least two alternatives:

1. Apply for possible enrollment within the Division of General Studies. For more information on this enrollment option refer to the description of the Division of General Studies located later within this section.
2. Reapply for admission after attending another accredited college of their choice and earning at least 30 semester (45 quarter) hours of transferable credit. The evaluation for admission is then based upon the

college record rather than the high school record.

A report of ACT scores is required from all Ontario secondary school students. ACT scores are used for counseling and placement purposes, rather than as a factor in the admissions decision.

Additional information for Ontario secondary school students is available in *Informational Handbook for Ontario Students and Guidance Counselors*, published by the Admissions Office.

Canadian applicants from provinces other than Ontario are also welcome and will be evaluated on the basis of the education system in their provinces.

## ONTARIO GRADE 13/OAC COURSES

Students who completed grade 13 or OAC courses before September, 1990 receive transfer credit at the University for each course in which a final mark of at least 60 percent was earned. Transfer credit will not be granted for OAC courses completed after that date. However, completion of OAC courses prepares some students to earn credit through testing. Up to 30 semester hours of credit may be earned by achieving satisfactory scores on CLEP tests and departmental examinations given on the campus. If information about



CLEP tests and departmental tests offered by the University is not available at your secondary school guidance office, please contact the Admissions Office.

## **FOREIGN STUDENTS (NON-CANADIANS)**

The University makes every effort to meet the needs of foreign students who give evidence of adequate academic preparation and sufficient competency in English.

Six months to one year before the beginning of the desired semester of entry, the student should write to the Director of Admissions requesting application materials. Applicants must satisfy entrance requirements comparable to those required for United States students. All credentials written in a language other than English must be accompanied by certified English translations.

No student should plan to come to Lake Superior State University with less than sufficient funds in the hope of obtaining financial assistance upon arrival. No foreign student scholarships are available, and employment opportunities for foreign students are restricted by government regulations. A notarized financial statement will be required before Form I-20 (required to obtain a student visa) will be issued. This statement must include the amount of money available per year and the source(s). Inclusion of false information in the financial statement is grounds for dismissal. In addition to the financial statement the student's sponsor or sponsoring agency must provide a letter assuming responsibility for all of the student's educational and living

expenses while studying in the U.S.A.

Applicants should not consider themselves admitted to the University until they have provided all documents which the University requires and received an official letter granting admission. Following the letter granting admission, the Certificate of Eligibility ( Form I-20) will be sent, as required by the US Immigration and Naturalization Service.

A health record form will be sent to students granted admission. This form must be completed and returned to the University's Health Service Office prior to registration.

Foreign students are required to purchase a health and accident insurance policy for each year in residence. This cost is approximately \$600 per year for a single student. The policy is offered by GM Underwriters, Inc.

The University's English language proficiency requirement for admission may be satisfied in any of three ways:

1. By achieving a score of 550 or above on the Test of English as a Foreign Language (TOEFL) administered in most countries. Information regarding this test can be obtained by writing to: TOEFL, Box 6151, Princeton, New Jersey, 08541-6151, U.S.A. or from any United States Information Service Center;
2. By completing Level 109 at any ELS Language Center located in the United States. Information regarding ELS Centers can be obtained by writing to: ELS Language Centers, 5761

Buckingham Parkway, Culver  
City, California, 90230, USA

3. By completing two years of study at a school, college, or university located in an English speaking country.

## PART-TIME ENROLLMENT

Students wishing to attend on a part-time basis may enroll for up to eleven credits per semester in courses for which they have sufficient academic background. Unless high school students have special permission from their principals, part-time enrollment is limited to those whose high school class has already graduated. Part-time students not seeking degrees or certificates, are not required to apply formally for admission prior to enrollment.

A course registration form must be completed during the registration period for each semester of attendance. These forms are available through the University's Registrar/Scheduling and Community Services and Development offices.

Should a part-time student later desire full-time enrollment (12 or more credits per semester), or elect to seek degree/certificate status, the student must submit a completed application for admission with a \$20 non-refundable application processing fee, have the required official transcripts sent to the Admissions Office and meet all admission requirements for Lake Superior State University.

Part-time students are not officially assigned to faculty advisors. However, they are encouraged to seek assistance in selecting courses

from the appropriate academic schools at Lake Superior State University.

## TECH PREP

The national Tech Prep movement is supported at Lake Superior State University. As a testimony of its institutional support, grades earned in applied high school science and mathematics courses contribute to the high school GPA computed for university admission. Tech prep, with its emphasis upon curricular integration between secondary and postsecondary educational institutions, assists Lake Superior State University in creating a broader array of educational options for its students.

Lake Superior State believes that Tech Prep agreements open career doors and professional pathways for high school students in applied sciences, business, allied health and technology. In keeping with the national Tech Prep movement, Lake Superior State University has created articulation agreements with area high schools to enhance applied and career educational opportunities at the postsecondary level. In tandem with its regional secondary education partners, the university has created pathways to applied education for specified curricula in business and technology. University course credit toward degree requirements for high school work if certain competencies are met and/or opportunities to demonstrate skill development acquired in secondary schools exist in these programs. Check with your high school guidance counselor or a Lake Superior admissions counselor to verify whether a specific course in your high school may apply. Additional tech prep articulations with both area high schools and community colleges are being

developed. Tech prep is an educational outreach effort strongly compatible with the mission of the institution. Applied skills developed in high school set the stage for postsecondary education across a range of career and professional fields available at Lake Superior State University. The LSSU Office of Career Planning and Placement can provide additional information for perspective students and parents.

## **DIVISION OF GENERAL STUDIES**

Division of General Studies (DGS) provides comprehensive academic support services to all Lake Superior State University students.

### *ACADEMIC ADVISING*

Academic advising for the provisional enrollment option. DGS provides an enrollment opportunity that would enable selected students (minimum prerequisite cumulative grade point average and measured academic capacity indicators apply in order to qualify) possessing a high level of desire and drive, along with the necessary academic capacity, to pursue a college education which would begin under certain provisions. A provisional admission would be offered only to motivated candidates who narrowly miss regular full admission to the University. Students offered provisional admission to the University are assigned to the Division of General Studies (DGS) for academic advising and are expected to meet certain educational and student support outcomes within four semesters (full or part-time). The enrollment option will end for those students not able to complete the outcomes within this allotted time.

## *WHY DGS*

For those students not meeting the regular admissions requirements, the college experience is especially difficult. Even though there are no guarantees even for regular admits, DGS provides a comprehensive supportive program which does provide serious students, who are carefully selected, the opportunity to do well.

### *FINANCIAL AID*

Financial aid is available to students enrollment in DGS and the student's eligibility for such aid is not affected by enrollment into DGS.

### *LENGTH OF DGS*

While enrolled in DGS the student is assigned to a DGS licensed professional counselor who works very closely with the student's respective academic department in the academic advising process in order to fully utilize that department's particular expertise wherever appropriate.

DGS creates course schedules which are personalized to meet the needs and capabilities of each individual student. These needs vary as much as the uniqueness of one student varies from another. The length of time necessary to make a full, successful transition varies from one individual to another. However, the student's course schedule and support services are based upon competency and personal adjustment so that students may exit as soon as they are ready. Consequently, some students will be ready by the end of their first semester, while others may take the four semesters. Some students will find that they will still be able to graduate right on

schedule, whereas others will take longer.

Before they enroll in classes students will take a battery of tests to assess their skill levels in such areas as reading, writing, and mathematics. On the basis of these tests and a host of other preliminary criteria gathered through the application process, students will register for courses and services tailored for their individualized needs.

### *SUPPORT SERVICES*

While involved with DGS, the student will have the opportunity to experienced a highly personalized and intensive environment of basic academic studies which will help maximize learning. Specifically, students are offered help in developing:

1. effective study strategies,
2. a sound basic foundation of writing, reading, and mathematics competencies,
3. solid career goals, and
4. enhancement of other personal strengths and confidences which will enable them to successfully complete the University's rigorous academic programs.

In short, DGS insures the best protection possible in guaranteeing each student's investment toward a college degree which reflects academic and personal success.

### *COMPREHENSIVE SYSTEM*

DGS is a comprehensive system of academic support services available to all students at virtually every waking hour of the day or weekend. As such, DGS services are sought after by any student regardless of their current enrollment status.

Successful students know that they owe it to themselves and they will avail themselves of all the services DGS provides which include:

1. comprehensive and personalized academic advising assistance
2. educational counseling (e.g., study skills assistance)
3. tutoring (individualized and group)
4. extra instructional help through learning seminars
5. smaller class size in developmental courses as provided by academic departments
6. assisted learning laboratories
7. advocacy and accommodation support for learning disabled and other special needs students
8. developmental courses in such areas as reading, writing, and mathematics
9. comprehensive career counseling
10. diagnostic testing (achievement, ability, interests, faculty make-ups, etc.)
11. personal, non-clinical counseling support and personal growth and adjustment courses
12. clinical counseling referral

## **DUAL ENROLLMENT FOR HIGH SCHOOL STUDENTS**

Recognizing some talented high school students may benefit from taking university courses while still enrolled in high school, Lake

Superior State University permits selected high school students to take specific courses at the University.

Prior to a student registering for any class, a Dual Enrollment Request form must be completed by the student and signed by the high school principal or counselor. The form is available from and must be returned to the Registrar/Scheduling Office. High school guidance counselor office also have the dual enrollment application form.

Students are eligible to enroll in 100 and 200 level courses only. Some courses require students to take and pass a placement test before being permitted to enroll in the courses. Others have one or more prerequisites. A prerequisite is a course that must first be completed before the other course can be taken.

A student must be a senior in high school and have qualified for a state endorsement in all three subject areas of the Michigan Educational Assessment Plan.

The Registrar at Lake Superior State University serves as the advisor for dual enrollment high school students.

A student no longer enrolled in high school whose high school class has not yet graduated is ineligible to enroll as a part-time student until his/her high school class has graduated.

## **SCHEDULING PROGRAMS**

### **FRESHMEN**

Each summer, the University offers the Fall Class Scheduling and Parents' Program. The program enables new freshmen to take placement tests, meet with academic advisors, schedule fall semester

classes and buy books. It also provides an opportunity for parents to meet University administrators and, through an informative program, gain a better understanding of the array of services Lake Superior State University provides.

### **TRANSFERS**

Transfer students attend the Transfer Student Scheduling Program in the spring. Participants take the mathematics placement test, meet with academic advisors, and schedule classes. Students unable to attend must arrange individual appointments to meet with academic advisors and complete testing and scheduling.

## **ORIENTATION PROGRAM**

Freshmen and transfer students are required to attend orientation prior to the start of classes. Program activities help students become acquainted with the campus and community and provide a basis for a smooth transition to university work. Included in the activities are lectures and conferences covering various phases of academic and extra-curricular activities, placement meetings with academic advisors and faculty members. Students who did not attend a summer scheduling program, will also take placement tests and schedule classes.

## **PLACEMENT TESTING**

Entering freshmen are required to take placement tests in English, mathematics, and reading.

**ENGLISH:** Individuals with high placement scores will be invited to enroll in honors English. Students whose English placement test scores

indicate a deficiency in English will complete the course EN091, Basic English, before enrolling in EN110, Freshman Composition.

**READING:** Students whose Reading Placement scores are below a standardized level in reading will be required to satisfactorily complete the course, SA090, Development Reading I, and where necessary, SA091, Development Reading II. Students not successfully meeting this requirement by their sophomore level (26 credits) will be limited to a 13 semester credit load, including the appropriate reading course, until satisfying this University requirement.

**MATHEMATICS:** One or more freshman-level mathematics courses may be waived for students whose placement test results demonstrate excellent preparation in mathematics. Students whose mathematics placement scores indicate a deficiency will be placed, depending on their scores, in either MA089, Pre-Algebra or MA090, Introductory Algebra.

Transfer students without appropriate course work in English, mathematics, and reading (see degree requirements) are also required to take placement tests.

## CREDIT BY EXAMINATION

Students may earn up to 30 semester hours at Lake Superior State University by examination.

The University grants credit by examination to entering students for satisfactory results from the College Entrance Examination Board's Advanced Placement Program, the College Level Examination Program (CLEP) tests, and departmental exams created by the University's individual academic departments.

Students already attending the University may earn credit through both CLEP and departmental exams.

Before credits by examination, or transfer credits from other sources, will be entered on students' permanent academic records in the Registrar's Office, they must:

1. Be admitted to the University under the criteria for full-time students; and
2. Enroll, either full-time or part-time.

### ADVANCED PLACEMENT PROGRAM (AP)

Advanced placement examinations are administered at high schools each May to seniors who have taken specific advanced level courses.

Lake Superior State University grants credit in selected courses for advanced placement examinations, without an essay section, passed with a score of 3 or higher. The grading scale is from a low of 1 to a high of 5.

If an essay is part of an individual advanced placement test, it must also be submitted to the University for evaluation. To receive credit, the essay must be satisfactory and the student must have a minimum score of 3 on the test.

A list of courses for which the University currently grants credit may be obtained from either the Registrar's Office or the University's Counseling and Testing Center.

### COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

Students may take CLEP exams either at the University's Counseling and Testing Center in Brown Hall or

at other testing centers. CLEP exams are given at the University each month except February and December, and elsewhere on scheduled dates. CLEP exam scores for students entering fall semester should be reported to the Registrar's Office no later than June 30 to be considered for advanced placement. To meet this date, a student taking the exams elsewhere should be tested no later than May. Interested students should contact the Counseling and Testing Center at Lake Superior State University for complete information about the program, test sites, and test dates. The current University policy for CLEP credit is:

1. An official copy of the CLEP score report form is required.
2. CLEP scores will be evaluated by the Registrar to determine if credit will be given.

Credit for the CLEP general examination will be granted as follows:

*Humanities:* Students passing the humanities general examination will receive a maximum of eight semester hours in humanities electives, toward general education requirements. If students previously have received credit in humanities courses or courses which substitute for humanities, a maximum of eight semester hours can be earned through a combination of the CLEP general examinations and previously earned credit.

*Mathematics:* Students passing the mathematics general examination will receive three elective credits in mathematics.

*Social Science:* Students passing the social science general examination will receive a

maximum of eight semester hours in those social science elective courses specified in the general education requirements, provided these are courses for which credit has not already been received.

*Natural Science:* Students passing the natural science general examination will receive a maximum of eight semester hours in those natural science elective courses specified in the general education requirements, provided these are courses for which credit has not already been received. Students who have earned previous college-level physical or life science credits must apply these credits against their general education requirements before any CLEP natural science general examination credits will be granted to fulfill the general education requirements.

CLEP general examination credit may not be used to repeat courses previously taken unless permission is granted from the academic department offering the course.

Grades for general examinations where credit is granted will be recorded as credit (cr) without grade points.

Credit for CLEP general examinations will be granted as follows for each test showing a composite score at the 50th percentile, based on college sophomore norms published by the Educational Testing Service.

Credit may be earned for individual courses by passing CLEP subject examinations.

CLEP subject examinations may not be used to repeat courses previously taken unless special permission is

<u>Test</u>	<u>Score</u> <u>Equiv. Reg.</u>	<u>Course</u>	<u>Cr.</u> <u>Hrs.</u>
Humanities	500	HU Electives	8
Mathematics	500	MA Electives	3
Social Science	500	SS Electives	8
Nat. Science	500	NS Electives	8

granted from the academic department offering the course.

A current listing of approved CLEP subject examinations and acceptable minimum scores may be obtained from the either the Registrar's Office or the University's Counseling and Testing Center.

#### DEPARTMENTAL EXAMINATIONS

Departments may provide their own examinations for certain courses. Students should inquire at the academic department offering the course whether a departmental examination is available. If an examination is available, the department head's written approval to take the examination must be obtained. An application form for credit by examination with explanation of the necessary procedural steps, may be obtained from the department head or the Registrar's Office. The fee amount will be equivalent to that for CLEP exams and students will not be charged tuition for the credits earned. An examination grade of 2.00 or better is required for credit to be earned. Course and credit earned by examination shall be recorded on the student's transcript with the grade marked as CR. Transfer credit earned by departmental examination may not be accepted by some universities.

## HEALTH RECORD FORM

Everyone entering the University for the first time is encouraged to complete a health history questionnaire, which is mailed to admitted students. The health history questionnaire can be completed by the student and/or a parent and returned to the Edna M. Youngs Student Health Center in the envelope provided.

Health history questionnaires are not considered as criteria for admission to the University. The information helps the University's Health Service better serve the needs of individual students.

**Note:** Information in the admissions section of the catalog is for information only and not part of an enrollment contract.

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## NOTES

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# STUDENT SERVICES

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The University recognizes the value of a well-rounded program for student development, and encourages students to participate in student activities. Students should carefully consider their choice of activities according to their special interests. There are opportunities to participate in the programs of the honorary, social, and professional organizations, special interest clubs, student publications, intramural, and intercollegiate activities.

Formation of clubs, of such personal interest groups as camera and amateur radio clubs, and of musical, dramatic, and other organizations is encouraged. Intramural athletics are stressed, and varsity teams representing Lake Superior State University compete in several athletic conferences.

Students are encouraged to take part in outdoor activity. Good hunting and excellent fishing are found within a few miles of the University. Favorite winter sports are skating, hockey, snowshoeing, tobogganing, ice fishing and skiing.

The H. Thayer Fletcher Center houses a variety of offices providing services to students: admissions, financial aid, placement, and registrar/scheduling, among others. It is named after a man who visited the campus one summer day in 1973 while back in his home town for a few days "to arrange for some scholarships." He set up a \$25,000 fund to be paid in at \$5,000 a year for five years. Upon his death in 1979 the University learned that he had left the bulk of his estate to expand this scholarship fund to almost more than a quarter of a million dollars.

## STUDENT SENATE

The Governing Body for many student activities is the Student Senate. All students are eligible for election to Senate membership and are encouraged to participate in this active student organization. The Senate each spring selects its future officers. It meet regularly during the academic year. Some annual events sponsored by the Senate: Winter Carnival and various lectures, motion pictures and entertainments.

## RECOGNIZED ORGANIZATIONS

**Student athletic:** Ski Club, Skating Club, Cheerleaders, Nordic Ski Club, and Judo Club.

**Student Professional:** Accounting Club, American Society of Mechanical Engineers (ASME), Technology Club, Society of Manufacturing Engineers, Phi Beta Lambda (Business), Lambda Sigma Beta (Business), Student Nursing Association, Institute of Electrical Electronic Engineers (IEEE), Geology Club, Data Processing Club, French Club, Criminal Justice Association, Biological Society, Political Science Club, Semper Fidelis Society (U.S. Marine Corps), Chemistry Club, Psychology Club,

Math Club, Phi Sigma (Business), Society of Automotive Engineers, Association of Computing Machinery, Environmental Awareness Club, Hospitality Club, and Recreation Club.

**Student Religious:** Inter-Varsity Christian Fellowship, Baptist Student Union, His House, Newman Association, Campus Crusade for Christ, and Anchor House.

**Special Student:** Alpha Kappa Chi, Associated Women and Men Student (AWMS), Canadian Club, Big Brothers and Big Sisters, Alpha Chi (National Academic Honorary), Alpha Phi Sigma (National Criminal Justice Honor Society), Science Fiction Club, Karate Club, Delta Sigma Phi, Chess Club, Forensic Club, Republican Forum, Young Democrats, Returning Students Organization, Students in Free Enterprise, Tau Kappa Epsilon, Delta Phi Epsilon, Theta Xi, Student Senate, Zeta Chi Epsilon, Inter Greek Council, Tau Alpha Phi, and Veterans' Club.

**Student Music:** LSSU Band, The Jazz Band, and Pep Band.

**Communications:** The Compass (weekly student newspaper), The Almanac (annual directory and data source), Sports Press Books (annual), and WLKR (student radio station).

## LODGING/FOOD

Modern Housing facilities are available for both men and women. All students (enrolled for 12 hours or more) attending Lake Superior State University must comply with this housing policy:

All unmarried, non-veteran students (enrolled for 12 hours or more) who are within twenty-seven calendar months of the date of their graduation from high school (for this purpose, all high school graduation dates shall be assumed to be June 1

in any given year) must reside in a University residence hall, with the following exceptions:

Students living with their parents within reasonable commuting distance.

Students exempted by the housing director when residence hall space is filled.

Students with unusual financial or health problems who are exempted by the vice-president for student services.

To permit adjustments to local housing problems, the University reserves the right to assign all students within the residence halls. Room, residence hall, and apartment preferences are considered according to the dates of receipt of application, with freshmen ordinarily given priority in residence hall assignments and upperclassmen being given priority in apartment assignments.

The University recognizes that the need for an exception to the policy stated above may occasionally arise. Student requests for permission to live off campus will be considered by the vice-president for student services.

Should a student request permission to live off campus for financial reasons, the vice-president for student services shall apply the following criteria to his or her request:

"Financial hardship" shall be defined for this purpose as a situation in which the total resources of the student and family added to the total financial aid available from the University do not equal the dollar amount budgeted by the financial aids office as the minimum required for on-campus residency. In such a situation, the student will be considered to face two alternatives: a.) withdrawing from the dormitory or b.) withdrawing from the University.

An example of a student who might be released from the dormitory under the above definition would be one whose financial situation changed suddenly during the year (perhaps due to the death of a parent) and who applies for assistance, after the aid program is depleted.

A complete and modern cafeteria is located in the Walker Cisler Center. The Center also has a snack bar, informal lounges and recreational areas.

A number of modern student apartments are available on campus. Married students or groups of single students desiring living accommodations should contact the housing manager.

The Student Village and Townhouse units were constructed with a loan from the Federal Government which is to be repaid from the room rentals. The University Board of Regents, in obtaining this loan agreed to provide for maximum occupancy and use of the buildings. As a result, the University reserves the right to transfer students to the Townhouses or the Student Village during the year. To avoid unnecessary inconvenience, such transfers are normally made between semesters.

## **COUNSELING/ TESTING**

All students are encouraged to avail themselves of the counseling and testing services. Several professional counselors are available at the student counseling center to assist students with their academic, personal, or vocational problems.

A complete vocational testing and counseling program, which has proven throughout the years to be invaluable in helping students assess their interests and potentials, is

available to all students to help them decide upon their educational and career goals.

The center maintains a complete file of individual test folders, which includes all orientation test results for our students. Those who wish to have their scores interpreted may make an appointment with a counselor at the counseling center. If the results are inconclusive you may wish to submit application for the complete vocational testing battery.

Tutoring services are also offered through the counseling center. Student tutors are available to help individually those students who request special help in their courses. No fee is charged for this service. For information regarding academic support services refer to the description of the Division of General Studies located earlier under the major heading of Admissions and following the sub-section, Tech Prep.

Growth group sessions are scheduled periodically for students who are interested in personal and social growth through the group dynamics of interpersonal relationships. Anyone interested in participating should stop by the counseling center.

The student counseling center is open Monday through Friday from 8 a.m. to 4:30 p.m. For an appointment call extension 2733 or just drop in.

## **HEALTH SERVICE**

The Edna M. Youngs Student Health Center is staffed by both nursing and physician personnel who offer a full range of health care services. Appointments are recommended and available for all students who reside on or off campus. The center is open during both Fall and Spring Semesters while university classes are in session.

A health care plan underwritten by Security Life Insurance Company of America is available for students who maintain three or more credits hours and attend classes on campus. All students, once enrolled, will receive the policy information outlining both coverage and cost during a summer mailing. The policy information is also available at The Student Health Center on an ongoing basis. Students are encouraged and welcome to review this plan which is offered on an annual basis.

All students from countries other than the United States and Canada are required to carry health insurance as a condition of enrollment. Students who choose not to carry the above plan must furnish proof that they have purchased an equivalent insurance plan that will cover their health care while they are in the United States. In either case, proof of insurance shall be required before registration is permitted.

## PLACEMENT

Lake Superior State University maintains a centralized career planning and placement service for alumni and graduates.

The function of the office of career planning and placement is to assist students in locating suitable and desirable employment. This is done by arranging interviews with representatives of schools, business, industry, and government agencies; by mailing employment credentials for graduates to prospective employers; and by notifying graduates of employment opportunities.

In addition to assisting graduate and currently enrolled undergraduate students, this office maintains an active file of available alumni candidates. Alumni desiring to become, or to remain, active

candidates must contact the office in writing for re-enrollment each year.

Assistance in finding part-time and summer jobs is maintained and made available to all students. Several bulletin boards listing current part-time jobs are maintained to keep registrants informed. Regular contact is maintained with employers both on and off campus in an effort to promote their interest in employing Lake Superior State University students.

## UPWARD BOUND

Upward Bound, a program for high school students who have the potential to become the first person in their family to attend college, is also run under the Student Services Division and Programs. Upward Bound provides a six-week summer residential program consisting of academic classes and enrichment activities. During the school year, students receive tutoring and counseling from Upward Bound staff. About 60 students from the Eastern Upper Peninsula participate in Upward Bound each year.

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## NOTES

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# ATHLETICS

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The mission of intercollegiate athletics at Lake Superior State University is to provide a broad-based, meaningful opportunity for the student-athlete to compete while providing safety in travel, competition and practice. In addition, the athletic program provides the rest of the student body, campus community, local community and alumni an opportunity to follow the University.

Lake Superior State University offers varsity intercollegiate athletics at the NCAA Division II level in the following sports: Men's and Women's Basketball, Cross Country, Track, Tennis, Women's Volleyball and Softball. In addition, Lake Superior State University sponsors NCAA Division I Ice Hockey.

The University is a member of the Great Lake Intercollegiate Athletic Conference (GLIAC) in its Division II sports, while holding membership in the Central Collegiate Hockey Association (CCHA) in Ice Hockey.

The President, with assistance of the Vice-President for Student Services,

has the same control over the athletics program that he/she exercises elsewhere in the University.

The Intercollegiate Athletic Council, composed of faculty and staff of the University, approve academic eligibility requirements, scheduling of athletic events, athletic grant-in-aid policies and institutional positions on legislative matters acted upon at annual NCAA conventions.

The Athletic Director reports directly to the Vice-President for Student Services on the day to day operation of the Intercollegiate Athletic Program. Initial and continuing eligibility for intercollegiate competition requires compliance with NCAA Bylaws Article 14. Interested individuals should contact the athletic department to ascertain the necessary information. All student-athletes are required to maintain a minimum grade point average, carry a required number of courses and make satisfactory progress towards a Baccalaureate Degree.

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# COSTS

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**University fees and assessments listed here are based on the 1994 academic year and are subject to change by the University Board of Regents.**

Application fee of \$20 (in United States funds) must accompany each application for admission to Lake Superior State University. Fee is non-refundable; does not apply towards tuition or other fees. The tuition schedule shown applies to on-campus instruction and at residence centers.

A. Residents of Michigan including students from Northern Ontario qualifying under the Reciprocity Agreement: Credit hour cost \$138.00 per hour for enrollment of 1 through 12 hours and for each additional credit hour in excess of 17. Total tuition cost per full-time resident student is \$3312.00 per academic year.

B. Non-residents of Michigan: Credit hour cost \$269.00 per hour, for enrollment of 1 through 12 hours and for each additional credit hour in excess of 17. Total tuition cost per full-time, non-resident student is \$6,456.00 per academic year.

## Michigan Residence

### DEFINITION OF MICHIGAN RESIDENCY:

As a state-supported institution, Lake Superior State University complies with the following definitions and regulations governing resident status:

1. The residence of a student who is a minor follows that of parents or legal guardians, except that a minor student who comes to the University from another state or country cannot be registered as a resident of this state on the basis of having a resident of this state as a guardian, except on permission of the University in each individual case.

2. A person who is at least 18 years of age at the time of initial registration and who has continuously resided in Michigan for at least six months immediately preceding the first day of classes, is a resident for tuition purposes provided he/she can provide evidence of Michigan residency. Such evidence should include, but is not limited to, changes in voter registration and vehicle registration.

3. Non-resident students who enter the state and immediately begin classes shall be eligible for reclassification to resident status after six months, provided they can provide evidence of a change in their residency status. Such evidence could include, but is not limited to, changes in voter and vehicle registration.

4. A Michigan resident absent from the state for periods of up to one year shall not forfeit his or her residence for tuition purposes, provided that he or she has taken

no action to become a resident of another state.

5. Initial decisions on classification, and requests for reclassification to become a resident student, will be made by and to the registrar. Students may appeal these decisions to the executive vice-president.
6. The residence of a student follows that of his or her spouse, except that a student who initially registers as a resident student may continue to register as a resident of Michigan although subsequently marrying a non-resident student or other non-resident.
7. Students on active duty in any of the armed services and stationed in the State of Michigan are exempt from payment of non-resident tuition.
8. Aliens lawfully admitted for permanent resident in the United State who have a permanent visa, their spouses and minor children, may register as residents of this state provided they have met the other requirements herein for residency.
9. Any full-time employee of the University, and those members of the teaching staff whose appointments require at least three contact hours of teaching each week in regularly assigned formal classes, and their dependents, may register as residents.

Any student who is in doubt of residence status should consult with the registrar and have any questions settled prior to registration.

## **POLICY: TUITION/FEEES**

All tuition and fees are payable according to established due dates. Students who are delinquent in payment of any financial obligation are subject to enrollment cancellation until all amounts due the University have been paid, or until satisfactory arrangements have been made with the business office.

The registrar, on notice that a student is delinquent in payment, will deny registration to students delinquent in payments of fees and other University obligations. University services including transcripts will not be provided until financial obligations are paid. Registration is not complete until fees are paid. A check or draft returned to the University and not honored by the bank shall constitute non-payment and result in cancellation of registration.

**Auditing:** The cost for auditing courses is one-half the tuition charged for credit courses plus special course fees.

**Other Courses:** A few courses have special fees. All registrations (including payment of fees) must be completed no later than six days after the beginning of regular instruction. No student may enroll for the semester after the six-day period has passed without special permission from the Registrar. A service charge will be assessed for adding late.

**Vehicles:** Students operating or parking a car or other motor vehicle anywhere on campus must pay an

annual vehicle registration fee. The fee will be refunded in whole or in part only under certain conditions.

**Credit by exam:** Credit by departmental examination can be available to students who are accepted as full-time. If a 2.00 or better is scored, the credit will be recorded on the student's transcripts. The only fee charged will be a fee equivalent to CLEP exams, with no tuition charged for credits earned.

**Withdrawal:** Students withdrawing from the University must complete a withdrawal form in the Student Services Building to initiate a refund. Authorized refunds apply only to tuition and special course fees. For students on approved University financial aids, or aid through other agencies that mandate recovery of financial assistance, refunds will be in accordance with related requirements. Withdrawing students should check with the Director of Financial Aids. Refunds are made according to the following: During the first six days 100% refund on withdrawals. Students withdrawing between the end of the 100% refund period and the first 10% of the semester will receive a 90% refund. Students withdrawing between the end of the 90% refund period and the 25% point of the semester will receive a 50% refund. Students withdrawing between the end of the 50% period and the 50% point of the semester will receive a 25% refund. No refunds for dropping one or two classes. This policy is subject to approval by the Board of Regents.

**Transcript Fee:** Each student or former student is furnished, without charge, one official transcript either before or after graduation. A charge

of \$5 is made for each additional transcript.

## ROOM & BOARD APPLICATIONS

**Housing applications:** All unmarried students enrolled for 12 or more credit hours, who are within 26 calendar months of the date of their graduation from high school by the beginning of the academic year (for this purpose, all high school graduation dates are assumed to be June 1st) must reside in a University residence hall, with the following exceptions:

1. Students living with parents within a 60-mile radius, or the three county (Luce, Chippewa, and Mackinac) service area of the University campus. An exception application is available in the Housing Office and must be approved by the Housing Director.
2. Students exempted, in writing, by the Housing Director when residence hall space is filled.
3. Students with unusual financial or health problems who are exempted, in writing, by the Vice President for Student Programs and Services.

Applications for housing must be made to the housing office. Students indicating interest in living on campus on their University admissions application will be sent housing information. Room assignments will be made upon receipt of the first room and board payment. Applications are voided if first room and board payment is not received by June 15. If application



is canceled by proper notification to the housing manager by June 15, all monies paid will be refunded. When cancellation is made between June 15 and the opening of the residence halls, LSSU retains \$100.00. If cancellation is made after the halls open, a penalty of \$300.00 is charged. Students must be accepted for admission to live on campus.

**Room and Board:** A variety of living environments are available on campus for students. Room and board costs for 1994-1995 are \$4,228.00 for the academic year includes a \$42.00 environmental fee. Payments are divided into seven installments.

**Damage deposit:** Students living on campus must pay a \$75.00 damage deposit prior to checking into the halls. This deposit will be retained as a guarantee against breakage or damage. It will be refunded, less charges for breakage or damage, when students leave on-campus housing.

**Regulations:** To insure effective use of residence hall and cafeteria facilities and to promote development of desirable social qualities in students, certain regulations have been adopted to govern the conduct in the residence halls. Each student is given a copy of the regulations.

## SUMMARY OF EXPENSES

	RESIDENT INCL. N. ONT.	NON- RESIDENT
Tuition	\$ 3,312	\$ 6,456
Housing (damage) deposit (paid once)	75	75
Board and Room	4,228	4,228
Books and supplies (higher for first semester)	<u>580</u>	<u>580</u>
<b>Total for year:</b>	<b>\$ 8,115</b>	<b>\$11,259</b>

In addition to the books and supplies indicated above students enrolled in certain curricula may be required to have special materials and supplies which may be purchased at the University bookstore. Travel and miscellaneous personal expenses will vary between students in proportion directly related to their established standards of living.

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# FINANCIAL AID

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The University strives to reward the scholar and to meet the needs of the many students who apply for financial assistance. A combination of University, state and federal programs enable many students to receive a "financial aid package" which may include a combination of scholarship, loan, grant, and/or work assistance. Priority in aid awards will be to full-time undergraduate students.

All students should carefully consider the full cost of their education, parental support, and savings, including savings from summer employment, in determining their need for financial aid. Students with excellent high school or community college grades are encouraged to apply for scholarships regardless of need. Students with need will be considered for loans, grants, and/or employment on the basis of need established from the Free Application for Federal Student Aid (FAFSA).

Applications for all financial aid programs are available from the Office of Student Financial Aid. The staff of this office will be happy to counsel with applicants and their parents concerning the costs of attending the University, availability of financial aid, and application procedures.

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**All applications for financial aid must be received by April 1. Financial Statements (FAFSA) must be postmarked on or before March 1.**

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## Applying

Prospective students wishing to apply for financial aid should complete the financial aid section of the application for admission; forms may be obtained from high school principals or counselors or by writing to: Student Financial Aid, Lake Superior State University, Sault Ste. Marie, MI 49783.

Students already enrolled may secure applications in the Financial Aid Office.

Applications should be submitted to the University as soon as possible and must be on file by April 1 to be considered for the fall semester beginning in September.

Scholarship requirements: Incoming freshmen must be in the upper one-fourth of their graduating class and have a 3.25 grade point average. The recipient of any award must be a full-time student (carrying 12 academic hours or more).

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**Scholarship awardees will be notified December 1 through May. Others; April 1 through June.**  
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In most cases scholarship winners are selected on the basis of competitive examinations, scholastic records, and/or financial need. The American College Test is the University's primary test for scholarship applicants. Test results must be on file by April 1.

Students applying for assistance must have parents or guardian complete a Free Application for Federal Student Aid (FAFSA). These forms may be obtained from local high school counselors or principals. The form must be mailed on or before March 1 to assure that financial needs analysis reports are received before the financial aid application deadline of April 1.

## **RETAINING AID (SATISFACTORY PROGRESS POLICY)**

A policy of great importance to students receiving financial aid defines the rate of academic progress and success which must be met if financial aid is to be retained. If you are receiving any form of financial aid, please study the following section carefully:

Financial aid regulations require satisfactory progress for students to remain eligible for financial aid. Programs affected by this policy are: Federal Pell Grant, Federal Perkins Student Loan, Federal College Work-Study, Federal Supplemental Educational Opportunity Grant, the Federal Stafford Student Loan Programs, Board of Regents Scholarships, Board of Regents Grant, Michigan Competitive Scholarship, and all other institutional scholarships and grants. The following is the minimum requirement for all types of financial aid; however, there are some types of aid, such as scholarships, with more stringent requirements:

Every student must maintain, at the end of each semester, a cumulative grade point average (GPA) of at least:

Credits Attempted	Cumulative GPA
0-25	1.70
26-55	1.86
56-87	1.93
88+	1.97

## **APPLICATION OF POLICY**

First-year freshmen and new transfer students not meeting the GPA requirement after their first semester will be placed on Financial Aid Probation for one semester. The cumulative GPA after the probationary semester must satisfy the minimum GPA or the student will have their financial aid suspended. Students enrolled for more than one semester will not have a probationary semester and must meet the schedule above.

### **Quantitative Standards:**

Students are expected to complete an associate degree in six semesters, a four-year degree in twelve semesters, and a masters in six semesters of full-time study.

Fall/Spring Semester			
Undergraduate Students	Credits to be Earned 75%	Graduate Enrolled Credits	Students to be Earned Credits
12+	9	10+	7
11	8	9	6
10	7	8	6
9	6	7	5
8	6	6	4
7	6	5	4
6	4		

Students enrolled for less than 6 credits do not have a term/semester added and those enrolled for 6 to 11 credits count as one-half semester.

Once financial aid is suspended, both the GPA and credit completion criteria must be met in subsequent semesters before reinstatement of aid is possible.

If completion of "I" grades or other record changes warrant a reinstatement, a written notice from the Registrar's Office must be presented to the Financial Aid Office by the

end of the semester following suspension of aid.

Summer school attendance may be used by the student to remove grade point or credit earned deficiencies. Students must file a request for reinstatement with the Financial Aid Office following the successful completion of a summer term.

### *FINANCIAL AID SUSPENSION*

No aid, including but not limited to the Federal Stafford Student Loan, Federal Direct Loan, Federal Perkins Student Loan, Federal College Work-Study, Federal Supplemental Educational Opportunity Grant, Federal Pell Grant, Michigan Competitive Scholarship, and Institutional Scholarships and Grants, will be granted once a student's eligibility is suspended. To remove financial aid suspension status, a student must have attained the minimum cumulative grade point average and credit earned requirements while not receiving financial aid processed through the University. Successful students then must advise the Financial Aid Office in writing that they meet the requirements for reinstatement.

### *TRANSFER STUDENTS*

The requirements for transfer students are based on the number of full-time equivalent credits transferred to LSSU. For example, a student with 68 transfer credits must earn a GPA of 1.93 or higher and must meet the quantitative credit hour minimum requirements each semester. Transfer credits are divided by 13 to determine the equivalent semesters completed for satisfactory progress purposes.

## *SCHOLARSHIP RENEWAL REQUIREMENTS*

In addition to the credits completion schedule, scholarship winners **must** meet the following GPA requirements to maintain their awards:

<u>BOARD OF REGENTS DISTINGUISHED*</u>	<u>BOARD OF REGENTS**</u>
3.00 or better after two semesters of study	2.50 or better after two semesters of study
3.10 or better after four semesters of study	2.60 or better after four semesters of study
3.20 or better after six semesters of study	2.70 or better after six semesters of study

\*Includes other institutional scholarships with a value of full-tuition or higher.

\*\*Includes other institutional scholarships with a value of less than full tuition.

## **RIGHT TO APPEAL**

A student whose aid is suspended may request reinstatement through the Financial Aid Committee. To obtain reinstatement, the student must effectively demonstrate that their poor performance was due to some unusual circumstance. Such requests should be in writing and addressed to the Vice President for Student Services.

Scholarships are awarded on academic excellence and may not be reinstated by appeal.

## **CONSUMER INFORMATION**

As an applicant and recipient of Federal financial student aid, you have certain rights and responsibilities. Knowing your rights and responsibilities will put you in a better position to make a decision about your goals and how you can best achieve them.

### **STUDENT RIGHTS:**

You have the right to know:

1. What financial aid programs are available. They are listed in the financial aid section of this Catalog.
2. Deadlines for submitting applications for each available financial aid program.
3. How financial aid will be distributed, how decisions on that distribution are made, and the basis for these decisions. (Contact Financial Aid Office.)
4. How your financial need was determined. This includes how costs for tuition and fees, room and board, travel, books and supplies, personal and miscellaneous expenses, etc., are considered in your budget. (See award letter.)
5. What resources (such as parental contribution, other financial aid, your assets, etc.) were considered in the calculation of your need. (Contact Financial Aid Office.)
6. How much of your financial need as determined by the institution has been met. (Contact Financial Aid Office.)
7. To request an explanation of the various programs in your student aid package.
8. Your school's refund policy. This is in the Catalog "costs" section.
9. What portion of the financial aid you receive must be repaid, and what portion is grant aid. If the aid is a loan, you have the right to know what the interest rate is, the total amount that must be repaid, the payback procedures,

the length of time you have to repay the loan, and when repayment is to begin. (Contact Financial Aid Office or see loan note.)

10. How the school determines whether you are making satisfactory progress, and what happens if you are not. This information is under "Retaining Financial Aid" in this section of the Catalog.
11. Handicapped students: Lake Superior State University programs are accessible to the handicapped. Further information is available from the director of counseling.
12. You are entitled by law to examine records maintained in the Financial Aid Office that relate to your financial aid file.

And finally, you have the right to request:

13. The names of associations, agencies or governmental bodies which approve, accredit or license the University programs and copies of the accreditation documents are to be available upon request. (See "Accreditation".)

## **STUDENT RESPONSIBILITIES:**

1. You are responsible for obtaining all the forms required to apply for the type of assistance you wish to receive. You must complete all application forms accurately and submit them on time to the right place.
2. You must provide correct information. In most instances,

**RICHARD I. BLANKENBAKER MEMORIAL AWARD:** Value: variable up to full tuition. Established by the family of Richard I. Blankenbaker, a person who overcame his impoverished youth to own a supermarket chain and devote much of his life to public service. He also served as Director of Public Safety for the city of Indianapolis, Indiana. Mr. Blankenbaker was an avid fisherman and outdoorsman who loved to visit the DeTour area and shared his love of the north woods with his five children and many grandchildren. Preference will be given to graduates of DeTour High School or a DeTour mailing address. Applicants must be needy and the award is renewable if the applicant meets the University's satisfactory progress policy for financial aid renewal.

**RUSSELL D. BRUCE RECREATION DEPARTMENT SCHOLARSHIP:** Value: \$300. This annual scholarship is established in honor and recognition of Dr. Russell D. Bruce, the first department head (1976-1987) of Recreation disciplines at Lake Superior State University. Awarded to a Recreation Major student at the conclusion of the Spring Semester of the junior year. Candidates will be nominated by the Recreation Department faculty, and the recipient will be selected based on scholarship (3.00 or better), leadership, and service contributions to the Recreation Club and Lake Superior State University. The recommendation of the Recreation Department will be submitted to the Financial Aid Committee for final approval.

**ROBERT W. CURTIS AMERICAN SOCIETY FOR METALS SCHOLARSHIP:** Value: \$250 (Canadian funds) for study in an engineering or engineering technology curriculum. To be awarded to Canadian citizens

who have graduated from Ontario high schools. Must be in the upper half of the graduating class and submit references from two non-relatives.

**CENTRAL SAVINGS BANK SCHOLARSHIP:** Value: tuition and books. Established in 1990 to assist majors in finance and economics. Students majoring in accounting or economics with a finance minor will be considered as a second priority. Preference to students who have graduated from high school in the Eastern Upper Peninsula or the Algoma District of Ontario who have an interest in seeking full-time employment in the field of banking in the Eastern Upper Peninsula. Applicants must have earned a 3.0 GPA after two or more semesters of study. A screening committee of five members composed of three members of the faculty of the Business and Economics Department, one Central Savings Bank representative and one person from the city government will review the qualified applicants at the conclusion of spring semester each year. Applicants must submit a resume and a transcript of grades. The committee will review the credentials of the applicants and invite the finalist for interviews. The committee will select the recipient and one alternate and recommend the selections to the full Financial Aid Committee for final approval. The recipient must maintain a grade point average consistent with the University policy for full tuition scholarships. The scholarship is renewable for a maximum of three years.

**BUD COOPER BASKETBALL AWARD:** Value: \$300. The Ronald "Bud" Cooper Award is awarded annually to the individual in the men's basketball program that most exemplifies the attributes of Ronald "Bud" Cooper during his

years as an athlete, coach, and athletic director here at Lake Superior State University. During Ronald "Bud" Cooper's 30+ years of service, he demonstrated a tremendous amount of loyalty to his teammates, staff, and Lake Superior State University. In addition to his loyalty, he exemplified a tremendous amount of tenacity in the sport, while performing solidly in the classroom. It is in honor of these attributes that Lake Superior State University will annually present the Ronald "Bud" Cooper Men's Basketball Award to an individual exhibiting these attributes. The recommendation of the Athletic Department will be submitted to the Financial Aid Committee for final approval.

**GERONTOLOGICAL NURSING SCHOLARSHIP:** Established in 1993 by MaryAnne Shannon, who is a certified clinical nurse specialist in gerontology and a member of the Nursing faculty, to assist a junior or senior, Canadian or American student who is interested in the field of gerontological nursing. An award of \$500 is made each year to an eligible nursing student with a demonstrated interest in serving elderly clients. Applicants must have a 3.00 GPA and have earned at least 26 LSSU credits. Nominations are made by the Nursing faculty and confirmed by the Financial Aid Committee.

**HUDSON, COATES, KLINE SCHOLARSHIP:** Value: minimum \$2000. Established by the Hudson Foundation in memory of Roberts P. Hudson, Claude W. Coates, and Robert C. Kline prominent Sault Ste. Marie attorneys. The Hudson Foundation administers funds for educational and charitable purposes in Chippewa County, Michigan. Awarded to a graduating Sault Area High School senior accepted for admission in any undergraduate degree program.

Selections shall be based on high school grades, ACT test scores, class rank and financial need. The award is renewable for up to a total of four years subject to the recipient maintaining the academic standards required for distinguished scholarships. If a graduating senior is not available for the scholarship, it may be awarded to a currently enrolled Lake Superior State University student who is a Sault High graduate who has earned 26 or more LSSU credits and has a 3.20 or above cumulative grade point average.

**FRANK AND GLADYS HOHOLIK SCHOLARSHIP:** Value: variable up to full tuition. Applicants may be entering freshmen, transfer students, or currently enrolled students who have completed two semesters of instruction at Lake Superior State University. Applicants must demonstrate financial need. Recipients may request renewal of the scholarship for up to four years.

**MICHAEL D. DELLA-MORETTA MEMORIAL SCHOLARSHIP:** In honor of Michael Della-Moretta, a 1977 graduate killed while serving as a navy pilot aboard the U.S. Carrier Independence off Iran in 1981. He once said the happiest years of his life were at Lake Superior State University. The value of the award is \$500 per year based on academic achievement and financial need. Preference given to Upper Peninsula residents with an interest in biological science.

**DR. ARTHUR E. DUWE MEMORIAL SCHOLARSHIP:** Established by family and friends in memory of Dr. Arthur E. Duwe, Professor of Biology from 1968-1991.

**Eligibility:** Awarded to a senior Medical Technology student for his/her year of internship. If a qualified Medical Technology student is not available, the award may be given to a senior in Biology, Fisheries and Wildlife or Environmental Science. Students may be a Michigan resident or non-resident, enrolled full-time with a cumulative 3.0 or higher grade point average. Financial need is not a criteria for award consideration.

**Selection:** One recipient shall be selected each year from qualified applicants by faculty of the Biology and Chemistry Department. Interested applicants will apply for the scholarship during the spring semester of their junior year and the award will commence fall semester of the applicant's senior year. If a student has earned a degree prior to the internship, he/she is eligible during the internship. The recommendation of the academic department will be submitted to the Financial Aid Committee of Lake Superior State University for final approval.

**ROSA L. GROUT SCHOLARSHIP FUND:** Value: variable. Established in 1992 by Rosa L. Grout, a long time teacher of Mathematics in the Sault Area Schools and one of the founders of the Chippewa County Employees Credit Union. Applicants must be enrolled in Engineering Technology, Mathematics, Computer and Mathematical Science, or a lab science major. Financial need is not a criteria. Selection based on high school grade point average, ACT test and high school class rank. Student may be Michigan resident or non-resident. Renewable for up to four years.

**BILL AYERS MEMORIAL SCHOLARSHIP:** Established as a memorial to Bill Ayers, former

girls' basketball coach at Sault High School. Recipient must be a Sault High graduate and be accepted at Lake Superior State University. Qualified applicants are recommended by the High School Scholarship Committee to the University Financial Aid Committee for final selection. Renewable up to four years.

**EARL AND MINNIE WALKER ENDOWMENT SCHOLARSHIP**

**FUND:** This scholarship fund was established in memory of Earl and Minnie Walker, long time residents and community leaders in Strong, Michigan. The Walkers highly valued education, and encouraged their children and others to pursue a college education. The value of the award is variable up to full tuition. Awards are made on the basis of academic achievement and financial need. Open to incoming students and renewable for up to four years.

**SOCIETY OF AMERICAN MILITARY ENGINEERS**

**SCHOLARSHIP:** Value: \$500 for full-time students currently enrolled in engineering or engineering technology curricula. Application to be made to the Dean of the School of Engineering Technology and Mathematics. Selection is made by the Financial Aid Committee upon recommendation of the SAME Executive Committee.

**SOO BOTTLING COMPANY SCHOLARSHIP:** Value: \$500.

Established in 1987 by the Soo Bottling Company to recognize outstanding high school graduates from eastern Upper Peninsula high schools. One student from each of the eligible high schools will be awarded a scholarship in the spring of their senior year. The eligible high schools include: Brimley, Pickford, Newberry, Rudyard, St. Ignace, Engadine, Mackinac Island, Grand Marais, Cedarville, DeTour,



Paradise and Sault Ste. Marie. Selection will be made on the basis of the student's high school grade point average, ACT test score and class rank. Recipients must enroll as full-time students at LSSU.

**TRI-COUNTY WILDLIFE UNLIMITED SCHOLARSHIP:** Value: \$1000. Established by the Tri-County Wildlife Unlimited Organization to assist qualified Fisheries and Wildlife students from the counties of Chippewa, Mackinac and Luce.

**Eligibility:** Awarded to a resident of the tri-county area who is classified as a sophomore or higher. Preference will be given to students enrolled in the Fisheries and Wildlife Program with a cumulative grade point average of 3.0 or higher. The scholarship is renewable for the senior year if the recipient maintains a cumulative grade point average equal to or greater than that required by University scholarship renewal policy.

**Selection:** One recipient shall be selected each year from qualified applicants by faculty of the Biology and Chemistry Department. Interested applicants will apply for the scholarship during the spring of their sophomore year and the award will commence fall semester of the applicant's junior year.

**BOWATING BUSINESS AND PROFESSIONAL WOMEN'S SCHOLARSHIP:** Value: variable for a student who has returned to college after at least a two-year interruption and who has established a college cumulative 3.0 grade point average in two semesters of study. Restricted to applicants from Chippewa, Mackinac or Luce counties. Selection made in fall.

**EDWARD C. AND HAZEL L. STEPHENSON FOUNDATION SCHOLARSHIP:** Value: variable up to \$500. Generally awarded during spring semester to students who have been enrolled at least two semesters at the University. Applicants may be enrolled in any degree curriculum and either resident or non-resident students. The Financial Aid Committee may give preference to junior or senior students if the number of qualified applicants exceeds the funding available.

**TENDERCARE ENDOWMENT** Value: \$1,000. Awarded annually to students in the health care field. The scholarship is awarded to person(s) who have a 3.00 minimum GPA and who have completed 26 or more LSSU credit hours. The scholarship is renewable and available to transfer students. Financial need is a consideration but not a requirement.

The endowment was established in 1994 with \$25,000 bequest by a client in an Indiana affiliated facility to Tendercare, Inc. The funds were, in turn, donated as a gift to the LSSU Foundation by the corporation's shareholders. Tendercare, which is based in Sault Ste. Marie, is the largest long-term care provider in the State of Michigan.

**PHILIP A. HART MEMORIAL SCHOLARSHIP:** These scholarships are for students whose ideals and goals reflect those of the late senator. Awards range in value from full tuition to the entire cost of education less other gift aid. Scholarships will be awarded annually in April and are renewable for up to four years.

Eligible are: Seniors of Michigan high schools or graduates of Michigan community colleges planning to attend Lake Superior State University for the first time. Applicants must have a 3.0 cumulative grade point average in their current studies.

Successful applicants will have demonstrated interests in public service, as reflected through leadership roles and volunteer activities in school, community, and church. Candidates will be required to submit with their applications formal essays detailing their values, goals, and public service experience. Essays should attempt to answer this question: "How have my activities thus far related to the goals and the ideals of Senator Hart?"

Candidates will also be required to submit two letters of recommendation from individuals acquainted with their leadership and/or public service activities. Deadline for receipt of all application materials is April 1.

**TEMPIE DUBOW MEMORIAL SCHOLARSHIP:** Established in memory of Tempie Dubow, a 1973 nursing graduate and cheerleader. Value variable. Recipient recommended to the Financial Aid Committee by the Nursing Department.

**449th BOMBARDMENT WING SCHOLARSHIP:** Value: variable. An endowment fund was established by officers, men and civilian employees of the 449th Bombardment Wing of Kincheloe Air Force Base as an expression of appreciation and friendship for the Tri-County area. Eligible applicants must be entering freshmen who have graduated from high schools in Chippewa, Luce or Mackinac counties. Students' high school grade point averages, rank in class,

and ACT test scores will be prime criteria in the selection of recipients.

**FLETCHER SCHOLARSHIP FUND:** A native of Sault Ste. Marie, H. Thayer Fletcher founded the first endowment scholarship fund at Lake Superior State University. Remembering his talented high school classmates who, during the depths of the Depression, could not attend college, Mr. Fletcher was dedicated to helping today's worthy but needy young people. At his death, he bequeathed to Lake Superior State University nearly a half a million dollars for this purpose.

**Value:** Variable up to \$3600 per year; for study in any degree curriculum offered by the University. Applicants must be Michigan or Canadian residents, demonstrate financial need, and have attained "superior" grades in high school, in previous colleges, or at Lake Superior State University. Eligible applicants may be entering freshmen, transfer students or students who have attended Lake Superior State University three semesters as full-time students. Renewable up to four years. Apply to Lake Superior State University Financial Aid Committee.

**GUY ADDA MEMORIAL ENDOWED SCHOLARSHIP:** Established by family and friends of Guy Adda, a 1973 psychology and law enforcement graduate. Preference will be given to applicants from southeastern lower Michigan who have financial need. Selection will be based on the student's academic grade point average, ACT test scores and high school class rank. The award is renewable for up to four years.

**FIRST NATIONAL BANK OF ST. IGNACE ENDOWED SCHOLARSHIP:** Established by

the First National Bank of St. Ignace to assist a St. Ignace area student attending the University. Preference will be given to graduates of LaSalle High School of St. Ignace and selection will be based on the student's grade point average, ACT test score and high school class rank. Financial need is not a criteria and the award is renewable for up to four years.

**KURT AND MARY E. BRAMMER SCHOLARSHIP:** Established in 1981 by Kurt and Mary Brammer through a gift of 10,000 shares of L. E. Myers Corporation stock. The Brammers are summer residents of Neebish Island, childhood home of Mrs. Brammer. The value of the scholarship is full tuition. Qualified applicants will include high school seniors, transfer students, or currently enrolled Lake Superior State University students who apply after two semesters of full-time attendance. Awards to high school seniors will be based on student's ACT test score, grade point average and class rank. Awards to college transfer and currently enrolled students will be based on college grade point average. Scholarships may be renewed for up to four years, provided student meets the University scholarship renewal criteria.

**GEORGE AND VIRGINIA LAHODNY ENDOWMENT SCHOLARSHIP FUND:** The value of the award will be minimum of \$500 up to full tuition depending on the annual earnings of the fund. Qualified applicants will include entering freshmen, community college graduates, or currently enrolled students who have completed three full-time semesters at Lake Superior State University. The Scholarships will be awarded on the following criteria: entering freshmen will be judged on the basis

of their high school grade point average, ACT test score and rank in class; community college graduates will be considered on their community college grade point average; currently enrolled Lake Superior State University students will be considered on their Lake Superior State University grade point average. This will be a merit award and financial need shall not be a criteria. Scholarships shall be renewable on the basis of the student filing a renewal financial aid application annually and the maintenance of the same academic grade point average as is required for a Board of Regents Scholarship.

**SAULT/LORETTO HIGH SCHOOL MEMORIAL SCHOLARSHIP:** Value: variable. Established in 1990 by a committee of Sault High/Loretto graduates to assist Sault High graduates attending Lake Superior State University. Applicants must be graduates of Sault High and enrolled full-time. Selection will be based on the student's grade point average, ACT test score and high school class rank. Financial need is not a criteria. If a graduating senior is not available for the scholarship, it may be awarded to a currently enrolled Lake Superior State University student who is a Sault High graduate.

**GEOLOGY CLUB SCHOLARSHIP:** A fund created by the Geology Club annually awards scholarship to one or more students majoring in geology. During the early weeks of spring semester a student (or students) will be selected to receive the award for spring semester of the same year. Recipients must be juniors or seniors who have attended Lake Superior State University for at least two semesters, been active members of the Geology Club, and have an exceptionally good academic record

in geology during this period. Candidates will be selected by the Geology Faculty.

**JOHN KALESKY MEMORIAL ENDOWED SCHOLARSHIP FUND:** Value: \$900. Established by his family in memory of John F. Kalesky, a 1985 geology graduate. Awarded to a high school senior admitted into the geology program. Preference given to students with need. Selected on the basis of high school grades, ACT test scores and class rank. The award may be granted to a currently enrolled geology student after one year (twenty-six credits) of study at the University. Eligible University students must have a GPA of 3.0 or higher. The award is renewable subject to the recipient meeting the Board of Regents scholarship renewal criteria and filing a renewal financial aid application on time.

**ERNEST KEMP ENDOWED SCHOLARSHIP FUND:** Minimum value: \$600. Established in the name of C. Ernest Kemp, a long-time professor of Geology and Dean Emeritus at the University. Professor Kemp was one of the original instructors of the then Sault Branch of Michigan Technological University in 1946 who retired in 1980. Awarded to a high school senior admitted in the geology program. Financial need is not a criteria and the recipient will be selected on the basis of high school grades, ACT test scores and class rank. If an eligible high school senior is not available, the scholarship may be awarded to a geology major who has completed twenty-six or more credits at the University and has a 3.0 or higher University GPA. The award is renewable subject to the recipient meeting the Board of Regents scholarship renewal criteria and filing a renewal financial aid application on time.

**GERALD M. SAMSON DEPT. OF MATHEMATICS SCHOLARSHIP:** Value: variable. A fund has been created for the purpose of annually awarding a monetary scholarship to a deserving computer and mathematical science major. During the early weeks of spring semester a student (or students) will be selected to receive the award for use in spring semester of the same year. The class level is open but the student must be majoring in computer and mathematical sciences. The recipient(s) will be nominated and chosen by a vote of the Mathematics Faculty.

**CRIMINAL JUSTICE SCHOLARSHIP:** A fund is available to assist criminal justice juniors or seniors. Adjunct faculty member Patrick Shannon established the fund in 1984. Awards of \$400 are made every year to a deserving criminal justice student. Application is based on need and will be awarded for the fall semester. Nominations are made by the Criminal Justice Faculty and confirmed by the Financial Aid Committee.

**SAM M. COHODAS ENDOWED SCHOLARSHIP FUND:** Established by Sam Cohodas through a gift of 132 shares of Tenneco Stock. Mr. Cohodas was a long time Upper Peninsula businessman, philanthropist, and recipient of LSSU's 1987 Distinguished Citizen Award. Earnings from the fund shall be used for two scholarships awarded to Michigan Upper Peninsula high school seniors, selection based on high school grades, ACT test scores, class rank, character, leadership and financial need.

**ALANA EITREM MEMORIAL ENDOWMENT FUND AWARD:** Value: variable. Established by family and friends in memory of

Alana Eitrem, a Nursing student from 1984-1986. Eligible students must be admitted to the Nursing program, be a graduate of a Chippewa County high school, and have financial need. The award is renewable if the recipient maintains a 2.00 grade point average and continues as an eligible nursing student.

**LSSU FOUNDATION ENDOWED SCHOLARSHIP FUND:** This fund was established in 1986 to assist academically qualified students with financial need. **Value:** variable, for Michigan resident or non-resident students. For study in any curriculum; available to high school seniors, community college graduates, and LSSU students who are enrolled full-time and have earned 26 or more LSSU credits. The selection is made on the basis of student GPA, ACT test scores and class rank (upperclass students on GPA only). Renewable. Selection by the Financial Aid Committee.

**RAYMOND CHELBERG OUTSTANDING SCIENCE ATHLETE SCHOLARSHIP FUND:** **Value:** variable. In memory of Prof. Raymond Chelberg, long-time head of the University chemistry program. Awarded to outstanding science/athlete students at end of their junior year. Selection by athletic department in conjunction with academic department heads. Recipients must have at least 3.0 GPA, have demonstrated leadership abilities, major in a natural science and excel in at least one varsity sport.

**CHIPPEWA-MACKINAC AREA RETIRED SCHOOL PERSONNEL SCHOLARSHIP:** **Value:** \$400. For graduates or near graduates of area high schools or currently enrolled university students. Applicants may be enrolled in any degree curriculum,

must have graduated from a Chippewa or Mackinac County secondary school, and ranked in the upper one-third of their high school graduating class. Currently enrolled University applicants must have completed twenty-six hours of academic credit at Lake Superior State University and have obtained a minimum 3.00 cumulative grade point average. Applicants must also have financial need and be accepted for admission. Selections will be made in the spring for the following academic year by the Financial Aid Committee of the University. Recipients may reapply annually.

**DONALD W HASTINGS MEMORIAL SCHOLARSHIP:** **Value:** variable. Established in memory of Donald W. Hastings, Assistant Professor Psychology from 1971-1973. Eligibility: Awarded to a junior majoring in psychology for the senior year. If a qualified junior is not available, the award may be made to a senior. Students may be Michigan residents or non-residents, enrolled full time with a cumulative 3.0 or higher GPA. Financial need is not a criterion for award consideration. Selection: The Psychology Faculty shall select one recipient for each year from qualified applicants. Interested applicants will apply for the scholarship during the spring semester of their junior year and the award will commence fall semester of the applicant's senior year. The recommendation of the Psychology Faculty will be submitted to the Financial Aid Committee for final approval.

**LESLIE D. O'POLKA MEMORIAL SCHOLARSHIP:** **Value:** variable. Established by family, friends, and co-workers at Lake Superior State University. Leslie was a 1992 business administration graduate employed in the Physical Plant Department.

## MEMORIALS

Substantial funds have been contributed to the University's endowment Scholarship Fund in memory of the following individuals:

Milton Bays  
David Blair  
Beverly Brennen Booth  
Matthew Howie  
Maurice Hunt  
Donald Lenick  
Howard and Hollis MacDonald  
Arvid Norlin  
Mary Lou Peacock  
Linda Pike

Orlando Pingatore  
Dr. Thomas Robinson Sr.  
Minnie Etta Shobbrook  
Bernard M. Smith  
Lynn Steppig  
E.J. "Shine" Sundstrom  
Viggo J. Thomsen  
Christopher Yanni  
Prof. Stephen P. Youngs

Applicants must be a graduate of Detour High School, admitted to any program of study and have financial need. The award may be granted to a currently enrolled student after one year of study (26 credits) if a high school senior is not eligible. The award is renewable subject to the recipient meeting the Board of Regents scholarship renewal criteria.

**FRANKLIN F. OTIS AWARD:** Established in memory of Franklin F. Otis, Professor of Mathematics from 1948-1978. This award is intended to recognize the hard working sophomore or higher student enrolled in Mathematics or Computer and Mathematical Sciences programs. The applicant must have earned at least 26 LSSU credits, have a least a 2.5 GPA overall and at least a 3.0 GPA in his/her computer science and mathematics courses. A letter of application addressing his/her qualifications should be sent to the designated mathematics faculty member of the first week of October for consideration. The applicant

must be a resident of Michigan or Wisconsin at the time of application.

### **PARKER TRUE VALUE HARDWARE SCHOLARSHIP:**

Established by Warren and Beverley Parker. Awarded to full-time students who have earned at least 26 credits in a business administration major. Applicants must have graduated from a high school in Chippewa, Mackinac or Luce Counties and demonstrate financial need. If the recipient meets the academic standards for scholarship renewal, the award may be renewable for the succeeding years.

### **THE FRANK AND MARION PINGATORE MEMORIAL SCHOLARSHIP FUND:**

Established by a bequest from the trust of Marion Pingatore. Frank and Marion Pingatore were long-time residents of Sault Ste. Marie, MI, who operated Aunt Marion's Food Market and Aunt Marion's Norgetown Laundry and Dry Cleaning Business. Frank served as city commissioner and mayor in the

mid to late 1970s. The scholarship is need-based, presented to graduates of Sault Area High School who are enrolled as full-time students in any LSSU associate or baccalaureate program. Selection is based on the student's GPA, ACT test score, and high school class rank, with a minimum grade point average of 3.0. Selection will be made by the Financial Aid Committee.

**MILTON SCHERER MEMORIAL ENDOWED SCHOLARSHIP:** In memory of Milton Scherer, LSSU assistant professor of history and geography from 1948 to 1965. Awarded to sophomores majoring in history with minors in geography. Must have a cumulative 3.0 GPA. Qualified applicants are recommended by the School of Arts, Letters and Social Sciences to Financial Aid Committee. Renewable.

**SMO FOUNDATION ENDOWED SCHOLARSHIP:** Established by Stanley Tomcyek family, native and long-time residents of Sault Ste. Marie. Applicants must be LSSU sophomores, majoring in pre-medicine or pre-pharmacy, resident of Chippewa, Mackinac, or Luce Counties, 3.50 college GPA., and have financial need. Renewable for the junior and senior year.

**CHRISTOPHER W. REINKE ENDOWMENT AWARD:** Established by family and friends in memory of Chris Reinke, a Natural Resources Technology (NRT) student, 1986-87. The intent of the award is to assist an average Natural Resources Technology student with a grade point average between 2.0-3.0 and who, in the opinion of the NRT faculty, has a sincere interest and dedication in the NRT field. Preference will be given to those students with financial need. Selection by the Natural Resources

Technology Faculty at the end of winter semester of the freshman year to be used for the sophomore year only.

**EUGENE L. WELCH ENDOWMENT SCHOLARSHIP:** Value: tuition and books. Established by Barbara Welch Buchanan of Richardson, Texas in memory of Eugene L. Welch, a former Sault businessman who highly valued education for his family and encouraged others to pursue a college education. Applicants must be accepted for admission in any undergraduate program, be a resident of Michigan, and have financial need. The award is renewable up to four years if the recipient maintains the grades required for a Distinguished Scholarship.

**LOTTIE, FLORENCE AND DOROTHY WEINRICH MEMORIAL SCHOLARSHIP FUND:** Value: \$1000. Established in memory of Lottie, Florence and Dorothy Weinrich, long-time residents of Sault Ste. Marie. Awards are made to both resident and non-resident students on the basis of academic achievement. The scholarship is renewable if the recipient meets the University scholarship renewal policy.

**C.G. "SANDY" SANDERSON ENDOWED SCHOLARSHIP:** Established in memory of C.G. "Sandy" Sanderson, a local aviator-businessman and long-time Sault Ste. Marie resident. Mr. Sanderson's high regard for education can best be exemplified in a quote from a letter he wrote to his grandson, Terry, upon learning he was returning to Lake Superior State to complete his education. "Education cannot be taken from you nor can it be transferred, there is no reasonable

way to measure its value. It will enhance your entire life."

**Eligibility:** Applicant must be a graduate of an Upper Peninsula high school and selection will be made on the basis of the applicant's grade point average, ACT test score and class rank. Financial need will not be a consideration and students may be enrolled in any course of study.

**SAULT AREA JAYCEES SCHOLARSHIP:** Value: \$500. Established by the Sault Area Jaycees. Awarded to full-time LSSU students with junior status who have earned at least 26 LSSU credits. Applicants must be graduates of a Chippewa County high school and have a cumulative grade point average of 3.00 or higher. Recipients are selected in the spring semester and awards are available for the following year. The scholarship is not renewable; however, a student may reapply with the applicant pool for a second year award.

One new recipient will be selected each year and awarded \$500 unless a written notification is received from the Sault Area Jaycees to dissolve the award. In case of dissolution, no new awards will be made.

**CHASE S. AND STELLA B. OSBORN ENDOWED SCHOLARSHIP FUND:**

Value: variable. Established through a bequest of Stella B. Osborn, wife of the former governor of Michigan, Chase S. Osborn. Award is based on GPA, ACT test, class rank, and financial need.

**MICHIGAN  
COMPETITIVE  
SCHOLARSHIPS**

These State scholarships range from \$100 to \$1,200 at Lake Superior State University. Applicants must:

1. have been continuous residents of Michigan for a 12-month period prior to July 1, 1994;
2. be a high school graduate;
3. participate in the National American College Test (ACT) and attain a qualifying score;
4. not have engaged in any university, normal school, junior college, or other advanced training following graduation from high school and prior to the qualifying examination;
5. have complied with all other provisions of the law and rules and regulations adopted by the authority; and
6. demonstrate financial need. Student must be in good standing, have at least a 2.00 grade point average and meet satisfactory progress requirements to renew a scholarship. High school seniors must obtain ACT test registration materials from their high school counselor and mail them prior to the deadline for the October ACT examination.

**FEDERAL PELL  
GRANTS**

For most students, Federal student aid begins with PELL Grants, which provide a foundation of financial assistance to which other forms of aid may be added. A distinguishing feature of this program is its central concept of "entitlement," which guarantees that students who demonstrate need will receive a grant based on that need and on the cost of education at the post-secondary school they choose to attend.

PELL Grants for the award period (July 1, 1994 to June 30, 1995) will range up to \$2,300 as determined by a standard formula.



To be eligible for a PELL Grant, students must:

1. be determined to have financial need;
2. be undergraduates accepted for admission and enrolled in eligible programs;
3. be U.S. citizens or permanent residents; and
4. not in default on a Stafford or Perkins Student Loan, and not owe a refund for a Pell or S.E.O.G.;

Although students are awarded through the University, the U.S. Department of Education determines their eligibility. The University Financial Aid Office uses a standard procedure established by the Department of Education to calculate the amount of the award.

To apply, applicants must complete the Free Application for Federal Student Aid (FAFSA). Forms are available at high schools, colleges, and financial aid offices.

**THE BOARD OF REGENTS GRANT** Program provides financial assistance to both incoming students and currently enrolled students based upon financial need. Preference for the grant is given to those whose financial need is greater than one-half the cost of education. Recipients must be Michigan residents enrolled full-time.

## FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS

The Higher Education Act of 1965 created this program of financial assistance to college students with

the greatest financial need. The Supplemental Educational Opportunity Grants may be used to meet all or part of student financial need (up to \$4000 in any one year), with the exact amount being proportional to the support that can reasonably be expected from their families.

Financial need is the primary consideration in the selection of grant recipients. Priority is given to Pell Grant recipients. Academically, it is only necessary to gain admission to the University in order to be eligible for the grant. Recipients are selected from among those applying for all forms of financial aid.

Recipients of this award must reapply each year and maintain the regular satisfactory progress standards in order to be considered for a renewal award.

**Michigan Adult Part-time Grant:** Established in 1986 to aid independent students with financial need who are enrolled for three to eleven credit hours; self-supporting, out of high school at least two years, Michigan residents for prior twelve months, U.S. citizens and making satisfactory academic progress. **Maximum grant:** \$600 per year; limited to two years of study.

**Michigan Educational Opportunity Grant:** Established in 1986, provides up to \$1000 a year to Michigan residents enrolled at least half-time. Eligible students must have been a Michigan resident for the past 12 months and making satisfactory academic progress and demonstrate financial need.

**Tuition Incentive Program (TIP):** The TIP Program is a State of Michigan program that pays tuition and fees for students of lower-income families. Eligible students must be Michigan residents, have graduated from high school or obtained a GED after May 1, 1988

and before reaching age 20, be accepted for admission into an eligible program and file a TIP application. Applications are

available from the Michigan Department of Social Services, high school guidance offices and college financial aid offices.

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## LOANS

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### FEDERAL PERKINS LOANS (National Direct Student Loans)

The Perkins Student Loan program is for students who are enrolled at least half-time in an eligible program and need a loan to meet their educational expenses.

Students may borrow up to \$3,000 for each year of undergraduate study. The maximum debt for undergraduates is \$15,000. The amount awarded by the University is generally less due to limited funds.

Repayment begins nine months after students graduate or leave school for other reasons. Students may be allowed up to ten years to pay back the loan, and during the repayment period they will be charged five percent interest on the unpaid balance of the loan principal.

The amount of the repayment depends upon the size of the debt and ability to pay; but in most cases, students must pay at least \$40 a month unless the school agrees to a lesser amount. This agreement for a lesser amount may be due to extraordinary circumstances such as prolonged unemployment.

**Default:** If a student defaults on a Perkins Loan and the school is unable to collect, the Federal

Government will take action to recover the loan. If such student is discharged in bankruptcy, becomes totally or permanently disabled or dies, loan obligations will be cancelled.

Deferment of payment is available while borrower is:

- A. enrolled and in attendance as at least a half-time student at an institution of higher education;
- B. for any period not to exceed three (3) years during which borrower is:
  - (1) unable to find full-time employment,
  - (2) experiencing economic hardship

**Cancellation:** Loans may be cancelled for:

- A. certain types of teaching,
- B. full-time qualified provider of early intervention services for the disabled,
- C. full-time nurse or medical technician,
- D. full-time law enforcement or corrections officer,
- E. death or disability of the student, or
- F. full-time staff of Head Start Program.

## **FEDERAL STAFFORD STUDENT LOAN**

Students may apply for a Stafford Student Loan after they have been admitted as full-time students at the University.

To qualify for a loan, students must be United States citizens. Students may borrow up to \$2,625 the first year of undergraduate study, \$3,500 as sophomore and \$5,500 as a junior or senior for a maximum of \$23,000. Eligibility is based on financial need for subsidized loans.

Students who do not have financial need may borrow from the Stafford Loan Program through an unsubsidized loan, where the interest is paid by the student.

All students are eligible for Federal Interest Benefits with the Federal government paying interest on the loan until six months after students graduate or cease to be at least half-time students.

Once enrolled at Lake Superior State University a student must meet the Satisfactory Progress Standards to be eligible for additional loans.

Repayment of principal and interest begins six months after students have graduated or reduced class hours to less than half-time. Interest rates are variable, not to exceed 8.25 percent. Applications are available at the Financial Aid Office.

## **FEDERAL PARENT (PLUS) LOAN**

Parents may borrow up to the difference between the cost of education and other financial aid the student is eligible for. The interest rate is variable based on 91-day treasury bill rates.

Parents will have deducted a three percent origination fee and a one percent insurance premium from each of two disbursements made per school year. Repayment begins within 60 days of disbursements. Applications are available at participating lenders and at the Financial Aid Office. Maximum interest is 9 percent.

## **NURSING STUDENT LOAN**

The Nursing Education Loan Program provides loans of up to \$2500 per year to students enrolled in the bachelor's degree or completion nursing program. Eligible students must be United States citizens, enrolled more than half-time and demonstrate financial need greater than one-half the cost of education. Qualified applicants should apply at the Financial Aid Office.

## **MI-LOAN PROGRAM**

The Michigan Higher Education Student Loan Authority of the Michigan Department of Education established the MI-Loan Program to assist students and their families in meeting the cost of post-secondary education.

Students must be certified as eligible by the school, be U.S. citizens, not in default on any education loans, and pass all credit standards. Students who cannot pass the credit standards must have a qualified co-signer that does.

The minimum loan is \$1,500 and maximum is \$10,000 per academic

year. Interest is fixed at 8.4 percent and repayment is a minimum of \$50.00 per month and must be repaid in 15 years. Applications are available at the Financial Aid Office or by calling the Student Loan Authority at 1-800-877-5659.

## CANADA STUDENT LOANS

The purpose of the Canada Student Loan Plan is to make bank loans available to Canadian students who need financial help to enable them to engage in full-time studies directed towards a degree at an institution of higher education.

To qualify for a loan, the student must:

1. be a Canadian citizen or have landed immigrant status;
2. be a resident of a province that participates in the plan;
3. have attained a satisfactory scholastic standard;
4. be enrolled, or qualified to enroll in a post-secondary course of studies;
5. be a full-time student.
6. send a confirmation of program information form and a copy of Social Insurance number card with his/her application.

The loans are interest free as long as a student is full-time and until six months after graduation or termination of full-time studies. After the interest-free period has expired, students are responsible not only for the repayment of principal

but also for the present payment of interest on the outstanding balance, at a rate that is in effect for student loans at the time the loan is taken out.

Application forms are available from Student Awards Branch, Ministry of Education and Training, P. O. Box 189 Red River Road, 4th Floor, Thunder Bay, Ontario P7B 6G9. Telephone 1-800-645-3013.

## SHORT TERM LOAN FUNDS

BEACH Loan Fund  
VALMA L. CURTIS Memorial Fund,  
ROBERT P. AND ELLA B. HUDSON Foundation, Inc. Loan Fund,  
DON LENICK Memorial Loan Fund,  
SHIRLEY LIGHT Memorial Loan Fund  
STEINMAN Loan Fund.

Several short-term loan funds are available. The purpose of these funds is to provide students who are temporarily out of cash with a small loan to meet an immediate, temporary financial problem.

Generally, loans are granted up to \$150 for a period of no longer than 30 days during the school year when classes are in session. These loans are signature loans and do not bear interest if repaid when due. A minimum \$5.00 service charge or one percent, whichever is greater, is assessed on all loans. Generally, loans must be repaid prior to the end of the semester in which they are issued.

Delinquent Loans are subject to a ten percent late penalty charge. Loans are made to students properly enrolled in the current semester and are obtained through the student Financial Aid Office. Loans over

\$150 will require a bank or institutional credit reference and a co-signer (may not be another

student) 18 years of age or older. If repaid late, a 10 percent late charge will be assessed.

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# CAMPUS EMPLOYMENT

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## HOW TO APPLY

Students interested in employment on campus should make application at the Office of Employee Relations. More than three hundred positions are open on campus for full-time students.

Every effort is made to employ students in their major area of study, thereby providing a "learn while you earn" situation. On-campus jobs include work in laboratories, libraries, maintenance, offices, switchboard and food service areas. A student can earn approximately \$1,300 during the school year and up to \$3,000 in the summer in one of the on-campus jobs.

It is recommended that students on academic probation do not continue or seek employment until probationary status has been corrected.

## FEDERAL COLLEGE WORK-STUDY

Students who need a job to help pay for some of their university expenses are potentially eligible for employment by Lake Superior State University under the federally supported Work-Study Program if they demonstrate financial need.

**20-Hour Load:** Students may work up to 20 hours weekly while attending classes more than half-time. During the summer or other vacation periods when they do not have classes, students may work full-time (40 hours per week) under this program. In three months of summer employment under the Work-Study Program, an eligible student could earn approximately \$3,000.

**Pay Scale:** The basic starting rate is \$4.25 per hour, although higher rates are paid for highly specialized work. Preference is given to students who have high need.

**Related Employment:** Work may be in the student's major area of study, thereby providing a "learn while you earn" situation. On-campus jobs include work in laboratories, libraries, maintenance, offices, storerooms, and food service areas.

## MICHIGAN WORK-STUDY

Undergraduates who have been Michigan residents for at least twelve months, have financial need, are enrolled at least half-time and are making satisfactory academic progress may be eligible for employment under the Michigan work-study program established in 1986.

## VOCATIONAL REHABILITATION

The Michigan Department of Education, Bureau of Rehabilitation, provides services and financial assistance to persons who have any disability that has interfered with, or may interfere with the individual's job performance. Students must

apply for financial aid and have need.

Further information may be obtained by writing to Bureau of Rehabilitation, Michigan Department of Education, Lansing, Michigan 48933, or contact your nearest Michigan Employment Security Commission office.

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# PROGRAMS FOR NATIVE AMERICANS

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### BUREAU OF INDIAN AFFAIRS SCHOLARSHIP GRANT:

Students who are members or eligible for membership in a federally recognized Indian tribe and with need may apply for Bureau of Indian Affairs Scholarship Grants by writing their Tribal education office for an application form. Eligible students may obtain up to full university expenses per year in scholarship grants if financial need is demonstrated. All applicants must complete a Free Application for Federal Student Aid (FAFSA).

### BUREAU OF INDIAN AFFAIRS VOCATIONAL TRAINING ASSISTANCE:

Indian students enrolled in certificate or associate degree programs are eligible for assistance to pay for tuition, books, and living expenses. Students must be members or eligible for membership in a federally recognized Indian tribe.

Awards are based on students' financial need. Applicants must complete a Free Application for Federal Student Aid (FAFSA).

Applications may be obtained by writing the Tribal Education Office.

**NATIVE AMERICAN TUITION  
WAIVER:** Value: full tuition for full- or part-time North American Indian students who can provide evidence of being one-quarter blood Native American Indian and Michigan residents.

Interested applicants must have their tribal chairperson or tribal certification officer submit a certification of one-quarter blood quantum to the Michigan Commission on Indian Affairs, 300 East Michigan Avenue, P.O. Box 30026, Lansing, Michigan 48909, along with a letter indicating the college student plans to attend. The Michigan Commission on Indian Affairs will attach a certification letter to the tribal certification and forward it to the Financial Aid Office at the University. The University will then issue a Native American Tuition Waiver in the amount of tuition for eligible students each semester. Students must be accepted for admission.

# VETERANS

## Veterans, Children of Deceased, or Totally Disabled Veterans

**Michigan Public Act 245:** Sons or daughters of a veteran who died of service-connected causes, may be eligible for benefits under the Public Act 245. The benefits waive tuition until the student reaches 23 years of age. Those who believe they are eligible should request an application from the Michigan Veterans' Trust Fund, 1225 Grand Ave., Lansing, Michigan 48913. Recipients may be full- or part-time students. Any student who believes they are eligible for educational assistance through any Veterans' Law should contact their area Veterans' office for information and applications. Veterans must be admitted into a degree program that has been approved by the State Approving Agency.

## Veterans' Standards of Progress

The requirement of grade point average will be the same as the University Academic Probation and Dismissal Policy. If your grade point average falls into the dismissal category, the Registrar's Office will notify the Veterans Administration of your dismissal and benefits will be terminated.

### WITHDRAWAL OR DROPPING A CLASS

You are required to notify the Registrar's Office if you drop a class

or withdraw completely from the University.

**Credit for Previous Training:** The Veteran must obtain a degree audit from their Department Head and submit it to the Registrar's Office. The Registrar's Office will indicate the amount of credit granted for previous training and notify the veteran. The Registrar's Office will keep the audit updated. The veteran should not register for classes not required for their degree. However, they should make sure they have the required electives.

**Graduate Program:** Veterans, and other eligible persons, enrolled in any graduate program must meet the following standards of progress: A maximum of six semester credits of C grades in 600-level course will be allowed in veteran's overall program. Veterans failing to maintain 3.0 (4.0 basis) average will be referred to the Master of Business Administration Standards and Policy Committee to determine whether they should be permitted to continue in the program. Veterans receiving D grades in 500 or 600-level courses will be referred to Master of Business Administration Standards and Policy Committee immediately. A veteran may withdraw from a course within 57 percent of the class. Veterans dismissed from the Master of Business Administration program may petition the Master of Business Administration Standards and Policy Committee to be reconsidered, and at the time of dismissal the Veterans Administration will be notified of their unsatisfactory progress.

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# GRADUATION PROCEDURES

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**Degree candidacy procedure:** Two semesters before students plan to complete degree requirements and graduate, they must submit to the Registrar's Office an appropriate departmental degree audit for each major and minor, and, a declaration of candidacy for degree. The necessary forms are available at students' major departmental office.

The departmental degree audit for a student's major or minor specifies all required courses which have been or must be completed. The audit must be signed by the department chair of the department and/or dean of the School offering the major or minor program. Course substitutions and waivers of departmental degree program requirements may be granted only by the dean of the school offering the major or minor program. Exceptions to specific General Education requirements may be granted only by the Scholastic Standards Committee. Such exceptions are infrequently made. A petition for exceptions to General Education requirements is initiated with the Registrar.

The Registrar's Office checks students' degree audits, after which a preliminary verification of the degree audit is sent to each student and respective department head. Students are responsible for examining this verification and requesting clarification of anything which is not consistent with their records or understanding.

From the declaration of candidacy for degree forms submitted by

students, the Registrar's Office creates a potential graduate list for each semester. Names for the commencement program and diploma will be official, legal name as listed on the records in the Registrar's Office. The names of students who are listed in the annual commencement program are also compiled from declaration of candidacy forms. Students will not be listed in the commencement program unless their degree candidacy form is filed with the Registrar's Office six weeks prior to commencement. Students are expected to attend commencement exercises unless excused by the Registrar's Office. Students completing degree requirements during the summer may participate in commencement the previous semester if their degree candidacy form is received six weeks prior to commencement.

After grades are received in the Registrar's Office at the end of each semester, degree audits will be updated for all students completing credit and who have a degree candidacy form on file. When all requirements specified on the degree audit are fulfilled the school dean and/or department head and



Registrar give a final approval. Names of these graduates are then sent by the Registrar to the President for Board of Regents approval. Subsequently, a diploma is provided to each student.

**Diploma charge:** There is no charge for the first diploma from Lake Superior State University. A fee is charged for replacement diplomas.

Students completing graduation requirements in the fall semester or summer, or who otherwise need documentation of completion before their diploma is available, will receive a letter from the Registrar certifying that they have completed degree requirements. Additionally, official university transcripts will be sent to any employer, graduate university, or elsewhere, as requested by the graduate. Official transcripts will not be mailed to students.

**Graduation with honors:** Honors graduates must earn at least 32 credits at Lake Superior State University. All credits with grade points completed at other colleges (percentages are converted to letter grades) will be figured in computing grade point averages for honors diplomas and medallions at Lake Superior State.

Students who earn 3.50 to 3.69 will graduate cum laude; 3.70 to 3.89, magna cum laude; 3.90 to 4.00, summa cum laude. Honors earned shall not be higher than those for which a student qualifies on basis of courses taken at Lake Superior State University.

Graduation diplomas with honors will be awarded to baccalaureate and associate and certificate recipients. Honors medallions will be awarded only to baccalaureate and associate

degree recipients who graduate summa cum laude.

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## *NOTES*

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# DEGREE REQ

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Lake Superior State University offers bachelor's (also called baccalaureate) degrees, associate degrees, and certificates. These degrees are offered in a wide variety of academic programs. Each academic department has a set of specific courses and other requirements for each of its degree programs. These are stated later in this Catalog in the various departmental sections. However, some requirements for bachelor's degrees are of a general nature, applying to all such degrees. These are discussed below.

**Bachelor's Degrees:** A minimum of 124 credits is required for a bachelor's degree. Some programs require more than this number of credits. Requirements are of five categories: general education, bachelor of arts or bachelor of science requirements, departmental requirements, competency requirements in mathematics and writing, and residency.

**Associate Degrees and Certificates:** See the appropriate school section of this Catalog for the specific requirements. A minimum of 62 credits is required for an associate degree. At least three credits each of English and Speech, plus six other general education credits are required. Competency in mathematics and writing is required for an associate degree. There is also a residency requirement.

**Minors:** Academic minor programs are also offered in a wide variety of disciplines. A minimum of 20 credits is required for a minor, and some require more. See school sections for specific minor program requirements.

## GENERAL EDUCATION (33 credits)

General Education consists of courses required of all students regardless of their specialized area of study. The purpose of general education is

to develop skills and knowledge useful for all students, regardless of their career choices. Requirements in English and speech enhance fundamental skills of writing and speaking. Requirements in humanities, natural sciences, and social sciences broaden intellectual perspective and familiarize students with fundamental fields of human knowledge.

**ENGLISH (6 credits)** - EN110 and EN205, EN210 or EN215

**SPEECH (3)** - SD101.

**HUMANITIES (8)** - any HU course or courses, or any of the courses AT250, 251; FR251; GN241; MU110, 111, 112, 113, 140, 141, 160, 161, 220, 221, 260; PL204, 205, 302; SD251, 252; or SP261, 305, 306; any second year foreign language course; with a maximum of four semester credits per discipline or total in foreign languages (excluding HU) allowed to count for this requirement. Four credits of one foreign language and four credits of another cannot be used.

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# UIREMENTS

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**SOCIAL SCIENCE (8)** - Any combination of courses in economics (EC); geography (GG), except GG106 and GG108; history (HS), political science (PS), psychology (PY) or sociology (SO) for which credit adds to eight semester credits.

**NATURAL SCIENCE (8)** - At least one course from each of the following two categories: Life Sciences - BL105, 110, 111, 122, 204; or both NS103 and 104 Physical Sciences - CH105, 108, 115, GE111, 112, 114; GG106, 108; NS101, 102, 105, 107, 119; PH221, 222, 231.

If the total credits of these two laboratory courses is less than eight, non-laboratory science courses may be applied toward the requirement if the department chair or dean evaluates the course as appropriate.

**NOTE.** Transfer students should refer to the Admission section of this catalog for an explanation of the MACRAO agreement as it applies to General Education requirements.)

## **BA and BS Requirements (8 credits)**

**Bachelor of Arts Degree** - one year of a modern foreign language (If taken at LSSU, this would be FR151-2 or 251-2; GN141-2; SP161-2 or 261-2) One-half of two different foreign language will not meet this requirement.

**Bachelor of Science Degree** - at least eight semester credits, in addition to courses used for general education requirements, from categories of social science, natural science or mathematics (MA).

## **DEPARTMENTAL REQUIREMENTS**

Each program has a set of specific course requirements determined by the department offering the degree program. See school and departmental sections for these requirements.

## **ELECTIVES**

Elective courses are chosen to obtain credit beyond that of specified requirements. Free electives refer to courses which students may select completely of their own choice. Designated electives refer to courses selected from a list specified by the department

## **COMPETENCY IN MATHEMATICS**

Students seeking associate or bachelor's degrees are required to demonstrate competence in mathematics at approximately the level of basic algebra. Both the Counseling and Testing center and the Department of Mathematics and Computer Sciences administer the minimum competency examination. Students can satisfy the mathematics competency requirement in the following ways:

(1) score 15 or higher on the intermediate algebra placement examination, given at the time the student enters the University, (2) pass the competency examination, or (3) complete one of the Lake Superior State University mathematics courses MA086 or MA090 or higher.

Transfer students who have previously completed a course equivalent to MA092, with a grade of 2.00, or higher, or a higher level math class (specifically excluding MA207) will have satisfied the University's mathematics graduation requirement. The student's transfer credit evaluation form must indicate that LSSU's mathematics competency requirement has been satisfied.

Students are required to complete mathematics competency (by course or exam) during the first 56 credits earned. A student reaching the 56 credit limit without competency shall enroll in an appropriate mathematics courses until passed and be limited to a maximum of 13 credits per semester, including the course, until competency is accomplished.

Transfer students entering LSSU with 40 or more transfer credits shall complete mathematics competency during the first 20 credits they earn at LSSU or be subject to the enrollment restrictions stated above.

## COMPETENCY IN WRITING

The Writing Competency Examination demonstrates a student's ability to read and write critically at a level deemed appropriate for undergraduate work. Effective Fall Semester 1991 it will be given at the end of the sophomore English course (EN205, EN210 or EN215) as a

"rising Junior test" before students begin upper level courses with disciplinary writing emphasis.

The test consists of a read/respond format in which a passage is supplied and students use it as the basis for the essay. At least three topics from across the curriculum will be available for each test. Students will have three hours to complete the test. The rising Junior test will be given during the final exam week of EN205, EN210 or EN215 at scheduled group times in place of the final examination. All other test sessions must be scheduled by individuals through Brown Hall.

The test is a university graduation requirement and will be graded pass/repeat by the faculty using criterion-referenced scoring methods. Students who must repeat the examination may retake the test one time at the counseling center after one month. Students who do not pass the test before Junior level (56 credits) must enroll in EN091, an intensive review of English, and will be limited to 13 semester credits, including EN091, until satisfying the requirement.

Transfer students who enter Lake Superior State University prior to fall semester 1992 with EN205, 210, or 215 credit must pass the examination within the first two semesters of attendance at Lake Superior State University. If they fail the first attempt, they may retake the examination after one month. If they do not pass the examination within two semesters, they must repeat EN205, 210 or 215.

Transfer students who entered Lake Superior State University in fall semester 1992 or later having completed the equivalent of the General Education English sequence must take the competency examination

before beginning their second semester. Transfer students who do not pass the test before their senior year (88 semester credits) must enroll in, EN091, an intensive review of English and will be limited to 13 semester credits, including EN091, until satisfying the requirement. Transfer students on a 3+1 program must take the test before the beginning of their first semester. Arrangements will be made, if possible, to administer the test on the campus of the institution from which students are transferring.

## **WAIVER OF COMPETENCY REQUIREMENTS**

Effective Fall semester 1991 the mathematics and/or writing competency graduation requirement(s) will be waived only on the basis of having a certifiable learning disability or neurological medical condition. Students must be certified by a licensed psychologist or neurologist as having a substantial disability in the learning process.

Students potentially eligible for a waiver are required to initiate their appeal through the University Counseling Center. Those students who obtain the necessary certification must provide the University Counseling Center with documentation of such. The Counseling Center shall then notify the Registrar's Office of the waiver. Enrollment restrictions stated above, as appropriate, continue in effect until a student has provided this documentation to the Counseling Center.

## **RESIDENCY RE- QUIREMENTS**

Bachelor's degree candidates must earn at least 32 of their final 40

credits and at least fifty percent of their departmental required 300/400 level credits in courses offered by Lake Superior State University. Regional Center students must earn at least 32 of their final 64 credits and at least fifty percent of their departmental required 300/400 level credits in courses offered by the University. Associate degree and certificate candidates must earn 16 of their final 20 credits in such courses. For a minor, students must earn at least 6 of the required credits in such courses.

## **EXCEPTIONS TO GRADUATION RE- QUIREMENTS**

Exceptions to specific General Education requirements may be granted only by the Scholastic Standards Committee. Such exceptions are infrequently made. A petition for exceptions to General Education requirements is initiated with the Registrar.

Course substitutions and waivers of departmental degree program requirements may be granted only by the dean of the school offering the program (major or minor).

Normally, students will graduate under the program degree requirements in effect and published in the Catalog at the time they are admitted into the given degree program, provided their enrollment at the University is continuous. If enrollment is interrupted, or if students select a new major, they will be required to satisfy program requirements in effect at the time they re-enter or officially change to the new major. If program requirements are revised during student's enrollment, they will be allowed to graduate under the new requirements providing they can meet such requirements in their entirety.

The University reserves the right to change the requirements for graduation at any time as a means of keeping pace with educational developments affecting the various curricula. As such changes are made, they may at the discretion of the University be applied to students already enrolled. In such cases reasonable and prudent effort will be made to provide students the benefit of the new educational program without imposing undue hardship.

## MULTIPLE MAJORS

Students earning a bachelor's degree at Lake Superior State University may do so with more than one major by completing all requirements of each desired major program. Before graduation students must file a degree audit approved by the appropriate school dean and/or department chair for each major.

## MULTIPLE DEGREES

Students desiring to earn more than one bachelor's degree from Lake Superior State University must complete all program requirements for the additional degree, including at least 32 additional credits of which at least 21 must be from courses offered by Lake Superior State University.

Students earning a bachelor's degree from Lake Superior State University who desire an associate degree must complete all requirements for the associate degree program at the time they are completing the bachelor's degree requirements.

Students earning an associate from Lake Superior State University who desire an additional associate degree must complete all requirements for the additional degree, including 16

additional credits of which 12 must be from courses offered by Lake Superior State University.

## ADDITIONAL DEGREES FOR GRADUATES OF OTHER UNIVERSITIES

Students who have earned a bachelor's degree at another accredited institution who desire a bachelor's degree from Lake Superior State University must complete all requirements of an approved degree schedule including at least 32 additional credits in courses offered by Lake Superior State University. The degree schedule must be approved by the major department chair, School Dean, Registrar and Provost. Students should initiate the approval process with the department head at the time of or before commencing study toward the additional degree. The schedule elected shall consist mainly of minor, major and cognate courses. Courses considered essential to the degree but not previously elected may, at the option of the department chair and/or school dean, be required even though the total may exceed 32 credits. Lake Superior State University general education requirements will be considered completed if the student has earned a bachelor's degree at any United States accredited university or an honors bachelor's degree from an accredited Canadian university. Mathematics and writing competency requirements must be met.

Students who have earned a bachelor's degree or associate degree at another accredited institution and who desire an associate degree from Lake Superior State University, must complete all requirements of an approved degree schedule including at least 16 additional credits in

courses offered by Lake Superior State University. The degree schedule process is identical to that described above for an additional bachelor's degree. The schedule elected shall consist mainly of major and cognate courses. Courses considered essential to the degree but not previously elected may, at the option of the department and school, be required even though the total may exceed 16 credits.

## **INDIVIDUALIZED STUDIES DEGREE**

In addition to the baccalaureate degrees described in departmental sections, Lake Superior State also offers Bachelor of Arts and Bachelor of Science in Individualized Studies degrees, for students who desire an unusually specialized program. The individualized studies program requires that students complete (1) a minimum of 124 credits, (2) general education requirements of the University, (3) 24 credits at the 300/400 level (in addition to the General Education requirement) and (4) mathematics and writing competency. A 2.00 overall grade point average is required.

Degree program approval by the Individualized Studies Committee is required. At least 30 credits must be completed after approval has been received. For further information on the approval process, students should contact the Chairperson of the Individualized Studies Committee. (This person's name can be obtained from the Provost Office.)

## **ASSOCIATE IN LIBERAL ARTS**

An Associate Degree in Liberal Arts is offered for students interested in a general two-year program. Requirements and a sample curricular plan

are listed in the School of Arts, Letters, and Social Sciences section of this catalog.

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# **NOTES**

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# School of Arts, Letters and Social Sciences





**FACULTY:** Dean of School, Dr. Richard Conboy; Profs. Richard C. Crandall, John C. Cullen, Daniel Dorrity, Richard Jennings, Gary R. Johnson, Hellmuth Kormmueller, Leon Linderoth, Margaret Malmberg, Robert Money, James W.T. Moody, Susan H. Ratwik, Timothy Sawyer, Thomas E. Schirer, E. Gary Toffolo, John Wilkinson; Assoc. Profs. Leslie A. Dobbertin, Georgegeen Gaertner, Marcel Pichot, Diana Pingatore, John Stevens, Nancy L. Voight; Asst. Profs. Carol S. Andary, Colleen Anderson, Jeffrey Ayres, Joel Bloch, Gerald F. Dobbertin, Laura McGowan, Gary A. Rackliffe, Shirley A. Schoenemann; Instructors: Lisa Allen, Jefferson Faye

This school encompasses a variety of disciplines and programs, including early childhood education, English, geography, history, human services, humanities, languages, legal assistant studies, Native American studies, substance abuse prevention and treatment, political science, psychology, sociology, teacher education, and the child care center. These are quite diverse in their perspectives and methodology, but all are concerned with the study of human behavior from the perspective of either the Liberal Arts or the Social Sciences. The professors in this School, regardless of the perspective that they adapt are concerned with the effective teaching of our students.

**OFFERINGS:** There are a variety of majors, minors, and associate degrees. Some programs give students specific employable skills upon graduation. Others are broader, so that upon graduation students may have the option of further education in graduate school or law school, or of entering careers in fields such as politics, teaching, social services, administration, and business. Each area of study is described in greater detail below, including requirements for majors, minors, and associate degrees.

**ENTRANCE REQUIREMENTS:** To qualify for admission as freshmen, applicants must be graduates of accredited secondary schools with above average standing in their class. Their secondary school preparation should include a four-year curriculum of at least 15 units of acceptable entrance credits. Two major sequences and two minor sequences should be included in the 15 units for graduation. Individual disciplines within the department may have additional entrance requirements.

## **TEACHER EDUCATION**

Lake Superior State University is offering in cooperation with Michigan State University an integrated program for K-12 teacher preparation. The program emphasizes a combination of preparation in the student's discipline and education course work that is coordinated with extensive work in schools. The program includes a BA or BS from LSSU and graduate course work from MSU, all of which will be completed in the Sault Ste. Marie area. Students who complete the final year program will be certified to teach at either the elementary or secondary level.

## **CHILD CARE CENTER**

A campus Child Care Center provides full or part-time care for children, aged two and one-half to five years, of students, staff, and

from the Sault Community. Children must be toilet trained. The Center, licensed by the State of Michigan Department of Social Services, provides developmentally sound experiences for the whole child across a range of social, emotional, physical and cognitive dimensions. It is a place where young children can develop a strong relationship with both adults and children. Each morning and afternoon under the supervision of an experienced staff, child

development students plan and supervise large group, art, snack and small group experiences for the children. A significant portion of each day is devoted to exploratory play. During exploratory play children may move throughout the various learning areas of the Center, electing to participate in any one of a wide variety of activities and interact with learning materials. The Child Care Center is located on the south edge of the Library parking lot.

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## *NOTES*

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# DEPARTMENT OF ENGLISH AND SPEECH

## BACHELOR OF ARTS ENGLISH LANGUAGE AND LITERATURE

**REQUIREMENTS:** Students must complete, in addition to the General Education requirements, two years of foreign language, 70 semester hours of credit in the courses specified below, or their equivalents, plus sufficient additional hours of free electives to make up a required total of 124 hours. Majors in English must complete one minor in an area to be approved by the chair of the department.

**I. Required Courses:**

EN231 American Lit I	3
EN232 American Lit II	3
EN233 English Literature I	3
EN234 English Literature II	3
EN420 Hist Struct of English	3
EN421 Hist Literary Criticism	3
EN430 Chaucer	3
EN431 Milton & Metaphy Poets	3
EN432 Shakespeare	3

2nd year modern foreign lang 8

(EN215 is strongly recommended in place of EN210.)

**II. 9 semester hours must be selected from:**

EN220 Advanced Composition	3
-OR-	
EN221 Creative Writing	3
EN330 Devel. Novel in Engl. & Amer. I	3
-OR-	
EN331 Devel. Novel in Engl. & Amer. II	3
EN332 The Short Story	3
-OR-	
EN333 Studies in the Drama	3

**III. 6 elective semester hours must be selected from:** EN220, 221, 320, 321, 322, 330, 332, 333, 334, 335, 433, 450, or HU256

### B.A., ENGLISH LANGUAGE AND LITERATURE

*FALL*

**FIRST YEAR**

EN110 Freshman Comp*	3
1st Year For Lang I	4
Minor	4
Natural Science Gen Ed	4
<b>15</b>	

*SPRING*

SD101 Fund Speech	3
1st Year For Lang II	4
Minor	4
Social Science Gen Ed	4
<b>15</b>	

\*May be taken Fall or Spring Semester of the first year

**SECOND YEAR**

EN215 Intro to Lit & Res	3
2nd Year For Lang I	4
EN231 American Lit I	3
EN233 English Lit I	3
Minor	4
<b>17</b>	

EN220 Adv Composition	3
or	
EN221 Creative Writing	4
2nd Year For Lang II	3
EN232 Am Literature II	3
EN234 Eng Literature II	3
<b>17</b>	

### 3RD YEAR

EN330 Dev Novel Eng Am I	3
or	
EN332 The Short Story	
EN420 Hist & Struct Eng Language	3
HU Gen Ed	4
NS Gen Ed	4
	<u>17</u>

EN331 Dev Novel Eng Am II	3
or	
EN333 Studies in the Drama	3
EN Elective	3
Minor	4
HU Gen Ed	4
	<u>17</u>

### 4TH YEAR

EN431 Milton & Met Poets	3
EN430 Chaucer	3
Free Elective	3
SS Gen Ed	4
Minor	4
	<u>17</u>

EN421 Literary Criticism	3
EN432 Shakespeare	3
EN Elective	3
Free Elective	4
Free Elective	4
	<u>17</u>

## BACHELOR OF ARTS ENGLISH LANGUAGE AND LITERATURE Elementary Teacher Certification

Requirements: In addition to General Education requirements (EN215 Introduction to Literature and Research is the recommended sophomore composition course for English majors), students must complete:

- 50 semester credit hours in the courses specified below or their equivalents;
- The Planned Program for Elementary Teachers, excluding the English section; and
- 21 credits in teacher education courses TE150, 250, 301, 401, and 402.

#### Required Courses

EN220 Adv Comp	3
EN221 Creative Writing	3
EN231 American Lit I	3

EN232 American Lit II	3
EN233 English Lit I	3
EN234 English Lit II	3
EN321 Rhet Comp Theory	3
EN322 Linguistics	3
EN330 Dev of the Novel I	3
or	
EN331 Dev of the Novel II	3
EN332 The Short Story	3
EN333 Studies in Drama	3
EN334 Approaches Poetry	3
EN335 Children's Lit	3
EN420 Hist Strut Eng	3
EN430 Chaucer	3
EN432 Shakespeare	3
2nd Yr Foreign Lang	8

## B.A., ENGLISH LANGUAGE AND LITERATURE, Elementary Teacher Certification

### FALL

#### FIRST YEAR

SD101 Fund of Speech	3
Plan Prog Math	3
1st Year For Lang I	4
Nat Sci Elective	4
	<u>14</u>

### SPRING

EN110 Fresh Comp*	3
Soc Sci Elective	4
1st Year For Lang II	4
TE150 Ref Learning	3
Plan Prog Math	3
	<u>17</u>

\*May be taken Fall or Spring Semester

**SECOND YEAR**

EN215 Intro to Lit & Res	3
2nd Year For Lang I	4
EN231 American Lit I	3
EN233 English Lit I	3
TE250 Student Div	3
	<u>16</u>

EN220 Adv Composition	3
2nd Year For Lang	4
EN232 Amer Lit II	3
EN234 Eng Lit II	3
PY265 Child Adl Dev	3
	<u>16</u>

**THIRD YEAR**

EN332 The Short Story	3
EN420 Hist/Struc Eng	3
EN221 Creative Writing	3
Humanities Elective	4
Nat Sci Elective	4
	<u>17</u>

EN333 Studies in Drama	3
EN432 Shakespeare	3
EN331 Dev Novel II	3
EN322 Linguistics	3
EN335 Children's Lit	3
Planned Prog Soc Sci	4
	<u>19</u>

**Summer**

TE301 Lrms, Context	4
GE114 Field Excursion	3
	<u>7</u>

**4TH YEAR**

TE401 Lrms Diversity	5
EN430 Chaucer	3
Planned Prog Nat Sci	3
Soc Sci Elective	4
Planned Prog Math	3
	<u>18</u>

E402 Craft Teaching	6
EN334 Approach to Poetry	3
EN321 Rhet Comp Theory	3
Planned Prog Soc Sci	4
Planned Prog Math	3
	<u>19</u>

**BACHELOR OF ARTS  
ENGLISH LANGUAGE AND  
LITERATURE  
Secondary Teacher Certification**

Requirements: In addition to General Education requirements (EN215 Introduction to Literature and Research is the recommended sophomore composition course for English majors), students must complete:

1. 53 semester hours of credit in the courses specified below or their equivalents;
2. A minor approved for teacher certification; and
3. 21 credits in teacher education courses TE150, 250, 301, 401, and 402.

**Required Courses**

EN220 Adv Comp	3
EN221 Creative Writing	3
EN231 American Lit I	3

EN232 American Lit II	3
EN233 English Lit I	3
EN234 English Lit II	3
EN321 Rhet Comp Theory	3
EN322 Linguistics	3
EN330 Dev of the Novel I	3
or	
EN331 Dev of the Novel II	3
EN332 The Short Story	3
EN333 Studies in Drama	3
EN334 Approaches Poetry	3
EN420 Hist Strut Eng	3
EN430 Chaucer	3
EN432 Shakespeare	3
2nd Yr Foreign Lang	8

## B.A., ENGLISH LANGUAGE AND LITERATURE, Secondary Teacher Certification

FALL

### FIRST YEAR

SD101 Fund of Speech	3
Minor Elective	4
1st Year For Lang I	4
Nat Sci Elective	4
	<u>15</u>

SPRING

EN110 Fresh Comp*	3
Soc Sci Elective	4
1st Year For Lang II	4
TE150 Ref Learning	3
	<u>15</u>

\*May be taken Fall or Spring Semester

### SECOND YEAR

EN215 Intro to Lit & Res	3
2nd Year For Lang I	4
EN231 American Lit I	3
EN233 English Lit I	3
TE250 Student Div	3
	<u>16</u>

EN220 Adv Composition	3
2nd Year For Lang	4
EN232 Amer Lit II	3
EN234 Eng Lit II	3
Nat Sci Elective	4
	<u>17</u>

### THIRD YEAR

EN332 The Short Story	3
EN420 Hist/Struc Eng	3
EN221 Creative Writing	3
Minor Elective	4
Soc Sci Elective	4
	<u>17</u>

EN333 Studies in Drama	3
EN432 Shakespeare	3
EN331 Dev Novel II	3
EN322 Linguistics	3
Minor Elective	4
	<u>16</u>

Summer

TE301 Lrns, Context	4
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### 4TH YEAR

TE401 Lrns Diversity	5
EN430 Chaucer	3
Minor	4
Minor	4
	<u>16</u>

TE402 Craft Teaching	6
EN334 Approach to Poetry	3
EN321 Rhet Comp Theory	3
Nat Sci Elec	4
	<u>16</u>

## ASSOCIATE DEGREE LIBERAL ARTS

This degree is offered to students who complete the General Education requirements of the University, any minor presently offered, free electives for a total of 62 credit hours (minimum), and demonstrate competency in mathematics and writing. Consult departmental offerings for selection of a minor and electives.

**NOTE:** Once you have chosen a minor, contact the department which offers it in order to be assigned an advisor. The department offering your minor will both advise you and conduct your degree audit before graduation.

**ASSOCIATE DEGREE IN LIBERAL ARTS**

**FALL**

**SPRING**

**FIRST YEAR**

EN110 Freshman Comp*	3	SD101 Fund of Speech	3
Social Science Gen Ed	4	Social Science Gen Ed	4
Minor Courses	7	Natural Science Gen Ed	3
Elective	<u>3</u>	Minor Courses	6
	<u>17</u>	Elective	<u>1</u>
			<u>17</u>

\*May be taken Fall or Spring Semester

**SECOND YEAR**

EN210 or 215	3	Natural Science Gen Ed	3
Humanities Gen Ed	4	Humanities Gen Ed	4
Natural Science Gen Ed	3	Minor Course	7
Elective	<u>1</u>	Elective	<u>3</u>
	<u>15</u>		<u>17</u>

Courses selected for credits toward the General Education requirements may be, at the discretion of the department offering the minor, accepted for the minor. It is advisable to complete General Education requirements first, as any changes in the choice of an area of study will not appreciably affect the program for the first year.

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**NOTES**

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# DEPARTMENT OF HISTORY & HUMANITIES

## BACHELOR OF ARTS/SCIENCE HISTORY

REQUIREMENTS for the bachelor of arts: 1) the bachelor of arts General Education requirements of the University; 2) one year of foreign language or its equivalent; 3) HS101, 102 History of World Civilization sequence; or HS131, 132 United States History sequence; 4) 16 semester hours of 300 or 400 level history courses; 5) HS496 Historical Methods and HS497 Senior Seminar in History; 6) Additional history electives to total 30 semester hours; 7) GG106 Physical Geography and GG201 World Regional Geography; 8) 4 semester hours selected from: GG306, 321, 322, 323, 325, 360, or EC201; 9) one minor (20 semester hours). Total department credits required: 70 semester hours.

REQUIREMENTS for the bachelor of science: This degree includes requirements 1,3,4,5,6,7,8 and 9 above but excludes 2. However, in place of the foreign language the student must take a minimum of 8 semester hours of social sciences, natural sciences, or mathematics beyond the general education and major requirements. Total department credits required: 70 semester hours.

### B.A. OR B.S., HISTORY

#### FALL

#### FIRST YEAR

EN110 Freshman Comp*	3
SD101 Fund of Speech	3
NS Elective	4
HS101 Hist World Civ I	
or	4
HS131 U.S. History I	14

#### SPRING

HU Elective	4
Minor	4
NS Elective	4
HS102 Hist World Civ II	
or	4
HS132 U.S. History II	16

#### SECOND YEAR

GG106 Physical Geography	4
History Elective	4
EN210 or 215*	3
Cognate** or Language	4
	<u>15</u>

GG201 World Reg Geog	4
History Elective	4
HU Elective	4
Cognate** or Language	4
	<u>16</u>

#### THIRD YEAR

300 Level History Elective	4
Minor	4
GG306,321,322,323,325, 360; or EC201	4
Free Elective	4
	<u>16</u>

300 Level History Elective	4
Minor	4
Free Elective	4
Minor	4
	<u>16</u>



## FOURTH YEAR

HS496 Historical Methods	2
400 Level History Elective	4
Minor	4
Free Elective	5
	<u>15</u>

HS497 Sr. Sem in History	2
400 Level History Elective	4
Minor	4
Free Elective	4
	<u>14</u>

\*May be taken Fall or Spring Semester

\*\*The cognate requirement is simply the BA/BS differentiation. Students who want a bachelor of arts degree should take 8 semester hours (one year) of a foreign language to fulfill this requirement. Students who want a bachelor of science degree should select 8 semester hours of social sciences, natural sciences or mathematics beyond the General Education and major requirements.

# BACHELOR OF ARTS/SCIENCE HISTORY Elementary Teacher Certification

Requirements: In addition to General Education requirements, students must complete:

- 53 semester credit hours in the courses specified below, or their equivalents;
- The planned Program for Elementary Teachers, excluding the Social Sciences and History section; and
- 21 credits in teacher education courses TE150, 250, 301, 401, and 402.

Required courses:

HS101/102 Wld Civil I, II	8
or	
HS131/132 U.S. Hist I, II	8

HS440 Dec of Independ	4
HS496 Historical Meth	2
HS497 Sr Seminar Hist	2

Additional 300/400 level history electives to total 30 semester hours 14

PS110 Intro Am Govt Pol	4
PS130 State/Local Govt	4
GG201 World Reg Geog	4
GG306 Cultural Geog	3

B.A., 1st Yr Foreign Lang	8
or	
B.S., Soc Sci Cognate	

## B.A. OR B.S., HISTORY, Elementary Teacher Certification

FALL

### FIRST YEAR

EN110 Freshman Comp*	3
NS Elective	4
HS101 Hist World Civ I	
or	
HS131 U.S. History I	4
Planned Prog Math	3
	<u>14</u>

SPRING

SD101 Fund of Speech	3
HU Elective	4
HS102 Hist World Civ II	
or	
HS132 U.S. History II	4
TE150 Ref Learning	3
	<u>14</u>

## SECOND YEAR

PS110 Intro Am Govt Pol	4
Cognate** or Language	4
TE250 Student Div	3
GG106 Physical Geog	3
Planned Prog Math	3
	<u>17</u>

EN215 Intro to Lit	3
Cognate** or Language	4
GG201 World Reg Geog	4
265 Child & Adl Dev	3
Planned Prog Nat Sci	3
	<u>17</u>

## THIRD YEAR

HS300 Level History Elec	4
HS440 Dec Independence	4
Planned Prog Math	3
Planned Prog English	3
	<u>14</u>

HS300 Level History Elec	4
HU Elective	4
Planned Prog Nat Sci	4
Planned Prog English	3
	<u>15</u>

### Summer

TE301 Learners, Context	4
GE114 Field Excursion	3
	<u>7</u>

## FOURTH YEAR

HS496 Historical Methods	2
HS400 Level History Elec	4
TE401 Learner Diversity	5
Planned Program English	3
	<u>17</u>

HS497 Sr. Sem in History	2
HS400 Level History Elec	4
TE402 Craft Teaching	6
PS130 State Local Govt	4
	<u>16</u>

\*May be taken Fall or Spring Semester

\*\*The cognate requirement is simply the BA/BS differentiation. Students who want a bachelor of arts degree should take 8 semester hours (one year) of a foreign language to fulfill this requirement. Students who want a bachelor of science degree should take 8 semester hours of social sciences, natural sciences, or mathematics beyond the General Education and major requirements.

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# NOTES

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# BACHELOR OF ARTS/SCIENCE HISTORY Secondary Teacher Certification

Requirements: In addition to General Education requirements, students must complete:

<p>1. 53 semester credit hours in the courses specified below, or their equivalents;</p> <p>2. A minor approved for teacher certification; and</p> <p>3. 21 credits in teacher education courses TE150, 250, 301, 401, and 402.</p> <p>Required courses:          HS101/102 Wld Civil I, II 8              or          HS131/132 U.S. Hist I, II 8</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td>HS440 Dec of Independ</td> <td style="text-align: right;">4</td> </tr> <tr> <td>HS496 Historical Meth</td> <td style="text-align: right;">2</td> </tr> <tr> <td>HS497 Sr Seminar Hist</td> <td style="text-align: right;">2</td> </tr> <tr> <td>Additional 300/400 level history electives to total 30 semester hours</td> <td style="text-align: right; border-top: 1px solid black;">14</td> </tr> <tr> <td>PS110 Intro Am Govt Pol</td> <td style="text-align: right;">4</td> </tr> <tr> <td>PS130 State/Local Govt</td> <td style="text-align: right;">4</td> </tr> <tr> <td>GG106 Physical Geog</td> <td style="text-align: right;">3</td> </tr> <tr> <td>GG201 Wld Reg Geog</td> <td style="text-align: right;">4</td> </tr> <tr> <td>B.A., 1st Yr Foreign Lang</td> <td style="text-align: right;">8</td> </tr> <tr> <td>    or</td> <td></td> </tr> <tr> <td>B.S., Soc Sci Cognate</td> <td style="text-align: right;">8</td> </tr> </table>	HS440 Dec of Independ	4	HS496 Historical Meth	2	HS497 Sr Seminar Hist	2	Additional 300/400 level history electives to total 30 semester hours	14	PS110 Intro Am Govt Pol	4	PS130 State/Local Govt	4	GG106 Physical Geog	3	GG201 Wld Reg Geog	4	B.A., 1st Yr Foreign Lang	8	or		B.S., Soc Sci Cognate	8
HS440 Dec of Independ	4																						
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Additional 300/400 level history electives to total 30 semester hours	14																						
PS110 Intro Am Govt Pol	4																						
PS130 State/Local Govt	4																						
GG106 Physical Geog	3																						
GG201 Wld Reg Geog	4																						
B.A., 1st Yr Foreign Lang	8																						
or																							
B.S., Soc Sci Cognate	8																						

## B.A. or B.S., HISTORY, Secondary Teacher Certification

*FALL*

### FIRST YEAR

EN110 Freshman Comp*	3
NS Elective	4
HS101 Hist World Civ I	
or	4
HS131 U.S. History I	
Minor	4
	15

*SPRING*

SD101 Fund of Speech	3
HU Elective	4
HS102 Hist World Civ II	
or	4
HS132 U.S. History II	
TE150 Ref Learning	3
	14

### SECOND YEAR

PS110 Amern Govt	4
Cognate (Lang or other)**	4
TE250 Student Div	3
GG106 Physical Geog	3
	14

EN210 Res Paper Process*	3
Cognate**	4
GG201 World Reg Geog	4
PS130 State Loc Govt	4
	15

### THIRD YEAR

HS300 Level History Elec	4
HS440 Dec Independence	4
Minor	4
Minor	4
	16

HS300 Level Hitory Elec	4
HU Elective	4
Minor	4
Elective	2
	14

Summer

TE301 Learners, Context	4
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## FOURTH YEAR

HS496 Historical Methods	2
HS400 Level History Elec	4
TE401 Learner Diversity	5
Minor	<u>4</u>
	15

HS497 Sr. Sem in History	2
HS400 Level History Elec	4
TE402 Craft Teaching	6
Nat Sci Elec	<u>4</u>
	16

\*May be taken Fall or Spring Semester

\*\*The cognate requirement is simply the BA/BS differentiation. Students who want a bachelor of arts degree should take 8 semester hours (one year) of a foreign language to fulfill this requirement. Students who want a bachelor of science degree will satisfy this requirement through credits from the planned program and other additional credits in English, social sciences, natural sciences, or mathematics beyond the General Education and major requirements.

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# NOTES

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# DEPARTMENT OF POLITICAL SCIENCE

## LEGAL ASSISTANT STUDIES

To train qualified legal assistants capable of working in a variety of areas of the law; program requirements based upon guidelines of American Bar Association and National Association of Legal Assistants.

Legal assistants, or paralegals, are paraprofessionals who work under the supervision of attorneys. Among other tasks, they do legal research, draft legal pleadings and documents, assist attorneys during legal proceedings, and manage activities of law offices. Legal assistants work for private law firms, banks, real estate offices, corporations, insurance companies, accounting firms, judges, government agencies, and others.

Programs include: Legal Assistant Studies Baccalaureate Degree with emphasis in: legal administration, criminal law, personal injury, labor law, legislative/constitutional law, or a selected minor as approved by the Legal Assistant Studies Coordinator; a two-year associate degree in the Legal Assistant Studies; or a minor in a four-year baccalaureate program.

## BACHELOR OF SCIENCE LEGAL ASSISTANT STUDIES

For this degree students must complete the required major courses below, the General Education requirements, plus electives to total 125-128 credits. Students may elect a specialty area as listed below or a minor as approved by the Legal Assistant Studies Coordinator.

Required Major Courses (45 credits)	
LA102 Lgl Res/Case Anal	3
LA202 Lgl Wrtg/Anal	3
LA150 Lgl Asst Prof/Eth Cons	3
LA125 Cvl Lit & Proc	4
LA140 Prsnl Inj Lit/Inv Tech	3
LA250 Law Off Mgmt, Sys/Tech	3
LA320 Real Estate Law	3
LA321 Family Law	2
LA322 Probate Law & Proc	3
LA401 Evidence & Trial Pract	3
LA450 Advance Legal Writing & Interviewing Seminar	3
LA Elective**	3
BA254, 255 Bus Law I & II	6
CJ319 Substantive Crim Law	3

General Education (33 credits)*	
EN110 Fresh Composition	3
EN210 Research Paper Process	3
SD101 Fundamentals of Speech	3
Natural Science	8
Humanities	8
Social Sciences-Must select	8
PS110 Intro to Am Gov & Pol	3
or	
PS467 Const Law & Cvl Lib	3
Cognates - Required: (16-18 credits)	
OA119 Acctg Procedures***	4
LA299 Lgl Assistant Intern & Prof Dev Seminar	6-8
CJ409 Proc Criminal Law	3

**Word Proc Comp Science** 3  
 Choose one of the following:  
 DP225 Word Proc Techniques  
 DP151 Computer Appl  
 CS100 Intro Micro Appl

**Electives (11-12 credits)**  
 Electives are to be chosen in consultation with advisor.

\*Note: The Legal Assistant B.S. Degree requires 8 credits in Social Science, Natural Science or Mathematics beyond those for General Education. These requirements may be fulfilled in part or in total through the Specialty section or the minor. Students should consult with their advisors.

\*\*Note: See LA300, Seniors in Legal Assistant Studies; also consult with Legal Assistant Advisor.

\*\*\*Note: AC132 may be substituted for OAI19 for students specializing in Legal Administration

Specialty/minor required (20 credits)  
 A student shall obtain a minimum of twenty (20) credits in any one of the specialties listed below. Specialty courses should be selected in consultation with your Legal Assistant Studies Advisor or Dean. As an alternative, a student may choose a minor of study that must be approved by the Legal Assistant Studies Advisor or Dean.

## SPECIALTY LIST

**NOTE:** At least nine (9) credit hours shall be at the 300-400 level.

### CRIMINAL LAW SPECIALTY:

CJ101 Intro to Crim Justice	3
CJ106 Juvenile Justice	3
CJ250 Correctional Law	3
CJ343 Investigation	3
CJ344 Criminalistics	3
SO101 Intro to Sociology	3
SO226 Races and Minorities	3
SO214 Criminology	3
SO338 Deviance	3
PY101 Intro to Psychology	4
PY259 Abnormal Psychology	3

### LABOR LAW SPECIALTY:

EC201 Prin of Macroeconomics	3
or	
EC202 Prin of Microeconomics	3
EC403 Priv Entrprs/Public Pol	3
LA406 Wrkrs Disability Comp Law	2
MN360 Prin of Mgmt	3
MN365 Human Resource Mgmt	3
MN451 Labor Law	4
MN464 Org Behavior in Bus	4
MN469 Collective Bargaining	3
SO313 Work and Organization	3
PY228 Organizational Behavior	3
PY383 Industrial Psychology	3

### LEGAL ADMIN SPECIALTY

AC132, 133 Prin of Acctg I/II	8
AC232, 233 Inter Acctg I/II	8

AC332 Cost Accounting I	4
AC334 Acctg Info Systems	3
AC421, 422 Fed Tax Acctg I/II	6
FN341 Managerial Finance	4
FN443 Insurance	4
MN360 Prin of Mgmt	3
MN365 Human Resource Mgmt	3
MN461 Management Simulation	3
MN464 Org Beh in Bus	4
MK281 Mktg Prin/Strategy	4
MK387 Adv Theory in Pract	3
BA226 Records Management	3
SD320 Public Relations	4
PY228 Organizational Behavior	3
EC302 Managerial Economics	4

### LEGISLATIVE/CONSTITUTIONAL LAW SPECIALTY:

EC201 Prin of Macroeconomics or	3
EC202 Prin of Microeconomics	
EC305 Public Finance	3
HS131,132 U.S. History I & II	8
LA305 Tribal Law and Gov	3
PS130 Intro State/Lcl Gov	4
PS201 Intro to Public Admin	3
PS301 Policy Anal/Eval	4
PS364 Political Parties, Interest	3
Groups & Public Opinion	
PS367 Congress & the Pres	4
PS401 Prin of Pub Admin	3

**PERSONAL INJURY SPECIALTY:**

HE209 Pharmacology**	3
BL105 Func of Human Body	4
BL121,122 Hmn Anat/Phys I/II	7
CH104,105 Life Chemistry I/II	7
FN443 Insurance	4
LA405 No-Fault Automobile Law	3
LA406 Wrks Dis Comp Law	2
PY101 Intro to Psychology	4
PY217 Social Psychology	3
PY357 Personality Theory	3
PY385 Health Psychology	3
TC101,102 Construction I & II	6

**Electives (9-10)**

Electives are to be chosen in consultation with advisor

\*LA300 Seminar in Legal Assistant Studies may apply to certain specialties and can be taken with approval of Legal Assistant Coordinator. In the alternative, these special topics may be used as the required Legal Assistant Elective.

\*\*Prerequisites: BL122 or BL105 or CH105

**B.S., LEGAL ASSISTANT STUDIES****FALL****FIRST YEAR**

EN110 Freshman Comp.*	3
LA102 Lgl Res Case Analy	3
LA150 Lgl Ass't Prof and Ethical Con	3
SD110 Fund of Speech	3
OA119 Accounting Proced	4
	<u>16</u>

**SECOND YEAR**

EN210 Res Paper Process*	3
LA202 Legal Writ & Analy	3
LA320 Real Estate Law	3
LA321 Family Law	2
BA254 Business Law I	3
RA Elective	1
	<u>15</u>

**THIRD YEAR**

LA401 Evid & Trial Prac	3
CJ319 Subst Criminal Law	4
NS Elective	4
Specialty/Minor	4
LA Elective	3
	<u>18</u>

**FOURTH YEAR**

PS467 Const Law Civil Lib	4
Specialty/Minor	7
HU Elective	4
RA Elective	1
	<u>16</u>

\*May be taken Fall or Spring semester.

**SPRING**

LA125 Civil Litig & Proc	4
LA140 Pers Inj Inves Tec	3
PS110 Intro Am Govt Pol	4
Cognate	3
Elective	2
	<u>16</u>

LA322 Probate Law Proc	3
BA255 Business Law II	3
LA250 Law Office Mgmt Sys & Tech	3
Electives	6
	<u>15</u>

CJ409 Proced Crim Law	3
NS Elective	4
Specialty/Minor	6
Elective	4
	<u>17</u>

LA450 Adv Legal Writ Int	3
LA299 Internship	6
Specialty/Minor	3
HU Elective	4
	<u>16</u>

# POLITICAL SCIENCE

Political Science is the systematic study of government and politics. Since government and politics are found at many levels--international, national, state, and local--and all over the world, political science has many facets. All of these facets receive attention in the political science program at Lake Superior State University.

The goal of the curriculum is to prepare students interested in government and politics for rewarding careers and lifetimes of learning and involvement. To best achieve this goal, three distinct concentrations or tracks are available for students of political science:

1. general political science
2. pre-law
3. public administration.

Each concentration has been designed to provide a combination of knowledge and skills that is uniquely appropriate for those with particular career goals. However, choosing one concentration over the others does not limit a student to one particular career path--each of the concentrations provides a solid grounding in political science.

## BACHELOR OF ARTS/SCIENCE POLITICAL SCIENCE - GENERAL

The general political science concentration is designed to provide a broad education in political science. It is most appropriate for students who plan to attend graduate school in political science and for those with an interest in government and politics who wish to get a broad, liberal education as preparation for a career in business, government, or journalism. Students who continue their education in graduate school most often pursue careers as professors, researchers, consultants, or government officials. Students who do not pursue graduate study choose from a wide variety of career options in business, government, and journalism.

Political Science Courses (36 credits)  
× PS110 Intro to Amer Gov & Pol 4  
PS491-492 Senior Seminar 6

A minimum of one course in each of following areas, and two courses in one of the areas: 16-20

*American Politics*  
(PS325, 364, 367, 467)

*Comparative Politics*  
(PS160, 331, 334)

*International Relations*  
(PS241, 411, 412)

*Political Philosophy*  
(PS351, 352)

Additional political science electives to reach 36 credits 6-10

NOTE: A minimum of 21 credits must be at the 300/400 level. Of these, at least 9 must be at the 400 level.

General Political Science Cognates  
(27-28 credits)

×CS100 Intro Microcomputer App 3

EC201 Prin of Macroeconomics 3

EN220 Advanced Composition 3

or 3

EN221 Creative Writing 8

HS sequence 8

PL204 Intro to Philosophy 3

or 3

PL205 Logic



SD302 Persuasion & Argu or	3-4
SD320 Public Relations	
SO201 Social Research and Stats	4
*One full-year history sequence (HS 101-102 or HS 131-132) is recommended	
General Education requirements	33

*Bachelor of Arts Cognates:*  
One year of a foreign language 8

*Bachelor of Science Cognates:*  
A minimum of 9 credits from the following:

EC202 Prin of Microeconomics	3
PY101 Intro to Psychology	4
SO101 Intro to Sociology	3
SO213 Intro to Anthropology	3

## POLITICAL SCIENCE - GENERAL

### FALL

#### FIRST YEAR

EN110 Freshman Comp*	3 x
PS110 Intro Amer Govt	4 x
HS History Seq Elect	4 x
Nat Sci Elect	3 x
SA100 Succeed College	<u>1</u> x
	15

### SPRING

SD101 Fund of Speech	(3)
Pol Sci Elective	4 x
Hist Seq Elective	(4)
Nat.Sci Elec	(3)
	14

#### SECOND YEAR

EN210 Res Paper Process*	3
HU251 Humanities I	4 x
Pol Sci Elec	3 x
CS100 Intro Micro Appl	3 x
Elective	<u>3</u>
	16

Nat Sci Elec	3
HU252 Humanities II	4
Pol Dist Elec	3
SO201 Soc Res Stats	<u>4</u>
	14

#### THIRD YEAR

Pol Sci Dist Elec	3
PL204 Intro to Philosophy	3
EC201 Macroeconomics	3
BA/BS Cognate	4 x
Elective	<u>3</u>
	16

Pol Sci Dist Elec	3
Pol Sci Elec	3
EN220 Adv Composition	3
SD302 Persuasion & Argu	3
BA/BS Cognate	<u>4</u> x
	16

#### FOURTH YEAR

PS491 Senior Seminar I	3
Pol Sci Dist Elec	4
Elective	3
Elective	3
Elective	<u>3</u>
	16

PS492 Senior Seminar II	3
Pol Sci Dist Elec	4
Elective	3
Elective	3
Elective	<u>3</u>
	16

\*May be taken in Spring semester.

# BACHELOR OF ARTS/SCIENCE POLITICAL SCIENCE - PRE-LAW

The pre-law concentration provides students of political science interested in legal careers with a planned curriculum that prepares them especially well for law school and for careers in law. Students who choose this option are often interested in careers as attorneys, prosecutors, or judges. It should be noted that this is not a mandatory pre-law curriculum; it is a curriculum for pre-law students who have a special interest in government and politics.

Noteworthy features of this concentration are a special course on the nature of legal careers and how to prepare for them; two courses in legal research and writing that provide students with a head start in using a law library and in conducting legal research; and a well-designed combination of support courses in logic, debate, writing, accounting, and research.

### Political Science Courses (36 credits)

PS110 Intro to Am Gov & Pol	4
PS120 Intro to Legal Proc	3
PS130 Intro to St/Lcl Gov	4
PS222 Intro to the Lgl Prof	2
PS467 Const Law/Cvl Lib	4
PS491-492 Senior Seminar	6

A minimum of one course in each of the following areas: 10-12

- Comparative Politics*  
(PS160, 331, 334)
- International Relations*  
(PS241, 411, 412)
- Political Philosophy*  
(PS351, 352)

**NOTE:** A minimum of 21 credits must be at the 300/400 level 1-3

Additional political science electives to reach 36 credits

### Pre-Law Cognates (40 credits)

CS100 Intro Microcomp App	3
EN220 Advanced Composition	3
or	
EN221 Creative Writing	8
HS sequence*	3
LA102 Lgl Res/Case Analy	3
LA202 Lgl Wrng & Analy	4
OA119 Accounting Procedures	4
or	
AC132 Prin of Acctg I	3
PL205 Logic	3
SD302 Pers & Argu	4
SO201 Social Res & Stats	4

\*One full-year history sequence (HS 101-102 or HS 131-132) is recommended

Two law courses from the following:

Any Legal Assistant (LA) courses	3
CJ319 Subst Criminal Law	3
CJ409 Proc Criminal Law	3
BA254 Business Law I	3
BA255 Business Law II	3

General Education requirements 33

*Bachelor of Arts Cognates*  
One year of a foreign language 8

### *Bachelor of Science Cognates*

A minimum of 9 credits from the following:

EC201 Prin of Macroeconomics	3
EC202 Prin of Microeconomics	3
PY101 Intro to Psychology	4
SO101 Intro to Sociology	3
SO213 Intro to Anthropology	3

## POLITICAL SCIENCE - PRE-LAW

### FALL

#### FIRST YEAR

EN110 Freshman Comp*	3
PS110 Intro Am Govt/Pol	4
Hist Seq Elec	4
Nat Sci Elec	3
SA100 Succeed in College	<u>1</u>
	15

### SPRING

SD101 Fund of Speech	3
PS120 Intro to Lgl Proc	3
History Seq Elec	4
Nat Sci Elec	3
Elective	<u>3</u>
	16

#### SECOND YEAR

EN210 Res Paper Process*	3
HU251 Humanities I	4
PS222 Intro to Legal Prof	2
CS100 Intro Micro Appl	3
BA/BS Cognate	<u>3</u>
	15

HU252 Humanities II	4
PS130 Intro St/Lcl Govt	4
SO201 Soc Res & Stats	4
Elective	1
BA/BS Cognate	<u>3</u>
	16

#### THIRD YEAR

Pol Sci Dist Elec	3
LA102 Lgl Res/Case Analy	3
EN220 Adv Composition	3
OA119 Acctg Proc	4
Nat Sci Elec	<u>3</u>
	16

Pol Sci Dist Elec	3
Pol Sci Elec	3
SD302 Pers & Argu	3
PL205 Logic	3
BA/BS Cognate	<u>3</u>
	15

#### FOURTH YEAR

PS491 Senior Seminar I	3
LA202 Lgl Wrtg & Analy	3
PS467 Const Law/Cvl Lib	4
Law Elective	3
Elective	<u>3</u>
	16

PS492 Senior Seminar II	3
Law Elective	3
Pol Sci Dist Elec	4
Elective	3
Elective	<u>2</u>
	15

\*May be taken in Spring Semester.

## BACHELOR OF SCIENCE POLITICAL SCIENCE - PUBLIC ADMINISTRATION

The public administration concentration is most appropriate for students who plan to work in an administrative capacity in public agencies or nonprofit organizations with public missions. Students who choose this option are preparing for careers of public service. Such careers may be pursued through positions in government agencies at the local, state or provincial, and national levels. Other positions may

be found in nonprofit organizations involved in public concerns, such as Common Cause, the Environmental Defense Fund, and the Michigan Health Council. Some of these careers of public service may be pursued with only a bachelor's degree. Others may require completion of a master's degree in public administration or a related field.

Senior public administration students will complete an internship as part of their education. Internships allow students to apply the knowledge they have gained in the classroom in an on-the-job setting. They are also valuable for creating a record of experience that will impress prospective employers and help the student become established in a career. Internships, which are arranged with the assistance of an advisor, are available with local, state or provincial, and federal agencies.

**Political Science Courses**  
(37 credits)

PS110 Intro Amer Gov & Pol	4
PS130 Intro to St/Local Gov	4
PS201 Intro to Public Admin	3
PS301 Policy Anal/Eval	4
PS401 Prin of Pub Admin	3
PS491-492 Senior Seminar	6
PS499 Pol Sci/Pub Admin Intrn	3

A minimum of one course in each of the following areas: 10-12

- Comparative Politics*  
(PS160, 331, 334)
- International Relations*  
(PS241, 411, 412)
- Political Philosophy*  
(PS351, 352)

**Public Administration Cognates**  
(34 credits)

CS100 Intro Micro App	3
EC201 Prin of Macroeconomics	3
EC305 Public Finance	3
HS Sequence*	8
MN360 Prin of Mgmt	3
MN365 Human Res Mgmt	3
OA119 Accounting Procedures	4
PY228 Organizational Behavior	4
or	
SO313 Work and Organizations	
SD302 Persuasion & Argu	3-4
or	
SD320 Public Relations	4
SO201 Soc Res & Stats	

General Education requirements 33

\*One full-year history seq (HS131-132) is recommended

**B.S., POLITICAL SCIENCE - PUBLIC ADMINISTRATION**

FALL

**FIRST YEAR**

EN110 Freshman Comp*	3
PS110 Intro Am Govt/Pol	4
Hist Sequence Elec	4
Nat Sci Elec	3
SA100 Succeed College	1
	<u>15</u>

SPRING

SD101 Fund of Speech	3
PS130 Intro St Local Gov	4
History Sequence Elec	4
Natural Science Elec	3
Elective	1
	<u>15</u>

**SECOND YEAR**

EN210 Res Paper Process*	3
HU251 Humanities I	4
PS201 Intro Public Admin	3
CS100 Intro Micro App	3
Elective	3
	<u>16</u>

Natural Science Elec	3
HU252 Humanities II	4
Pol Sci Dist Elec	4
SO201 Soc Res & Stats	4
Elective	1
	<u>16</u>

### THIRD YEAR

Pol Sci Dist Elec	3
OA119 Acctg Proc	4
EC201 Macroeconomics	3
PY228 Organiz Behavior	3
Elective	3
	<u>16</u>

PS301 Plcy Anal/Eval	4
SD320 Public Relations	4
MN360 Prin of Mgmt	3
Elective	3
Elective	2
	<u>16</u>

### FOURTH YEAR

PS491 Senior Seminar I	3
PS401 Prin of Pub Admin	3
EC305 Public Finance	3
MN365 Human Res Mgmt	3
Elective	3
	<u>15</u>

PS492 Senior Sem II	3
PS499 Pub Adm Intern	3
Pol Sci Dist Elec	3
Elective	3
Elective	3
	<u>15</u>

\*May be taken in Spring Semester

## PRE-LAW

No prescribed course of study can be recommended to all students who plan to attend law school. Students entering law school choose undergraduate majors from a wide variety of fields. However, a pre-law concentration is offered in the political science curriculum, and various law courses are offered as a part of the legal assistant studies program at Lake Superior State University. See the appropriate political science and legal assistant studies program listings.

Students interested in a legal career should consult with the pre-law advisor, Professor Carol Andary, early and often during their undergraduate studies. Pre-law planning, based on consultation with the advisor, will allow the student to make an informed choice of curriculum and of elective courses that will help with the development of the skills mentioned below. The pre-law advisor will also provide pre-law students with a variety of materials about admission to law school, the law school admission test, and careers in law.

A student's undergraduate grade point average and his or her score on the Law School Admission Test (LSAT) are the two most important criteria for admission to law school. Details on admission policies of law

schools throughout the country, and the degree to which these schools may use other criteria in addition to grade point average and LSAT score, may be found in the Pre-Law Handbook. This handbook is published by the Law School Admission Council/Law School Admission Services and is the official law school guide. It may be examined by contacting the pre-law advisor or purchased in many book stores.

Although there is no prescribed major which must be taken for admission to law school, some curricula may be better than others in helping students develop skills necessary for admission to law school and for a successful legal career. A broad and challenging undergraduate curriculum is the best preparation for law school. The

Pre-Law Handbook stresses that a student's undergraduate education should lead to the development of skills in three areas: (1) the ability to understand and express oneself well in words, (2) the development of a critical understanding of the human institutions and values with which the law deals, and (3) the development of creative power in

thinking. A pre-law student should consider the need to develop these skills in selecting his or her curriculum. In addition, students should think about whether the curriculum they choose can provide an alternative to a career in law should they eventually choose not to pursue a legal career.

## ASSOCIATE DEGREE LEGAL ASSISTANT STUDIES

For this degree, students must complete the courses below, the General Education requirements for Associate Degrees, and electives to total 64 credits.\*

### Required courses (53 credits)

EN110 Freshman Composition	3
EN210 Research Paper Process	3
SD101 Fundamentals of Speech	3
LA102 Lgl Res Case Analysis	3
LA125 Cvl Lit & Procedure	4
LA140 Pers Injury Litigation & Investigative Techniques	3
LA150 Lgl Assistant Profession & Ethical Considerations	3
LA202 Legal Writing & Analysis	3
LA250 Law Office Management, Systems & Technology	3
LA320 Real Estate Law	3
LA321 Family Law	2
LA322 Probate Law/Proc	3
BA254 Business Law I	3
BA255 Business Law II	3
CJ319 Substantive Criminal Law	3
OA119 Accounting Procedures	4
PS110 Intro Amer Govt/Politics	4

### Cognate Required (3 credits)

DP225 Word Proc Techniques	
or	
DP150 Applied Comp Appl	3
or	
CSI00 Intro to Micro Appl	

### Elective: (8 credits)\*\*

Electives are to be chosen in consultation with advisor.

Students completing the Associate Degree in Legal Assistant Studies may conveniently continue their education in a Bachelor's Degree in Legal Assistant Studies or other fields such as office administration, human services, or political science. Those interested in this option should consult the Legal Assistant Studies Advisor.

\*Note: The Legal Assistant Associate Degree requires 2 credits in Social Science, Natural Science or Mathematics beyond those for general education. These requirements may be fulfilled from the students' electives.

\*\*Note: Students may wish to apply some elective credits to the Legal Assistant Internship and Professional Development Seminar (LA299) in their sophomore year.

## ASSOCIATE DEGREE, LEGAL ASSISTANT STUDIES

### FALL

### FIRST YEAR

EN110 Fresh Comp*	3
LA102 Lgl Res Case Anal	3
LA150 Lgl Assist Prof & Ethical Considerations	3
SD101 Fund of Speech	3
OA119 Acctg Proc	4
	16

### SPRING

LA125 Cvl Lit & Proc	4
LA140 Personal Injury Lit & Investigative Tech	3
PS110 Intro Amer Govt Pol	4
Cognate	3
Electives	2
	16

## SECOND YEAR

EN210	Res Paper Process*	3
LA202	Lgl Wrtg & Analy	3
LA320	Real Estate Law	3
LA321	Family Law	2
BA254	Business Law I	3
CJ319	Substan Crim Law	<u>3</u>
		17

LA322	Prob Law & Proc	3
BA255	Business Law II	3
LA250	Law Office Mgmt, System/Technology	3
	Electives	<u>6</u>
		15

\*May be taken Fall or Spring semester.

# NOTES

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# DEPARTMENT OF PSYCHOLOGY

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## BACHELOR OF SCIENCE HUMAN SERVICES

The Human Services major allows students to combine practical skills with an academic preparation in psychology or sociology. Students complete 3 minors. One of the three must be the coordinating minor (psychology or sociology). All skill minors require a practicum or internship. A total of 9-16 credits of practicum must be completed between the two skill minors. No more than 16 practicum credits may be counted for the degree. The General Education requirements must also be completed.

The acceptable skill minors are:

1. Child Development
2. Corrections
3. Counseling
4. Gerontology
5. Human Services Admin
6. Industrial Relations
7. Law Enforcement
8. Legal Assistant Studies
9. Native Amer Studies
10. Recreation Studies Skill
11. Subst Abuse Counseling

Students should consult the descriptions of the skill minors for detailed information. Transfer students who have completed the equivalent of a skill minor at another college or university may request a waiver of one skill minor.

New students may register as Pre-Human Services majors and may concurrently enroll in a Liberal Arts Associate Degree program in either psychology, sociology, or in one of the skill minors. Special Associate Degree programs exist for Early Childhood Education, Corrections, Legal Assistant Studies and Substance Abuse Prevention and Treatment. Students may apply for admission to the Human Services major after completing 12 credits of

human services or social sciences coursework or after completing an Associate Degree or Canadian college diploma in a human services area. Students considering graduate school are encouraged to select a double major in either Psychology and Human Services or Sociology and Human Services.

Human Services majors must be ethical, caring individuals who are capable of forming helping relationships with others and serving as good role models. As part of the admissions process, students will be asked to volunteer in human service agencies and to explore their own appropriateness to enter the human service field.

Students need 24 credits of 300-400 level courses across their 3 minors, and all students must complete a capstone course from the following list.

- CJ401 Senior Seminar
- HM480 Grantwriting
- LA450 Adv Legal Writing  
& Interview Seminar
- PY498 Senior Research I
- SO401 Research Seminar I



# BACHELOR OF ARTS/BACHELOR OF SCIENCES PSYCHOLOGY

Psychology is the systematic study of methods to understand, predict, and influence human behavior and mental processes. The major provides students with exposure to the areas that define contemporary scientific psychology. The psychology major helps a student develop analytical thinking and communication skills which are applicable to a variety of careers. Many psychology majors pursue post baccalaureate degrees. Psychology electives enable students to construct a program of study consistent with their professional goals. The Bachelor of Science and Bachelor of Arts degrees differ only in the nature of the cognate; science classes or foreign language classes, respectively.

Total Departmental Credits Required: 41

Required Psychology Credits  
(35 credits)

✓ PY101	Intro to Psychology	4
✓ PY210	Statistics	3
✓ PY212	Experimental Psychology	3
✓ PY311	Learning and Motivation	3
✓ PY357	Personality Theory	3
✓ PY396	Tests and Measurement	3
✓ PY456	Hstry & Sys of Psych	3
✓ PY457	Cognition	3
✓ PY459	Physiological Psychology	3
✓ PY498	Senior Research I	3
✓ PY499	Senior Research II	4

Elective Psychology Credits (6 credits)

PY Elective - any level	3
PY217 Soc Psych	}
or	
✓ PY259 Abnormal Psych	}
or	
PY265 Chld & Adlscnt Dev	3

Cognate

*Bachelor of Arts Degree*

1 year of foreign language 8

*Bachelor of Science Degree*

8 credits from the following: biology, chemistry, and physical science beyond those used to fulfill general education requirements; mathematics at the level of MA111 and above (except MA207); any CS or DP courses; PL204, PL205, HS235.

General Education and Electives

Students must complete all General Education requirements including BL105. Students must take sufficient electives to total 124 semester credits.

Acceptable Minors:

Psychology majors may select an approved minor (21 credits) or may complete 21 credits in courses approved in lieu of the minor by their advisor. Nine credits must be at the 300-400 level.

## B.A., PSYCHOLOGY

FALL

### FIRST YEAR

EN110	Freshman Comp*	3
	Foreign Language	4
PY101	Intro to Psych	4
PY210	Statistics	3
BL105	Func Hum Bdy	4
		<u>18</u>

### SECOND YEAR

EN210	Res Paper Process*	3
	Minor Course	3
PY311	Lrng & Motivation	3
PY357	Personality Theory	3
NS Elective		4
		<u>16</u>

SPRING

SD101	Fund. of Speech	3
✓ PY212	Exp Psych	3
	Foreign Language	4
	Physical Science	3
	MA Elec 100+ Level	2-4
		<u>15-17</u>

PY Elective	3	
Minor Course	3	
✓ PY396	Tests & Msrmts	3
	Minor Course	3
	PY Designated Elective	3
		<u>15</u>

**THIRD YEAR**

PY459 Phys Psych	3
HU or elective	3-4
Minor courses	6
Elective	3
	<u>15-16</u>

PY457 Cognition	3
HU or Elective	3-4
Minor Courses	6
Elective	3
	<u>15-16</u>

**FOURTH YEAR**

PY498 Senior Research I	3
PY456 Hs & Sys of Psych	3
Minor Course	3
Electives	3-6
	<u>12-15</u>

PY499 Senior Research II	4
Electives	<u>10</u>
	14

\*May be taken Fall or Spring Semester

**B.S., PSYCHOLOGY****FALL****FIRST YEAR**

EN110 Freshman Comp*	3
PY101 Intro to Psych	4
PY210 Statistics	3
BL105 Func Human Body	4
MA Elect 100+ level	2-4
	<u>16-18</u>

**SPRING**

SD101 Fund of Speech	3
PY Elective	3
PY212 Exp Psych	3
Natural Science	4
MA Elec 100+ level	3-4
	<u>15-17</u>

**SECOND YEAR**

EN210 Res Paper Process*	3
Minor Course	3
PY311 Lrng & Motivation	3
PY357 Personality Theory	3
Cognate Course	3
	<u>15</u>

PY Designated Elective	3
Minor Course	3
PY396 Tests & Msrmts	3
Electives	3
Physical Science	3
	<u>15</u>

**THIRD YEAR**

PY459 Phys Psych	3
HU Humanities	4
Minor Courses	6
Elective	3
	<u>16</u>

PY457 Cognition	3
HU Humanities	4
Minor Courses	6
Elective	3
	<u>16</u>

**FOURTH YEAR**

PY498 Senior Research I	3
PY456 Hs & Sys of Psych	3
Minor Course	3
Electives	6
	<u>15</u>

PY499 Senior Research II	4
Electives	<u>11</u>
	15

\*May be taken Fall or Spring semester.

# BACHELOR OF ARTS/BACHELOR OF SCIENCE SOCIAL SCIENCES

Students who elect either of these programs should become more effective citizens for tomorrow and develop skills useful in various employment areas, both in the public and private sector. These curricula allow a large number of electives and a great deal of flexibility for the mature student.

The programs of study provide both depth and breadth in the social sciences (economics, geography, history, political science, psychology, and sociology), as well as providing opportunities for specialization in areas of interest.

## Major Area Requirements:

Introductory Sequences	27-31
Students must select four full year introductory sequences from the following six areas:	
Economics	6
Geography	8
History	8
Political Science	8
Psychology	7
Sociology	6

Lower Level Courses from the Six Areas of the Major	9
Students must choose at least 9 credits from the 100-200 level in the six areas.	

Upper Level Courses from the Six Areas of the Major	21
Students must choose 21 credits from the 300-400 level offerings	

in the six areas. No more than 12 credits can be in any one discipline.

Methodology Courses 5-7  
Students choose 2 courses from SO201, PY210, PY212, HS496

**Minor or Cognate:** To earn a *Bachelor of Arts* degree, students must take 8 credits of a foreign language as well as an additional 12 approved credits from English, humanities, speech, journalism, or philosophy (beyond General Education requirements).

For a *Bachelor of Science* degree, students will take an approved minor in natural science or social science (20-28 credits).

**General Education and Electives:** Students must complete all the General Education requirements and electives to total 124 semester credits.

## B.A., SOCIAL SCIENCES

### FALL

EN110 Freshman Comp*	3
Intro Sequence I	3-4
NS Elective	3
Intro Sequence II	3-4
First Yr For Lang	4
	<u>16-18</u>

### SECOND YEAR

EN210 Res Paper Process*	3
Intro Sequence III	3-4
Intro Sequence IV	3-4
NS Elective	3
	<u>13-14</u>

### SPRING

SD101 Fund of Speech	3
Intro Sequence I	3-4
NS Elective	3
Intro Sequence II	3-4
First Year For Lang	4
	<u>16-18</u>

Social Sci Electives	6
Intro Sequence III	3-4
Intro Sequence IV	3-4
Elective	3
	<u>15-17</u>

**THIRD YEAR**

Cognate/Minor	3
HU Elective	4
Methodology Course	3
EN/HU/JR/SD Elective	3
Elective	<u>3</u>
	16

Cognate/Minor	3
HU Elective	4
Methodology Course	3
EN/HU/JR/SD Elective	3
Elective	<u>3-6</u>
	16-19

**FOURTH YEAR**

Electives (if needed)	3
EN/HU/JR/SD Electives	9
Cognate/Minor	<u>3-4</u>
	15-16

Electives (if needed)	3-5
Social Sci Electives	9
Cognate/Minor Course	<u>3-4</u>
	15-18

\*May be taken Fall or Spring semester.

**B.S., SOCIAL SCIENCES****FALL****FIRST YEAR**

EN110 Freshman Comp*	3
Intro Sequence I	3-4
NS Elective	4
Intro Sequence II	3-4
Cognate/Minor	<u>3-4</u>
	16-19

**SPRING**

SD101 Fund of Speech	3
Intro Sequence I	3-4
NS Elective	4
Intro Sequence II	3-4
Cognate/Minor	<u>3-4</u>
	16-19

**SECOND YEAR**

EN210 Res Paper Process*	3
Intro Sequence III	3-4
Intro Sequence IV	3-4
Elective	<u>3</u>
	13-14

Soc Sci Electives	6
Intro Sequence III	3-4
Intro Sequence IV	3-4
Elective	<u>3</u>
	16-17

**THIRD YEAR**

Cognate/Minor	3
HU Elective	4
Methodology Course	3
Social Sci Elective	<u>3</u>
	16

Cognate/Minor	3
HU Elective	4
Methodology Course	3
Social Sci Elective	3
Elective	<u>3-6</u>
	16-19

**FOURTH YEAR**

Electives (if needed)	3
Soc Sci Electives	9
Cognate/Minor	<u>3-4</u>
	15-16

Electives (if needed)	3-5
Social Sci Elective	9
Cognate/Minor Course	<u>3-4</u>
	15-18

\*May be taken Fall or Spring semester.

# ASSOCIATE DEGREE SUBSTANCE ABUSE PREVENTION AND TREATMENT

The associate degree program provides training in substance abuse counseling to prepare students for paraprofessional roles in hospitals, treatment centers, and substance abuse prevention programs. Students are required to be good role models for the clients they will serve.

The associate degree can be completed in two years of full-time study and requires an extensive practicum placement. Practicum placements may be completed outside the local area. Placements are available in hospitals, out patient programs, assessment centers, detoxification units, long term treatment centers, prevention programs, and specialized programs in schools or in corrections settings. All placements require the Fundamentals of Substance Abuse Counseling credential. The test for this credential is offered through the Michigan Office of Substance Abuse Services.

Students completing the Associate Degree may apply to continue in the B.S. in Human Services program to qualify for entry level counseling positions.

Students completing the Associate Degree in Substance Abuse Prevention and Treatment may conveniently continue their education in the Bachelors Degree in Human Services or other fields such as Psychology, Sociology, or Corrections. Students interested in these options should consult the chair of the appropriate discipline.

#### Required Courses:

EN110 Freshman Composition	3
EN210 Research Paper Processes	3
SD101 Fundamentals of Speech	3
BL105 Func of Human Body	4
HM204 Fund of Drug Abuse	3
HM250 Human Serv Practicum	9
HM292 Alcohol Abuse Prevention & Treatment	3
SO242 Sociology of Sex	3
SO341 Sociology of Addiction	3
SO344 Social Welfare Systems	3
PY101 Intro to Psych	4
PY201 Commun Skills Couns	3
PY259 Abnormal Psychology	3

#### Cognate - Required

SO225 Native American Cultures	
or	3
SO226 Races and Minorities	
PY291 Group Counseling	
or	3
PY391 Family Therapy	

#### Electives

General Education requirements and sufficient electives must be completed to total a minimum of 64 semester credits.

**Total Credits Required 64**

**Bachelor of Arts**

The student must complete one year of a foreign language (8 hours)

Students must take sufficient electives to total 124 semester credits.

**B.A., SOCIOLOGY****FALL****FIRST YEAR**

EN110 Fresh Comp*	3
SO101 Intro. to Sociology	3
NS Elective	3
Cognate or Elective	3
	<u>12</u>

*(Complete math proficiency, if necessary, during first year)*

**SECOND YEAR**

EN210 Res Paper Process*	
or	3
EN215 Intro to Lit Res*	
Substantive Soc. Course	3
Cognates or Electives	6
HU Elective	4
	<u>16</u>

**THIRD YEAR**

SO301 Theory	3
Substantive Soc. Course	3
Cognates or Electives	6
First Year Foreign Lang	4
	<u>16</u>

**FOURTH YEAR**

SO401 Soc. Seminar I	3
Cognates or Electives	14
	<u>17</u>

**SPRING**

SO102 Social Problems	4
NS Elective	3
SD101 Fund. of Speech	3
Cognate or Elective	3
	<u>13</u>

SO210 Soc. Res./Stats.	4
Substantive Soc. Course	3
Cognate or Elective	3
HU Elective	4
	<u>14</u>

Substantive Soc. Course	3
Cognates or Electives	9
First Year Foreign Lang	4
	<u>16</u>

SO402 Soc. Seminar II	3
Cognates or Elective	14
	<u>17</u>

\*May be taken Fall or Spring semester

**B.S., SOCIOLOGY****FALL****FIRST YEAR**

EN110 Freshman Comp*	3
SO101 Intro. to Sociology	3
NS Elective	3
Cognate or Elective	3
	<u>13</u>

*(Complete math proficiency, if necessary, during first year)*

**SECOND YEAR**

EN210 Res Pap Process*	
or	3
EN215 Intro to Lit Res*	
Substantive Soc. Course	3
Cognates or Electives	6
HU Elective	4
	<u>16</u>

**SPRING**

SO102 Social Problems	4
NS Elective	4
SD101 Fund. of Speech	3
Cognate or Elective	3
	<u>14</u>

SO201 Soc. Res./Stats.	4
Substantive Soc. Course	3
Cognates or Electives	5
HU Elective	4
NS Elective	1
	<u>17</u>

**THIRD YEAR**

SO301 Theory	3
Substantive Soc. Course	3
Cognates or Electives	6
Electives	<u>4</u>
	16

Substantive Soc. Course	3
Cognates or Electives	9
Elective	<u>4</u>
	16

**FOURTH YEAR**

SO401 Soc. Seminar I	3
Cognates or Electives	<u>14</u>
	17

SO402 Soc. Seminar II	3
Cognates or Electives	<u>14</u>
	17

\*May be taken Fall or Spring Semester

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## *NOTES*

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# ASSOCIATE DEGREE EARLY CHILDHOOD EDUCATION

This two-year program leading to an associate degree is for students interested in working with young children--birth through age five. Students are expected to acquire an understanding of developmental patterns of the preschool child in such areas as: cognition, emotion, social interaction, and physical growth. This understanding will be the basis for working with groups of children and will culminate in a practicum.

Graduates of this program normally seek positions with day care centers, day care homes, head start programs, residential homes, and other facilities designed for the care and development of the preschool child. Graduates wishing to continue their education can matriculate into the four-year bachelor degree program in human services at the University or pursue a degree in elementary education or special education. A total of 62 credit hours is required as follows:

**Required**

EN110 Freshman Composition	3
EN210 Research Paper Processes	3
SD101 Fundamentals of Speech	3
BL105 Func of the Human Body	4
HE104 Nutrition for Early Child	3
HE181 First Aid	1
SO113 Soc of the Amer Family	3
ED101 Found of Early Child Ed	3
ED105 Child Guidance/Welfare	3
ED110 Curr Dev/Tchg Pract	3

ED111 Infants & Toddlers: Dev Approaches & Practices	3
ED220 Early Childhood Lit	3
ED260 Practicum I	4
ED261 Practicum II	4
ED270 Admin Early Chldhd Prog	3

**Cognate Required**

PY155 Lifespan Development	3
or	
PY265 Child/Adolescent Dev	
PY288 Organizational Behavior	3
or	
PY299 Exceptional Child/Adol	
SO225 Native American Culture	3
or	
SO226 Races and Minorities	

**Electives**

**7**

Students completing the Associate Degree in Early Childhood Education may conveniently continue their education in the Bachelors Degree in Human Services or other fields such as Psychology, Sociology, or Corrections. Students interested in this option should consult the Early Childhood Education advisor.

## ASSOCIATE DEGREE, EARLY CHILDHOOD EDUCATION

**FALL**

**SPRING**

**FIRST YEAR**

EN110 Fresh Comp	3
BL105 Funct Hmn Bdy	4
PY155 Lifespan Dev	
or	3
PY265 Child & Adol Dev	
ED101 Foun Childhood Ed3	
ED110 Curr Dev Tch Prac 3	
16	

SD101 Fund. of Speech	3
SO113 Soc of Amer Fam	3
HE104 Nut Early Chldhd	3
HE181 First Aid	1
ED111 Infants & Toddlers: Devel Approp Prac	3
ED105 Child Guid/Wlfre	3
16	



## SECOND YEAR

EN210 Res Pap Proc	3
ED220 Early Chldhd Lit	3
ED260 Practicum I	4
PY* or SO**	3
Elective	<u>2</u>
	15

ED270 Admin of EC Prog	3
Elective	3
Elective	2
ED261 Practicum II	4
PY* or SO**	<u>3</u>
	15

Choose one of the following:

PY299 Exceptional Child & Adol

or

PY288 Organizational Behavior

Choose one of the following:

SO225 Native American Cultures

or

SO226 Races and Minorities

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## *NOTES*

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# TEACHER EDUCATION

Lake Superior State University currently has, in cooperation with Michigan State University, an integrated program in Teacher Education. The program emphasizes a combination of preparation in the student's discipline and education course work that is coordinated with extensive work in schools. The program includes a B.A. or B.S. from LSSU followed by graduate course work from MSU, all of which will be completed in the Sault Ste. Marie area. A four-year phase in of the program began Fall Semester, 1991.

Disciplinary majors and minors that will lead to elementary or secondary teaching certification are being developed by several academic departments.

The following majors have been approved for elementary and secondary teaching:

- Biology
- English Language and Literature
- Geology
- History
- Mathematics

See individual majors for program requirements.

Majors are also being developed in:

- Economics
- Political Science
- Psychology
- Sociology

Minors for secondary teaching have been approved in the following disciplines:

- Biology
- Chemistry
- Communication
- Economics
- English Language and Literature
- French Language and Literature
- Geography
- History
- Journalism
- Political Science

Psychology  
Sociology

Information about the program can be obtained from Dr. Gary Rackliffe, 906-635-2736.

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## *NOTES*

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# PLANNED PROGRAM FOR ELEMETARY TEACHERS

## Required:

PY265 Child & Adol Dev 3

Students would take the courses in three of the following groups that do not overlap their major

## English:

EN215 Intro Lit & Res 3

EN231 Am Lit I 3

or 3

EN232 Am Lit II

EN320 Respond to Writ 3

EN335 Childhood Lit 3

## Mathematics:

MA103 Num Sys Prob Sol 3

MA104 Geom & Measure 3

MA111 College Algebra 3

Choose one of the following:

BA211 Bus Stat 3

MA207 Prin Stat Methods 3

PY210 Statistics 3

SO201 Soc Research Stat 4

## Natural Sciences:

CH108 Applied Chemistry 4

GE114 Fld Exc Eth Sci 3

NS101 Conceptual Phy 3

BL105 Funct Human Body 4

or 4

NS103 Envir Science

NS104 Envir Science Lab

## Social Sciences and History

Choose one of the following series:

HS101 Hist Wld Civil I 4

HS102 Hist Wld Civil II 4

or

HS131 U S History I 4

HS132 U S History II 4

GG201 Wld Reg Geog 4

PS110 Intro Am Govt Pol 4

(Canadian students may substitute:

PS160 Intro Can Govt Pol 3

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## NOTES

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## FRENCH LANGUAGE AND LITERATURE MINOR

This minor may be used as a Teaching Minor.

Total Credits Required: 28

Required Courses:

FR151	First Yr. French I	4
FR152	First Yr. French II	4
FR251	Sec Yr. French I	4
FR252	Sec Yr. French II	4
FR351	Adv Conv Comp I	4
FR352	Adv Conv Comp II	4
FR355	Sur French Lit I	3
FR356	Sur French Lit II	3

## GEOGRAPHY MINOR

This minor meets the needs of students aspiring to professional careers in business, government, or planning agencies, or who wish to do university graduate work. It is strongly suggested that students pursuing professional careers complete MA207 Statistical Methods.

A total of 20 credits is required:

Geography (15-17 credits)

GG106	Phys Geo: Landforms	3
GG108	Phys Geo: Meteorology and Climatology	3
GG302	Economic Geography	4
GG306	Cultural Geography	3
GG492	Ind Studies Geog	2-4

Geography electives to total 20 credits:

GG201	Wld Reg Geography	4
GG321	Geo Europe/Gr Brit	4
GG322	Geo of S. America	4

GG323	Geo of East Asia	4
GG325	Reg Geo North Am	4
GG360	Historical Geog	4

## GEOGRAPHY TEACHING MINOR

Required credits 21

Required Courses:

NS105	Earth, Sun Weather	3
NS107	Land Forms	3
GG201	World Reg Geog	4
GG306	Cultural Geog	3

At least two courses from:

GG302	Econ Geography	4
GG321	Geog of Europe	4
GG322	Geog of South Am	4
GG323	Geog E & SE Asia	4
GG325	Geog North Am	4

## GERONTOLOGY MINOR

A minor course of studies is offered in gerontology. This minor provides an educational foundation upon which the physiological, sociological, and psychological changes that occur during the aging process are understood. The skill minor in gerontology provides students who are majoring in recreation management, therapeutic recreation, human services, or other majors with course specialization in working with the aged in nursing homes, retirement homes, retirement villages, and in community programs.

Total Credits Required 23

Required Courses:

BL105	Funct Human Body	4
PY155	Lifespan Dev	3
RC101	Int Rec Leis Ser	3

RC105 Prog Dev Ldrshp	3
Rec Leis Services	3
RC295 Practicum	1
RC370 Rec for Elderly	3
SO326 Soc Aging & Aged	3
SO327 Soc Dying & Death	3

## HISTORY MINOR

Total Required Credits	23-24
History	20
Geography	3-4

### Required Courses:

HS101,102 Hist Wld Civ	8
or	
HS131,132 U.S. Hist	8
HS496 Hist Methods	2
HS300/400 Level His Elec	8

### One Course from:

GG306 Cultural Geog	3
GG321 Geo Europe/Gr Brit	4
GG322 Geo of S. America	4
GG323 Geo of East Asia	4
GG325 Reg Geo of N. Am	4
GG360 Hist Geography	4

## HISTORY TEACHING MINOR

Total Required Credits	22
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### Required Courses:

HS101 Hist Wld Civ I	4
HS102 Hist Wld Civ II	4
HS131 U.S. Hist I	4
HS132 U.S. Hist II	4
HS440 Dec Indep Const	4
HS496 Hist Methods	2

### One Course from:

HS202 Renaissance, Reform- ation Baroque Europe	4
HS230 Sur Am Ind Hist	4
HS310 Russia: Underdev State to Superpower	4

HS346 Canadian History	4
HS361 Latin America	4
HS371 Far East Civil	4
GG306 Cultural Geog	3
NS105 Phy Geog: Earth, Sun, and Weather	3
NS107 Phy Geog: Landforms and Soils	3
PS130 Int State Local Govt	4

## HUMAN SERVICES ADMIN MINOR

This skill minor in Human Services Administration offers training and experience in management, fiscal control, staff supervision, and service marketing in human service agencies. The minor recognizes that many agencies, especially in rural areas, are small and that service providers may also share administrative tasks. Also, service providers in larger agencies may wish to prepare for advancement into administrative positions.

Practicum placements may be completed outside the local area. Depending on the student's skill and interests, placements are available at state/provincial social services offices, child care centers, counseling agencies, tribal/band offices, treatment centers, family support agencies, corrections settings, etc.

Total Credits Required: 23

### Required Courses:

SO344 Soc Welfare Sys	3
MN365 Human Res Mgmt	3
DP Elective	3
PS201 Intro to Public Admin	3
or	
PY228 Org Behavior	3
HM250 Human Serv Pract	3
OAl19 Accounting Procedures	4
or	
ACI32 Prin of Accounting I	4
MK281 Marketing Principles	4

## HUMANITIES MINOR

Total Credit Hours 24

Required courses:

HU251 Humanities I	4
HU252 Humanities II	4

Select 16 credits from the areas of study listed below, at least 6 but not more than 8 credits, must be taken in one discipline, with no more than 3 credits in studio or performing classes. The remaining credits are to be distributed in at least three of the following areas: Spanish Literature in Translation (class is taught in English), History of Drama, Music, Mythology, Philosophy, Art, World Literature, Film, Second year of a foreign language (provided it is used to satisfy of any other requirement).

## JAPANESE STUDY MINOR

Students must completed the full-year program at the Japan Center for Michigan Universities. Enrollment in the program is based upon the requirement that the student be a full-time, tuition paying student of LSSU. The Center is located in Hikone, Japan, and it is their staff and resources that provide the courses for this minor. The minor should consist of the following courses, totaling 24 semester hours: JS105-JS302. This sequence shall fulfill the one-year of foreign language required for Bachelor of Arts Degree. Students are strongly advised to take GG323.

## JOURNALISM MINOR

This minor may be used as a Teaching Minor.

Total Credits Hours 20

Required courses:

JR210 Writ Mass Media	3
JR211 Print Newswrit	3
JR310 Elect Edit Prod	3
JR410 Broadcast Newswrit	3
JR411 Broadcast Edit Prod	3

Elective courses:

JR311 Superv School Pub	3
EN220 Adv Comp	3
EN221 Creat Writ	3
MK387 Adv Theory Prac	3
JR413 Dir Ind Studies	2

## JOURNALISM WRITING MINOR

Total Credit Hours 24

Required courses:

EN220 Adv Comp	3
EN221 Creat Writ	3
SD307 Class Cont Rhetoric	3
JR210 Writ Mass Media	3
JR211 Print Newswrit	3

Elective courses:

JR410 Broadcast Newswrit	3
JR411 Broacast Edit Prod	3
JR311 Superv School Pub	3
EN320 Respond Writ	3
JR310 Elect Edit Prod	3
JR413 Dir Ind Studies	2

# LEGAL ASSISTANT STUDIES MINOR

Total Credit Hours: 26

## Required core courses

- LA102 Lgl Res/Case Analsis3
- LA202 Lgl Writ & Analysis3
- LA125 Cvl Litigation Proce4
- LA150 Lgl Asst Professions  
& Ethical Considerations3
- OA119 Accounting Procedures  
or 4
- PS110 Intro Amer Gov Pol

Electives: Minimum of 9 credits from the following (with 6 credits selected from 300-400 level courses):

- LA140 Pers Inj Litigation  
& Investigative Tech 3
- LA250 Law Off Mgmt/Systems  
& Technology 3
- LA300 Sem Lgl Asst St 1-4
- LA320 Real Estate Law 3
- LA321 Family Law 2
- LA322 Probate Law & Proc3
- LA401 Evid Trial Practice 3
- LA405 No-Fault Auto Law 3
- LA406 Wrkrs Dis Com Law2
- CJ319 Substantive Crim Law3
- CJ409 Procedural Crim Law3
- BA254 Business Law I 3
- BA255 Business Law II 3

# NATIVE AMERICAN STUDIES MINOR

A minor is offered in Native American Studies, requiring a minimum of 22 credits.

The Native American Studies minor is appropriate for students majoring in a wide variety of disciplines who

may or may not be Native American themselves. Students intending to eventually work in a Native American setting or who may often work with Native Americans are likely to benefit from the information and new perspectives gained from the experiences provided by the minor. The Native American Studies minor is also appropriate for students who are simply interested in and wish to explore the Native American culture of our area. Individual courses within the Native American Studies minor may be of interest and value to both full and part-time students across the campus community.

Approximately 25% of the population in the local service area of Lake Superior State University is Native American. There are also a substantial number of Native Americans in the broader service region of the University, both in Michigan and Ontario. The Native American Studies minor is designed to provide valuable background and current information about Native American culture and society.

The courses in the Native American Studies minor reflect the Native American experience across time and throughout North America, but have a particular focus on issues which are of particular importance to Native Americans at the present time in the Great Lakes area. Course content will include the study of Native American history, culture, and literature. In addition, courses within the Native American Studies minor will introduce students to the structure and operation of tribal governments and tribal law, as well as various current Native American issues and concerns.

The faculty for the Native American Studies program may be contacted for further information.

This minor consists of the following courses:

Required credits:	19
NA/SO225 Nat Cultures N. Amer	3
SO226 Races and Minorities	3
NA/HS230 Survey Am Ind Hist	4
NA/EN235 Survey Nat Amer Lit	3
NA/LA305 Tribal Law & Govt	3
NA320 Cont Nat Amer Issues	3
NA310 Sem in Nat Amer Stud	3
or	
Approved Internship Course	3
Elective Credit:	1

## POLITICAL SCIENCE MINOR

Total Credits Required	28
PS110 Intro Amer Govt/Pol	4
SO201 Social Res/Stats	4

A minimum of one course in each of the following areas: 13-16

- American Politics*  
(PS325, 364, 367, 467)
- Comparative Politics*  
(PS160, 331, 334)
- International Relations*  
(PS241, 411, 412)
- Political Philosophy*  
(PS351, 352)

Additional political science electives to reach 28 credits (A minimum of 12 credits must be at the 300/400 level) 4-7

## POLITICAL SCIENCE TEACHING MINOR

Total Credits required	21
PS110 Intro Amer Govt Pol	4

Minimum of one course from each of the following areas: 13-16

American Government:	
PS120 Intro Legal Proc	3
PS130 Intro St Loc Govt	4
PS201 Intro Public Adm	3
PS301 Pol Analysis Eval	4
PS325 Politics and Media	3
PS357 Politics Violence	3
PS364 Pol Parties, Int Groups and Pub Opinion	3
PS367 Cong & Presidency	4
PS401 Prin Pub Admin	3
PS467 Const Law Civ Lib	4

Political Philosophy:	
PS351 Political Phil I	4
PS351 Political Phil II	4

Comparative Politics:	
PS160 Intro Can Govt Pol	3
PS331 Comp Politics of West Eur & USSR	4

International Relations:	
PS241 Intro Intrnat'l Rel and Wld Politics	4
PS247 Model United Nat	1
PS334 Middle East Politics	3
PS411 For Policy I (U.S.)	3
PS412 For Pol II (Non-US)	3

Electives to total 21

A minimum of 9 credits must be at the 300/400 level. Social Science majors must complete 21 credits beyond the required political science credits for their major and SO201 Social Research and Statistics is required.

## PSYCHOLOGY MINOR

The psychology minor provides students with a knowledge base for understanding and studying behavior.



Total credits Required: 22

Required Courses:

PY101 Intro to Psych	4
PY210 Statistics	3
PY212 Exper Psychology	3
PY Electives	6
PY elective at 300+ level	3
PY357 Personality Theory	} 3
or	
PY396 Tests & Measure	
or	
PY457 Cognition	
or	
PY459 Physiological Psy	

## PSYCHOLOGY TEACHING MINOR

Total Credits Required 22

PY101 Found of Psy	4
PY210 Statistics	3
PY212 Exper Psychology	3
PY357 Personality Thry	3
PY396 Tests Measurements	3
PY457 Cognition	3
PY459 Physiologicay Psy	3

## PUBLIC ADMINISTRATION MINOR

Total Credits Required 28

Required:

PS110 Intro Amer Govt/Pol	4
PS130 Intro St Lcl Govt	4
PS201 Intro to Public Admin	3
PS302 Policy Anal/Eval	4
PS401 Prin of Public Admin	3
PS449 Pol Sci Pub Adm Int	3
EC201 Prin Macroeconomics	3
SO201 Social Res & Stats	4

## PUBLIC RELATIONS MINOR

Total Credits Required 20

Required courses:

SD202 Inform Speaking	} 3
or	
SD302 Pers & Argum	} 3
SD307 Classic Cont Rhet	
or	
SD308 Comm Theory	} 3
SD320 Public Relations	
SD325 Org Commun	3
PS325 Politics & Media	3
JR210 Writ Mass Media	3
SD161 Prob Speech/Drama	3

## RECREATION STUDIES SKILL MINOR

Total Credits Required: 23

Required Courses:

RC101 Intro Rec Leisure	3
RC105 Prog Dev & Ldrshp in Rec & Leisure Serv	3
RC295 Practicum	2-4
RC370 Rec for Elderly	3

Cognate Requirements

ES140 Health and Fitness	3
PY155 Lifespan Develop	3
SO327 Soc Aging & Aged	3
HM250 Practicum	3-9

## SOCIOLOGY MINOR SOCIAL WELFARE

Total Credits Required: 22

Required Courses:

SO101 Intro Sociology	3
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SO102	Social Problems	4
SO226	Races and Minorities	3
SO344	Soc Welfare Inst	3

Required Options: One course from each of these areas:

Area 1	SO214	Criminology	3
	SO338	Deviance	3
Area 2	SO327	Soc Dying/Death	3
	SO326	Soc Aging/Aged	3
Area 3	SO325	Soc Stratif	3
	SO314	Social Change	3
	SO321	Soc of Women	3

## SOCIOLOGY MINOR GENERAL

Total Credits Required: 21

Required Courses:

SO101	Intro to Sociology	3
SO102	Social Problems	4

Additional sociology courses to total a minimum of 21 hours, among which at least 9 hours are 300 or 400 level courses. 14

## SOCIOLOGY TEACHING MINOR

Total Credits Required 21

Required Courses:

SO101	Intro to Soc	3
SO102	Social Prob	3
SO238	Soc Psych	3
SO226	Races & Minorities	3

Choose one of the following:

SO325	Soc Stratification	3
SO301	Dev Soc Theory	3
SO201	Soc Research Stat	4

Additional sociology electives to total 21 semester hours. At least 9 credits must be at the 300/400 level.

## SPEECH AND DRAMA MINOR

Students must complete 20 semester hours of credit in addition to Composition and Speech (SD101) from speech and drama offerings, or their equivalents. Those who wish both a major in English language and literature and a minor in speech and drama must take additional credit in English for any of the advanced courses which overlap in both programs.

## SUBSTANCE ABUSE COUNSELING MINOR

This skill minor prepares students to work in substance abuse settings and provides invaluable background for students planning to work in law enforcement, domestic violence, or corrections settings. Students choosing this minor must be good role models for clients confronting and recovering from substance abuse problems. Students must obtain a Michigan Apprentice Counseling Certificate by successfully completing the Michigan Office of Substance Abuse Counseling Examination before applying for practicum. Applicants for Substance Abuse Counseling Practicum must meet all ethical and personal qualifications for employment in a substance abuse prevention or treatment program.

Students seeking the B.S. in Human Services degree who select both this minor and the Counseling minor will

note that there is a great deal of overlap between the minors. Therefore, these students must select three courses (2 at the 300-400 level) from the Approved Overlap Courses list.

Total Credits Required:	21
Required Courses:	
HM204 Fund Drug Abuse	3
HM250 Human Serv Prac	3
HM292 Alcohol Abuse	
Prev/Treat	3
SO341 Soc of Addiction	3
PY201 Comm Skills Coun	3
PY396 Tests and Meas	3
PY291 Group Counseling	
or	3
PY391 Family Therapy	
BL105 Funct Human Body**	4
PY259 Abnormal Psy***	
or	3
SO338 Deviance***	

\*Because of prerequisite to PY396, students must choose one of the following as part of coordinating minor or electives:

PY210 Statistics	3
<i>(already required by PY minors)</i>	
SO201 Soc Research & Stat.3	
<i>(counts toward SO minors)</i>	
MA207 Prin of Stat Methods	3

\*\*May count toward General Education

\*\*\*May count toward SO/PY minor

NOTE: If substance abuse minor and counseling minor are both selected, student must fulfill overlap requirement.

#### APPROVED OVERLAP COURSES 9-15 CREDITS

Students minoring in both Substance Abuse Counseling and Counseling must choose 9 credits from this list including 6 credits at the 300-400 level. Overlap credits will not count in the coordinating minor.

HM480 Grantwriting	3
PY217 Social Psychology	3
PY228 Organizational Behavior	3
PY240 Behav Modification	3
PY259 Abnormal Psychology	3
PY311 Learning and Motivation	3
PY357 Personality Theory	3
PY383 Industrial Psychology	3
PY385 Health Psychology	3
PY457 Cognition	3
PY459 Physiological Psy	3
SO214 Criminology	3
SO226 Races and Minorities	3
SO242 Sociology of Sex	3
SO321 Sociology of Women	3
SO327 Sociology Death/Dying	3
SO338 Deviance	3

## WRITING MINOR

Total Credits 20

#### Required Courses:

EN220 Adv Comp	3
EN221 Creat Writing	3
EN321 Rhet Comp	3
JR210 Writ Mass Media	3
JR211 Print Newswrit	3

#### Elective Courses:

JR413 Dir Ind Studies	2
JR310 Elect Edit Prod	3
EN320 Respond Writing	3
MK387 Adv Theory Prac	3

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## NOTES

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# School of Business



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# EXECUTIVE MASTER OF BUSINESS ADMINISTRATION

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## MBA ADMINISTRATION AND FACULTY

Bruce T. Harger, Dean of the School of Business and Coordinator of the Executive MBA program; Prof. Ann Marinoni; Assoc. Profs. M. L. Adams, John Erkkila, Robert Gaertner, Jean Lundin, Daniel Mugavero, Lynn Ryckman, Karl J. Sherman; Asst. Prof. Annette Ryckman.

The MBA faculty is responsible for the governance and curriculum of the Executive MBA program. Exceptions to standards and policies can only be granted by the MBA Standards and Policies Committee. Appeals for admission decisions are heard by the Admissions Committee. Students with questions in these areas can address their concerns to these committees or the Coordinator of the Executive MBA Program in care of the School of Business.

## MISSION STATEMENT

The Executive Master of Business Administration Program offers general business education to students from diverse academic backgrounds. The program develops and enhances leadership skills for the early and mid-career managers. Cultural and international diversity characterizes the students. Students benefit from this diversity.

MBA faculty members believe that a quality program reflects the dynamic nature of business in a global economy. They continually assess and improve program focus and quality.

## OUTCOMES

Graduates will demonstrate knowledge of the common professional component. They will understand the economic, legal, political, cultural and global environment of business.

Graduates will demonstrate skills in research, communication, teamwork and critical thinking.

Graduates will advance in their professions.

Graduates will demonstrate involvement in professional and community affairs.

Courses will be offered at times convenient to students and consistent with program integrity.

The MBA Faculty will produce an annual assessment report.

# ADMISSIONS REQUIREMENTS EFFECTIVE FALL SEMESTER, 1994

Admission to the Executive MBA Program will be based on the following requirements:

1. Possession of a recognized baccalaureate degree, comprising a minimum of 120 semester credits, from an accredited college or university.
2. Two letters of recommendation with one preferably from an academic source and one required from an employer or supervisor.
3. Completion of the application form.
4. Official transcripts of all previous post-secondary work, with certified translations for non-English transcripts, from which an undergraduate grade point average (gpa) can be computed.
5. Minimum points from Formula 1 or Formula 2 (below), with additional restrictions on verbal and quantitative scores. All applicants must have scores reported for the Graduate Management Admissions Test (GMAT) taken within the past five years.
6. For students whose first language differs from English, a minimum score of 550 on the Test of English as a Foreign Language (TOEFL) is required, with a minimum score of 48 on Section 1, Listening Comprehension.

## FORMULA 1

Applicants must have a minimum of 1000 points using formula 1 based on the gpa (4.0 scale) from the last 60 semester credits of undergraduate work.  $[200 \times \text{gpa} + \text{GMAT score} \geq 1000]$ .

## FORMULA 2

Applicants must have a minimum of 950 points using formula 2 based on the gpa (4.0 scale) for all undergraduate work.  $[200 \times \text{gpa} + \text{GMAT score} \geq 950]$ .

For full admission, minimum scores of 28 for the quantitative GMAT score and, for candidates whose first language is English, 25 for the verbal GMAT score are required. Applicants who do not receive the minimum quantitative or verbal scores will be required to complete additional preparatory work for full admission.

Applicants who are denied admission may appeal to the Graduate Admissions Committee.

## APPLICATION PROCEDURE

Those seeking admission into the Executive MBA program must complete the following steps.

1. Complete an application for admission and submit it with a \$25.00 non-refundable application fee (U.S. funds) to the Admissions Office.
2. Official transcripts of all undergraduate and graduate work should be requested to be sent to the Admissions Office directly by the institution from which credit was earned.

3. Official copies of GMAT (Graduate Management Admission Test) scores, taken within the past five years, should be sent directly to Admissions.
4. Two letters of recommendation, one required from an employer, should be sent directly to Admissions.
5. For students whose first language differs from English, an official copy of the TOEFL (Test of English as a Foreign Language) score should be sent directly to Admissions.

## EXECUTIVE MBA DEGREE REQUIREMENTS

Students must complete preparatory courses at the 500 level, or their undergraduate equivalents, and 36 semester credits at the 600 level to obtain the Executive Master of Business Administration degree. Consult with the School of Business to determine if an undergraduate course will meet a preparatory course requirement.

Preparatory Course	credits
EC201 Principles of Macroeconomics	3
EC202 Principles of Microeconomics	3
MB503 Business Law	3
MB508 Statistical Analysis	3
MB521 Financial Accounting	3
MB525 Business Finance	3
MB561 Organizational Theory	3
MB581 Marketing Concepts Applications	3
<b>Total Preparatory Courses</b>	<b>24</b>
600 Level Courses	Credits
MB604 Managerial Economics	3
MB608 Research Techniques	3
MB621 Managerial Accounting & Control	3
MB625 Financial Management	3
MB659 Administrative Policy	3
MB660 Organizational Behavior	3
MB681 Marketing Management	3
<b>Total Common Prof. Component</b>	<b>21</b>
MB600 Level Electives	15
<b>Total 600 Level Requirement</b>	<b>36</b>

Course Substitutions, Waivers, Transfer Credit: Waivers of requirements and course substitutions can only be granted by the Coordinator of the Executive MBA Program. Students should retain copies of waiver/substitution documentation for their records. Waivers of preparatory courses are normally granted at the time of admission to the Executive MBA program.

A maximum of 12 semester credits may be transferred from other institutions to meet 600 level course requirements. The credits must be at the graduate level, from an accredited institution, with a grade of 3.0 or higher, applicable to the MBA program, and have been earned within the six-year period prior to the student's admission. The Coordinator of the Executive MBA program must approve the transfer of credit. Students should provide course descriptions or syllabi when requesting transfer credit evaluations. Copies of documentation should be retained by students.

## PROGRAM LENGTH

All degree requirements must be completed within eight years from date of admission.

## GRADES

The following grades are awarded to Executive MBA students:

A+ = 4.0	C- = 1.7
A = 4.0	D+ = 1.3
A- = 3.7	D = 1.0
B+ = 3.3	D- = 0.7
B = 3.0	F = 0.0
B- = 2.7	N = 0.0
C+ = 2.3	I = 0.0
C = 2.0	Z = 0.0

A minimum overall grade point of 3.00 (4.00 basis) is required with no more than six credits of "C" grades.

Students who earn a "D" or "F" grade will be immediately referred to the MBA Standards and Policy Committee for review. Courses with grades of "D" or "F" must be repeated or the student will not be eligible to graduate.

## **GUEST STUDENTS**

Students who have not been formally accepted into the Executive MBA Program are classified as guest students and may enroll in classes provided they have the necessary prerequisites. Students who wish to use credit earned as a guest student towards the Executive MBA degree must apply and be accepted into the Program. A maximum of six credits earned as a guest student may be applied toward the degree requirements. No exceptions to this maximum will be allowed.

## **REGISTRATION AND SCHEDULING INFORMATION**

Course registration and scheduling begins upon receipt of the scheduling bulletin each trimester. All registration and scheduling is processed through the Community Services and Development Office.

## **DROP/REFUND POLICY**

Classes may be dropped at any time PRIOR to the first class session with a 100% refund. No refund will be given for classes dropped between that date and the course's final examination. A drop slip must be processed through the Registrar-Scheduling Office. Courses dropped by the end of the seventh week of the semester will be assigned an "N" grade on the academic transcript.

## **NON-CREDIT OPTION**

If desired, students may sign up for a course on a non-credit basis (without letter grade). Tuition remains at the same rate as the credit basis. This option must be selected at scheduling time and cannot be changed once the course has begun. Courses taken under this option do not count towards the Executive MBA degree requirements. They do not affect the grade point average. Students who complete courses under the non-credit option may request a Certificate of Completion by contacting the Community Services and Development Office. This may be a practical option for guest students who are not taking the course for degree credit, but rather professional and/or personal development.

For more information, Please contact the Community Services and Development Office.

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## **NOTES**

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# DEPARTMENT OF BUSINESS & ECONOMICS

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**FACULTY:** Prof. Bruce T. Harger, Dean; Profs. Ann B. Marioni; Madan Saluja; Assoc. Profs. Mary L. Adams, Donner Dowd, John Erkkila (chair), Robert C. Gaertner, John S. Hudson, Jean Lundin, Charles Meiser, Daniel Mugavero, Lynn Ryckman, Karl (Jim) Sherman; Ass't. Profs. Annette Ryckman, Linda Schmitgal.

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## Well-rounded professional education for careers in fields of business

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### *MISSION STATEMENT*

This department services students in identifying and achieving their goals. We do this by offering courses, programs of study, and advising. We serve traditional first-time-in-college and transfer students, as well as non-traditional students, on campus and at off-campus sites.

Students receive individual attention through academic advising and small class size. We teach and demonstrate ethical business conduct, business foundations, and current business concepts, technologies, trends, and practices. Students learn skills in research, communications and critical thinking. We promote continuing professional development and association with professional and community groups.

### *OUTCOMES*

- Graduates will demonstrate knowledge of business-core subjects. Graduates will know specific functional areas of business and how these areas are integrated. They will understand the economic, legal, political and global environment of business.
- Graduates will hold positions, including graduate study, in a field related to their educational goals.
- Graduates will demonstrate skills in research, communication and critical thinking.
- Graduates will demonstrate personal growth: a desire for lifelong learning, adaptation to change, and curiosity.
- Graduates will demonstrate involvement in professional and community affairs.

- Graduates will demonstrate effective interpersonal skills.
- Graduates will lead moral and ethical lives.
- Graduates will appreciate the work ethic.

## BACHELOR OF SCIENCE ACCOUNTING

The discipline of accounting provides financial and other information essential to the efficient conduct and evaluation of the activities of any organization. The information which accounting provides is essential for

1. effective planning, control and decision making by management,
2. discharging the accountability of organizations to investors, creditors, government agencies, taxing authorities, association members, contributors to non-profit institutions and others.

Accounting includes the development and analysis of data, the

testing of their validity and relevance, and the interpretation and communication of the resulting information to intended users. The data may be expressed in monetary or other quantitative terms, or in symbolic or verbal forms. **This program** is primarily for those students who may desire

1. to enter the field of public accounting, or
2. a more intensive study of accounting.

The program meets the State of Michigan educational requirements, qualifying students to sit for the certified public accountant's examination.

### Business Core (42 Credits)

AC132	Prin of Acct I	4
AC133	Prin of Acct II	4
BA211	Business Statistics	3
BA231	Business Communications	3
BA254	Business Law I	3
BA466	Business Policy	3
DP151	Computer Applications	3
EC201	Prin of Macroeconomics*	3
EC202	Prin of Microeconomics*	3
FN341	Managerial Finance	4
MK281	Marketing Prin and Strat	3
MN365	Human Resource Mgmt	3
MA111	College Algebra**	3

\*May count toward Social Science General Education Requirement

\*\*May count toward B.S. Degree Requirement

### Major Requirements (38 credits)

AC232	Intermediate Acct I	4
AC233	Intermediate Acct II	4
AC332	Cost Accounting I	4
AC333	Cost Accounting II	4
AC334	Acct Information Systems	3
AC432	Advanced Accounting I	3
AC433	Advanced Accounting II	3
AC421	Fed Taxation Acct I	3
AC422	Fed Taxation Acct II	3
AC427	Auditing	4
BA255	Business Law II	3

General Education Requirements and sufficient elective credits must be completed such that at least 128 semester credits have been earned.

# BACHELOR OF SCIENCE, ACCOUNTING

FALL

SPRING

## FIRST YEAR

AC132 Prin Accounting I	4
MA111 College Algebra	3
EN110 Freshman Comp*	3
DP151 Computer Appl	3
NS Elective	<u>3</u>
	16

AC133 Prin of Acct II	4
SD101 Fund of Speech	3
NS Elective	3
HU Elective	4
Soc Sci Elective	<u>3</u>
	17

## SECOND YEAR

AC232 Inter Acct I	4
BA254 Bus Law I	3
EC201 Principles of Macroeconomics	3
EN210 or 215 Res Pap/Lit*	3
HU Elective	<u>4</u>
	17

AC233 Inter Accounting II	4
BA255 Business Law II	3
EC202 Principles of Microeconomics	3
BA231 Business Comm	3
BA211 Business Statistics	<u>3</u>
	16

## THIRD YEAR

AC332 Cost Accounting I	4
FN341 Mgr Finance	4
MK281 Marketing Prin & Strategies	3
NS Elective	<u>3</u>
	14

AC333 Cost Accounting II	4
MN365 Human Res Mgmt	3
AC334 Acct Info Syst	3
NS/MA/SS Elective Electives	<u>3</u>
	16

## FOURTH YEAR

AC421 Fed Tax Acct I	3
AC432 Adv Accounting I	3
AC427 Auditing	4
Electives	<u>6</u>
	16

AC422 Fed Tax Acct II	3
AC433 Advanced Acct II	3
BA466 Business Policy	3
Electives	<u>7</u>
	16

\*English Composition may be taken either Fall or Spring semester

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# NOTES

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# BACHELOR OF SCIENCE BUSINESS ADMINISTRATION

Requires successful completion of a four-year curriculum of 128 semester hours as prescribed in the following pages. The degree in business administration provides the student with a broad background in business administration. Students are encouraged to complete a minor, a specialty, or to take an internship.

## Common Professional Component (54 Credits)

AC132 Prin of Account I	4		MK281 Marketing Prin & Strat	3
AC133 Prin of Acct II	4		MN360 Prin of Management	3
BA211 Business Statistics	3		MN365 Human Resource Mgmt	3
BA231 Business Comm	3		MN464 Organizational Behavior	3
BA254 Business Law I	3		MA111 College Algebra**	3
BA255 Business Law II	3			
BA403 Business, Gov't & Soc	3			
BA466 Business Policy	3			
DP151 Computer Applications	3			
EC201 Prin of Macroecon*	3			
EC202 Prin of Microecon*	3			
FN341 Managerial Finance	4			

General education requirements and sufficient elective credits must be completed such that at least 128 credits have been earned.

Students are encouraged to use free electives to complete a minor, a specialty, or an internship.

\* May count toward Social Science General Education requirement

\*\* May count toward B.S. Degree requirement

## B.S. IN BUSINESS ADMINISTRATION

*FALL*

*SPRING*

### FIRST YEAR

AC132 Prin Accounting I	4		AC133 Prin Acct II	4
MA111 College Algebra	3		SD101 Fund of Speech	3
EN110 Freshman Comp	3		NS Elective	4
NS Elective	4		BA211 Bus Statistics	3
DP151 Comp Applications	3		Elective	3
	17			17

### SECOND YEAR

MK281 Mkt Prin & Strat	3		HU Electives	4
BA254 Business Law I	3		BA255 Business Law II	3
EC201 Prin of Macro	3		EC202 Prin of Micro	3
EN210 or 215 Res Pap/Lit	3		BA231 Business Comm	3
HU Elective	4		Elective	3
	16			16

### THIRD YEAR

SS Elective	3		MN365 Human Res Mgmt	3
FN341 Managerial Finance	4		SS/NS/MA Elective	4
MN360 Prin of Mgmt	3		Electives	9
Electives	6			16
	16			

### FOURTH YEAR

BA403 Bus, Govt, & Soc	3		BA466 Business Policy	3
MN464 Organ Behavior	3		Electives	12
Electives	9			15
	15			

\*English composition may be taken either Fall or Spring semester

## SPECIALTIES

Requirements for specialties in Management, Marketing and Accounting are listed below. Students may use free electives to complete a specialty or a minor. Internship experiences are also valued and should be considered (see course descriptions for BA299 and BA399). In addition to the minors in business outlined at the end of this section of the catalog, minors in other departments are attractive and should be considered. Examples include Business French, Communications, Computer Science, Legal Assistant Studies, Native American Studies, Public Administration and Public Relations. For a complete listing of minors, see page 4.

### MANAGEMENT SPECIALTY

Total Credits Required: 15

Required Courses:

MN451 Labor Law	4
MN461 Management Simulation	3
MN469 Collective Bargaining	3
MN471 Prod Operations Mgmt	5

### MARKETING SPECIALTY

Total Credits Required: 18

Required Courses:

MK381 Consumer Behavior	3
MK387 Advertising	3
MK480 Marketing Research	3

MK481 Marketing Management	3
MK486 International Marketing	3
MK Elective	3

### ACCOUNTING SPECIALTY

Total Credits Required: 26

Required Courses:

AC232 Intermediate Acct I	4
AC233 Intermediate Acct II	4
AC332 Cost Accounting I	4
AC333 Cost Accounting II	4
AC334 Acct Information Sys	3
AC421 Federal Taxation Acct I	3
AC427 Auditing	4

## BACHELOR OF SCIENCE FINANCE and ECONOMICS

The study of finance and economics affords an opportunity for the student to acquire a general knowledge of business and economic systems. Specialized courses are included to develop ability in the use of the tools of economic and financial theory and analysis. To deal with the advances in sophistication and rigor in this discipline, students are required to take calculus. The program prepares students for careers in business, government service, education, and graduate study.

#### Business Core (44 Credits)

AC132 Prin of Accounting	4
AC133 Prin of Accounting II	4
BA211 Business Statistics	3
BA231 Business Communications	3
BA254 Business Law I	3
BA466 Business Policy	3
DP151 Computer Applications	3
EC201 Prin of Macroeconomics*	3
EC202 Prin of Microeconomics*	3
FN341 Managerial Finance	4
MK281 Mktg Prin and Strategy	3
MN365 Human Resources Mgmt	3
MA111 College Algebra**	3

#### Major Requirements (41 credits)

BA255 Business Law II	3
EC304 Money, Banking and Monetary Policy*	3
EC305 Public Finance	3
EC408 International Economics**	3
EC308 Inter Microeconomics	3
EC309 Inter Macroeconomics	3
FN446 Fin Anal and Policy	4
FN448 Investment Strategy	4
MA112 Calc for Bus & LS**	4
EC/FN/AC Electives	11

\*May count toward Social Science General Education Requirement

\*\*May count toward B.S. Degree Requirement

General Education requirements and sufficient elective credits must be completed such that at least 124 semester credits have been earned.

# B.S. DEGREE, FINANCE AND ECONOMICS

FALL

SPRING

## FIRST YEAR

EN110 Freshman Comp*	3
MA111 College Algebra	3
NS Elective	4
AC132 Prin Accounting I	4
Elective	3
	<u>17</u>

SD101 Fund of Speech	3
MA112 Calc for Business & Life Science	4
NS Elective	4
AC133 Prin Accounting II	3
Elective	3
	<u>17</u>

## SECOND YEAR

EN210 or 215 Res Pap/Lit*	3
HU Elective	4
EC201 Macroeconomics	3
BA254 Business Law I	3
DP151 Comp Applications	3
	<u>16</u>

BA211 Bus Statistics	3
HU Elective	4
EC202 Microeconomics	3
BA255 Business Law II	3
Elective	3
	<u>16</u>

## THIRD YEAR

FN341 Managerial Fin	4
EC309 Intermediate Macroeconomics	3
BA231 Bus Comm	3
Electives	6
	<u>16</u>

FN448 Invest Strategy	4
EC304 Money, Banking & Monetary Policy	3
MK281 Mkt Prin & Strat	3
EC/FN/AC Elective	4
Elective	3
	<u>17</u>

## FOURTH YEAR

EC308 Intermediate Microeconomics	3
EC408 Int'l Economics	3
MN365 Human Res Mgmt	3
EC/FN/AC Elective	3
Free Elective	4
	<u>15</u>

EC305 Public Finance	3
FN446 Fin Anal & Policy	4
BA466 Business Policy	3
EC/FN/AC Elective	4
	<u>14</u>

\*English composition may be taken either Fall or Spring semester

# NOTES

# ASSOCIATE DEGREE BUSINESS ADMINISTRATION

This Program prepares students for entry level positions in industry and government requiring two years of college level business preparation. The program is oriented toward marketing and should be of special interest to individuals seeking careers in marketing or as management trainees in retail organizations. The degree program is transferable into a four-year program in Business Administration.

## ASSOCIATE DEGREE, BUSINESS ADMINISTRATION

### General Education Requirements

EN110	Freshman Composition	3
EN210	Research Paper Process	
	or	3
EN215	Intro to Lit and Res	
SD101	Fundamentals of Speech	3
PY101	Found of Psychology	
	or	3-4
PY228	Organizational Behavior	
EC202	Prin of Microeconomics	3

### Departmental Requirements

AC132	Prin of Accounting I	4
BA231	Business Comm	3

BA254	Business Law I	3
BA255	Business Law II	3
FN245	Prin of Finance	
	or	3-4
FN341	Mgr Finance	
MK281	Mktg Prin and Strategy	4
MK283	Principles of Selling	3
MK285	Retail Management	3
MK387	Adv Theory and Practice	3
MN365	Human Resource Mgmt	3
BA105	Business Mathematics	3
DP151	Computer Applications	3

Sufficient elective credits must be completed such that at least 62 semester credits have been earned.

## ASSOCIATE, BUSINESS ADMINISTRATION

*FALL*

*SPRING*

### FIRST YEAR

AC132	Prin Accounting I	4
EN110	Freshman Comp	3
PY101	or PY228	3-4
BA105	Business Math	3
Elective		3
		<u>16-17</u>

SD101	Fund of Speech	3
MK281	Mkt Prin & Strat	3
MK285	Retail Management	3
EC202	Microeconomics	3
DP151	Electives	3
		<u>15</u>

### SECOND YEAR

MK283	Prin of Selling	3
BA254	Business Law I	3
EN210	or 215 Res Pap/Lit	3
FN245	Prin of Finance	3
Elective		3
		<u>15</u>

MN365	Human Res Mgmt	3
MK387	Adv Thry & Pract	3
BA255	Business Law II	3
BA231	Business Comm	3
Elective		3-4
		<u>15-16</u>

\*English composition may be taken either Fall or Spring semester.

# ASSOCIATE DEGREE OFFICE ADMINISTRATION

This Program is designed for students seeking a career as an administrative assistant, word processor, corresponding secretary, or office supervisor. Good basic writing skills are required.

<p><b>General Education Requirements</b></p> <p>EN110 Freshman Composition 3</p> <p>EN210 Research Paper Process or 3</p> <p>EN215 Intro Lit &amp; Research 3</p> <p>SD101 Fundamentals of Speech 3</p> <p>General education electives 6</p> <p><b>Departmental Requirements</b></p> <p>BA226 Records Management 3</p> <p>BA231 Business Communications 3</p> <p>BA121 Introduction to Business 3</p> <p>BA105 Business Mathematics 3</p> <p>DP160 DOS 1</p> <p>DP151 Lotus 1-2-3 2</p> <p>DP151 dBase 2</p> <p>DP241 Desktop Pub/Pres 3</p> <p>DP225 Word Proc Techniques 3</p>	<p>OA111 Keybrdg/Doc Formating I 3</p> <p>OA112 Keyboard Skillbuilding 2-4</p> <p>OA113 Document Formatting II 2</p> <p>AC132 Principles of Accounting I or 4</p> <p>OA119 Accounting Procedures</p> <p>OA235 Automated Office Systems 3</p> <p><b>Business Electives (4-6) From</b></p> <p>MN365 Human Resource Mgmt 3</p> <p>MK281 Mktg Prin &amp; Strategy 3</p> <p>BA261 Business Skills 1-3</p> <p>FN245 Principles of Finance 3</p> <p>BA254 Business Law I 3</p> <p>Sufficient elective credits must be completed such that at least 64 semester credits have been earned.</p>
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## ASSOCIATE, OFFICE ADMINISTRATION

*FALL*

*SPRING*

### FIRST YEAR

<p>OA111 Keyboarding 3</p> <p>OA112 Skillbuilding 2</p> <p>DP160 DOS 1</p> <p>EN110 Freshman Comp 3</p> <p>BA105 Business Math 3</p> <p>DP151 Lotus 1-2-3 2</p> <p>BA121 Intro to Business 3</p> <p style="text-align: right;"><u>17</u></p>	<p>OA112 Skillbuilding 2</p> <p>OA113 Formatting II 2</p> <p>DP151 dBase 2</p> <p>SD101 Fund of Speech 3</p> <p>Elective 3</p> <p>Designated Bus Elective <u>3</u></p> <p style="text-align: right;"><u>15</u></p>
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### SECOND YEAR

<p>EN210 or 215 Res Pap/Lit 3</p> <p>DP225 Word Proc Tech 3</p> <p>OA119 Accounting Proc or 4</p> <p>AC132 Prin Accounting I</p> <p>DP241 Desktop Pub/Pres 3</p> <p>General Ed Elective <u>3</u></p> <p style="text-align: right;"><u>16</u></p>	<p>BA231 Business Comm 3</p> <p>OA235 Autom Office Sys 3</p> <p>BA226 Records Mgmt 3</p> <p>Designated Bus Elective 1</p> <p>General Ed Elective 3</p> <p>Elective <u>3</u></p> <p style="text-align: right;"><u>16</u></p>
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## ASSOCIATE DEGREE PERSONAL COMPUTER SPECIALIST

Personal Computer Specialists are in tune with the direction of the industry. The ubiquitous personal computer of today outperforms the mainframe computers of a generation ago at a tiny fraction of the cost. This associate degree trains individuals to assist personal computer users. They will be able to assemble, upgrade, maintain, troubleshoot, and repair personal computers; install and maintain both peer-to-peer and client-server local area networks (LANs), as well as configure systems for achieving maximum efficiency of the systems. They will also be able to install and operate user applications software packages. These skills are combined with general education and business courses.

### General Education Requirements

EN110 Freshmen Comp	3
EN210 Research Paper Proc or	
EN215 Intro Lit & Research	3
SD101 Fund of Speech	3
PY228 Organiz Behav	3
General Education Electives	3

### Department Requirements

OA119 Acct Proc (or AC132 and AC133)	4
BA231 Business Comm	3
BA254 Business Law I	3
MK281 Mkt Prin & Strat	3

### OA111 Keyboarding/Format I

or	
DP225 Word Processing	3
DP160 Person Comp Workstation Operating Syst	3
DP163 Troubleshooting & Rep of Personal Comp	3
DP260 Personal Comp Network Operating Systems	3
DP263 Storage, Protection & Recovery of Personal Computer Data	3
DP151 Lotus 1-2-3	2
DP151 dBase	2
DP241 Desktop Publishing	3
Electives	12
62 Credits Required for Degree	

## ASSOCIATE, PERSONAL COMPUTER SPECIALIST

### FALL

#### FIRST YEAR

OA111 Keyboarding or	3
DP225 Word Processing	
EN110 Freshman Comp	3
PY228 Organiz Behav	3
DP151 Lotus 1-2-3	2
BA254 Business Law I	3
	14

### SPRING

DP163 Trb & Rep PC	3
DP160 PC Wrkst Op Sys	3
DP151 dBase	2
SD101 Fund of Speech	3
Elective	6
	17

#### SECOND YEAR

EN210 or 215 Res Pap/Lit	3
MK281 Mkt Prin & Strat	3
OA119 Accounting Proc or	
AC132 Prin Accounting I	4
DP241 Desktop Pub/Pres	3
General Ed Elective	3
	16

BA231 Business Comm	3
DP260 PC Netwk Op Sys	3
DP263 Stor, Prot & Rec of PC Data	3
Elective	6
	15

# ASSOCIATE DEGREE TECHNICAL ACCOUNTING

This Program is designed for the student who does not plan to go to college for four years but desires a working knowledge in the field of accounting. The program provides students with knowledge in the accounting techniques used in modern business. Emphasis is on business administration courses in addition to accounting such as economics, business law, data processing, and business communications. After completing this program, the student may transfer to the four year program without loss of credit.

General Education Requirements		Departmental Requirements	
EN110 Freshman Composition	3	AC132 Prin of Accounting I	4
SD101 Fundamentals of Speech	3	AC133 Prin of Accounting II	4
EN210 Research Paper Process		AC232 Intermed Accounting I	4
or	3	AC233 Intermed Accounting II	4
EN215 Intro Lit & Research		AC332 Cost Accounting I	3
MA092 Intermediate Algebra		BA231 Business Comm	3
or	3	BA254 Business Law I	3
MA111 College Algebra		AC421 Federal Taxation Acct I	3
EC201 Prin of Macroeconomics		DP151 Computer Applications	3
or	3	FN245 Prin of Finance	
EC202 Prin of Microeconomics			3-4
General Education Elective	3	or	
		FN341 Mgr Finance	

Sufficient elective credits must be completed such that at least 64 semester credits have been earned.

## ASSOCIATE, TECHNICAL ACCOUNTING

*FALL*

### FIRST YEAR

AC132 Prin Accounting I	4
EN110 Freshman Comp	3
Electives	3
MA111 College Algebra*	3
DP151 Electives	3
	16

*SPRING*

BA254 Business Law I	3
AC133 Prin Accounting II	4
SD101 Fund of Speech	3
Elective	6
	16

### SECOND YEAR

AC232 Intermed Acctg I	4
AC332 Cost Accounting I	4
AC421 Fed Tax Acct I	3
EN210 or 215 Res Pap/Lit	3
FN245 Prin of Finance	3
	17

AC233 Inter Acct II	4
BA231 Bus Comm	3
EC201 Prin of Macroecon	
or	3
EC202 Prin of Microecon	
General Education Elective	3
Electives	2
	15

\*College Algebra recommended; intermediate algebra required; MA092 credit does not apply toward 64 credits for degree.

# CERTIFICATE INFORMATION PROCESSING

This program prepares students for entry-level office positions as word processors or receptionists. The program develops other fundamental skills in communications, computer applications and records management.

## *FALL*

EN110	Freshman Comp	3
BA105	Business Math	3
OA111	Keyboarding	3
DP225	Word Proc Tech	3
	Elective	<u>3</u>
		15

## *SPRING*

SD101	Fund of Speech	3
OA235	Auto Offc Syst	3
BA226	Records Mgmt	3
OA112	Keybd Skillbuild	2
OA113	Doc Format II	2
DP151	Lotus 1-2-3	2
DP151	dBase	<u>2</u>
		17

# CERTIFICATE PERSONAL COMPUTER SPECIALIST

This program provides the skill necessary to assist personal computer users as described under the associate degree program. With additional courses in general education and business, holders of this certificate can obtain the associate degree.

## *FALL*

DP160	PC Wkst Op Sy	3
DP151	Lotus 1-2-3	2
DP151	dBase	2
OA119	Acct Proc	4
EN110	Fresh Comp	3
OA111	Keyboarding	
	or	<u>3</u>
DP225	Word Processing	
		17

## *SPRING*

DP163	Trb & Rep PC	3
DP260	PC Ntwk Op Sys	3
DP241	Desktop Pub/Pres	3
PY228	Organiz Behav	3
DP263	Stor, Prot &	
	Rec of PC Data	<u>3</u>
		15

# MINOR COURSE OF STUDY

Eight minors are offered in the Department of Business and Economics. Course requirements are set out below. Elective courses are to be chosen in consultation with advisors.

## ACCOUNTING-FINANCE MINOR

Total Credits Required: 24

Required Courses:

AC132 Prin of Acct I	4
AC133 Prin of Acct II	4
FN341 Managerial Finance	4
AC and FN electives	12

## ECONOMICS MINOR

Total Credits Required: 21

Required Courses:

EC201 Prin of Macroeconomics	3
EC202 Prin of Microeconomics	3
EC308 Inter Microeconomics	3
EC309 Inter Macroeconomics	3
EC Electives	9

## ECONOMICS- FINANCE MINOR

Total Credits Required: 28

Required Courses:

AC132 Prin of Acct I	4
AC133 Prin of Acct II	4
EC201 Prin of Macroeconomics	3
EC202 Prin of Microeconomics	3
FN341 Managerial Finance	4
EC or FN electives	10

## GENERAL BUSINESS MINOR

Total Credits Required: 22-23

Required Courses:

AC132 Prin of Accounting I	
or	4
OA119 Accounting Procedures	
MN360 Prin of Mgmt	3
MK281 Mktg Prin & Strat	3
EC201 Prin of Macroeconomics	3
EC202 Prin of Microeconomics	3
FN245 Principles of Finance	
or	3-4
FN341 Managerial Finance	
BA231 Business Comm	3

## HUMAN RESOURCE MANAGEMENT MINOR

Total Credits Required: 31

Required Courses:

EC201 Prin of Macroeconomics	3
EC202 Prin of Microeconomics	3
BA254 Business Law I	3
MN360 Prin of Mgmt	3
MN365 Human Resource Mgmt	3
MN451 Labor Law	4
MN469 Collective Bargaining	3
PY228 Organizational Behavior	3
PY396 Tests and Measurements	3
PY203 Counseling Theory & Proc	3
or	
PY383 Industrial Psychology	3

## MARKETING MINOR

Total Credits Required: 21

Required Courses:

MK281 Mktg Prin & Strat	3
MK283 Princ of Selling	3
MK387 Adv Thry & Pract	3
MK481 Marketing Mgmt	3
MK486 International Mkt	3
MK Electives	3
EC202 Prin of Microeconomics	3

## OFFICE ADMIN MINOR

Total Credits Required: 22

Required Courses:

DP160 DOS	1
DP151 Lotus 1-2-3	2
or dBase	
DP241 Desktop Pub/Pres	3
DP225 Word Proc Techniques	3
BA226 Records Management	3
OA235 Auto Offc Systems	3
BA121 Intro to Business	3
OA119 Accounting Procedures	3
or	4
AC132 Princ of Accounting I	

# PERSONAL COMPUTER SPECIALIST MINOR

Total Credits Required: 20

Required Courses:

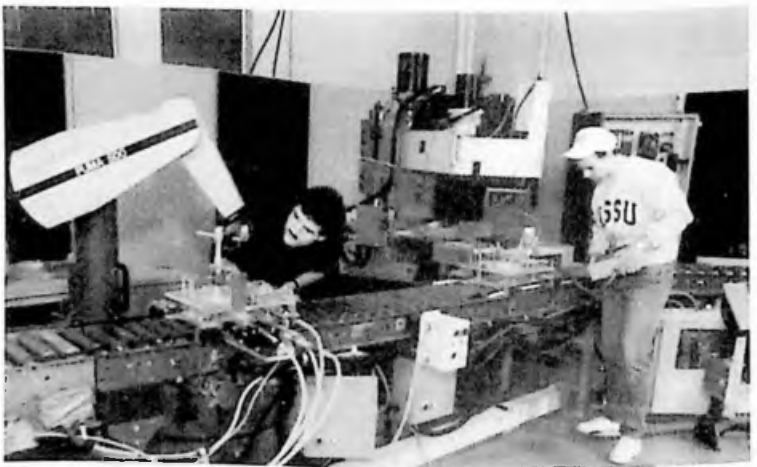
DP160	Personal Comp Workstation Oper System	3
DP163	Troubleshoot Repair PC	3
DP260	PC Network Oper Sys	3
DP263	Storage, Protection & Recovery of PC Data	3
DP/CS/AM	Electives	8

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## *NOTES*

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# School of Engineering Technology and Mathematics



# ENGINEERING TECHNOLOGY

**FACULTY:** Assoc. Prof. Ray Adams, Dean of School of Engineering Technology and Mathematics, Lawrence H. Bolio, Paul R. Duesing, John T. Madl, David M. McDonald, Mohamad Qatu, and Charles L. Weber; Asst Profs. James Devaprasad, Steven Gerrish, Patrick M. Grounds, Ajay Mahajan, Alan D. Niemi, Keith E. Schwiderson, Lester Spencer, and Maurice Walworth.

The Engineering Team: Most activities involving engineering have increased in complexity so that a team of engineering professionals is required. The size and cost of engineering endeavors have dictated the employment of professional engineers, engineering technologists, technicians and skilled craftsmen as a team. Bachelor of science degrees in engineering technology are offered at LSSU along with associate degrees in engineering technology. LSSU offers the first two years of a professional engineering program after which a student can transfer to a school of engineering. LSSU does not offer training in the skilled trades.

## PROGRAMS

The education of engineering technologists focuses on application and implementation of current technologies. Engineering technology programs strive to balance the theoretical and practical aspects of engineering science. Typical job responsibilities of engineering technologists include product and process design, system design and implementation, and operations management. Graduates with bachelor of science degrees are adequately prepared for graduate studies in engineering technology.

**Accreditation:** All of the programs in Engineering Technology, both 4-year and 2-year, are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology. The U.S. Department of Education formally recognizes this board's exclusive jurisdiction for

accreditation of engineering and engineering technology education.

**B.S. in Engineering Technology:** LSSU offers Bachelor of Science degrees (4-year) programs in Automated Manufacturing, Electrical/Electronics, Environmental, and Mechanical Engineering Technology. These programs utilize mathematics at the calculus level and provide appropriate laboratory experiences.

**A.D. in Engineering Technology:** LSSU offers Associate degrees (2 year) programs in Electronics-Computer and Mechanical, Engineering Technology. These degrees qualify the graduate as a technician. A certificate (1-year) program in Computer Aided drafting with concentrations in Electrical and Mechanical is also offered.

**Engineering Transfer:** The first two years of a professional engineering degree may be taken at LSSU if you

are well prepared in mathematics. It is recommended that you contact the engineering school that you would like to transfer to early in your freshman year at LSSU. Each school of engineering has somewhat different requirements which will affect the exact program you take at LSSU.

**Transfer Students:** An evaluation of all previous course work will be made upon acceptance to the University. Please refer to the section on Admissions for further information.

**Entrance Requirements:** To qualify for admission as freshmen in engineering technology, applicants must be graduates of accredited secondary schools with above average standing in their class. The secondary school preparation should include a four-year curriculum of at least 15 units of acceptable entrance credits. The following subjects should be included in these credits: one unit of beginning algebra, one

unit of advanced algebra, and one unit of science with laboratory. An additional unit of trigonometry or geometry is strongly recommended. Please refer to the section on Admissions for further information.

**Transfer of LSSU credits to engineering schools.** Most engineering technology credits earned at LSSU will not transfer to professional engineering schools due to the mathematics requirements of each program.

**Current Catalogs:** Current catalogs for many colleges and universities offering engineering programs are on file in the Engineering Technology Department or the Admissions Office. It is recommended that you contact the engineering school that you would like to transfer to early in your freshman year at LSSU. Each school of engineering has somewhat different requirements which will affect the exact program you take at LSSU.

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## *NOTES*

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# DEPARTMENT OF AUTOMATED MANUFACTURING ENGINEERING TECHNOLOGY

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Asst. Prof. James Devaprasad, Chair

## BACHELOR OF SCIENCE Automated Manufacturing Engineering Technology

The Automated Manufacturing Engineering Technology program emphasizes the application of robotics, computer systems and automation to modern manufacturing. This program combines the disciplines of mechanical, electrical, computer, and manufacturing engineering technologies in preparing students for modern manufacturing and production career responsibilities.

The Automated Manufacturing Engineering Technology (AMET) program is a capstone program and therefore assumes a two-year background in an appropriate engineering technology or pre-engineering curriculum. Graduates will be prepared to design, integrate, and implement various systems for automated manufacturing. Technical courses in the final two years will be based upon the student's previous background and are designed to produce a well-rounded and versatile engineering technologist.

### TRANSFER STUDENTS

Students from community colleges with a background in an engineering technology curriculum can usually transfer directly into the third year of the automated manufacturing program. Most community college programs in Michigan have transfer curriculum agreements with LSSU.

An individualized plan of study for each transfer student will be generated by the AMET faculty in consultation with the student. This plan of study will provide a schedule of courses needed to fulfill the AMET degree requirements as set forth by the University, TAC/ABET, and the faculty.

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## *NOTES*

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# B.S., AUTOMATED MANUFACTURING ENGINEERING TECHNOLOGY

(Electronics-Computer Engineering Technology Associate Degree Track)

## Engineering Technology Courses (36 Credits)

AM315	Prog Logic Cont	3
AM325	Robotics in Mfg	4
AM365	Comp Control Concepts	3
AM375	Auto Mfg Systems	4
AM445	Indust Engr	2
AM455	Automatic Controls	4
AM465	Sensor Tech & Appl	4
AM485	Auto Mfg Proj	3
ET485	Project Planning	1
MT112	Mfg Processes I	3
MT260	Quality Engr	2
MT316	Stat and Strengths	3

## Mathematics and Science Courses (7 credits)

MA142	Tech Calc II	4
MA240	Adv Tech Mathematics	3

## Support Courses (4 Credits)

EC302	Managerial Econ	4
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## Elective Courses (16 Credits)

BL	Biology Elective	3
HU	Humanities Electives	8
	Free Electives	5

Total Credits 63

In addition to the courses listed above, the Electronics-Computer Associate degree courses must be completed for a total of at least 128 semester credits for the B.S. degree.

# B.S., AUTOMATED MANUFACTURING ENGINEERING TECHNOLOGY

(Electronics-Computer Engineering Technology Associate Degree Track)

## FIRST YEAR

### FALL

MA140	Algebra for Tech	4
MA109	Trig & Vectors	2
EN110	Freshman Compos	3
	Social Science Elec	4
ET115	Elec Circuits I	4
		<u>17</u>

### SPRING

SD101	Fund of Speech	3
MA141	Tech Calculus I	4
DT125	Electronic Drafting	2
ET116	Elec Circuits II	4
CS100	Microcomp Appl	3
		<u>16</u>

## SECOND YEAR

PH221	Elmts of Physics I	4
ET211	Electronic Devices	4
CT235	Microproc Fund	4
ET244	Electrical Mach	4
		<u>16</u>

PH224	Physics for EET	4
CT224	Digital Electronics	4
ET212	Analog Elec	4
EN205	Tech Rpt Writing	3
HE181	First Aid	1
		<u>16</u>

## THIRD YEAR

MA142	Tech Calculus II	4
BL	Biology Elective	3
AM325	Robotics in Mfg	4
MT112	Mfg Process I	3
MT316	Statics & Strengths	3
		<u>17</u>

MA240	Adv Tech Math	3
AM375	Auto Mfg Systems	4
AM365	Comp Cont Concept	3
	Humanities Elective	4
AM315	PLCs	3
		<u>17</u>

## FOURTH YEAR

AM455 Automatic Controls	4	AM485 Auto Mfg Project	3
AM465 Sensor Tech Appl	4	AM445 Industrial Engr	2
ET485 Project Planning	1	EC302 Managerial Econ	4
MT260 Quality Engr	2	Humanities Elective	4
Free Elective	5		13
	<u>16</u>		16

## B.S., AUTOMATED MANUFACTURING ENGINEERING TECHNOLOGY

(Mechanical Engineering Technology Associate Degree Track)

### Engineering Technology Courses (33 Credits)

AM315 Prog Logic Cont	3
AM325 Robotics in Mfg	4
AM365 Comp Ctrl Conc	3
AM375 Auto Mfg Syst	4
AM445 Industrial Engr	2
AM455 Automatic Controls	4
AM465 Sensor Tech Appl	4
AM485 Automated Mfg Proj	3
ET302 Appl Elec II	3
ET485 Project Planning	1
MT260 Quality Engr	2

### Mathematics & Science Courses (7 Credits)

MA142 Tech Calc II	4
MA240 Adv Tech Math	3

### Support Courses (4 Credits)

EC302 Managerial Econ	4
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### Electives (16 credits)

BL Biology Elective	3
Humanities Electives	8
Free Electives	5

<b>Total Credits</b>	<b>60</b>
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In addition to the courses listed above, the Mechanical Engineering Technology associate degree courses, general education requirements must be completed for a total of at least 129 semester credits for the B.S. degree.

## B.S., AUTOMATED MANUFACTURING ENGINEERING TECHNOLOGY

(Mechanical Engineering Technology Associate Degree Track)

*FALL*

### FIRST YEAR

EN110 Freshman Comp.	3
MA140 Algebra for Tech	4
MA109 Trig & Vectors	2
ME104 Technical Drawing	4
MT112 Mfg Processes I	3
MT100 Mech Sys & Comp	2
	<u>18</u>

*SPRING*

CH108 Applied Chemistry	4
MA141 Tech Calculus I	4
ME106 Desc Geom & GDT	2
ME124 Basic CAD	3
MT113 Mfg Processes II	3
	<u>16</u>

### SECOND YEAR

EN205 Tech Rpt Writ	3
ET201 Applied Elec I	3
MT220 Statics	3
PH221 Elem Physics I	4
Soc Sci Elective	4
	<u>17</u>

CT265 Intro to Tech Prog	3
MT241 Str of Materials	4
MT253 Engr Materials	4
PH222 Elem Physics II	4
SD101 Fund of Speech	3
	<u>18</u>

### THIRD YEAR

AM315 Prog Logic Cont	3
AM325 Robotics in Mfg	4
Humanities Elective	4
MA142 Tech Calculus II	4
	<u>15</u>

AM365 Comp Ctrl Concept	3
AM375 Auto Mfg Systems	4
ET302 Appl Elect II	3
MA240 Adv Tech Math	3
MT260 Quality Engr	<u>2</u>
	<u>15</u>

### FOURTH YEAR

AM455 Auto Controls	4
AM465 Sensor Tech Appl	4
Biology Elective	3
ET485 Project Planning	1
Free Electives	<u>5</u>
	<u>17</u>

AM445 Industrial Engr	2
AM485 Auto Mfg Project	3
EC302 Managerial Econ	4
Humanities Elective	<u>4</u>
	<u>13</u>

The AMET program was initially titled Robotics Engineering Technology. The AMET program continues to provide a strong background in robotics to students enrolled in the curriculum.

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## *NOTES*

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# DEPARTMENT OF ELECTRICAL/ELECTRONICS ENGINEERING TECHNOLOGY

Assoc. Prof. David M. McDonald, Chair

## BACHELOR OF SCIENCE ELECTRICAL/ELECTRONICS ENGINEERING TECHNOLOGY

This program combines the theory and application of computer and electronics technology to prepare students for career responsibilities in a wide variety of modern computer, communications, and industrial electronics systems.

This program provides a background in modern analog and digital electronics systems and the technical applications of computers. Students work with microcontroller and computer-based electronics, communication, and industrial control systems. Graduates have found employment in product design, instrumentation, programming, production, sales, and testing.

Students from community colleges with a background in electrical or electronics engineering technology can usually transfer directly into the third year of the program. Transfer articulation agreements exist for most community colleges in Michigan.

### Engineering Technology Courses (64 Credits)

ET115	Electrical Circuits I	4
ET116	Electrical Circuits II	4
ET211	Electronic Devices	4
ET212	Analog Electronics	4
ET244	Elect Machinery	4
ET342	Network Analysis	4
ET345	Analog Design	4
ET437	Communications Syst	4
ET447	Ind Controls & Inst	4
ET485	Design Project I	1
ET486	Design Project II	3
AM365	Comp Controls Conc	3
CT224	Digital Electronics	4
CT235	Microprocessor Fund	4
CT335	Digital Design	4
CT336	Microcontroller Sys	4
DT125	Electronic Drafting	2
MT316	Statics & Strength	3

### Mathematics & Science Courses (26 Credits)

MA109	Trig & Vectors	2
MA140	Algebra for Tech	4
MA141	Tech Calculus I	4
MA142	Tech Calculus II	4

NS103	Env Biology	3
NS104	Env Biology Lab	1
PH221	Physics I	4
PH224	Physics Elec Tech	4

### Support Courses (17 Credits)

EN110	Freshman Comp	3
CS100	Microcomputer Appl	3
SD101	Fund of Speech	3
EN205	Tech Rpt Writing	3
HE181	First Aid	1
EC302	Managerial Econ	4

### Elective Courses (15 Credits)

Social Science Elective	4
Humanities Electives	8
Free Electives	3

### Designated Electives\*

6

\*Includes any CS or ME course, any Engr Tech, MA, MK, or MN course 200 level or above.

Total credits required for degree 128

# B.S. ELECTRICAL/ELECTRONICS ENGINEERING TECHNOLOGY

SPRING

FALL

## FIRST YEAR

EN110	Freshman Comp	3
ET115	Elec Circuits I	4
MA109	Trig & Vectors	2
MA140	Algebra for Tech	4
Social Science	Elec	4
		<hr/>
		17

CS100	Microcomp Appl	3
DT125	Electronic Drafting	2
ET116	Elec Circuits II	4
MA141	Tech Calculus I	4
SD101	Fund of Speech	3
		<hr/>
		16

## SECOND YEAR

CT235	Micro Fund	4
ET211	Electronic Devices	4
ET244	Elec Machinery	4
PH221	Physics I	4
		<hr/>
		16

CT224	Digital Electronics	4
EN205	Tech Rpt Writing	3
ET212	Analog Elec	4
HE181	First Aid	1
PH224	Physics for EET	4
		<hr/>
		16

## THIRD YEAR

AM365	Comp Cont Conc	3
CT335	Digital Design	4
MA142	Tech Calculus II	4
MT316	Stat & Strengths	3
Elective		3
		<hr/>
		17

CT336	Microcontroller Sys	4
ET342	Network Analysis	4
ET345	Analog Cir Design	4
NS103	Env Biology	3
NS104	Env Biology Lab	1
		<hr/>
		16

## FOURTH YEAR

ET437	Comm Sys	4
ET447	Indus Cntrl & Inst	4
ET485	Sr Design Proj I	1
Humanities	Elective	4
Designated	Elective	3
		<hr/>
		16

ET486	Sr Design Proj II	3
EC302	Managerial Econ	4
Humanities	Elective	4
Designated	Elective	3
		<hr/>
		14

# ASSOCIATE DEGREE ELECTRONICS-COMPUTER ENGINEERING TECHNOLOGY

This program prepares students for employment as technicians in computer, electronics, and instrumentation fields. Graduates can also continue their education and complete a Bachelor of Science degree in Automated Manufacturing or Electrical/Electronics Engineering Technology in two years.

The curriculum provides students with a strong base in written and oral communications, mathematics, science, computers and electronics fundamentals. The theory classes are combined with laboratory instruction so that students learn computer application, problem-solving, instrumentation, and testing skills.

Engineering Technology Courses  
(30 Credits)

ET115	Elec Circuits I	4
ET116	Elec Circuits II	4
ET211	Elec Devices	4
ET212	Analog Elect	4

ET244	Elec Machinery	4
CT224	Digital Elect	4
CT235	Micro Fund	4
DT125	Elec Drafting	2

<b>Mathematical &amp; Science Courses (18 Credits)</b>	
MA109 Trig & Vectors	2
MA140 Algebra for Tech	4
MA141 Tech Calculus I	4
PH221 Physics I	4
PH224 Phy for Elec Tech	4

<b>Support Courses (17 Credits)</b>	
EN205 Tech Rpt Writing	3
EN110 Freshman Comp I	3
CS100 Microcomputer Appl	3
HE181 First Aid	1
SD101 Fund of Speech	3
Social Science Elective	4

<b>Total Credits</b>	<b>65</b>
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## ASSOCIATE DEGREE, ELECTRONICS-COMPUTER ENGINEERING TECHNOLOGY

**FALL**

**SPRING**

### FIRST YEAR

EN110 Freshman Comp	3
ET115 Elec Circuits I	4
MA109 Trig & Vectors	2
MA140 Algebra for Tech	4
Social Science Elective	4
	<u>17</u>

CS100 Microcomputer Appl3	
DT125 Elec Drafting	2
ET116 Elec Circuits II	4
MA141 Tech Calculus I	4
SD101 Fund of Speech	3
	<u>16</u>

### SECOND YEAR

CT235 Micro Fund	4
ET211 Elec Devices	4
ET244 Elec Machinery	4
PH221 Physics I	4
	<u>16</u>

CT224 Digital Electronics	4
EN205 Tech Rpt Writing	3
ET212 Analog Elec	4
HE181 First Aid	1
PH224 Physics for ET	4
	<u>16</u>

## CERTIFICATE COMPUTER DRAFTING

This one-year program prepares students for employment in computer-aided drafting (CAD) departments within engineering companies where graduates work directly with experienced technologists and engineers to produce state-of-the-art CAD drawings.

### CERTIFICATE, COMPUTER DRAFTING (Electrical Concentration)

<b>Engineering Technology Courses (22 Credits)</b>	
DT125 Elec Drafting	2
ET115 Elec Circuits I	4
ET116 Elec Circuits II	4
ME104 Tech Drawing	4
ME106 Desc Geom & GDT	2
ME124 Basic CAD	3
ME214 Advanced Cad	3

<b>Mathematics and Science Courses (6 Credits)</b>	
MA109 Trig & Vectors	2
MA140 Alg for Tech	4
<b>Support Course (3 Credits)</b>	
EN110 Freshman Comp	3
<b>Total Credits</b>	<b>31</b>

**CERTIFICATE, COMPUTER DRAFTING  
(Electrical Concentration)**

**FALL**

ET115	Elec Circuits I	4
ME104	Tech Drawing	4
ME124	Basic CAD	3
MA109	Trig & Vectors	2
EN110	Freshman Comp	<u>3</u>
		16

**SPRING**

ET116	Elec Circuits II	4
MA140	Algebra for Tech	4
DT125	Elec Drafting	2
ME214	Advanced CAD	3
ME106	Desc Geom & GDT	<u>2</u>
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**NOTES**

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## DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCES

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**FACULTY:** Chair, Mark Terwilliger; Profs. Gary Thesing, Bernard Arbic, Thomas Mickewich, Paul Wilson; Assoc. Profs. Thomas Boger, Mieczyslaw Gutowski; Asst. Profs. Janina Gutowska, Galen Harrison and Randall Suggitt.

In recent years, a quiet revolution has taken place. The computer has moved out of the back room of large corporations and research institutions into the front offices and living rooms of modern society. Computer scientists work at the leading edge of this revolution, developing software systems that allow us to utilize the electronic hardware the engineers have built. The work is challenging, and often frustrating, but is ultimately very rewarding.

The department offers a Bachelor of Science In Computer and Mathematical Sciences that combines a study of digital computing with the study of mathematical concepts. The resulting program provides students with considerable versatility and potential for future endeavors in which practical quantitative skills are important. A **MINOR** in computer science is also available to provide excellent support and value to most majors offered at the University. This minor is an approved teaching minor for students planning to teach at the secondary level.

**Entrance Requirements:** To qualify for admission to the program in computer and mathematical sciences, applicants must satisfy University admission requirements

as described in the Admissions section of this Catalog. (This information is also included in the Viewbook.)

Secondary school academic subjects should include: Three units of English, two units of algebra, one unit of geometry. It is strongly recommended that applicants have a fourth unit of college-preparatory mathematics which includes one-half unit of trigonometry. A unit of chemistry or physics is also recommended.

For incoming students with college-level achievement, the opportunity will be offered, by means of examination, to obtain course credit or placement into an advanced course.

# BACHELOR OF SCIENCE COMPUTER AND MATHEMATICAL SCIENCES

<b>Computer Science (24 credits)</b>	
CS111 Intro to Comp Sci I	3
CS112 Intro to Comp Sci II	3
CS205 Comp Org and Arch	3
CS212 File & Database Mgmt	3
CS333 Systems Programming	3
CS334 Operating Systems Conc	3
CS411 Prog Language Concepts	3
CS418 Software Engineering	3

<b>Mathematics (23 Credits)</b>	
MA151 Calculus I	4
MA152 Calculus II	4
MA215 Fund Conc of Math	3
MA216 Disc Math. & Prob Solv	3
MA261 Intro to Num Methods	2
MA305 Computational Lin Alg	3
MA308 Prob and Math Stat	4

<b>Computer Science or Mathematics Electives (6 credits)</b>	
CS340 Computer Simulation	3
or	
MA401 Mathematical Modeling	3
CS401 Automata, Lang & Computability	3
or	
MA341 Abstract Algebra I	3

Additionally, a student is required to satisfy one of the following:

1. A minor (from any discipline), or
2. Thirty six or more credits at the 300 or 400 levels (from any discipline, including CS and MA courses required above).

Elective credits, approximately 26, and General Education requirements must be completed such that at least 124 semester credits have been earned.

A sample four-year schedule of courses for this program follows. Numerous options for completing the program are possible and students will select these with assistance of their advisor.

## B.S., COMPUTER AND MATHEMATICAL SCIENCES

*FALL*

### FIRST YEAR

CS111 Intro. to C.S. I	3
MA151 Calculus I	4
EN110 Freshman Comp.*	3
Soc. Sci. Elective	<u>4</u>
	14

*SPRING*

CS112 Intro. to C.S. II	3
MA152 Calculus II	4
Soc. Sci. Elective	4
Elective	<u>4</u>
	15

### SECOND YEAR

CS205 Comp Org & Arch	3
MA215 Fund. Conc. Math	3
EN210 Res Pap Process**	3
Nat. Sci. Elective	4
Elective	<u>3</u>
	16

CS212 File & Dtbse Mgmt	3
MA216 Disc Mth Prb Solv	3
Nat. Sci. Elective	4
SD101 Fund. of Speech	3
Elective	<u>3</u>
	16

### THIRD YEAR

CS333 Systems Prog	3
MA261 Numerical Meth	2
Humanities Elective	4
Electives	<u>7</u>
	16

CS334 Operating Sys Conc	3
MA305 Comp Linear Alg	3
Humanities Elective	4
Electives	<u>6</u>
	16

## FOURTH YEAR

CS418 Software Eng.	3	CS411 Prog. Lang. Conc.	3
CS321 Comp Graphics***	3	CS340 Computer Simulation	
MA308 Prob & Math Stats	4	or	3
MA341 Abstract Algebra I		MA401 Math Modeling	
or	3	MA309 Appl Stats	3
CS401 Automat, Lang & Computability		Electives	<u>6</u>
Elective	<u>3</u>		<u>15</u>
	16		

\*EN110 may be taken in Spring semester

\*\*EN205 or EN215 also acceptable

\*\*\*Suggested electives

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# MATHEMATICS

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**A most productive tool:** Mathematics is the foundation of the sciences and the technology largely responsible for our present standard of living. Mathematics is one of the most productive tools yet discovered for unraveling the mysteries of our universe. In some instances, it is the only language in which some ideas can be expressed. Courses offered in this discipline provide the foundation for future work in mathematics. Our teaching objectives are twofold: to give students an understanding of mathematics, and to impart an understanding of the many ways in which this tool may be used.

**Career opportunities:** Mathematicians are employed as teachers in secondary schools, colleges and universities. Many work for government agencies such as the Department of Defense, National Aeronautics and Space Administration and the Department of Commerce. Companies providing computer and data processing services, educational and testing services, and management and actuarial services also employ mathematicians.

Graduate study improves opportunities for mathematicians and students are encouraged and supported in their graduate school plans and placement. Graduate study in numerous fields related to mathematics is possible.

**Entrance Requirements:** To qualify for admission to the program in mathematics, applicants must satisfy University admission requirements as described in the Admissions section of the Catalog. (This

information is also included in the Viewbook.)

Secondary school academic subjects should include: Three units of English, two units of algebra, one

unit of geometry. It is strongly recommended that applicants have a fourth unit of college-preparatory mathematics which includes one-half unit of trigonometry. A unit of chemistry or physics is also recommended.

For incoming students with college-level achievement, the opportunity will be offered, by means of examination, to obtain course credit or placement into an advanced course.

## BACHELOR OF SCIENCE, MATHEMATICS

### Departmental Requirements (55 credits)

CS111	Intro. Computer Science I	3
MA151	Calculus I	4
MA152	Calculus II	4
MA215	Fund. Concepts of Math	3
MA216	Disc Math & Prob Solv	3
MA251	Calculus III	4
MA261	Intro. to Num Methods	2
MA305	Comp Linear Algebra	3

MA308	Prob and Math Stat	4
MA341	Abstract Algebra I	3
MA421	Real Analysis I	3
MA401	Mathematical Modeling	
	or	3
MA411	Advanced Calculus	
PH231	General Physics I	5
PH232	General Physics II	5

Additionally, six credits from MA courses numbered 300 or above. Also, a student is required to satisfy one of the following:

1. a minor (from any discipline), or
2. Thirty six or more credits at the 300 or 400 levels (from any discipline, including MA courses required above).

Free electives, approximately twenty five credits, and General Education requirements must be completed such that at least 124 semester credits have been earned.

A sample four-year schedule of courses for this program follows. Numerous options for completing the program are possible and students will select these with assistance of their advisor.

### B.S., MATHEMATICS

#### FALL

#### FIRST YEAR

EN110	Fresh Comp.	3
MA151	Calculus I	4
Soc. Sci. Elective		4
Elective		<u>4</u>
		15

#### SPRING

CS111	Intro to Cmp Sci I	3
MA152	Calculus II	4
Soc. Sci. Elective		4
Elective		<u>4</u>
		15

#### SECOND YEAR

MA215	Fund Conc Math	3
MA261	Num Methods	2
EN210	Res Pap Process	3
Humanities Elective		4
Elective		<u>4</u>
		16

MA216	Dis Mth Prb Slv	3
MA251	Calculus III	4
Humanities Elective		4
SD101	Fund. of Speech	3
Elective		<u>3</u>
		17

### THIRD YEAR

MA305	Comp Lin Alg	3
MA341	Abstract Alg. I	3
PH231	General Physics I	5
	Elective	<u>4</u>
		15

MA310	Differential Eqs.	3
	Natural Sci. Elect. (life)	4
PH232	General Physics II	5
	Elective	<u>3</u>
		16

### FOURTH YEAR

MA308	Prob & Math Stat	4
MA421	Real Analysis I	3
	Electives	<u>9</u>
		16

MA401	Math Modeling	3
	MA Elective	3
	Electives	<u>9</u>
		15

\*EN110 may be taken in Spring Semester

\*\*EN205 or EN215 also acceptable

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## NOTES

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# BACHELOR OF SCIENCE MATHEMATICS Elementary Teaching Option

A sample five-year schedule of courses for a B.S. in Mathematics with Elementary Teaching Option follows:

## B.S., MATHEMATICS Elementary Teaching Option

*FALL*

*SPRING*

### FIRST YEAR

EN110 Fresh Comp.*	3
MA151 Calculus I	4
PY101 Intro to Psy	4
TE150 Ref Lrn & Teach	<u>3</u>
	14

CS111 Intro Comp Sci I	3
MA152 Calculus II	4
NS101 Conceptual Physics	3
PS110 Intro Am Govt Pol	<u>4</u>
	14

### SECOND YEAR

EN215 Intro Lit Resarch	3
HS101 Hist Wld Civil I	4
MA103 Num Sys Prob Sol	3
MA215 Fund Conc Math	3
PY265 Child & Adol Dev	<u>3</u>
	16

EN232 American Lit II	3
HS102 Hist Wld Civil II	4
MA104 Geom & Measure	3
SD101 Fund of Speech	3
TE250 Student Div Sch	<u>3</u>
	16

### THIRD YEAR

BL105 Func Human Body	4
or	
NS103, 104 Env Biology	4
GG201 Wld Reg Geog	4
MA261 Intro Num Meth	2
MA321 Hist of Math	<u>3</u>
	13

CH108 Applied Chemistry	4
Humanities Elective	4
MA325 College Geometry	3
MA401 Math Modeling	<u>3</u>
	14

### Summer Following Third Year

GE114 Field Ex Earth Sci	3
TE301 Lrn/Lrng Tch Cont	<u>4</u>
	7

### FOURTH YEAR

EN320 Respond to Writ	3
MA308 Prob Math Stat	4
MA341 Abstract Alg I	3
TE401 Lrn Div Tch Sub	<u>5</u>
	15

EN335 Children's Lit	3
MA305 Comp Linear Alg	3
TE402 Craft Teach Prac	<u>6</u>
	12

### FIFTH YEAR Internship Year, MSU Graduate Courses

TE501 Int Tch Div Lrnrs I	6
TE801 Pro Rol Tch Pra I	3
TE802 Rfl Inq Tch Prac I	<u>3</u>
	12

TE502 Int Tch Div Lrnrs II	6
TE803 Pro Rol Tch Pra II	3
TE804 Rfl Inq Tch Prac II	<u>3</u>
	12

# BACHELOR OF SCIENCE MATHEMATICS Secondary Teaching Option

A sample five-year schedule of courses for a B.S. in Mathematics with Secondary Teaching Option follows:

## B.S., MATHEMATICS Secondary Teaching Option

*FALL*

*SPRING*

### FIRST YEAR

EN110 Fresh Comp.*	4	MA152 Calculus II	4
MA151 Calculus I	4	SD101 Fund of Speech	3
PY101 Intro to Psy	4	Soc Sci Elective	4
TE150 Ref Lrn & Teach	<u>3</u>	Elective	<u>4</u>
	14		15

### SECOND YEAR

CS111 Intro Comp Sci I	3	MA216 Dis Math Prob Sol	3
EN210 Res Paper Process**	3	MA251 Calculus III	4
MA215 Fund Conc Math	3	TE250 Student Div Sch	3
Humanities Elective	4	Humanities Elective	4
Elective	<u>3</u>	Elective (Minor)	<u>3</u>
	16		17

### THIRD YEAR

MA341 Abstract Alg I	3	MA305 Comp Linear Alg	3
CH115 Gen Chem I	4	MA325 College Geom	3
or		CH116 Gen Chem II	4
PH231 Gen Physics I	5	or	
Electives (Minor)	<u>7</u>	PH232 Gen Physics II	5
	14-15	Natural Sci Elec (Life)	<u>4</u>
			14-15

Summer Following Third Year

TE301 Lrn/Lrng Tch Cont 4

### FOURTH YEAR

MA308 Prob Math Stat	4	MA401 Math Modeling	3
MA321 Hist of Math	3	TE402 Craft Teach Prac	6
TE401 Lrn Div Tch Sub	5	Elective (Minor)	<u>5</u>
Elective (Minor)	<u>4</u>		14
	16		

### FIFTH YEAR Internship Year, MSU Graduate Courses

TE501 Int Tch Div Lrnrs I	6	TE502 Int Tch Div Lrnrs II	6
TE801 Prof Rol Tch Prac	3	TE803 Prof Rol Tch Prac II	3
TE802 Rfl Inq Tch Prac I	<u>3</u>	TE804 Rfl Inq Tch Prac II	<u>3</u>
	12		12

\*EN110 may be taken in the spring semester

\*\*EN205 or EN215 also acceptable

# DEPARTMENT OF MECHANICAL ENGINEERING TECHNOLOGY

Assoc. Prof. Paul R. Duesing, Chair

## BACHELOR OF SCIENCE MECHANICAL ENGINEERING TECHNOLOGY

This program prepares graduates for career responsibilities in machine design, manufacturing, and thermal sciences.

The curriculum provides a broad base for job preparation and emphasizes topics which are current in today's technical environment. Graduates have found employment in product design, manufacturing, plant engineering, inspection, production supervision, and sales and service. Students graduating from community

colleges with an associate degree in mechanical engineering technology can usually transfer into this program and receive a bachelor of science degree in mechanical engineering technology in two years. Many community college programs in Michigan have transfer articulation agreements with Lake Superior State University.

### Engineering Technology Courses (70 Credits)

ME104	Tech Drawing	4
ME106	Desc Geom & GDT	2
ME124	Basic CAD	3
MT100	Mech Sys & Comp	2
MT112	Mfg Proc I	3
MT113	Mfg Proc. II	3
MT220	Statics	3
MT241	Strength of Materials	4
MT253	Engr Materials	4
MT260	Quality Engr I	2
MT320	Dynamics	4
MT341	Fluid Mechanics	3
MT371	NC/CNC Man Proc	3
MT410	Machine Design I	4
MT411	Machine Design II	4
MT412	Finite Element Anal	3
MT430	Thermodynamics	3
MT431	Thermo-Heat Trans	4
AM315	Prog Logic Control	3
CT265	Intro to Tech Prog	3
ET201	Electricity I	3
ET302	Applied Elec II	3

### Mathematics and Science Courses (26 Credits)

CH108	Appl Chemistry	4
MA109	Trig. & Vectors	2
MA140	Algebra for Tech	4
MA141	Tech. Calc. I	4
MA142	Tech. Calc. II	4
PH221	Elmts. Phys. I	4
PH222	Elmts. Phys. II	4

Support Courses (13 Credits)		
EC302	Managerial Econ	4
EN110	Freshman Comp	3
EN205	Tech Rpt Writing	3
SD101	Fund of Speech	3

Elective courses (18 Credits)		
	Biological Science Elec	3
	Social Science Elec	4
	Humanities Elec	8
	Free Elective	3

Designated Electives\* 3

\*Select one of the following courses: AM305, ME214, or MT360



In addition to the above courses, general education requirements must be completed for a total of 130 semester credits.

## B.S., MECHANICAL ENGINEERING TECHNOLOGY

*FALL*

*SPRING*

### FIRST YEAR

MA109 Trig & Vectors	2	ME106 Des Geom & GDT	2
MA140 Algebra for Tech	4	MA141 Tech Calc I	4
EN110 Freshman Comp	3	ME124 Basic CAD	3
ME104 Tech Drawing	4	MT113 Mfg Processes II	3
MT112 Mfg Processes I	3	CH108 Appl Chemistry	<u>4</u>
MT100 Mech Sys & Comp	<u>2</u>		16
	18		

### SECOND YEAR

PH221 Elmts of Physics I	4	PH222 Elmts of Physics II	4
MT220 Statics	3	MT241 Str of Materials	4
ET201 Electricity I	3	MT253 Eng Matls	4
Soc Sci Elective	4	CT265 Intro to Tech Prog	3
EN205 Tech Rep Wrtg	<u>3</u>	SD101 Fund of Speech	<u>3</u>
	17		18

### THIRD YEAR

MA142 Tech Calculus II	4	AM315 Prog Logic Contr	3
MT320 Dynamics	4	MT341 Fluid Mech	3
MT371 NC/CNC Man Proc	3	ET302 Applied Elect II	3
Biology Elective	3	Technical Elective	3
MT260 Quality Engr I	<u>2</u>	Free Elective	<u>3</u>
	16		15

### FOURTH YEAR

MT410 Machine Design I	4	MT411 Machine Design II	4
MT430 Thermodynamics	3	MT431 Therm-Heat Trans	4
Humanities Elective	4	Humanities Elective	4
MT412 Fin Elem Analysis	<u>3</u>	EC302 Managerial Econ	<u>4</u>
	14		16

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# *NOTES*

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# ASSOCIATE DEGREE MECHANICAL ENGINEERING TECHNOLOGY

This program prepares graduates for work as draftsmen, product designers, machine designers, instrument technicians, and development and installation specialists in the creation and use of all types of production machinery.

Requirements for the Associate Degree in Mechanical Engineering Technology are the same as the first two years of the Bachelor of Science Degree in Mechanical Engineering Technology. Thus, the graduate of this program has the option of

seeking employment as a technician, or continuing his or her education by transferring directly into the third year of the Bachelor of Science in Mechanical Engineering Technology or Automated Systems Engineering Technology.

## Mechanical Engineering Technology (34 Credits)

ME104	Tech. Drawing	4
ME106	Desc Geom & GDT	2
ME124	CAD	3
MT100	Mech Syst & Comp Prog	2
MT112	Manf Proc I	3
MT113	Manf Proc II	3
MT220	Statics	3
MT241	Strength of Materials	4
MT253	Engr Mat	4
ET201	Electricity I	3
CT265	Intro Tech Prog	3

## Mathematics & Science Courses (22 Credits)

CH108	Applied Chemistry	4
MA109	Trig & Vectors	2
MA140	Algebra for Tech	4
MA141	Tech Calc I	4
PH221	Physics I	4
PH222	Physics II	4

## Support Courses (9 Credits)

EN110	Freshman Comp	3
EN205	Bsc Tch Rep Wrtg	3
SD101	Speech	3

## Elective Courses (4 Credits)

Soc Sci	Elective	4
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A total of 69 credits is required.

## ASSOCIATE DEGREE, MECHANICAL ENGINEERING TECHNOLOGY

*FALL*

### FIRST YEAR

MA109	Trig & Vectors	2
MA140	Algebra for Tech	4
EN110	Freshman Comp	3
ME104	Tech Drawing	4
MT112	Mfg Processes I	3
MT100	Mech Sys & Comp	2
		<u>18</u>

*SPRING*

ME106	Des Geom & GDT	2
MA141	Tech Calc I	4
ME124	Basic CAD	3
MT113	Mfg Processes II	3
CH108	Appl Chemistry	4
		<u>16</u>

## SECOND YEAR

PH221	Elmts of Physics I	4
MT220	Statics	3
ET201	Electricity I	3
Soc Sci	Elective	4
EN205	Tech. Report Writ.	<u>3</u>
		17

PH222	Elmts of Physics II	4
MT241	Str of Mat	4
MT253	Eng Matls	4
CT265	Intro to Tech Prog	3
SD101	Fund of Speech	<u>3</u>
		18

## CERTIFICATE COMPUTER DRAFTING

This one-year program prepares students for employment in computer-aided drafting (CAD) departments within engineering companies where graduates work directly with experienced technologists and engineers to produce state-of-the-art CAD drawings.

### CERTIFICATE, COMPUTER DRAFTING (Mechanical Concentration)

#### Engineering Technology Courses (23 Credits)

DT132	Const Sketch & Draw	3
ME104	Tech Drawing	4
ME106	Desc Geom & GDT	2
ME124	Basic CAD	3
ME214	Adv CAD	3
MT100	Mech Sys & Comp	2
MT112	Mfg Proc I	3
MT113	Mfg Proc II	3

#### Mathematics and Sciences Courses (6 Credits)

MA109	Trig & Vectors	2
MA140	Algebra for Tech	4

#### Support Course (3 Credits)

EN110	Freshman Comp	3
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Total Credits 32

### CERTIFICATE, COMPUTER DRAFTING (Mechanical Concentration)

#### FALL

MT100	Mech Sys & Comp	2
MT112	Mfg Proc I	3
ME104	Technical Draw	4
ME124	Basic CAD	3
MA109	Trig & Vectors	2
EN110	Fresh Comp	<u>3</u>
		17

#### SPRING

MT113	Mfg Proc II	3
MA140	Algebra for Tech	4
DT132	Cons Sketch Draw	3
ME214	Adv CAD	3
ME106	Desc Geom & GDT	<u>2</u>
		15

# OTHER ENGINEERING TECHNOLOGY PROGRAMS

## BACHELOR OF SCIENCE ENVIRONMENTAL ENGINEERING TECHNOLOGY

This program prepares students for employment as environmental specialists. The curriculum provides students with a strong fundamental base in chemistry and engineering technology. The graduate will be able to plan and conduct studies to measure the chemical makeup and concentration of pollutants and map out a strategy for reducing them. Also, he/she will be able to test the effectiveness of pollution control devices and advise on compliance with regulations.

### B.S., ENVIRONMENTAL ENGINEERING TECHNOLOGY

#### Engineering Technology Courses (29 Credits)

ET201	Electricity I	3
ET302	Electricity II	3
ET485	Project Planning	1
ME124	Comp Aided Draft	3
MT220	Statics	3
MT241	Strength Materials	4
MT260	Quality Engr I	2
MT341	Fluid Mechanics	3
MT430	Thermodynamics	3
MT431	Thermo-Heat Trans	4

#### Environmental Science Courses (11 Credits)

EV249	Water Pollution	3
EV311	Environmental Law	2
EV313	Solid/Haz Wastes	3
EV425	Env Syst Analysis	3

#### Mathematics & Science Courses (57 Credits)

BL204	Microbiology	4
CH115	General Chem I	5
CH116	General Chem II	4
CH225	Organic Chem I	4

CH231	Quant Analysis	3
CH342	Environ Chem II	4
CH361	Physical Chem	4
GE410	Engineering Geology	4
MA109	Trig & Vectors	2
MA140	Algebra for Tech	4
MA141	Tech Calculus I	4
MA142	Tech Calculus II	4
MA207	Prin Stat Methods	3
NS103	Intro Env Science	3
NS104	Intro Env Sci Lab	1
PH221	Physics I	4

#### Support Courses (16 Credits)

CS100	Intro to Microcomp	3
EC302	Managerial Econ	4
EN110	Freshman Comp	3
EN205	Tech Report Writ	3
SD101	Fund of Speech	3

#### Elective Courses (16 Credits)

Soc Science Electives	4
Humanities Electives	8
Technical Electives	4

Total Credits 129

## B. S., ENVIRONMENTAL ENGINEERING TECHNOLOGY FIRST YEAR

### FALL

MA109 Trig/Vectors	2
MA140 Algebra for Tech	4
EN110 Freshman Comp	3
CH115 General Chem I	5
ME124 Comp-Aided Draft	3
	<u>17</u>

### SPRING

MA141 Tech Calculus I	4
CS100 Intro to Microcomp	3
CH116 General Chem II	4
NS103 Intro Environ Sci	3
NS104 Intro Envir Sci Lab	1
	<u>16</u>

### SECOND YEAR

PH221 Elem of Physics I	4
MT220 Statics	3
CH225 Organic Chem I	4
EN205 Tech Report Writ	3
MA207 Prin Stat Methods	3
	<u>17</u>

SD101 Fund of Speech	3
MT241 Strength Materials	4
MT260 Quality Engineering	2
EV249 Water Pollution	3
Social Science Elective	4
	<u>16</u>

### THIRD YEAR

MA142 Tech Calculus II	4
ET201 Electricity I	3
BL204 Gen Microbiology	4
CH231 Quant Analysis	3
Technical Elective	4
	<u>18</u>

EV311 Environmental Law	2
MT341 Fluid Mechanics	3
ET302 Electricity II	3
CH342 Environ Chem II	4
EC302 Managerial Econ	4
	<u>16</u>

### FOURTH YEAR

MT430 Thermodynamics	3
Humanities Elective	4
GE410 Engr Geology	4
EV313 Solid/Haz Wastes	3
ET485 Project Planning	1
	<u>15</u>

MT431 Thermo/Heat Tran	4
Humanities Elective	4
CH361 Physical Chem	4
EV425 Envir Syst Analysis	3
	<u>15</u>

## ASSOCIATE DEGREE GENERAL ENGINEERING

This curriculum is for students who plan to transfer to engineering after two years at Lake Superior State University.

Entrance requirements: To qualify for admission as freshmen, applicants must be graduates of accredited secondary schools with above average standing in their class. Their secondary school preparation should include a four-year curriculum of at least 15 units of acceptable entrance credits. The following subjects should be included in these credits: one unit of beginning algebra, one unit of

geometry, one-half unit of advanced algebra, one-half unit of trigonometry, one unit of chemistry or physics, and three units of English. Recommended: a fourth year of senior mathematics.

Current catalogs for many colleges and universities offering engineering programs are on file in the Engineering Technology Department or the Admissions Office.

## ASSOCIATE DEGREE, GENERAL ENGINEERING

FALL

SPRING

### FIRST YEAR

CH115 General Chem I	5	CS111 Intro Comp Appl	3
EN110 Freshman Comp	3	CH116 General Chem II	4
MA151 Calculus I	4	MA152 Calculus II	4
ME104 Tech Drawing	4	ME124 Basic Cad	3
RA Elective	1	RA Elective	1
	<u>17</u>		<u>15</u>

### SECOND YEAR

EC201 Prin Macrocon	3	EC202 Prin Microcon	3
EN210 Res Paper Proc	3	MA251 Calculus III	4
MA207 Prin Stat Methods	3	MA310 Diff Equations	3
PH231 General Phy I	4	PH232 General Phy II	4
Elective	4	SD101 Fund of Speech	3
	<u>17</u>		<u>17</u>

## ASSOCIATE DEGREE GENERAL ENGINEERING TECHNOLOGY

Associate degree program in general engineering technology is a program intended for students who have decided to major in engineering technology but have not decided on a specific area. The student will receive extra advising and schedule courses in different areas to assist in determining career interests. As soon as an engineering technology major is chosen, the student will transfer to that program.

## ASSOCIATE DEGREE, GENERAL ENGINEERING TECHNOLOGY

FALL

SPRING

### FIRST YEAR

ET100 Exploring Tech	4	ME/MT Elective	3
ME/MT Elective	3-4	ET115 Circuits I	4
MA109 Trigonometry	2	SD101 Fund of Speech	3
MA140 Algebra	4	MA141 Tech Calculus I	4
CS100 Intro to Microcomp	3	EN110 Freshman Comp	3
	<u>16-17</u>		<u>17</u>

### SECOND YEAR

EN205 Tech Report Writ	3	Soc Sci Elective	4
PH221 Physics I	4	PH222 Physics II	4
MT220 Statics	3	Technology Electives	8
Technology Electives	4		<u>16</u>
	<u>14</u>		

First Year ME/MT Electives to be chosen from

ME104 Tech Drawing	4
ME106 Descriptive Geom	2
ME124 Basic CAD	3
ME214 Advanced CAD	3
MT112 Manuf Proc	3

Second Year Technology Electives to be chosen from

AM305 Intro Automation	3
CT224 Digital Electron	4
ET116 Circuits II	4
ET211 Elec Devices	4
ET212 Analog Electives	4
MT241 Strength Materials	4
MT253 Engineer Materials	4
MT260 Quality Engr I	2

## MINOR COURSES OF STUDY

### COMPUTER SCIENCE MINOR

For a minor in computer science a total of 21 semester credits must be selected as follows:

CS111 Intro to Comp Sci I	3
CS112 Intro to Comp Sci II	3
CS205 Comp Org & Arch	3
CS212 File & Dtbse Mgmt	3

Plus three additional CS courses at the 300 or 400 level 9

**Note:** The mathematics prerequisite for CS111 implies that at least one mathematics course at the 100 level or above must be taken. Some CS elective courses may have additional mathematics requirements.

This is an approved teaching minor.

### MATHEMATICS MINOR

For a minor in mathematics a total of at least 22 semester credits must be selected as follows:

CS111 Intro to Comp Sci I	3
MA151,152 Calculus I & II	8
or	
MA141,142 Tech Calculus I & II	8
MA207 Prin Stat Meth	3
or	
MA308 Prob & Math Stat	4
MA215 Fund Concepts Math	3
or	
MA401 Mathematical Modeling	3
MA261 Intro Numerical Meth	2
or	
MA305 Comp Linear Algebra	3

Plus MA elective credits from MA215,

MA216 or any MA course numbered 250 or above such that credits total 22.

(Note that MA141 and MA151 have prerequisites which may effectively add credits to the above when these are chosen.)

### MATHEMATICS TEACHING OPTION

For a minor in mathematics with teaching option a total of at least 23 credits must be selected as follows:

MA151 Calculus I	4
MA152 Calculus II	4
MA215 Fund Concepts Math	3
MA216 Discrete Math Prob Solv	3
MA207 Prin of Stat Meth	3
or	
MA308 Prob & Math Stat	4
MA321 Hist of Math	3
MA325 College Geometry	3

## NOTES

# School of Health and Human Services





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## DEPARTMENT OF CRIMINAL JUSTICE/FIRE SCIENCE

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**FACULTY:** Chair, Criminal Justice and Fire Science, Asst. Prof. James Blashill; Asst. Prof. Elizabeth Foley; Prof. Terry Heyns; Assoc. Prof. James Madden; Asst. Profs. Dennis Holmes, Paige Ralph.

Programs include: Criminal justice baccalaureate degree with emphasis in: corrections, criminalistics, generalists, law enforcement, loss control, and public safety. Fire Science baccalaureate degrees with emphasis in engineering technology, hazardous materials, and generalists. Two-year associate degrees in corrections, fire science, and law enforcement.

### CRIMINAL JUSTICE

Michigan Law Enforcement Officers Training Council (MLEOTC) Certification: Students enrolled in the emphasis in criminalistics, law enforcement, or public safety in the criminal justice baccalaureate degree may be eligible for MLEOTC Certification. Upon graduation and the completion of the mini-academy, these students may be eligible for employment with local law enforcement agencies in Michigan without further training.

MLEOTC Mini-Academy: Students enrolled in the MLEOTC Track will have to complete a six week mini-academy which is held after the end of the school year. Contained within the mini-academy are skill hours such as firearms, driving, and defense tactics. Only students who are enrolled in the MLEOTC track at the beginning of their senior year will be eligible for enrollment in the mini-academy.

Michigan corrections Officer Training Council Certification: Students enrolled in the associate or baccalaureate degree in corrections

will also take the five courses necessary for this certification.

Canadian Students may substitute CJ202 Canadian Criminal Law and CJ406 Advanced Canadian Jurisprudence for CJ319 Substantive Criminal Law and CJ409 Procedural Law. PS160 Introduction to Canadian Government may be substituted for PS110 Introduction to US Government.

Entrance Requirements: To qualify for admission as freshmen, applicants must meet the minimum criteria of Lake Superior State University. Criminalistics and fire science students must have completed two units of algebra and at least one laboratory course, preferably chemistry, in high school.

Code of conduct: Majors in criminal justice and fire science will be required to sign a code of conduct. The code specifies certain behavior on the part of students and also states that violation of criminal laws and/or university regulations may end in the separation of the student from the criminal justice/fire science program.

# BACHELOR OF SCIENCE CRIMINAL JUSTICE Corrections Emphasis

## General Education Requirements (25\* credits)

<b>Major Requirements (46 credits)</b>		
CJ101	Intro to Crim Just ✓	3
CJ102	Police Process ✓	3
CJ106	Juvenile Justice ✓	3
CJ110	Intro to Corrections ✓	3
CJ130	Client Rel in Corr ✓	3
CJ140	Corr Client Growth ✓	3
	& Development	3
CJ220	Institutional Corr ✓	3
CJ240	Comm Based Corr ✓	3
CJ250	Correctional Law ✓	3
CJ319	Substantive Criminal Law ✓	3
	or	3
CJ202	Canadian Criminal Law	
CJ321	Eth Issues in Pub Safety	3
CJ330	Correctional Casework	3
CJ345	Statistics	4

CJ401	Senior Seminar	3
CJ402	Crim Just Internship	3-9

<b>Support Courses (20 credits)</b>		
PS160	Intro Can Govt/Pol	3-4
	or	
PS110	Intro Amer Govt/Pol	3
PS120	Legal Processes	3
PY101	Intro to Psych ✓	4
PY259	Abnormal Psychology**	3
SO214	Criminology**	3
SO100	Sp tp: Cultural Div**	3

## Minor (20 credits)

## Electives (13 credits)

\*8 Hours Included in Support Courses.  
\*\*B.S. Requirement.

## B.S. CRIMINAL JUSTICE (Corrections Emphasis)

FALL

### FIRST YEAR

CJ101	Intro to Crim Just	3 ✓
CJ102	Police Process	3 ✓
CJ110	Intro to Corrections	3 ✓
EN110	Freshman Comp	3 ✓
	Elective	3
		<u>15</u>

SPRING

CJ106	Juvenile Justice	3 ✓
PS160	Intro to Can Govt	3-4
	or	
PS110	Intro to Amer Govt	3 ✓
CJ130	Client Growth	3 ✓
SD101	Speech	3
	Elective	3
		<u>15-16</u>

### SECOND YEAR

CJ140	Correction Client	3 ✓
CJ240	Comm Based Corr	3 ✓
EN210	Res Paper Proc	3 ✓
PY101	Intro to Psych	4 ✓
	Elective	2
		<u>15</u>

PS120	Legal Proc	3
CJ220	Inst Corrections	3 ✓
PY259	Abnormal Psych	3
	Humanities Elective	4
	Natural Science	4
		<u>17</u>

### THIRD YEAR

CJ250	Corr Law	3 ✓
SO214	Criminology	3
	Natural Science	4
	Elective	3
	Minor	3
		<u>16</u>

CJ330	Corr Casework	3
CJ321	CJ/FS Ethics	3
SO100	Sp Tp: Cultural Div	3
CJ345	Statistics	4
	Electives	2
		<u>15</u>

### FOURTH YEAR

CJ401	Seminar	3
CJ319	Subst Crim Law	3 ✓
	or	
CJ202	Canadian Law	
	Minor	10
		<u>16</u>

CJ402	Internship	3
	Humanities Elective	4
	Minor	8
		<u>15</u>

# BACHELOR OF SCIENCE CRIMINAL JUSTICE Criminalistics Emphasis

## General Education Requirements (17\* credits)

### Major Requirements (36 credits)

CJ101	Intro to Crim Just	3
CJ102	Police Process	3
CJ201	Firearms Training	1
CJ243	Investigation	3
CJ313	Crisis Int Dev Beh**	3
CJ319	Subst Criminal Law**	3
CJ321	Eth Issues in Pub Safety	3
CJ345	Statistics	4
CJ401	Senior Seminar	3
CJ402	Crim Just Internship	3-9
CJ409	Procedural Criminal Law**	3
CJ444	Criminalistics	4

### Support Courses (59 credits)

BL110	General Zoology..	4
BL111	General Botany	4
CH115	General Chemistry I***	5
CH116	General Chemistry II	4

CH225	Organic Chemistry I	4
CH226	Organic Chemistry II	4
CH231	Quantitative Analysis	3
CH232	Instrumental Analysis	3
CH351	Introductory Biochemistry	4
HE190	Prehospital Emrg Care & Crisis Intervention I	3
HE191	Prehospital Emrg Care & Crisis Intervention II*	2
NS101	Conceptual Physics	3
PS110	Intro Amer Govt/Pol	4
PY101	Intro to Psychology	4
PY259	Abnormal Psychology	3
RA197	Phys Fit LE****	2
SO214	Criminology	3

### Electives (12 credits)

- \*16 Hours Included in Support
- \*\*MLEOTC Courses
- \*\*\*B.S. Requirement
- \*\*\*\*Repeated twice

## B.S. CRIMINAL JUSTICE (Criminalistics Emphasis)

### FALL

#### FIRST YEAR

CJ101	Intro to Crim Just	3
CJ102	Police Process	3
CH115	Prin of Chem I	4
EN110	Freshman Comp	3
PY101	Intro to Psych	4
		<u>17</u>

#### SECOND YEAR

CH225	Org Chemistry I	4
CH231	Quant Anal	3
BL110	Zoology	4
CJ201	Firearms	1
CJ243	Investigation	3
		<u>15</u>

#### THIRD YEAR

CH351	Biochemistry	4
Humanities	Elective	4
RA	Electives	1
Elective		7
		<u>16</u>

#### FOURTH YEAR

CJ319	Substantive Law*	3
Electives		2
CJ401	Seminar	3
HE190	PEC & CI I*	3
RA197	Phys Fit - LE**	1
		<u>12</u>

### SPRING

CH116	Princ of Chem II	4
PS110	Intro to Amer Govt	4
SD101	Speech	3
Elective		3
		<u>14</u>

CH226	Org Chemistry II	4
CH232	Inst Anal	3
BL111	Botany	4
PY259	Abnormal Psych	3
EN210	Res Paper Proc	3
		<u>17</u>

NS101	Comc Phy	3
SO214	Criminology	3
CJ345	Statistics	4
CJ402	Internship	3-9
Humanities	Elective	4
		<u>17</u>

CJ321	Ethics*	3
CJ313	Crisis Intervention*	3
CJ444	Criminalistics*	4
CJ409	Procedural Law*	3
HE191	PEC CI II*	2
RA197	Phys Fit - LE**	1
		<u>16</u>

\*MLEOTC Course

\*\*MLEOTC Students Only

# BACHELOR OF SCIENCE CRIMINAL JUSTICE Generalist Emphasis

## General Education Requirements (25 credits)

### Major Requirements (42 credits)

CJ101 Intro to Crim Just	3
CJ102 Police Process	3
CJ110 Intro to Correction	3
CJ345 Statistics	4
CJ401 Senior Seminar	3
Other CJ Classes****	26

### Support Courses\*\* (20 credits)

PS110 Intro to Amer Govt/Pol	4
PS120 Legal Processes	3

PY101 Intro to Psych	4
PY259 Abnormal Psychology***	3
SO214 Criminology***	3
SO100 Sp Tp: Cultural Div***	3

### Electives (37 credits)

\*8 Hours Included in Support Courses.  
 \*\*At Least 20 Hours of Support or Electives  
 at 300-400 Level.  
 \*\*\*B.S. Requirement.  
 \*\*\*\*Min 19 credit hours at 300-400 level

## B.S., CRIMINAL JUSTICE (Generalist Emphasis)

### FALL

#### FIRST YEAR

CJ101 Intro to Crim Just	3
CJ102 Police Process	3
EN110 Freshman Comp	3
CJ Elective	3
Elective	<u>3</u>
	15

### SPRING

PS110 Intro to Amer Govt	4
PS120 Legal Process	3
SD101 Speech	3
CJ Elective	<u>3</u>
	13

#### SECOND YEAR

CJ110 Intro to Corrections	3
EN210 Res Paper Proc	3
PY101 Intro. to Psych	4
Humanities Elective	4
CJ Elective	<u>3</u>
	17

PY259 Abnormal Psych	3
Humanities Elective	4
Natural Science	4
CJ Elective	3
Elective	<u>3</u>
	17

#### THIRD YEAR

SO100 Sp Tp: Cultural Div	3
CJ Elective	6
Elective	<u>5</u>
	14

SO214 Criminology	3
Natural Science	4
CJ345 Statistics	4
Electives	<u>5</u>
	16

#### FOURTH YEAR

CJ401 Seminar	3
Electives	<u>12</u>
	15

CJ Electives	9
Electives	<u>8</u>
	17

# BACHELOR OF SCIENCE CRIMINAL JUSTICE Law Enforcement Emphasis

## General Education Requirements (25\* credits)

<b>Major Requirements (51 credits)</b>	
CJ101 Intro to Crim Just	3
CJ102 Police Process	3
CJ106 Juvenile Justice	3
CJ110 Intro to Corrections	3
CJ201 Firearms Training	1
CJ206 On Campus Internship	3
CJ212 Loss Control	3
CJ243 Investigation	3
CJ313 Crisis Int of Dev Beh	3
CJ319 Substantive Criminal Law or	3
CJ202 Canadian Criminal Law	3
CJ321 Eth Issues in Pub Safety	3
CJ345 Statistics	4
CJ401 Senior Seminar	3

CJ402 Crim Just Intern	3-9
CJ409 Procedural Criminal Law or	3
CJ406 Adv Can Jurisprudence	4
CJ444 Criminalistics	3
FS101 Intro to Fire Science	3
<b>Support Courses (20 credits)</b>	
PS160 Intro to Can Govt/Pol or	3-4
PS110 Intro to Amer Govt/Pol**	3
PS120 Legal Processes**	4
PY101 Intro to Psych	3
PY259 Abnormal Psychology	3
SO214 Criminology	3
SO100 Sp Tp: Cultural Div	3

Electives (28 credits)  
\*8 Hours Included in Support Courses  
\*\*B.S. Requirement

## B.S. CRIMINAL JUSTICE (Law Enforcement Emphasis)

### FALL

#### FIRST YEAR

CJ101 Intro to Crim Just	3
CJ102 Police Process	3
CJ110 Intro to Corrections	3
EN110 Freshman Comp	4
Elective	4
	<u>17</u>

#### SECOND YEAR

CJ201 Firearms	1
CJ212 Loss Control	3
EN210 Res Paper Proc	3
FS101 Intro to Fire Sci	3
PY101 Intro to Psych	4
CJ243 Investigation	3
	<u>17</u>

#### THIRD YEAR

SO100 Sp Tp: Cultural Div	3
Humanities Elective	4
Natural Science	4
Elective	2
	<u>13</u>

#### FOURTH YEAR

CJ401 Seminar	3
CJ319 Subst Law or	3
CJ202 Canadian Law	3
Electives	8
	<u>14</u>

### SPRING

CJ106 Juvenile Justice	3
PS160 Intro to Can Govt or	3-4
PS110 Intro to Amer Govt	3
PS120 Legal Process	3
SD101 Speech	3
Elective	3
	<u>15-16</u>

CJ206 LE/LC Internship	3
PY259 Abnormal Psych	3
SO214 Criminology	3
Humanities Elective	4
Natural Science	4
	<u>17</u>

CJ313 Crisis Intervention	3
CJ321 CJ/FS Ethics	3
CJ345 Statistics	4
Elective	5
	<u>15</u>

CJ402 Internship	3-9
CJ409 Crim Proc or	3
CJ406 Canadian Juris	4
CJ444 Criminalistics	6
Electives	6
	<u>16</u>

# CERTIFICATION CRIMINAL JUSTICE Law Enforcement Emphasis

## General Education Requirements (25\* credits)

### Major Requirements (51 credits)

CJ101	Intro to Crim Just	3
CJ102	Police Process	3
CJ106	Juvenile Justice	3
CJ116	Intro to Corrections	3
CJ201	Firearms Training	1
CJ206	On Campus Internship	3
CJ212	Loss Control	3
CJ243	Investigation	3
CJ313	Crisis Inter of Dev Beh**	3
CJ319	Subst Criminal Law**	3
CJ321	Eth Issues Pub Safety**	3
CJ345	Statistics	4
CJ401	Senior Seminar	3
CJ402	Crim Just Internship	3-9
CJ409	Procedural Criminal Law**	3
CJ444	Criminalistics**	4
FS101	Intro to Fire Science	3

## Support Courses (27 credits)

HE190	Prehospital Emrg Care & Crisis Intervention I	3
HE191	Prehospital Emrg Care & Crisis Intervention II	2
<del>PS110</del>	Intro to Amer Govt/Pol	4
PS120	Legal Processes	3
<del>PY101</del>	Intro to Psych	4
<del>PY259</del>	Abnormal Psychology***	3
RA197	Phys Fit - LE****	2
SO214	Criminology***	3
<del>SO100</del>	Sp Tp: Cultural Div***	3

## Electives (21 credits)

\*8 Hours Included in Support Courses  
 \*\*MLEOTC Courses  
 \*\*\*B.S. Requirement  
 \*\*\*\*Repeated Twice

## B.S. CRIMINAL JUSTICE (Certification in Law Enforcement)

### FALL

#### FIRST YEAR

CJ101	Intro to Crim Just	3
CJ102	Police Process	3
CJ110	Intro to Corrections	3
EN110	Freshman Comp	3
Elective		3
		<u>15</u>

#### SECOND YEAR

CJ201	Firearms	1
CJ212	Loss Control	3
EN210	Res Paper Proc	3
FS101	Intro to Fire Sci	3
CJ243	Investigations	3
Elective		3
		<u>16</u>

#### THIRD YEAR

Humanities Elective	4	
Natural Science	4	
SO100	Sp Tp Cultural Div	3
Elective		5
		<u>16</u>

#### FOURTH YEAR

CJ319	Substantive Law*	3
Electives		3
CJ401	Seminar	3
RA197	Phys Fit -LE I**	1
HE190	Pec & CI I*	3
		<u>13</u>

### SPRING

CJ106	Juvenile Justice	3
PS110	Intro to Amer Govt	4
PS120	Legal Process	3
SD101	Speech	3
PY101	Intro Psychology	4
		<u>17</u>

CJ206	LE/LC Internship	3
PY259	Abnormal Psych	3
SO214	Criminology	3
Humanities Elective		4
Natural Science		4
		<u>17</u>

CJ402	Internship	3-9
CJ345	Statistics	4
Electives		7
		<u>14-20</u>

CJ321	Ethics*	3
CJ313	Crisis Intervention*	3
CJ444	Criminalistics*	3
RA197	Phys Fit -LE I**	1
CJ409	Procedural Law*	3
HE191	Pec & CI II*	2
		<u>16</u>

\*MLEOTC Course  
 \*\*MLEOTC Students Only

**THREE-YEAR DEGREE PLAN FOR A B.S. IN CRIMINAL JUSTICE FOLLOWING THE NRT DEGREE.**  
 SEE DEPARTMENT OF BIOLOGY

Students with a particular interest in state and federal laws enacted to protect our natural resources and federal restrictions on the use of our renewable resources should consider obtaining both an Associate Degree in Natural Resources Technology (2 years) and a Bachelor of Science Degree in Criminal Justice (3 additional years). The NRT degree will provide the student with a good general background in natural resources and the Criminal Justice degree will allow the student to be fully qualified for many different

law enforcement opportunities. Jobs for conservation law offices are limited, but the above configuration of degrees prepares a student to be highly competitive for openings that do occur. Students selecting this course of study should work closely with their advisor in order to complete both degrees in the five year span. After completing the two-year NRT Associate Degree, students would complete the following sequence of courses. This plan assumes MLEOTC certification. 91 additional hours.

**B.S. CRIMINAL JUSTICE**

*FALL*

**THIRD YEAR**

CJ101 Intro to Crim Just	3
CJ102 Police Process	3
CJ110 Intro to Corrections	3
PS110 Intro Amer Govt	4
Humanities Elective	4
	<u>17</u>

**FOURTH YEAR**

CJ201 Firearms Training	1
CJ212 Loss Control	3
CJ243 Investigation	3
FS101 Intro Fire Sci	3
PY101 Intro Psy	4
	<u>14</u>

**FIFTH YEAR**

CJ319 Substantive Law*	3
CJ401 Senior Seminar	3
HE190 PEC & CI I	3
RA197 Phy Fit for LE*	1
Elective	4
	<u>14</u>

*SPRING*

CJ106 Juvenile Just	3
CJ206 Law Enforce Intern	3
SO214 Criminology	3
Humanities Elective	4
	<u>13</u>

CJ345 Statistics	4
CJ402 Internship	3
PS120 Legal Process	3
PY259 Abnormal Psy	3
SO226 Races & Minorities	3
	<u>16</u>

CJ313 Crisis Inter*	3
CJ321 Ethics*	3
CJ409 Procedural Law*	3
CJ444 Criminalistics*	4
HE191 PE & CI II*	3
RA197 Phy Fit for LE*	1
	<u>17</u>

\*MLEOTC Course

# BACHELOR OF SCIENCE CRIMINAL JUSTICE Loss Control Emphasis

## General Education Requirements (25\* credits)

### Major Requirements (54 credits)

CJ101	Intro to Crim Just	3
CJ102	Police Process	3
CJ110	Intro to Corrections	3
CJ201	Firearms Training	1
CJ206	Law Enf/Loss Cont Intern	3
CJ212	Loss Control	3
CJ243	Investigation	3
CJ306	Security Systems	3
CJ319	Substantive Criminal Law	3
	or	3
CJ202	Canadian Criminal Law	
CJ341	Fire/Arson Investigation	3
CJ345	Statistics	4
CJ401	Senior Seminar	3
CJ402	Crim Just Internship	3-9
CJ409	Procedural Criminal Law	3
	or	3
CJ406	Adv Can Jurisprudence	

CJ444	Criminalistics	4
FS101	Intro to Fire Science	3
FS111	Hazardous Materials	3
FS321	Industrial Fire Protection	3

### Support Courses (30 credits)

MN365	Pers Management	3
MN451	Labor Law	4
PS110	Intro to Amer Govt/Pol	4
PS120	Legal Processes	3
PY101	Introduction to Psychology	4
PY259	Abnormal Psychology**	3
SO214	Criminology	3
SO100	Sp Tp: Cultural Div**	3
TC104	Industrial Safety & Small Engine Mechanics	3

### Electives (15 credits)

\*8 Hours Included in Support Courses  
\*\*B.S. Requirement

## B.S. CRIMINAL JUSTICE (Loss Control Emphasis)

*FALL*

### FIRST YEAR

CJ101	Intro to Crim Just	3
CJ102	Police Process	3
CJ212	Loss Control	3
EN110	Freshman Comp	3
PY101	Intro to Psych	4
		<u>16</u>

*SPRING*

PS160	Intro to Can Govt	3-4
	or	3-4
PS110	Intro to Amer Govt	3
PS120	Legal Process	3
SD101	Speech	3
SO214	Criminology	3
FS111	Hazardous Material	3
		<u>15-16</u>

### SECOND YEAR

CJ110	Intro to Corrections	3
CJ201	Firearms	1
FS101	Intro to Fire Sci	3
CJ243	Investigations	3
EN210	Res Paper Proc	3
TC104	Safety/SE	3
		<u>16</u>

CJ206	LE/LC Internship	3
PY259	Abnormal Psych	3
	Humanities Elective	4
	Natural Science	4
		<u>14</u>

### THIRD YEAR

SO100	Sp Tp: Cultural Div3	3
	Humanities Elective	4
	Natural Science	4
	Elective	3
		<u>14</u>

CJ306	Sec. System	3
CJ341	Fire & Arson	3
	Electives	3
FS321	Industrial Fire Prot	3
CJ345	Statistics	4
		<u>16</u>

### FOURTH YEAR

CJ401	Seminar	3
CJ319	Subst Crim Law	3
	or	3
CJ202	Canadian Law	
MN365	Pers Mgmt	3
	Electives	6
		<u>15</u>

CJ402	Internship	3-9
CJ409	Procedural Law	3
	or	3
CJ406	Canadian Juris	4
CJ444	Criminalistics	4
MN451	Labor Law	4
	Electives	3
		<u>17</u>



# BACHELOR OF SCIENCE CRIMINAL JUSTICE Public Safety Emphasis

## General Education Requirements (25\* credits)

### Major Requirements (54 credits)

✓CJ101	Intro to Crim Just	3
✓CJ102	Police Process	3
CJ201	Firearms Training	1
CJ206	Law Enf/Loss Cont Intern	3
CJ243	Investigations	3
CJ313	Crisis Inter & Dev Beh**	3
CJ319	Substantive Criminal Law**	3
CJ321	Eth Issues in Pub Safety	3
CJ345	Statistics	4
CJ401	Crim Just Senior Seminar	3
	or	
FS401	Fire Sci Senior Seminar	3
CJ402	Crim Just Internship	3-9
	or	
FS402	Fire Sci Internship	3-9
CJ409	Proc Criminal Law**	3
CJ444	Criminalistics	4
✓FS101	Intro to Fire Science	3
✓FS111	Hazardous Materials	3

FS204	Fire Prot Hyd & Pumps	3
FS205	Fire Prot Systems & Equip	3
FS211	Tactics & Strategy	3

### Support Courses (27 credits)

HE190	Prehospital Emrg Care & Crisis Intervention I**	3
HE191	Prehospital Emrg Care & Crisis Intervention II**	2
✓PS110	Intro to Amer Govt/Pol	4
✓PS120	Legal Processes	3
✓PY101	Intro to Psych	4
✓PY259	Abnormal Psychology***	3
SO214	Criminology***	3
SO100	Sp Tp: Cultural Div***	3
RA197	Phys Fit -LE****	2

### Electives (18 credits)

\*8 Hours Included in Support Courses  
 \*\*MLEOTC Courses  
 \*\*\*B.S. Requirement  
 \*\*\*\*Repeated Twice

## B.S. CRIMINAL JUSTICE (Public Safety Emphasis)

### FALL

#### FIRST YEAR

CJ101	Intro to Crim Just	3
CJ102	Police Process	3
EN110	Freshman Comp	3
FS101	Intro to Fire Sci	3
Elective		3
		<u>15</u>

### SPRING

PS110	Amer Government	4
PS120	Legal Process	3
SD101	Speech	3
	Natural Science	4
FS111	Hazardous Material	3
		<u>17</u>

#### SECOND YEAR

CJ201	Firearms	1
CJ243	Investigation	3
FS204	F.P. Hydraulics	3
PY101	Intro to Psych	4
EN210	Res Paper Proc	3
Elective		3
		<u>17</u>

CJ206	LE/LC Internship	3
FS205	Fire Protection Sys.	3
FS211	Tactics & Strategy	3
PY259	Abnormal Psycho	3
	Humanities Elective	4
		<u>16</u>

### THIRD YEAR

Humanities Elective	4
Natural Science	4
SO100 Sp Tp: Cultural Div3	
Electives	<u>3</u>
	14

SO214 Criminology	3
CJ402 Crim Just Internship	3-9
or	
FS403 Fire Sci Internship	4
CJ345 Statistics	4
Electives	<u>4</u>
	14-20

### FOURTH YEAR

CJ319 Substantive Law*	3
RA197 Phys Fit - LE****	1
CJ401 CJ Seminar	
or	3
FS401 FS Senior Seminar	
Electives	5
HE190 PEC & CI I*	<u>3</u>
	15

CJ321 Ethics*	3
CJ313 Crisis Intervention*	3
CJ444 Criminalistics*	4
RA197 Phys Fit - LE****	1
CJ409 Procedural Law*	3
HE191 PEC & CI II*	<u>2</u>
	16

\*MLEOTC Course

\*\*MLEOTC Students Only

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# FIRE SCIENCE

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## BACHELOR OF SCIENCE FIRE SCIENCE Engineering Technology Emphasis

#### General Education Requirements (29\* credits)

#### Major Requirements (37 credits)

CJ341 Fire & Arson Invest	3
CJ345 Statistics	4
FS101 Intro to Fire Science	3
FS111 Hazardous Materials	3
FS204 Fire Prot Hyd & Pumps	3
FS205 Fire Prot Sys & Equip	3
FS211 Tactics & Strategy	3
FS301 Code Enf Insp & Fire Prev	3
FS321 Industrial Fire Protection	3
FS401 Senior Seminar	3
FS403 Fire Science Internship	3-9
FS420 Fire Science Management & Incident Analysis	3

#### Support Courses (41 credits)

CS100 Intro Microcomp Appl	3
MA140 Alg for Technologists	3

MA141 Technical Calculus I**	4
MA142 Technical Calculus II**	4
ME104 Technical Drawing	4
MT316 Stat & Stgth of Mat	3
MT341 Fluid Mechanics	3
MT430 Thermodynamics	3
MT431 Thermo/Heat Trans	4
NS101 Conceptual Physics	
or	4
PH221 Elmts Phys I	
TC101 Construction I	3
TC102 Construction II	3

#### Electives (17 credits)

\*4 Hours Included in Support Courses.  
\*\*B.S. Requirement

# B.S. FIRE SCIENCE (Engineering Technology Emphasis)

FALL

SPRING

## FIRST YEAR

FS101 Intro to Fire Sci	3	CS100 Intro to Microcomp	3
Electives	3	TC102 Construction II	3
EN110 Freshman Comp	3	SD101 Speech	3
MA140 Algebra & Trig	4	Social Science	4
TC101 Construction I	<u>3</u>	FS111 Hazardous Material	<u>3</u>
	16		16

## SECOND YEAR

FS204 FP Hydraulics	3	FS205 FP Systems	3
ME104 Technical Drawing	4	FS211 Tactics	3
Elective	3	MA142 Tech Calc II	4
MA141 Tech Calc I	4	Social Science	3
EN205 Tech Rept Wrtg		Humanities Elective	<u>4</u>
or	3		17
EN210 Res Paper Process	<u>17</u>		

## THIRD YEAR

FS301 Code Enforcement	3	FS321 Industrial FP	3
NS Life Science Elective	4	CJ341 Fire & Arson	3
PH221 Physics I	4	MT316 Stats & Strat	3
Humanities Elective	<u>4</u>	MT341 Fluid Mech	3
	15	CJ345 Statistics	<u>4</u>
			16

## FOURTH YEAR

FS401 Seminar	3	FS403 Internship	3
MT430 Thermodynamics	3	FS420 Fire Management	3
Electives	<u>8</u>	MT431 Thermo/Heat Trans	4
	14	Electives	<u>3</u>
			13

# NOTES

# BACHELOR OF SCIENCE FIRE SCIENCE Generalist Emphasis

**General Education Requirements (33 credits)**

**Major Requirements (57 credits)**

CJ341 Fire & Arson Investigation	3
CJ345 Statistics	4
FS101 Intro to Fire Science	3
FS111 Hazardous Materials	3
FS204 Fire Prot Hyd & Pumps	3
FS205 Fire Prot Sys Equip	3
FS211 Tactics & Strategy	3
FS301 Code Enf Insp/Fire Prev	3
FS321 Industrial Fire Prot	3

FS401 Senior Seminar	3
FS403 Fire Science Internship	3-9
FS420 Fire Science Mgmt & Incident Analysis	3

**Minor (20 credits)**

**Support Courses (6 credits)**

TC101 Construction I	3
TC102 Construction II	3

**Electives\* (28 credits)**

\*Must Include 8 Hours B.S. Requirements.

## B.S. FIRE SCIENCE (Generalist Emphasis)

**FALL**

**FIRST YEAR**

FS101 Intro to Fire Sci	3
TC101 Construction I	3
EN110 Freshman Comp	3
Elective	<u>6</u>
	15

**SPRING**

Social Science	4
Humanities Elective	4
SD101 Speech	3
TC102 Construction II	3
FS111 Hazardous Material	<u>3</u>
	17

**SECOND YEAR**

FS204 FP Hydraulics	3
EN205 Tec Rep Wrtg	3
or	3
EN210 Res Paper Proc	3
Social Science	4
Natural Science	<u>4</u>
	14

FS205 FP Systems	3
FS211 Tactics	3
BS Requirement	4
Natural Science	4
Elective	<u>3</u>
	17

**THIRD YEAR**

FS301 Code Enforcement	3
BS Requirement	4
Humanities Elective	4
Minor	<u>4</u>
	15

FS321 Industrial Fire Prot	3
CJ341 Fire & Arson	3
Minor	6
CJ345 Statistics	<u>4</u>
	16

**FOURTH YEAR**

FS401 Seminar	3
Minor	6
Electives	<u>6</u>
	15

FS403 Internship	3
FS420 Fire Management	3
Minor	4
Electives	<u>5</u>
	15

# BACHELOR OF SCIENCE FIRE SCIENCE Hazardous Materials Emphasis

## General Education Requirements (25\* credits)

### Major Requirements (37 credits)

CJ341	Fire and Arson Invest	3
CJ345	Statistics	4
FS101	Intro to Fire Science	3
FS111	Hazardous Materials	3
FS204	Fire Prot Hyd & Pumps	3
FS205	Fire Prot Sys Equip	3
FS211	Tactics & Strategy	3
FS301	Code Enf Insp/Fire Prev	3
FS321	Industrial Fire Prot	3
FS401	Senior Seminar	3
FS403	Fire Science Internship	3-9
FS420	Fire Sci Mgt Inci Analy	3

### Support Courses (51 credits)

BL110	General Zoology**	4
BL111	General Botany	4

CH115	General Chemistry I	5
CH116	General Chemistry II**	4
CH225	Organic Chemistry I	4
CH226	Organic Chemistry II	4
CH231	Quantitative Analysis	3
CH232	Instrumental Analysis	3
CH351	Intro Biochemistry	4
GG108	Phys Geo: Met/Clim	3
NS102	Intro to Geology	3
RT275	Soil Management	4
TC101	Construction I	3
TC102	Construction II	3

### Electives (11 credits)

\*8 Hours Included in Support Courses.  
\*\*B.S. Requirement

## B.S. FIRE SCIENCE (Hazardous Materials Emphasis)

### FALL

#### FIRST YEAR

FS101	Intro to Fire Sci	3
Electives		3
EN110	Freshman Comp	3
TC101	Construction I	3
CH115	Princ Chemistry I	5
		<u>17</u>

#### SECOND YEAR

FS204	FP Hydraulics	3
CH225	Org. Chem. I	4
CH231	Analytic I	3
BL110	Zoology	4
EN205	Tech Rep Wrtg	3
or		
EN210	Res Paper Proc	4
		<u>17</u>

#### THIRD YEAR

GG108	Physical Geology	3
RT275	Soils	4
Social Science		4
Humanities Elective		4
		<u>15</u>

#### FOURTH YEAR

FS401	Seminar	3
CH351	Biochemistry	4
FS301	Code Enforcement	3
Electives		4
		<u>14</u>

### SPRING

SD101	Speech	3
CH116	Prin of Chem II	4
Social Science		4
FS111	Hazardous Material	3
TC102	Construction I	3
		<u>17</u>

FS205	FP System	3
Humanities Elective		4
CH226	Org. Chem. II	4
CH232	Analytic	3
BL111	Botany	4
		<u>18</u>

FS321	Industrial FP	3
NS102	Geology	3
FS211	Tactics	3
CJ345	Statistics	4
		<u>13</u>

FS403	Internship	3
FS420	Fire Management	3
CJ341	Fire & Arson	3
Electives		4
		<u>13</u>

# ASSOCIATE DEGREE CRIMINAL JUSTICE Corrections Emphasis

**Basic Requirements (9 credits)**

**Major Requirements (30 credits)**

CJ101 Intro to Crim Just	3
CJ106 Juvenile Justice	3
CJ110 Intro to Corrections	3
CJ140 Cor Client Growth & Dev	3
CJ130 Client Rel in Corr	3
CJ220 Institutional Corrections	3
CJ240 Comm Based Corrections	3
CJ250 Correctional Law	3

CJ319 Substantive Criminal Law or	3
CJ202 Canadian Criminal Law	
CJ330 Correctional Casework	3

**Support Courses (6 credits)**

SO214 Criminology	3
PS120 Legal Process or	3
PS160 Intro to Can Govt/Pol	

**Electives (17 credits)**

## ASSOCIATE DEGREE, CRIMINAL JUSTICE (Corrections Emphasis)

**ALL**

**FIRST YEAR**

CJ101 Intro to Crim Just	3
CJ110 Intro to Corrections	3
CJ140 Correctional Clients	3
EN110 Freshman Comp	3
Elective	4
	16

**SPRING**

CJ106 Juvenile Justice	3
CJ130 Client Growth	3
Electives	3
PS120 Legal Process or	3
PS160 Intro to Can Govt	
SD101 Speech	3
	15

**SECOND YEAR**

CJ240 Comm Based Corr	3
CJ250 Correctional Law	3
CJ319 Subst Crim Law or	3
CJ202 Can Crim Law	
EN210 Res Paper Proc	3
Electives	4
	16

CJ220 Institutional Corr	3
CJ330 Corr Casework	3
SO214 Criminology	3
Electives	6
	15

# ASSOCIATE DEGREE CRIMINAL JUSTICE Law Enforcement Emphasis

**Basic Requirements (9 credits)**

**Major Requirements (19 credits)**

CJ101 Intro to Crim Just	3
CJ102 Police Process	3
CJ106 Juvenile Justice	3
CJ201 Firearms Training	1
CJ206 On Campus Intern	3
CJ212 Loss Control	3
CJ243 Investigation	3

**Support Courses (17 credits)**

PS110 Government	4
PS120 Legal Process	3
SO100 Spec Top: Cultural Div	3
SO214 Criminology	3
PY101 Intro to Psychology	4

**Electives (17 credits)**

**ASSOCIATE DEGREE,  
Enforcement Emphasis)**

**FALL**

**FIRST YEAR**

CJ101 Intro to Crim Justice	3
CJ102 Police Process	3
EN110 Freshman Comp	3
SO214 Criminology	3
Electives	<u>3</u>
	15

**CRIMINAL JUSTICE (Law**

**SPRING**

CJ106 Juvenile Justice	3
PS110 Government *	4
SD101 Speech	3
SO100 Sp Tp: Cultur Div	3
Electives	<u>3</u>
	16

**SECOND YEAR**

CJ201 Firearms	1
CJ212 Loss Control	3
CJ243 Investigation	3
Electives	<u>8</u>
	15

CJ206 On Campus Intern	3
EN210 Res Paper Proc	3
PS120 Legal Process	3
PY101 Intro to Psychology	3
Electives	<u>3</u>
	16

\* or PS160 Canadian Government

# ASSOCIATE DEGREE FIRE SCIENCE

## Basic Requirements (9 credits)

### Major Requirements (21 credits)

CJ341 Fire & Arson Invest	3
FS101 Intro to Fire Science	3
FS111 Hazardous Materials	3
FS204 Fire Prot Hyd & Pumps	3
FS205 Fire Prot Sys & Equip	3
FS211 Tactics & Strategy	3
FS321 Industrial Fire Prot	3

## Support Courses (17 credits)

HE190 Prehospital Emrg Care & Crisis Intervention I	3
HE191 Prehospital Emrg Care & Crisis Intervention II	2
SO, PY or PS	6
TC101 Construction I	3
TC102 Construction II	3

## Electives (15 credits)

## ASSOCIATE DEGREE, FIRE SCIENCE

### FALL

#### FIRST YEAR

FS101 Intro to Fire Sci	3
FS111 Hazardous Materials	3
EN110 Freshman Comp	3
TC101 Construction I	3
HE190 PEC & CI I	3
	15

### SPRING

HE191 PEC & CI II	2
SD101 Speech	3
TC102 Construction II	3
SO, PY or PS	3
Electives	4
	15

#### SECOND YEAR

FS204 FP Hydraulics	3
EN205 Tech Rep Wrtg	3
or	3
EN210 Res Paper Proc	
SO, PY or PS Electives	3
Electives	4
	16

FS205 FP Systems	3
FS211 Tactics & Strategy	3
FS321 Industrial FP	3
CJ341 Fire & Arson	3
Electives	4
	16

## MINOR COURSES OF STUDY

### CORRECTIONS MINOR

Total Credits Required: 21

#### Required Courses:

CJ110 Intro to Corr	3
CJ220 Inst Corrections	3
CJ240 Comm Based Corrections	3
CJ319 Substantive Law	3

#### Minimum of 9 hours from:

(At least one must be 300-400)

CJ101 Intro to Crim Just	3
CJ106 Juvenile Justice	3
CJ130 Client Relations	3
CJ140 Client Grh/Dev	3
CJ243 Investigation	3
CJ250 Correctional Law	3
CJ330 Correctional Casework	3
CJ402 Internship	3-9
CJ409 Procedural Law	3



## FIRE SCIENCE MINOR

Total Credits Required: 21

**Required Courses:**

FS101 Intro to Fire Science	3
FS111 Hazardous Materials	3
FS204 FP Hydraulics & Systems	3
FS205 FP Systems & Equipment	3

**Minimum of 9 hours from:**

FS211 Tactics and Strategy	3
FS301 Code Enf & Admin	3
FS321 Industrial Fire Prot	3
FS341 Fire/Arson Invest	3
FS420 Fireground Management	3
TC101 Construction I	3
TC102 Construction II	3

## LAW ENFORCEMENT MINOR

Total Credits Required: 21

**Required Courses:**

CJ101 Intro to Crim Just	3
CJ102 Police Process	3

**Minimum of 15 hours from:**

CJ202 Canadian Criminal Law	3
CJ206 LE/LC Internship	3
CJ243 Investigation	3
CJ313 Crisis Intervention	3
CJ319 Substantive Law	3
CJ321 Ethics	3
CJ406 Adv Canadian Juris	3
CJ409 Procedural Criminal Law	3
CJ444 Criminalistics	4

## LOSS CONTROL MINOR

Total Credits Required: 21

**Required Courses:**

CJ212 Loss Control	3
CJ306 Security Systems	3

**Minimum of 6 hours from:**

CJ202 Canadian Criminal Law	3
CJ319 Substantive Law	3
CJ406 Adv Canadian Juris	3
CJ409 Procedural Law	3

**Minimum of 9 hours from:**

MN365 Pers Management	3
CS100 Intro to Microcomputers	3
MN451 Labor Law	4
MK285 Retail Management	3

## INSTITUTIONAL LOST CONTROL MINOR

Total Credits Required: 21

**Required Courses:**

Cj212 Loss Control	3
CJ306 Security Systems	3
CJ341 Fire & Arson Inv	3
FS101 Intro to Fire Sci	3
FS111 Hazardous Mat	3
FS301 Codes Enf	3
FS321 Indus Fire Prot	3

This minor may not be used for Fire Science majors.

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# DEPARTMENT OF NURSING

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**FACULTY:** Dr. Mae E. Markstrom, Dean of School of Health and Human Services; Prof. Carole Connaughton; Assoc. Profs. Alice I. Halsey, Carol A. Campagna; Asst. Profs. Donna M. Anleitner, Elizabeth M. Hellow, Ruth K. Johnston-Pike, Lynn M. Kabke, Diane K. Lewis, MaryAnne Shannon; Instructor, Julie Briglio.

The Department of Nursing offers a bachelor of science degree in nursing which is based on the belief that nursing is goal-oriented, directed toward assisting human beings in health promotion, maintenance, restoration, and rehabilitation. The program is based upon human needs theory throughout the life cycle and is built on a liberal arts foundation in the belief that all aspects of society must be considered influential factors in the health of human beings.

**Accreditation:** The Bachelor of Science in Nursing Program is approved by the Michigan Board of Nursing and is accredited by the National League for Nursing.

**Courses Offered** by the department are in nursing and health sciences. Nursing courses provide the core content of the nursing major and are limited to students accepted into the nursing programs. Health science courses provide a wide range of knowledge and skills useful for preparation in related health careers

and in the delivery of health services in the community.

**Clinical experiences:** The nursing program is unique in its international affiliation. Clinical nursing experience is obtained at hospitals and community agencies in Sault Ste. Marie, Ontario, as well as at health care and community agencies in Sault Ste. Marie, Michigan, and the surrounding area. The LSSU Wellness CARE Center provides opportunities for practice in a nurse-managed community nursing center.

## BACHELOR OF SCIENCE NURSING

The Department of Nursing offers two curricular tracks to the bachelor of science degree in nursing: the four-year program and the two-year completion program for the registered nurse.

These programs provide students with the opportunity to acquire knowledge, values and skills necessary for the practice of

professional nursing. They offer them the opportunity to:

Demonstrate skills of critical thinking and decision making in

nursing practice. **Promote** the health of individuals, families, groups and communities in a variety of settings. **Assist** clients of all ages in their adaptation to actual and potential stressors. **Demonstrate** independent use of the nursing process in health promotion, maintenance, restoration, and rehabilitation. **Integrate** professional values into nursing practice. **Practice** within the ethical, moral and legal parameters of the nursing profession. **Demonstrate** responsibility and accountability for evaluating the effectiveness of one's nursing practice. **Evaluate** nursing research findings for possible utilization in nursing practice. **Integrate** leadership and management skills into the nursing role. **Synthesize** theoretical/ empirical knowledge from nursing, the physical and behavioral sciences, and humanities in nursing practice.

**Collaborate** with the health care team and consumer to improve health care service, using knowledge of the political system. Use effective interpersonal communication skills as client advocate, caregiver, health educator and change agent.

Course distribution requirements facilitate development of liberal backgrounds in physical science, social science and humanities. The curriculum lays a scientific basis for expanding roles in nursing practice. The nursing curriculum provides an inter-disciplinary major and does not require a minor to meet graduation requirements. Students interested in a minor should refer to the appropriate Catalog section. A total of 127 credits is required to complete a Bachelor of Science Degree in Nursing.

## □ B.S. NURSING FOUR-YEAR PROGRAM

**Pre-Nursing entrance requirements:** To qualify for admission to the pre-nursing program, applicants must satisfy University admission requirements described in the admission section of the Catalog. (This information is also included in the Viewbook.)

For students with college-level achievement, the opportunity will be offered, by means of examination, to obtain course credit or placement into an advanced course.

High school academic subjects include a minimum of one unit of biology, one of chemistry, three of English and two of algebra. Additional science and mathematics courses are highly recommended.

**Entrance requirements to Nursing:** Following successful completion of

the pre-nursing requirements, students will be admitted to the nursing program based upon academic achievement and competency in mathematics. Mathematics proficiency at the MA091 level is required prior to the sophomore year. Mathematics proficiency at the MA092 level is required prior to entering the junior year of the nursing program.) Entrance into nursing requires a cumulative grade point average of 2.5 or above in nursing, nursing support, and English courses. Required academic

courses are separated into two groups:

1. Nursing support courses (anatomy and physiology, microbiology, life chemistry, psychology, sociology, nutrition, pharmacology, pathophysiology, computer applications in the health sciences, and statistics;) and
2. General education requirements (English, humanities, and speech).

A grade of C or above is required in all nursing, nursing support courses and English courses. A grade of D in other general education or elective courses is accepted. Students should file a Declaration of Intent to enter the nursing program in the Departmental Office by March 1. Students selected for nursing must complete all pre-nursing course requirements satisfactorily to remain on the accepted list. A maximum of 50 students with the highest grade point average will be accepted.

**Transfer credit** will be granted on an individual basis. Only those courses in which the student

received a grade of C or better are transferrable. Credits for baccalaureate nursing courses and pharmacology are transferrable for five years.

Time requirements for program completion is four academic years; however, completion may require more than four years for students who do not meet all entrance requirements.

Progression and readmission policies are detailed in the Baccalaureate Nursing Student Handbook.

Students are responsible for transportation to and from clinical agencies, as well as additional costs incurred by enrollment in the nursing program. Costs, academic and general information are listed in the Baccalaureate Nursing Student Handbook.

**Licensure:** Graduates of this program are eligible to write the NCLEX-RN examination administered by the Michigan Board of Nursing for licensure as a Registered Nurse (R.N.). Canadian students must pass the NCLEX-RN examination prior to applying for licensure in Ontario.

Requirements for the Bachelor of Science Degree in Nursing Four-Year Program are as follows:

**Nursing (57 credits)**

NU110 Intro to Prof Nrsg I	1
NU211 Intro to Prof Nrsg II	3
NU212 Health Appraisal	3
NU213 Fund of Nursing	5
NU325 Parent/Newborn Nrsg	5
NU326 Parent/Child Nrsg	6
NU327 Adult Nursing I	8
NU431 Adult Nursing II	8
NU432 Community Hlth Nrsg	5
NU433 Mnd Hlth Nrsg	5
NU434 Nrsg Research	3
NU435 Mgmt in Nursing	3
NU436 Cntmpry Iss in Nrsg	2

**Health Sciences (10 credits)**

HE208 Nutrition	2
HE209 Pharmacology	3
HE232 Pathophysiology	3
HE235 Comp Appl in Hlth Sci	2

**Other Disciplines (16 credits)**

BL121 Human Anat & Phys I	4
BL223 Clinical Microbiology	3
CH104 Life Chemistry I	3
MA207 Prin of Stat Meth	
or	
PY210 Statistics	3
SO326 Soc of Aging & Aged	3

General Education (35 credits)	
PY101 Found of Psych	4
PY155 Lfspn Devel	3
SO101 Intro to Soc	3
BL122 Human Anat/Phys II	4
CH105 Life Chemistry II	4
Humanities	8
EN110 Freshman Comp	3
EN210 Res Paper Process	3
SD101 Fund Speech	3

General Electives (9 credits)	9
Total credits:	127

A sample four-year schedule of courses for this program follows. The planned sequence of courses may be modified to meet the needs of individual students.

## BACHELOR OF SCIENCE, NURSING: FOUR-YEAR PROGRAM

### FALL

#### FIRST YEAR

EN110 Freshman Comp	3
PY101 Intro Psych	4
SO101 Intro Soc	3
SD101 Fund. Speech	3
BL121 Human Anat./Phys.	4
	<u>17</u>

### SPRING

Humanities	4
NU110 Intro Prof Nrsg I	1
CH104 Life Chem I	3
BL122 Hmn Anat/Phys II	4
PY155 Lfspn Devel	3
HE208 Nutrition	2
	<u>17</u>

#### SECOND YEAR

EN210 Res Paper Process	3
NU211 Intro Prof Nrsg II	3
CH105 Life Chemistry II	4
NU212 Health Appraisal	3
HE232 Pathophysiology	3
	<u>16</u>

BL223 Microbiology	3
Humanities	4
NU213 Fund of Nursing	1
HE209 Pharmacology	1
	<u>9</u>

#### THIRD YEAR

SO326 Sociology of Aging	3
NU325 Prnt/Nwbrn Nrsg	5
NU326 Prnt/Chld Nrsg	6
Elective	3
	<u>17</u>

PY210 Statistics	
or	3
MA207 Prin Stat Meth	
NU327 Adult Nursing I	8
HE235 Cmp App Hlth Sci	2
Elective	3
	<u>16</u>

#### FOURTH YEAR

NU431 Adult Nursing II	8
NU434 Nursing Research	3
NU435 Mgmt. in Nursing	3
	<u>14</u>

NU432 Comm Hlth Nrsg	5
NU433 Mntl Hlth Nrsg	5
NU436 Cnmpry Issues in Nrsg	2
Elective	3
	<u>15</u>

## □ B.S. NURSING: COMPLETION PROGRAM FOR R.N. STUDENTS

**Entrance requirements:** To qualify for admission to the R.N. Completion Program, applicants must satisfy University admission requirements as described in the admission section of the Catalog. (This information is also included in the Viewbook.)

For students with college-level achievement, the opportunity will be offered, by means of examination, to obtain course credit or placement into an advanced course.

Applicants must be graduates of a state or provincial approved associate degree or diploma nursing program with a cumulative grade point average of 2.5 in all nursing, nursing support, and English courses. Nursing support courses include: chemistry, anatomy and physiology, microbiology, statistics, nutrition, pharmacology, pathophysiology, computer applications in health sciences, psychology, and sociology courses. Credit may be granted for basic nursing courses, nutrition, and pharmacology upon writing the required NLN challenge tests within 5 years prior to admission and achieving scores at the 50 percentile or above. NLN tests may be repeated once; students must enroll in the course if not successful on second writing. Psychomotor skills validation and mathematics proficiency at the MA092 level are also required. Students may be admitted to the University at any point, but may not be admitted to nursing core courses until they have fulfilled the above requirements.

**Required Admission credentials:** Submit to Admissions Office: standard LSSU admission application; transcripts from previous nursing school(s) and college(s). Submit to Department of Nursing: work experience and reference list; copy of current

Michigan or Ontario professional nursing license; NLN test scores for Mobility Profile II (Book 1), Nursing of Childbearing Family, and Nursing of Children. All credentials must be on file preceding semester of entry.

**Transfer credits:** Transfer credit may be granted on an individual basis for equivalent general education and support courses. Only those courses in which students received a grade of C or better may be transferred. Credit for pharmacology and baccalaureate nursing courses are accepted for five years after completion of course. A maximum of 32 semester hours credit in basic nursing courses may be transferred. Partial credit for NU433 may be obtained by writing the Mental Health NLN test prior to the course and achieving a score at the 50 percentile or above.

Time required for completion will depend upon the number of transfer credits and credits received by examination. Most registered nurses can complete the program in two years.

Progression and readmission policies are detailed in the Baccalaureate Nursing Student Handbook.

Students are responsible for transportation to clinical agencies

and additional costs incurred by enrollment in the nursing program. Costs, academic and general

information are listed in the Baccalaureate Nursing Student Handbook.

Requirements for the Bachelor of Science Degree in Nursing (RN Completion Program) are as follows:

**Nursing (57 credits)**

NU213 Fundamentals of Nursing**	5
NU325 Parent/Newborn Nursing**	5
NU326 Parent/Child Nursing**	6
NU327 Adult Nursing I**	8
NU431 Adult Nursing II**	8
NU361 Trans to Prof Nrsng	3
NU363 Comp Health Appraisal	3
NU364 Health Promotion through the Lifespan	3
NU432 Comm Hlth Nrsng	5
NU433 Mental Health Nursing	5
NU434 Nursing Research	3
NU435 Management in Nursing	3

**Health Sciences (10 credits)**

HE208 Nutrition**	2
HE209 Pharmacology**	3
HE232 Pathophysiology**	3
HE235 Comp Appl in Hlth Sci	2

**Other Disciplines (16 credits)**

BL121 Human Anat/Phys I	4
BL223 Clinical Microbiology	3
CH104 Life Chemistry I	3
MA207 Prin of Stat Meth	
or	3
PY210 Statistics	
SO326 Soc of Aging & Aged	3

**General Education (35 credits)**

PY101 Found of Psych	4
SO101 Intro to Soc	3
BL122 Human Anat/Phys II	4
CH105 Life Chemistry II	4
EN110 Freshman Comp	3
EN210 Res Paper Process	3
SD101 Fund Speech	3
Humanities	8
SO Elective	3

**General Electives**

Total credits: 127

\*\*Challenge examinations available

A sample two-year schedule of courses for this program follows. The planned sequence of courses may be modified to meet individual needs.

**□ BACHELOR OF SCIENCE IN NURSING  
COMPLETION PROGRAM  
FOR THE REGISTERED NURSE**

**Prerequisite courses for entrance to program:**

BL121 Hmn Anat/Phys I	4
BL122 Hmn Anat/Phys II	4
BL223 Microbiology	3
EN110 Freshman Comp	3
EN210 Res Paper Process	3
HE208 Nutrition	2
HE209 Pharmacology	3

PY101 Intro. Psychology	4
SO101 Intro. Sociology	3
	<u>29</u>

**NLN Challenge Exams**

NU213 Fund of Nrsng	5
NU325 Prnt/Nwbrn Nrsng	5
NU326 Prnt/Chld Nrsng	6
NU327 Adult Nrsng I	8
NU431 Adult Nrsng II	8
	<u>32</u>

**BACHELOR OF SCIENCE, NURSING:  
COMPLETION PROGRAM**

*FALL*

*SPRING*

**FIRST YEAR**

NU361 Trans to Prof Nrsng	3
NU363 Comp Hlth Appr	3
HE232 Pathophysiology	3
SD101 Fund of Speech	3
SO326 Soc of Aging/Aged	3
Elective	3
	<u>18</u>

CH104 Life Chemistry I	3
NU364 Health Promotion Through the Lifespan	3
HE235 Comp Appl Hlth Sci	2
Humanities	4
Soc Sci Elective	3
	<u>15</u>

**SECOND YEAR**

CH105 Life Chemistry II	4
NU432 Comm Hlth Nrsng	5
NU433 Mntl Hlth Nrsng	5
PY210 Statistics	
or	3
MA207 Prin of Stat Meth	
	<u>17</u>

NU434 Nursing Research	3
NU435 Mgmt in Nursing	3
Humanities	4
Electives	6
	<u>16</u>

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**NOTES**

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# DEPARTMENT OF RECREATION STUDIES AND EXERCISE SCIENCE

FACULTY: Department Chair, Prof. Sally Childs; Asst. Prof. Lee Gardiner, Debra McPherson, Stephen Yanni; Instructor Joe Susi.

## BACHELOR OF SCIENCE EXERCISE SCIENCE

The Exercise Science major concentrates on developing an understanding of the physiological and psychological consequences of exercise in various populations, and applying this knowledge to fitness, clinical and research settings. The need for exercise science professionals is growing in each of these areas as exercise continues to occupy a prominent role in enhancing the quality of life and maintaining health; and, gains prominence in the treatment and prevention of lifestyle diseases such as cardiovascular disease, hypertension, obesity, and diabetes. Employment opportunities for exercise science professionals are becoming more varied and requiring increased levels of expertise and technical skills. This major is designed to prepare students to meet these professional challenges through a skill-development approach in the critical areas of exercise testing and exercise prescription. The required 125 graduation credits emphasize course work in physiology, pathophysiology, sports medicine, laboratory procedures, research methods, exercise psychology and computer applications.

Exercise Science (38 credits)		PY101 Intro to Psychology	4
ES141 Intro to Movement	3	PY385 Health Psychology	3
ES242 Sports Medicine	3	Departmental Electives (10 credits)	
ES248 Psy/Sports & Ath	3	ES140 Health and Fitness	3
ES295 Practicum	2	ES240 Tech of Athletic Tr	2
ES342 Exercise Physiology	3	ES295 Practicum	2
ES344 Kinesiology	3	ES349 Ortho Asmt/Spts Med	3
ES348 Lab Proc in Exer Sci	3	ES390 Rec Leader Apprenticeship I	1
ES358 Res Meth in Exer Sci	3	ES442 ECG in Exer Sci	2
ES390 Rec Leader Apprentice	2	ES481 Professional Dev Seminar	1
ES440 Exercise Physiology Sem	2	RA211 Water Saf & Lfgrd Instr	2
ES444 Exercise Prescription	2	RC101 Intro to Rec & Leis Ser	3
ES492 Internship	6	RC105 Prog Devel & Leadership in Recreat & Leisure Services	3
ES496 Selected Research Topics	3	RC212 Instr Meth Adpdt Aquat	2
Cognate Requirements (33 credits)		RC240 Found of TR	3
BL121 Anatomy & Physiology I	4	RC482 Admin of Rec Leis Serv	4
BL122 Anatomy & Physiology II	4	Cognate Electives (12 credits)	
CH104 Life Chemistry I	3	BL330 Animal Physiology	4
CH105 Life Chemistry II	4	BL423 Immunology	4
CS100 Intro to Microcomputers	3	HE190 Prehospital Emrg Care & Crisis Intervention I	3
HE208 Nutrition	2		
HE232 Pathophysiology	3		
MA207 Princ of Stat Methods	3		

HE191 Prehospital Emrg Care & Crisis Intervention II	2
HE209 Pharmacology	3
HM480 Grantwriting	3
PH221 Elmts Phys I	4
PH222 Elmts Phys II	4
PY459 Physiological Psychology	3

Elective credits (approximately 11) and General Education requirements must be completed such that at least 125 semester credits have been earned

## B. S., EXERCISE SCIENCE

### FALL

#### FIRST YEAR

EN110 Fresh Comp	3
ES/RC Elective	3
General Electives	5
Soc Sci Elec	<u>2</u>
	13

#### SECOND YEAR

BL121 Anat & Phys I	4
CH105 Life Chemistry II	4
ES242 Sports Medicine	3
ES248 Spts Psy	3
Humanities	<u>4</u>
	18

#### THIRD YEAR

ES342 Exer Phys	3
MA207 Statistics	3
HE232 Pathophysiology	3
ES/RC Elective	3
SD101 Fund Speech	<u>3</u>
	15

#### FOURTH YEAR

Cognate Elective	6
ES440 Exer Phys Seminar	2
ES444 Exer Prescription	2
ES496 Sel Res Topics	3
PY385 Health Psychology	<u>3</u>
	16

### Summer

ES492 Internship	6
(following either 3rd or 4th year)	

### SPRING

CH104 Life Chemistry I	3
CS100 Intro Microcom	3
ES141 Intro to Movement	3
PY101 Intro to Psych	<u>4</u>
	13

BL122 Anat & Phys II	4
EN210 Res Paper Proc	3
ES295 Practicum	1
General Electives	3
HE208 Nutrition	<u>2</u>
Humanities	4
	17

ES344 Kinesiology	3
ES348 Lab 7 Meas in ES	3
ES358 Res Meth Exer Sci	3
ES390 Rec Ldr Apprentsp	1
ES/RC Elective	<u>2</u>
General Electives	3
	15

Cognate Elective	6
ES295 Practicum	1
ES390 Rec Ld Appr	1
ES/RC Elective	2
Soc Sci Elective	<u>1</u>
	13

## □ Athletic Training Concentration

A person who receives a degree concentration in Athletic Training, which is also referred to as Sports Medicine, will become a highly skilled professional who deals directly with injuries which occur to athletes. The athletic trainer works closely with physicians and other health care professionals in order to provide today's athletes with the best medical care possible. Those who pursue a career in athletic training may seek employment on the high school, college, or professional sport level. In addition, the athletic trainer may be employed in sports medicine and health fitness clinics, which have increased in numbers during the past decade. All the above mentioned positions usually require certification by the National Athletic Trainers' Association. Students completing the concentration at Lake Superior State University will be more marketable in the field of exercise science and eligible for a variety of graduate programs in athletic training and sports medicine throughout the country. Any student wishing to achieve eligibility to sit for the National Athletic Trainers' Association certification examination will receive individual guidance in that direction.

### Exercise Science (38 credits)

ES141	Intro to Movement	3
ES240	Tech in Ath Training	2
ES242	Sports Medicine	3
ES295	Practicum	2
ES342	Exercise Physiology	3
ES344	Kinesiology	3
ES348	Lab Procedures Exer Sci	3
ES349	Orthopaedic Assessment	3
ES358	Res Meths in Exer Sci	3
ES440	Exercise Physiology Sem	2
ES444	Exercise Prescription	2
ES492	Internship	6
ES496	Selected Research Topics	3

### Cognate Requirements (44 credits)

BL121	Anatomy & Physiology I	4
BL122	Anatomy & Physiology II	4
CH104	Life Chemistry I	3
CH105	Life Chemistry II	4
HE190	Prehospital Emrg Care & Crisis Intervention I	3
HE191	Prehospital Emrg Care & Crisis Intervention II	2
HE208	Nutrition	2
HE209	Pharmacology	3
HE232	Pathophysiology	3
MA207	Prin Statistical Methods	3
PY101	Intro to Psychology	4
PY201	Comm Skills Counseling	3

PY240	Behavior Management	3
PY385	Health Psychology	3

### Departmental Electives (9 credits)

ES140	Health and Fitness	3
ES248	Psy of Sports and Athl	3
ES295	Practicum	2
ES390	Rec Leader Apprenticeship I	1
ES442	ECG in Exer Sci	2
ES481	Prof Dev Seminar	1
RA211	Water Saf & Lfgd Inst	2
RC101	Intro to Rec & Leis Ser	3
RC105	Prog Dev Ldsp Rec Leis	3
RC212	Instruc Meth Adapted Aq	2
RC240	Foundations in TR	3
RC270	Sports Management	3
RC370	Rec for the Elderly	3
RC482	Admin of Rec Leis Ser	4

### Cognate Electives (9 credits)

BL220	Genetics	3
BL330	Animal Physiology	4
BL423	Immunology	4
PH221	Elem of Physics I	4
PH222	Elem of Physics II	4

Elective credits (approximately 11) and General Education requirements must be completed such that at least 127 semester credits have been earned.

## B. S., EXERCISE SCIENCE (Athletic Training Concentration)

### FALL

#### FIRST YEAR

EN110 Freshman Comp	3
General Electives	6
HE190 Em Care Cr In I	<u>3</u>
	12

#### SECOND YEAR

BL121 Anat & Phys I	4
CH105 Life Chemistry II	4
ES242 Sports Medicine	3
ES240 Tech Ath Train	2
Humanities	<u>4</u>
	17

#### THIRD YEAR

ES342 Exer Phys	3
PY385 Health Psychology	3
MA207 Statistics	3
PY240 Behav Management	3
SD101 Fund of Speech	<u>3</u>
	15

#### Summer

ES492 Internship (following 3rd year)	6
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#### FOURTH YEAR

Cognate Elective	3
ES440 Exer Phys Seminar	2
ES444 Exer Prescript	2
ES496 Sel Res Topics	3
ES/RC Elective	3
HE232 Pathophysiology	<u>3</u>
	16

### SPRING

CH104 Life Chemistry I	3
ES140 Health and Fitness*	3
ES141 Intro to Movement	3
HE191 Emer Care Cr In II	2
PY101 Intro to Psychology	<u>4</u>
	15

BL122 Anat & Phys II	4
ES349 Orthopaedic Assmnt	3
Humanities	4
EN210 Res Paper Proc	3
General Electives	<u>3</u>
	17

ES358 Research Mthds ES	3
ES344 Kinesiology	3
ES348 Lab Proceed in ES	3
ES390 Rec Ldr Appr*	1
HE208 Nutrition	2
PY201 Comm Sk Couns	<u>3</u>
	15

\*Suggested electives

# BACHELOR OF ARTS/SCIENCE RECREATION MANAGEMENT

The Recreation Management degree is a program of study designed to prepare those students seeking employment opportunities in the recreation/leisure field that demand sound management skills. Career choices abound within commercial, resort, industrial, military, municipal, state, federal government, and voluntary recreation settings. The need for qualified leaders, supervisors, and directors who possess management and recreation skills is increasing. Career specialization can be achieved by selecting recreation electives that promote a concentration, enhancing a degree with a built-in business minor.

## B. A. RECREATION MANAGEMENT

### Department Requirements (29 credits)

ES140 Health and Fitness	3
RA Recreation Activity	1
RA Recreation Activity	1
RC101 Intro to Recreation	3
RC105 Program Devel Ldr Rec Leisure Services	3
RC295 Practicum	1
RC390 Rec Ldr Appr	1
RC435 Prob & Issues	3
RC436 TR & Rec Leis Sci Res	2
RC481 Prof Dev Seminar	1
RC482 Admin Rec & Leis Serv	4
RC492 Internship	6

### Business Requirements (25 credits)

AC132 Prin of Accounting I	4
BA231 Bus Communications	3
BA254 Bus Law I	3
EC201 Prin of Macroeconomics	3
EC202 Prin of Microeconomics	3
FN245 Principles of Finance	3
MK281 Mkt Prin & Strategy	3
MN360 Principles of Management	3

### Cognate Requirements (20 credits)

BL105 Functions Human Body	4
CS100 Intro Microcomputers	3
HE181 First Aid	1
HM480 Grantwriting	3
PS130 Intro State & Local	4
or	
PS160 Intro Canadian Govt	3
PY101 Intro to Psychology	4
or	

PY155 Lifespan Dev	3
PY210 Statistics	3

### Department Electives (16 credits)

ES141 Intro to Movement	3
ES240 Tech of Athletic Training	2
ES242 Sports Medicine	3
ES248 Psy of Sport & Athletics	3
ES342 Exercise Physiology	3
ES344 Kinesiology	3
ES348 Lab Proc & Meas in ES	3
ES442 Electrocardiography in ES	2
ES444 Exercise Prescription	2
RC212 Ins Mds Adapted Aquatics	2
RC220 Methods in Arts & Crafts	3
RC240 Foundations of TR	3
RC262 Outdoor Recreation	3
RC270 Sports Management	3
RC280 Readin Games, Act, Sports	3
RC295 Practicum	1-3
RC320 Dance Rym Act for Rec	3
RC340 Prog Dev Therap Rec	3
RC342 Disab Sem Therap Rec	3
RC344 Rec Pursuits Disab Cond	3
RC346 Clin Issues Pract Ther Rec	3
RC362 Land Mgmt Rec Purposes	3
RC365 Expedition Management	3
RC370 Recreation for Elderly	3
RC390 Rec Ldr Apprenticeship	1
RC496 Selected Res Topics	1-3

Elective credits (approximately 9) and General Education requirements must be completed such that at least 124 semester credits have been earned.

## B.A., RECREATION MANAGEMENT

### FALL

#### FIRST YEAR

BL105	Funct Human Body	4
EN110	Freshman Comp	3
ES140	Health and Fitness	3
PY101	Intro Psychology	4
	or	
PY155	Lifespan Dev	3
RC101	Intro Rec Leis	3
		<u>16-17</u>

### SPRING

CS100	Intro Microcomp	3
NS	Natural Sci Elective	4
PS130	Intro St Loc Govt	4
	or	
PS160	Intro Can Govt Pol	3
RC105	Prog Dev Ldr Rec	3
SD101	Fund of Speech	3
		<u>16-17</u>

#### SECOND YEAR

AC132	Accounting I	4
BA Req	- Foreign Lang	4
EN210	Res Paper Proc	3
RA	Elective	1
RC295	Rec Practicum	1
RC	Restricted Elective	3
		<u>16</u>

BA Req	- Foreign Lang	4
EC201	Macroeconomics	4
FN245	Prin Finance	3
HE181	First Aid	1
RA	Elective	1
RC	Restricted Elective	3
RC390	Rec Ldr Appr	1
		<u>16</u>

#### THIRD YEAR

BA231	Business Comm	3
EC202	Microeconomics	3
HU	Humanities Elect	4
PY210	Statistics	3
RC	Restricted Elect	3
		<u>16</u>

BA254	Bus Law I	3
HU	Humanities Elect	4
MK281	Marketing	3
MN360	Prin Management	3
RC	Restricted Elec	3
		<u>16</u>

#### FOURTH YEAR

General Electives	2	
RC	Restricted Elec	4
RC435	Prob & Issues	3
RC481	Prof Dev Seminar	1
RC482	Admin Recreation	4
		<u>14</u>

General Electives	3	
HM480	Grantwriting	3
RC436	TR & Rec Res	2
RC492	Internship	6
		<u>14</u>

## NOTES

## B.S., RECREATION MANAGEMENT

Department Requirements (29 credits)	
ES140 Health and Fitness	3
RA Recreation Activity	1
RA Recreation Activity	1
RC101 Intro to Recreation	3
RC105 Program Dev & Ldrship	
Rec & Leisure Ser	3
RC295 Practicum	1
RC390 Rec Ldr Appr	1
RC435 Prob & Issues	3
RC436 TR & Rec Leis Sci Res	2
RC481 Prof Dev Seminar	1
RC482 Admin Rec & Leis Serv	4
RC492 Internship	6

Business Requirements (25 credits)	
AC132 Prin of Accounting I	4
BA231 Bus Communications	3
BA254 Bus Law I	3
EC201 Prin of Macroeconomics	3
EC202 Prin of Microeconomics	3
FN245 Prin of Finance	3
MK281 Mkt Prin & Strategy	3
MN360 Prin of Management	3

Cognate Requirements (20 credits)	
BL105 Func of Human Body	4
CS100 Intro Microcomputers	3
HE181 First Aid	1
HM480 Grantwriting	3
PS130 Intro State & Local	4
or	
PS160 Intro Canadian Govt	3
PY101 Intro to Psychology	4
or	
PY155 Lifespan Dev	3
PY210 Statistics	3

Department Electives (16 credits)	
ES141 Intro to Movement	3
ES240 Tech of Ath Training	2
ES242 Sports Medicine	3
ES248 Psy of Sport & Athletics	3
ES342 Exercise Physiology	3
ES344 Kinesiology	3
ES348 Lab Proc & Meas in ES	3
ES442 Electrocardiography in ES	2
ES444 Exercise Prescription	2
RC212 Ins Mds Adapted Aquatics	2
RC220 Methods Arts & Crafts	3
RC240 Foundations of TR	3
RC262 Outdoor Recreation	3
RC270 Sports Management	3
RC280 Read Games Act Sports	3
RC295 Practicum	1-3
RC320 Dance Rym Act for Rec	3
RC340 Prog Dev in TR	3
RC342 Disabilities Seminar in TR	3
RC344 Rec Pur & Disabling Cond	3
RC346 Clinical Issues & Prac	3
RC362 Land Mgmt for Rec Purp	3
RC365 Expedition Management	3
RC370 Recreation for Elderly	3
RC390 Rec Ldr Apprenticeship	1
RC496 Sel Res Topics	1-3

Elective credits (approximately 9) and General Education requirements must be completed such that at least 124 semester credits have been earned.

## B. S., RECREATION MANAGEMENT

FALL

### FIRST YEAR

BL105 Func Hum Body	4
EN110 Freshman Comp	3
ED140 Health & Fitness	3
PY101 Intro to Psy	4
or	
PY155 Lifespan Dev	3
RC101 Intro Rec	3
	16-17

SPRING

CS100 Microcomp	3
NS Nat Sci Elec	4
PS130 Intro State Local	4
or	
PS160 Int Canadian Govt	3
RC105 Prog Dev	3
SD101 Fund of Speech	3
	16-17

### SECOND YEAR

AC132 Prin of Acctg I	4
BS Degree Requirement	3
EN210 Res Paper Proc	3
RA Elective	1
RC Restricted Elec	3
RC295 Practicum	1
	15

EC201 Macroeconomics	3
FN245 Prin Finance	3
General Electives	3
HE181 First Aid	1
RA Elective	1
RC Restricted Elective	3
RC390 Rec Ldt Appr	1
	15

### THIRD YEAR

BA231 Bus Comm	3
EC202 Microeconomics	3
HU Humanities	4
PY210 Statistics	3
RC Restricted Elective	3
	<u>16</u>

BA254 Bus Law I	3
HU Humanities	4
MK281 Mkt Prin Strat	3
MN360 Prin Mgmt	3
RC Restricted Elective	3
	<u>16</u>

### FOURTH YEAR

General Electives	3
RC Restricted Elective	4
RC435 Prob & Issues	3
RC481 Prof Dev Seminar	1
RC482 Adm Rec & Leis	4
	<u>15</u>

General Electives	2
HM480 Grantwriting	3
PY/SO Psy/Soc Elect	2
RC436 TR & Rec Res	2
RC492 Internship	6
	<u>15</u>

## □ Parks and Recreation Management Concentration

This is an in-house 2 + 2 degree. At the end of four years of study, the student will have earned an associate degree in Natural Resources Technology and a baccalaureate degree in Recreation Management with a Parks and Recreation emphasis. Students who complete this degree will have acquired skills specific to land management and resource development. This person would be well-qualified to pursue a wide variety of career options which include, but are not limited to, working with agencies such as the Department of Natural Resources or the National Park Service, working with municipal parks and recreation, or working in outdoor education.

#### Recreation Requirements (26 credits)

RC101 Intro to Recreation	3
RC105 Progran Dev & Leadership Recreation Leisure Services	3
RC262 Outdoor Recreation	3
RC362 Land Mgmt for Rec Purp	3
RC365 Expedition Management	3
RC481 Professional Dev Sem	1
RC482 Admin Rec & Leis Serv	4
RC492 Internship	6

#### Natural Resources Technology (17 credits)

RT101 Intro to Natural Resources	3
RT102 Meth in Nat Resources	1
RT206 Wildlife Mgmt Tech	2
RT207 Bio & Mgmt of Fishes	3
RT284 Principles of Forestry	4
RT286 Limnological Techniques	4

#### Cognate Requirements (45 credits)

AC132 Prin of Acctg I	4
BL130 Remote Sensing	3

BL230 Intro to Soils	3
BL239 Wildlife Bio & Mgmt	2
CH108 Applied Chemistry	4
CS100 Intro to Microcomputers	3
HE181 First Aid	1
HM480 Grantwriting	3
ID300 Man and His Env	3
MA109 Trigonometry & Vectors	2
MN365 Human Resource Mgmt	3
PS130 State and Local Govt	4
PY101 Intro to Psychology	4
TC103 Surveying	3
TC104 Industrial Safety & Small Engine Mechanics	3

Elective credits (approximately 9) and General Education requirements must be completed such that at least 126 semester credits have been earned.



# RECREATION MANAGEMENT (Parks Concentration)

## FALL

## SPRING

### FIRST YEAR

CS100	Intro to Microcomp	3
EN110	Freshman Comp	3
MA109	Trig and Vectors	2
RC101	Intro to Rec & Leis	3
RT101	Intro to Nat Res	3
RT102	Meth in Nat Res	<u>1</u>
		15

BL130	Remote Sensing	3
CH108	Applied Chemistry	4
HE181	First Aid	1
SD101	Fund of Speech	3
TC104	Indus Sfty/Sml Eng	<u>3</u>
		14

### SECOND YEAR

RT207	Bio/Mgmt Fishes	3
BL230	Intro Soils	3
RT284	Prin Forestry	4
RT286	Limnological Tech	<u>4</u>
		14

BL239	Bio/Wildlife Mgmt	2
EN205	Tech Rep Writing	3
ID300	Man & His Env	3
RC105	Program Dev & Leadership in Rec	3
RT206	Wldf Mgmt Tech	2
TC103	Surveying	<u>3</u>
		16

### THIRD YEAR

AC132	Prin of Acctg I	4
HU	Humanities	4
RC262	Outdoor Recreation	3
PY101	Intro to Psych	<u>4</u>
		15

HM480	Grantwriting	3
	General Electives	2
HU	Humanities	4
MN365	Human Res Mgmt	3
PS130	St/Local Governmt	<u>4</u>
		16

### FOURTH YEAR

	B.S. Requirements	3
	Electives	4
RC482	Admin of Rec	4
RC481	Prof Dev Seminar	1
	Gen Elective	<u>2</u>
		14

RC362	Lnd Mgmt for Rec	3
	B.S. Requirements	4
	Soc Sci Requirements	2
RC365	Expedition Mgmt	3
	General Electives	<u>4</u>
		16

### Summer

RC492	Internship	6
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## NOTES

# BACHELOR OF SCIENCE THERAPEUTIC RECREATION

With the advancement of the humanistic and holistic philosophy of health care, the development of Therapeutic Recreation as a profession has been tremendous. Using prescribed recreational activities as a modality, the Therapeutic Recreation Specialist improves the physical, social, mental and emotional functioning of individuals with a variety of limiting conditions. Canadian and American students graduating with a bachelor of science in Therapeutic Recreation have been very successful in finding employment in a variety of settings, such as hospitals, homes for the aged, special recreation associations, prisons, municipal recreation programs and agencies providing services for the physically, mentally, and emotionally challenged.

## Recreation Studies (46 credits)

ES141 Intro to Movement	3
ES342 Exercise Physiology	3
RC101 Intro to Recreation	3
RC105 Program Dev & Leadership in Recreation & Leisure Serv	3
RC220 Meth in Arts & Crafts	3
RC240 Foundations of TR	3
RC262 Outdoor Recreation	3
RC340 Prog Dev in TR	3
RC342 Disabilities Seminar in TR	3
RC344 Rec Pursuits & Dis Cond	3
RC346 Clinical Issues/Prac TR	3
RC390 Rec Leader Apprentice	1
RC435 Prob & Issues in TR	3
RC436 TR & Leis Sci Research	2
RC481 Professional Dev Sem	1
RC492 Internship	6

## Cognate Requirements (33 credits)

BL121 Human Anat/Phy I	4
BL122 Human Anat/Phys II	4
CH104 Life Chemistry I	3
CS100 Intro to Microcomp	3
HM480 Grantwriting	3
PY101 Intro to Psychology	4
PY155 Lifespan Development	3
PY201 Comm Skills in Coun	3
PY210 Statistics	3
PY259 Abnormal Psychology	3

## Cognate Electives (9 credits)

BA121 Intro to Business	3
HE190 Prehospital Emrg Care & Crisis Intervention	3
HE208 Nutrition	2
HE209 Pharmacology	3
HE232 Pathophysiology	3
HM204 Fund of Drug Abuse	3
MN360 Prin Management	3
PY217 Social Psychology	3
PY240 Behavior Mgmt	3
PY291 Group Counseling	3
PY385 Health Psychology	3
PY391 Family Therapy	3
SO326 Soc of Aging/Aged	3
SO327 Death & Dying	3

## Departmental Electives (12 credits)

ES140 Health & Fitness	3
ES248 Psychology of Sport	3
ES344 Kinesiology	3
ES349 Orthopaedic Assessment	3
RC212 Ins Mds Adapted Aqua	2
RC270 Sports Mgmt	3
RC280 Read Games, Act, Spts	3
RC295 Practicum	2
RC320 Dance/Rhythmic Act	3
RC365 Expedition Management	3
RC370 Rec for the Elderly	3
RC482 Admin Rec & Leis Serv	4
RC496 Selected Research Topics	1

Elective credits (approximately 9 credits) and General Education requirements must be completed such that at least 126 semester credits have been earned.

## B.S., THERAPEUTIC RECREATION

### FALL

### FIRST YEAR

BL121 Human Anat	4
CS100 Microcomputers	3
EN110 Freshman Comp	3
PY101 Intro to Psy	4
RC101 Intro Rec/Leis	3
<u>17</u>	

### SPRING

BL122 Human Anat	4
CH104 Life Chem I	3
RC105 Prog Dev	3
SD101 Fund Speech	3
<u>13</u>	

## SECOND YEAR

EN210 Res Paper Proc	3
Humanities	4
RC220 Meth Arts/Crafts	3
RC240 Found of TR	3
RC262 Outdoor Recreation	3
	<u>16</u>

ES141 Intro Movement	3
General Electives	3
Humanities	4
PY155 Lifespan Dev	3
PY201 Comm in Coun	3
	<u>16</u>

## THIRD YEAR

ES342 Exer Phys	3
Department Elective	3
PY259 Abnormal Psy	3
RC340 Prog Dev TR	3
RC342 Disab Sem TR	3
	<u>15</u>

Department Elective	3
General Elective	3
PY210 Statistics	3
RC344 Rec Purs/Dis Cond	3
RC346 Clin Iss/Prac TR	3
RC390 Rec Ldr Appr	1
	<u>16</u>

## FOURTH YEAR

Cognate Elective	3
Department Elective	3
General Elective	3
RC435 Prob Issues TR	3
RC481 Prof Dev	1
	<u>13</u>

Cognate Elective	6
Department Elective	3
HM480 Grantwriting	3
RC436 TR Leis Sci Res	2
	<u>14</u>

## Summer

RC492 Internship	6
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## MINOR COURSE OF STUDY

### RECREATION STUDIES

This minor includes 16 credits of required courses and 9 credits of departmental electives.

Required: 16 credits

ES140 Health and Fitness	3
RC101 Intro Rec Leisure Serv	3
RC105 Program Dev & Ldrshp in Rec & Leisure Serv	3
RC295 Practicum	2
RC390 Recreation Leader Appr	1
RC482 Admin Rec Lsre Serv	4

Departmental Electives: (9 credits)  
(6 credits from 300 and 400 level classes)

HM480 Grantwriting	3
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RA210 Lifeguarding	2
RA211 Wtr Sfty & Lfgrd Inst	2
RC212 Inst Meth in Adpdt Aqua	2
RC220 Meth in Arts & Crafts	3
RC240 Found of Thera Rec	3
RC262 Outdoor Recreation	3
RC270 Sports Mgmt	3
RC280 Read Games, Act, Spts	3
RC320 Dance & Rhythmic Act for Recreation	3
RC342 Dis Seminar TR	3
RC344 Rec Pur/Dis Con	3
RC346 Clin Iss Prac TR	3
RC362 Lnd Mgmt for Rec Purp	3
RC365 Expedition Mgmt	3
RC370 Rec for the Elderly	3
RC435 Problems & Issues TR	3
RC496 Selected Research Topics	1

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# PHYSICAL EDUCATION

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Lake Superior State University does not offer majors or minors in physical education. However, there are a wide variety of activity courses available. Students may select these courses as free electives.

The faculty offer a varied program of activities. Courses include badminton, basketball, bowling, volleyball, swimming, weight training, dance, backpacking, outdoor survival, rock climbing and rappelling, racquetball, jogging, orienteering, canoeing, soccer, self defense, and individualized physical fitness. Physical education, intramurals, and athletics play an important part in the lives of the students. Students are encouraged to participate in activities that will provide a carry-over into later life. Preparation for a lifetime of recreational activity is a major goal of the university.

The James Norris Physical Education Center provides facilities

for intercollegiate basketball, hockey, volleyball, softball and tennis. It features an ice arena, three gymnasiums, swimming and diving pools, handball-racquetball courts, classrooms, dance studio, shooting range, wrestling and weight training rooms, offices for recreational activity, recreation studies and criminal justice faculty and athletic staff. In addition the center contains steam, laundry, locker, equipment, and training rooms. Spectator capacities include 2,500 in the gymnasium, 420 for swimming and 3,200 in the ice arena. Adjacent to the Norris Center are eight tennis courts, a softball diamond, a soccer-touch football field, and a six-lane, all-weather quarter-mile track.

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## NOTES

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**School of Science and Natural Resources**

**FACULTY:** Karel L. Rogers, Dean of School of Science and Natural Resources; John W. Lehman, Department Chair Chemistry and Environmental Science; Lewis M. Brown, Department Chair Geology and Physics; Profs. David J. Behmer, Charles W. Jones, Charles R. Mullin, Steven J. Person, Bryce E. Smith, and Richard J. Zabelka; Assoc. Profs. Thomas A. Allan, Patrick W. Brown, Richard S. Furr, William L. Haag, and Dennis M. Merkel; Asst. Profs. Michael J. Chejlava, Barbara I. Evans, Paul R. Kelso, David M. Myton, John H. Roesse, and Deborah K. Stai.

## Honors Program

This program is a research sequence open to biology and environmental science majors with a minimum overall GPA of 3.5 through the first semester of the junior year. Majors electing this sequence will select an instructor as their supervisor. An undergraduate research project will be outlined in consultation with the supervising instructor and submitted to the department for approval. The outline must be approved before the first semester of the senior year. At the end of the seventh week of the spring semester during the senior year, the students will forward an abstract of their work to the department chair and during the tenth week of the same semester will submit the final copy of their research papers in publishable form, for departmental approval. All grades for this sequence will be deferred until the final semester. Eight credit hours of honors credit will be substituted for 8 hours of

electives upon successful completion of the research sequence. The special problem sequence will not be open to students electing the honors program research sequence. The completed research may be used for Senior Thesis.

## Independent Study

Students desiring to enroll in BL, CH, or EV Special Problem courses will be granted permission to take the course(s) provided the following conditions are in existence at the time of petition: (A) junior or senior standing; (B) With overall GPA of at least 2.5; (C) No I grades on transcript. Students meeting these requirements must petition department faculty with a detailed one-page outline of work and date to be completed. Request for more than four hours will result in a proportionate reduction in a 17-hour load. The faculty preceptor must endorse the petition with a signature and the date the project is to be completed.

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# DEPARTMENT OF BIOLOGY

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Biological Sciences prepare students for careers in research and in applied aspects of life sciences as well as providing a background in biology for a career or further studies in allied sciences. Programs offered include bachelor of science degrees in biology, fisheries and wildlife management, and medical technology; a bachelor of arts degree in biology; and an associate degree in natural resources

technology. Associate degree students electing to pursue four-year degree programs generally can change their majors to one of the other biology degree programs without losing credits or having to make up deficiencies. Students working toward these four-year degree programs have the same basic courses.

## BACHELOR OF ARTS/SCIENCE Biology

Lake Superior State University is ideally located for field studies of terrestrial and aquatic resources. Students electing a variety of courses in ecology and applied ecology can qualify for state and federal positions in fisheries biology, wildlife biology, and other related fields. Laboratory courses give students knowledge and techniques necessary for many technical positions with industry and governmental agencies.

Students interested in research positions in marine biology, microbiology, physiology, fish and wildlife ecology and numerous other life sciences can receive a strong undergraduate background at Lake Superior State University that will enable them to pursue a career or graduate education elsewhere. Admission requirements for professional and graduate universities vary throughout the United States and Canada. Students planning post-baccalaureate education should work with their advisor to insure that these requirements are met.

Entrance requirements: To qualify for admission as freshmen, applicants must be graduates of accepted secondary schools with above average standing in their class. Their secondary school preparation should include a four-year curriculum of at least 15 units of acceptable entrance credits. The following subjects must be included in these credits: one unit of beginning algebra, one unit of

advanced algebra, one unit of chemistry and three units of English. In addition, one biology unit and one unit of geometry or trigonometry are highly recommended. Students not meeting these requirements may enter on a provisional basis. OAC students are required to take departmental competency examinations before credit will be granted in biology and chemistry. Substitution for courses required as part of biology degree requirements must be approved by the department chair.

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## NOTES

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# BACHELOR OF ARTS BIOLOGY

## Biology (29 credits)

BL110 General Zoology	4
BL111 General Botany	4
BL204 General Microbiology	4
BL220 Genetics	3
BL221 Genetics Lab	1
BL330 Animal Physiology	4
or	4
BL315 Plant Physiology	3
BL337 General Ecology	1
BL395 Junior Seminar	3
BL420 Pop Genetics & Evol	2
BL499 Senior Thesis	2

## Chemistry (17 credits)

CH115 General Chemistry I	5
CH116 General Chemistry II	4
CH225 Organic Chemistry I	4
CH226 Organic Chemistry II	4

## Other Departments (24 credits)

CS100 Intro to Microcomp	3
MA111 College Algebra	3
MA112 Calc Bus Life Sci	4
MA207 Prin Stat Methods	3
EN210 Res Paper Proc	3
Foreign Language *	8

Additionally, a student is required to:

1. take 6-8 semester credits of BL electives with at least 1 course numbered 300 or higher and
2. satisfy General Education requirements (Natural Science requirements are met by above classes) such that 125 semester credits are earned.

\*All 8 credits must be taken in one language.

## BACHELOR OF ARTS, BIOLOGY

### FALL

#### FIRST YEAR

BL110 General Zoology	4
CH115 General Chem I	5
MA111 College Algebra	3
EN110 Freshman Comp	3
	15

#### SECOND YEAR

CH225 Organic Chem I	4
MA207 Prin Stat Methods	3
CS100 Intro to Microcomp	3
Humanities Elective	4
BL Elective	3
	17

#### THIRD YEAR

BL337 General Ecology	3
Foreign Language	4
BL220 Genetics	3
BL221 Genetics Lab	1
Soc Sci Elective	4
	15

#### FOURTH YEAR

BL Elective	5
Free Elective	9
	14

### SPRING

BL111 General Botany	4
CH116 General Chem II	4
MA112 Calc Bus Life Sci	4
SD101 Fund of Speech	3
	15

CH226 Organic Chem II	4
EN210 Res Paper Proc	3
BL204 General Microbiology	4
Humanities Elective	4
	15

Foreign Lang. II	4
Soc Sci Elective	4
BL315 Plant Physiology	4
or	4
BL330 Animal Physiology	1
BL395 Junior Seminar	1
Free Elective	4
	17

BL499 Senior Thesis	2
BL420 Pop Genetics & Evol	3
Free Elective	12
	17



# BACHELOR OF ARTS BIOLOGY ELEMENTARY TEACHING OPTION

<b>Courses Required for Major</b>							
BL110	General Zoology	4		MA207	Prin Stat Methods	3	
BL111	General Botany	4		HS101-102	Hist Wild Civ I, II	8	
BL204	General Microbiology	4		or			
BL220	Genetics	3		HS131-132	U.S. Hist I, II		
BL221	Genetics Lab	1		GG201	Wild Reg Geog	4	
BL330	Animal Physiology			PS110	Intro Am Govt Pol	4	
	or	4		(Canadian students may substitute PS160 Intro Canadian Govt Pol 3 cr)			
BL315	Plant Physiology			<b>Remaining General Education</b>			
BL337	General Ecology	3		EN110	Freshman Comp	3	
BL395	Junior Seminar	1		SD101	Fund of Speech	3	
BL420	Pop Genetics & Evol	3		Humanities			8
BL499	Senior Thesis	2		<b>Teacher Education Minor</b>			
Electives (300 level)		2-4		TE150	Ref Lrn & Teach	3	
<b>Chemistry</b>				TE250	Student Div Sch	3	
CH115	General Chemistry I	5		TE301	Lrn/Lrng Tch Cont	4	
CH116	General Chemistry II	4		TE401	Lrn Div Tch Sub	5	
CH225	Organic Chemistry I	4		TE402	Craft Teach Prac	6	
CH226	Organic Chemistry II	4		<b>BA Requirements</b>			
<b>Other Departments</b>				Foreign Language*			8
CS100	Intro to Microcomp	3		<b>Total Credits for Graduation</b>			142-144
MA112	Calc Bus Life Sci	4		<b>MSU Graduate Courses</b>			
PH221	Elem Phsics I	4		TE501	Int Tch Div Lrnrs I	6	
<b>Planned Program Courses</b>				TE502	Int Tch Div Lrnrs II	6	
PY265	Child & Adol Dev	3		TE801	Prof Role Tch Prac I	3	
EN210	Res Paper Process	3		TE803	Prof Role Tch Prac II	3	
EN231	Am Lit I			TE802	Rfl Inq Tch Prac I	3	
	or	3		TE804	Rfl Inq Tch Prac II	3	
EN232	Am Lit II			<b>*All 8 credits must be taken in one language.</b>			
EN320	Respond Writ	3					
EN335	Childhood Lit	3					
MA103	Numb Syst & Prob Sol	3					
MA104	Geom & Measurement	3					

## NOTES

# BACHELOR OF ARTS BIOLOGY SECONDARY TEACHING OPTION

<b>Courses Required for Major</b> BL110 General Zoology 4 BL111 General Botany 4 BL204 General Microbiology 4 BL220 Genetics 3 BL221 Genetics Lab 1 BL202 Field Botany and BL330 Animal Physiology or 8 BL315 Plant Physiology and BL302 Invertebrate Zoology BL337 General Ecology 3 BL395 Junior Seminar 1 BL420 Pop Genetics & Evol 3 BL499 Senior Thesis 2 Electives (300 level) 2-4		<b>Remaining General Education</b> EN110 Freshman Comp 3 EN210 Res Paper Process 3 SD101 Fund of Speech 3 Humanities 8 Social Sciences 8  <b>Teacher Education Minor</b> TE150 Ref Lrn & Teach 3 TE250 Student Div Sch 3 TE301 Lrn/Lrng Tch Cont 4 TE401 Lrn Div Tch Sub 5 TE402 Craft Teach Prac 6  <b>BA Requirements</b> Foreign Language* 8  <b>Total Credits for Graduation</b> 125  <b>MSU Graduate Courses</b> TE501 Int Tch Div Lrnrs I 6 TE502 Int Tch Div Lrnrs II 6 TE801 Prof Role Tch Prac I 3 TE803 Prof Role Tch Prac II 3 TE802 Rfl Inq Tch Prac I 3 TE804 Rfl Inq Tch Prac II 3
<b>Other Departments</b> CS100 Intro Microcomp 3 MA111 College Algebra 3 MA112 Calc Bus Life Sci 4 MA207 Prin Stat Methods 3		
<b>Chemistry Teaching Minor</b> CH115 General Chemistry I 5 CH116 General Chemistry II 4 CH225 Organic Chemistry I 4 CH226 Organic Chemistry II 4 CH351 Biochemistry 4		

\*All 8 credits must be taken in one language.

## NOTES

# BACHELOR OF SCIENCE BIOLOGY

<b>Biology (47 credits)</b>	
BL110 General Zoology	4
BL111 General Botany	4
BL204 General Microbiology	4
BL220 Genetics	3
BL221 Genetics Lab	1
BL280 Biometrics	3
BL315 Plant Physiology	4
or	
BL330 Animal Physiology	3
BL337 General Ecology	3
BL395 Junior Seminar	1
BL420 Pop Genetics & Evol	3
BL499 Senior Thesis	2
BL Electives	15
(including at least 2 courses numbered 300 or higher)	

<b>Chemistry (21 credits)</b>	
CH115 General Chemistry I	5
CH116 General Chemistry II	4

CH225 Organic Chemistry I	4
CH226 Organic Chemistry I	4
CH351 Intro Biochemistry	4
<b>Other Departments (24 credits)</b>	
CS100 Intro to Microcomp	3
MA111 College Algebra	3
MA112 Calc Bus Life Sci	4
MA207 Prin Stat Methods	3
PH221 Elem Physics I	4
PH222 Elem Physics II	4
EN210 Res Paper Proc	3

Additionally, a student is required to satisfy General Education requirements (Natural Science requirements are met by above classes) and free electives such that 125 semester credits are earned.

## BACHELOR OF SCIENCE, BIOLOGY

*FALL*

*SPRING*

### FIRST YEAR

BL110 General Zoology	4
CH115 General Chem I	5
MA111 College Algebra	3
Soc Sci Elective	4
	16

BL111 General Botany	4
CH116 General Chem II	4
MA112 Calc Bus Life Sci	4
EN110 Freshman Comp	3
	15

### SECOND YEAR

CH225 Organic Chem I	4
BL Elective	3
MA207 Prin Stat Meth	3
Humanities Elec	4
CS100 Intro to Microcomp	3
	17

CH226 Organic Chem II	4
BL204 Gen Microbiology	4
BL280 Biometrics	3
Humanities Elective	4
EN210 Res Paper Proc	3
	18

### THIRD YEAR

BL220 Genetics	3
BL221 Genetics Lab	1
BL337 General Ecology	3
PH221 Elem Physics I	4
CH351 Intro Biochem	4
	15

BL315 Plant Physiology	4
or	
BL330 Animal Physiology	4
BL Elective	4
PH222 Elem Physics II	4
Soc Sci Elective	4
BL395 Junior Seminar	1
	17

### FOURTH YEAR

BL Elective	4
BL420 Pop Gen & Evol	3
Free Electives	7
	14

BL499 Senior Thesis	2
BL Electives	4
SD101 Fund of Speech	3
Free Elective	4
	13

# FISHERIES & WILDLIFE

Fisheries and wildlife courses place strong emphasis on understanding organisms in their habitats and these courses blend a conceptual understanding of fish and wildlife populations with practical knowledge of relevant lab and field techniques. Students work with, and must learn to identify, a wide variety of plants, fish, birds, and mammals.

Students graduating from this rigorous curriculum can meet the qualifications of state and federal

government agencies as technicians and biologists. Students desiring certification by the Wildlife Society should consult with an advisor for details. Other career opportunities include positions as naturalists, conservation officers, and related professions. The rigorous curriculum provides an extremely competitive background for admittance to graduate school. All students majoring in fisheries and wildlife management are strongly encouraged to consider pursuing a graduate degree.

**ENTRANCE REQUIREMENTS:**  
Same as biology.

## BACHELOR OF SCIENCE FISHERIES AND WILDLIFE MANAGEMENT

### Biology (45 credits)

BL110	General Zoology	4
BL111	General Botany	4
BL202	Field Botany	3
BL220	Genetics	3
BL280	Biometrics	3
BL310	Ichthyology	3
BL312	Ornithology	3
BL330	Animal Physiology	4
BL337	General Ecology	3
BL395	Junior Seminar	1
BL411	Mammalogy	3
BL432	Fish Ecol & Mgmt	3
BL439	Wildlife Ecol & Mgmt	3
BL445	Limnology	3
BL499	Senior Thesis	2

Student must select at least 14 semester hours from the following:

BL130	Remote Sensing	3
BL201	Plant Morphology	3
BE204	General Microbiology	4
BL230	Soils	4
BL239	Wildlife Bio Mgmt	2
BL245	Vertebrate Anatomy	4
BL272	Freshwtr Fish Cult	2
BL275	Aquatic Entomology	3
BL315	Plant Physiology	4
BL437	Plant Ecology	3
EV311	Environmental Law	2

Other classes may be selected if approved by advisor and department chair.

### Chemistry (17 credits)

CH115	General Chemistry I	5
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CH116	General Chemistry II	4
CH225	Organic Chemistry I	4
CH226	Organic Chemistry II	4
To complete a chemistry minor, students should also select:		
CH231	Quant Analysis	3
or		
CH351	Intro Biochemistry	4

### Other Departments (13 credits)

CS100	Intro to Microcomp	3
MA111	College Algebra	3
MA112	Calc Bus Life Sci	4
MA207	Prin Stat Methods	3
EN210	Res Paper Proc	3

Students who qualify are urged to replace MA111 & MA112 with:

MA150	Precalculus Math	4
MA151	Calculus I	4

Additionally, students must complete General Education requirements and sufficient electives to total 125 semester credits.

To meet Wildlife Society certification standards, students must satisfy the following requirements: Botany - 9 hours (select BL201, BL315, or BL437); Physics, Geology, or Soils - 3-4 hours (select PH221, GE111, or BL230) Communication - 12 hours (select SD201 or SD202) Policy, Admin, & Law - 6 hours

(Select BL239, EV311, PS110, or PS201).  
Federal agencies require 9 semester hours of

botany. To meet this requirement, students  
should select BL201, BL315, or BL437.

## BACHELORS OF SCIENCE, FISHERIES AND WILDLIFE MANAGEMENT

### FALL

#### FIRST YEAR

BL110	General Zoology	4
CH115	General Chem I	5
MA111	College Algebra	3
CS100	Intro to Microcomp	3
		<u>15</u>

#### SECOND YEAR

CH225	Organic Chem I	4
BL	Elective	4
BL202	Field Botany	3
MA207	Prin Stat Methods	3
EN210	Res Paper Proc	3
		<u>17</u>

#### THIRD YEAR

BL220	Genetics	3
BL337	General Ecology	3
	Free Elective	4
	Humanities Electives	4
SD101	Fund of Speech	3
		<u>17</u>

#### FOURTH YEAR

BL	Elective	3
BL432	Fish Ecol & Mgmt	3
BL439	Wildlife Ecol Mgmt	3
	Free Elective	3
	Soc Sci Elective	4
		<u>16</u>

### SPRING

BL111	General Botany	4
CH116	General Chem II	4
MA112	Calc Bus Life Sci	4
EN110	Freshman Comp	3
		<u>15</u>

CH226	Organic Chem II	4
BL	Elective	4
BL280	Biometrics	3
BL330	Animal Physiology	4
		<u>15</u>

BL312	Ornithology	3
BL310	Ichthyology	3
BL395	Junior Seminar	1
	Humanities Elective	4
	Free Electives	4
		<u>15</u>

BL499	Senior Thesis	2
BL411	Mammalogy	3
BL445	Limnology	3
BL	Elective	3
	Soc Sci Elective	4
		<u>15</u>

# Medical Technology

Medical technologists perform most of the clinical tests conducted in hospital, clinical and health laboratories. Pharmaceutical manufacturers employ medical technologists in connection with the development of drugs and the search for sera and vaccines. Students may obtain the bachelor of science degree in medical technology by completing the specified three-year sequence at the University (see medical technology bachelor of science requirements) followed by 12 months training at an affiliated hospital. Students may elect any NAACLS accredited hospital (whose program is approved as satisfactory by the university). Lake Superior State University does not assume responsibility for obtaining an affiliation at an approved hospital.

Graduates of this program are eligible to take an examination for certification as a registered medical technologist.

**ENTRANCE REQUIREMENTS:**  
To qualify for admission as freshmen, applicants must be graduates of accredited secondary schools with above average standing in their class. Their secondary school preparation should include a four-year curriculum of at least 15 units of acceptable entrance credits. The following subjects must be included in these credits: one unit of beginning algebra, one unit of geometry, one-half unit of advanced algebra, one unit of chemistry or physics (preferably chemistry) and three units of English. One unit of biology is highly recommended. Students not meeting these requirements may enter on a provisional basis.

## BACHELOR OF SCIENCE MEDICAL TECHNOLOGY

### Biology (60 credits)

BL110	General Zoology	4
BL204	General Microbiology	4
BL220	Genetics	3
BL243	Vertebrate Anatomy	4
BL330	Animal Physiology	4
BL380	Clin Hematol & Hemosts	4
BL422	Parasitology	
	or	3
BL480	Microbiol. & Biotech.	
BL423	Immunology	4
BL460	Medical Tech Intern*	30

### Chemistry (23 credits)

CH115	General Chemistry I	5
CH116	General Chemistry II	4
CH225	Organic Chemistry I	4
CH226	Organic Chemistry II	4

### Chemistry (cont)

CH231	Quantitative Analysis	3
CH232	Instrumental Analysis	3
Other Departments (16 credits)		
CS100	Intro to Microcomp	3
MA111	College Algebra	3
MA112	Calc Bus Life Sci	4
MA207	Prin Stat Methods	3
EN210	Res Paper Proc	3

Additionally, a student is required to satisfy General Education requirements (Natural Science requirements are met by required classes) such that 125 semester credits are earned.

\*Calendar Year

## B.S., MEDICAL TECHNOLOGY

### FALL

#### FIRST YEAR

BL110 General Zoology	4
CH115 General Chem I	5
MA111 College Algebra	3
EN110 Freshman Comp	3
	<u>15</u>

#### SECOND YEAR

CH225 Organic Chem. I	4
MA207 Prin Stat Methods	3
BL243 Vertebrate Anatomy	4
Humanities Elective	4
EN210 Res Paper Proc	3
	<u>18</u>

#### THIRD YEAR

BL220 Genetics	3
BL422 Parasitology*	
or	3
BL480 Microbiol & Biotech*	
CH231 Quant Analysis	3
Soc Science Elective	4
Free Electives	4
	<u>17</u>

#### FOURTH YEAR

BL460 Med Tech Intern	15
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### SPRING

CH116 General Chem II	4
MA112 Cal Bus Life Sci	4
SD101 Fund of Speech	3
CS100 Intro to Microcomp	3
Free Elective	3
	<u>17</u>

CH226 Organic Chem II	4
BL330 Animal Physiology	4
BL204 Gen Microbiology	4
Humanities Elective	4
	<u>16</u>

BL423 Immunology	4
CH232 Instrument Analysis	3
BL380 Clinic Hematology & Hemostasis	4
Soc Science Elective	4
	<u>15</u>

BL460 Med Tech Intern	15
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NOTE: The 3 + 1 nature of the program forces these students to take 300 and 400 level courses in an earlier year. Alternate year offerings will also affect the precise year in a student's program in which he/she can take a particular course.

\*Indicates courses offered in alternate years.

## Pre-professional: Medicine, Optometry, Dentistry, Veterinary Medicine

Professional schools, including medical, dental, optometry, and veterinary schools, typically do not specifically require any college degree, let alone a specific degree in biology. However, applicants to professional schools are seldom accepted with only three years of undergraduate credit. Further, since career goals often change, pre-professional students at LSSU are

encouraged to remain four years and complete the requirements for a baccalaureate degree. A survey of medical and dental school admission requirements for the United States and Canada as published by the American and Canadian Associations of Medical and Dental Colleges shows that courses taken for either the Lake Superior State University Bachelor of Science or Bachelor of

Arts degree in Biology meet the most stringent entrance requirements. Therefore, although other curricula may be pursued as pre-professional degrees, most students elect to strive toward a degree in biology.

#### Pre-Professional Advisory Board:

The board consists of representatives from the disciplines of biology and chemistry including two pre-professional advisors. This committee serves to aid the progress of all pre-professional students throughout their undergraduate careers. In addition to assessing a student's progress at the end of their sophomore year, where possible the committee will write a formal recommendation to the appropriate medical, optometry, veterinary or

dental university. By virtue of our small size and student to faculty ratio, we can write an in-depth letter based upon our personal knowledge of each student's abilities and performance rather than merely using grade point average and MCAT, VAT, DAT or OAT scores. These letters, which take into account the aspects of the student's personality that relate to their potential as a medical professional, are highly regarded by the various professional schools in Michigan as well as in the province of Ontario.

A handbook is available to all LSSU pre-health professional students upon formal admission to our programs. This handbook is designed to assist students in achieving their goal of successful entrance into professional school.

## Pre-Pharmacy (Transfer Program)

The two-year course of study outlined below is a guide for those who plan to apply for admission and transfer to a three-year professional pharmacy curriculum at another institution. In Michigan, such programs are offered at Ferris State University, University of Michigan, and Wayne State University. For further information and planning, students are advised to consult catalogs from these or other institutions. Generally, application for admission to a professional pharmacy curriculum must be submitted after completing the first year of pre-pharmacy studies.

Usually students must have a cumulative grade point average of 2.00 as well as grades of C or better in sciences and mathematics. Students entering Ferris State University with one year of high school physics may pass a physics proficiency examination in lieu of the year of college physics. If the latter courses are not taken, a sequence of humanities or behavioral science courses is recommended.

The following suggested schedule, for instance, is recommended and meets all requirements for admission to the School of Pharmacy of Ferris State University.



## PRE-PHARMACY

FALL

### FIRST YEAR

CH115	General Chem I	5
BL110	General Zoology	4
MA111	College Algebra	4
PY101	Intro Psychology	4
		<u>16</u>

SPRING

CH116	General Chem II	4
BL111	General Botany	4
MA112	Calc Bus Life Sci	4
	or	
MA151	Calculus I	4
EN110	Freshman Comp	3
EC201	Prin Macroecon	3
		<u>18</u>

### SECOND YEAR

CH225	Organic Chem I	4
BL121	Human Anat Phys	4
PH221	Elem Physics I	4
EN210	Res Paper Proc	3
SD101	Fund of Speech	3
		<u>18</u>

CH226	Organic Chem II	4
BL122	Human Anat Phys	4
PH222	Elem Physics II	4
	Humanities Elective	4
		<u>16</u>

\*At Ferris State University, Physics is not required.

## NOTES

# Natural Resources Technology

This program constitutes the first half of the Parks option of the B.S. in Recreation Management. The Natural Resources Technology degree provides a broad background of information in natural resource technology and management.

**ENTRANCE REQUIREMENTS:**  
To be considered for admission as

freshmen, applicants must be graduates of accredited secondary schools with above average standing in their class. Their secondary school preparation should include a four-year curriculum of at least 15 units of acceptable entrance credits. The following should be included in these credits: one unit of beginning algebra, one unit of laboratory science (biology, chemistry or physics--preferably biology) and three units of English.

## ASSOCIATE DEGREE Natural Resources Technology

Resource Technology, Biology, and Chemistry (33 credits)

NS103	Environmental Sci	3
RT102	Methods in Nat Res	1
RT206	Wildlife Mgmt Tech	2
RT207	Biol & Mgmt Fish	3
RT284	Prin of Forestry	4
RT286	Limnological Tech	4
BL130	Remote Sensing	3
BL230	Intro to Soils	4
BL239	Wildlife Biol & Mgmt	2
CH108	Applied Chemistry	4
ID300	Man & Environment	3

Other Departments (26 credits)

RC101	Intro Rec/Services	3
MA109	Trigonometry	2
CS100	Intro to Microcomp	3
EN110	Freshman Comp	3
EN205	Technical Rept Writ	3
HE181	First Aid	1
TC103	Surveying	3
TC104	Small Eng/Safety	3
SD101	Fund of Speech	3

Students are required to take three additional free elective credits for a total of 62 semester credits.

### ASSOCIATE DEGREE, Natural Resources Technology

*FALL*

#### FIRST YEAR

EN110	Freshman Comp	3
NS103	Environmental Sci	3
RT102	Methods in Nat Res	1
MA109	Trigonometry	2
CS100	Intro to Microcomp	3
RC101	Intro Rec/Services	3
		<u>15</u>

#### SECOND YEAR

BL230	Intro to Soils	4
RT284	Prin of Forestry	4
RT207	Biol & Mgt Fish	3
RT286	Limnological Tech	4
		<u>15</u>

*SPRING*

TC104	Small Eng/Safety	3
BL130	Remote Sensing	3
CH108	Applied Chemistry	4
SD101	Fund of Speech	3
HE181	First Aid	1
Free Elective		<u>2</u>
		<u>16</u>

BL239	Wildlife Bio Mgmt	2
RT206	Wildlife Mgmt Tech	2
ID300	Man & Environ	3
TC103	Surveying	3
EN205	Tech Rep Writ	3
Free Elective		<u>3</u>
		<u>16</u>

# THREE-YEAR DEGREE PLAN FOR A B.S. IN CRIMINAL JUSTICE FOLLOWING THE NRT DEGREE.

Students with a particular interest in state and federal laws enacted to protect our natural resources and federal restrictions on the use of our renewable resources should consider obtaining both an Associate Degree in Natural Resources Technology (2 years) and a Bachelor of Science Degree in Criminal Justice (3 additional years). The NRT degree will provide the student with a good general background in natural resources and the Criminal Justice degree will allow the student to be fully qualified for many different

law enforcement opportunities. Jobs for conservation law offices are limited, but the above configuration of degrees prepares a student to be highly competitive for openings that do occur. Students selecting this course of study should work closely with their advisor in order to complete both degrees in the five year span. After completing the two-year NRT Associate Degree, students would complete the following sequence of courses. This plan assumes MLEOTC certification. 91 additional hours.

## B.S. CRIMINAL JUSTICE

### FALL

#### THIRD YEAR

CJ101 Intro to Crim Just	3
CJ102 Police Process	3
CJ110 Intro to Corrections	3
PS110 Intro Amer Govt	4
Humanities Elective	<u>4</u>
	17

#### FOURTH YEAR

CJ201 Firearms Training	1
CJ212 Loss Control	3
CJ243 Investigation	3
FS101 Intro Fire Sci	3
PY101 Intro Psy	<u>4</u>
	14

#### FIFTH YEAR

CJ319 Substantive Law*	3
CJ401 Senior Seminar	3
HE190 PEC & CI I	3
RA197 Phy Fit for LE*	1
Elective	<u>4</u>
	14

### SPRING

CJ106 Juvenile Just	3
CJ206 Law Enforce Intern	3
SO214 Criminology	3
Humanities Elective	<u>4</u>
	13

CJ345 Statistics	4
CJ402 Internship	3
PS120 Legal Process	3
PY259 Abnormal Psy	3
SO226 Races & Minorities	<u>3</u>
	16

CJ313 Crisis Inter*	3
CJ321 Ethics*	3
CJ409 Procedural Law*	3
CJ444 Criminalistics*	4
HE191 PE & CI II*	3
RA197 Phy Fit for LE*	1
	17

\*MLEOTC Course

# BIOLOGY MINOR

This minor is open to all students. Requires a minimum of 21 credit hours of Biology courses. This is an approved teaching minor.

Biology (21 credits)

BL110 General Zoology	4		BL221 Genetics Lab	1
BL111 General Botany	4		BL337 General Ecology	3
BL220 Genetics	3		BL Electives 200+ level	6

At least six semester hours of the required courses must be taken at LSSU for a student to obtain this minor.

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## *NOTES*

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**DEPARTMENT OF  
CHEMISTRY AND  
ENVIRONMENTAL SCIENCE**

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## **Environmental Chemistry**

Environmental Chemistry is a relatively new, fast-growing subdiscipline of Chemistry that addresses the need of society for a safe, healthy environment by applying chemical principles to the maintenance and enhancement of environmental quality. Chemicals have increased our standard of living and quality of life, but have also exacted a heavy price in terms of pollution and environmental degradation. It is only through the enlightened application of chemistry that the problems caused by chemicals can be solved and environmental quality improved. Anyone entering into an environmental field, as well as those entering the chemical profession, should have a basic understanding of environmental chemistry. The environmental sector is the fastest growing component of the U.S. economy, and shortages are greatest in the areas of environmental chemistry as well as environmental engineering. The Environmental Chemistry program at Lake Superior State University is intended for students who have an interest in and aptitude for chemistry and a concern for the environment. The program takes advantage of LSSU's strategic location at the outlet of Lake Superior, which provides for a broad

variety of field and research experiences. Graduates of the program will apply chemical methods to the study, amelioration, and solution of environmental problems. They will be employable by federal and state or provincial agencies, industries, and businesses, and as environmental consultants.

### **ENTRANCE REQUIREMENTS:**

Those planning to enroll in the program should have completed at least 15 units of acceptable entrance credits at an accredited secondary school with above average standing in their class. The credits must include one unit of beginning algebra, one-half unit of advanced algebra, one unit of geometry, one unit of chemistry, and three units of English. An additional year of chemistry and a year of senior math are highly recommended.

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## ***NOTES***

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# BACHELOR OF SCIENCE ENVIRONMENTAL CHEMISTRY

## Chemistry and Environmental Science (56 credits)

CH115	General Chem I	5
CH116	General Chem II	4
CH225	Organic Chem I	4
CH226	Organic Chem II	4
CH231	Quantitative Analysis	3
CH232	Instrumental Analysis	3
CH341	Envir Chem I: Water	4
CH342	Envir Chem II: Air	4
CH351	Intro Biochemistry	4
CH353	Toxicology	3
CH361	Physical Chem I	4
NS103	Environmental Sci	3
EV311	Environmental Law	2
EV313	Solid & Haz Waste	3
EV395	Junior Seminar	1
EV425	Envir Systems Analysis	3
EV499	Senior Thesis	2

## Support Courses (37-39 credits)

BL110	General Zoology	4
BL111	General Botany	4
BL204	General Microbiology	4
BL337	General Ecology	3
CS100	Intro to Microcomp	3
MA151	Calculus I	4

MA152	Calculus II	4
MA207	Prin Stat Methods	3
PH221	Elem Physics I	4-5
	or	
PH231	General Physics I	4-5
PH222	Elem Physics II	
	or	
PH232	General Physics II	

Directed Electives (6-8 credits). Students must select two related courses from the following list after consultation with a faculty advisor.

BL130	Remote Sensing	3
BL230	Intro to Soils	4
BL445	Limnology	3
ID300	Man in Environment	3
ID399	Internship in Env Chem	3-4
GE111	Physical Geology I	4
GE112	Physical Geology II	4
GE311	Prin Hydrology	3
GE312	Groundwater Hydrology	3

In addition, students are required to satisfy General Education requirements (Natural Science requirements are met by the above courses) and to take enough free electives such that 125 semester credits are earned.

## B.S., ENVIRONMENTAL CHEMISTRY

### FALL

#### FIRST YEAR

CH115	General Chem I	5
BL110	General Zoology	4
MA151	Calculus I	4
NS103	Environmental Sci	3
		<u>16</u>

#### SECOND YEAR

CH225	Organic Chem I	4
PH221	Elem Physics I	4
SD101	Fund of Speech	3
EN205	Technical Rep Writ	3
MA207	Prin Stat Methods	3
		<u>17</u>

#### THIRD YEAR

CH231	Quant Analysis	3
CH361	Physical Chem I	4
BL204	Gen Microbiology	4
EV311	Environmental Law	2
BL337	General Ecology	3
		<u>16</u>

### SPRING

CH116	General Chem II	4
BL111	General Botany	4
MA152	Calculus II	4
EN110	Freshman Comp	3
		<u>15</u>

CH226	Organic Chem II	4
PH222	Elem Physics II	4
CS100	Intro to Microcomp	3
	Social Science Elective	4
	Free Elective	3
		<u>18</u>

CH232	Instrumental Analy	3
CH341	Envir Chem I: Water	4
EV395	Junior Seminar	1
	Social Science Elective	4
	Humanities Elective	4
		<u>16</u>

## FOURTH YEAR

CH342	Envir Chem II: Air	4
CH351	Intro Biochemistry	4
EV313	Solid & Haz Waste	4
	Directed Elective	<u>3-4</u>
		14-15

CH353	Toxicology	3
EV425	Env Systems Analy	3
EV499	Senior Thesis	3
	Directed Elective	<u>3-4</u>
	Humanities Elective	<u>4</u>
		15-16

## Environmental Science

Environmental Science is a comparatively new field that is still evolving. It offers careers to technicians, scientists, and engineers in a wide variety of specialties. Students aspiring to become environmental scientists must possess a deep and lasting concern for the ecosystem, acquire a comprehensive knowledge of environmental issues, and develop the scientific skills needed to solve environmental problems and deal intelligently with our natural resources. They should also acquire the technical and communicative skills needed to deal with business, industrial and government leaders whose activities

affect the environment. The curriculum is a four-year program to prepare students for careers directed toward the maintenance and improvement of environmental quality.

### ENTRANCE REQUIREMENTS:

Those planning to enroll in the environmental science curriculum at Lake Superior State University should have completed at least 15 units of acceptable entrance credits at an accredited secondary school with above average standing in their class. These credits must include one unit of beginning algebra, one-half unit of advanced algebra, one unit of geometry, one unit of chemistry or physics, and three units of English. One unit of biology and a year of senior math are highly recommended.

## BACHELOR OF SCIENCE ENVIRONMENTAL SCIENCE

### Biology, and Environmental Science (36 credits)

BL110	General Zoology	4
BL111	General Botany	4
BL230	Intro to Soils	4
BL337	General Ecology	3
NS103	Environmental Sci	3
EV249	Water Pollution Control	3
BL204	General Microbiology	4
EV311	Environmental Law	2
EV313	Solid & Haz Waste	3
EV395	Junior Seminar	1
EV499	Senior Thesis	2
ID300	Man & His Environment	3

### Chemistry (23 credits)

CH115	General Chemistry I	5
CH116	General Chemistry II	4
CH225	Organic Chemistry I	4

CH226	Organic Chemistry II	4
CH231	Quantitative Analysis	3
CH232	Instrumental Analysis	3

### Other Departments (31 credits)

CS100	Intro to Microcomp	3
MA111	College Algebra*	3
MA112	Calc Bus Life Sci*	4
MA207	Prin Stat Methods	3
PH221	Elem Physics I*	4
PH222	Elem Physics II*	4
GE311	Hydrology	3
EN205	Technical Report Writ	3
GE111	Physical Geology I	4

Directed Electives (students select one of the following--minimum 3 credits)

BL130	Remote Sensing	3
CH353	Intro Toxicology	3

CH341	Envir Chem I: Air	4
CH342	Envir Chem II: Water	4
EV490	Indep Study: Env Sci	3-4
GE112	Physical Geology II	4
GG108	Phys Geog: Meteor, Clim	3
TC103	Surveying	3

\*Students with adequate preparation in mathematics are advised to take MA151-152 in place of MA111-112 and PH231-232 in

place of PH221-222. Competency in trigonometry is required to take physics. See advisor for details.

Additionally, a student is required to satisfy General Education requirements (Natural Science requirements are met by above classes) and free electives such that 125 semester credits are earned.

## B.S., ENVIRONMENTAL SCIENCE

### FALL

#### FIRST YEAR

CH115	General Chem I	5
BL110	General Zoology	4
MA109	Trigonometry**	2
MA111	College Algebra	3
NS103	Environmental Sci	3
		<u>17</u>

#### SECOND YEAR

CH225	Organic Chem I	4
PH221	Elem Physics I	4
GE111	Physical Geology I	4
EN205	Tech Report Writ	3
		<u>15</u>

#### THIRD YEAR

EV313	Solid/Haz Waste*	3
MA207	Prin Stat Methods	3
CH231	Quant Analysis	3
BL204	Gen Microbiology	4
Soc Sci	Elective	3
		<u>16</u>

#### FOURTH YEAR

BL337	General Ecology	3
Social Sci	Elec	3
EV311	Environmental Law	2
Humanities	Elective	4
Free	Elective	4
		<u>16</u>

\*Taken in alternate years

\*\*Student will be offered chance to have course waived by examination  
If taken, can be used as a free elective.

### SPRING

CH116	General Chem II	4
BL111	General Botany	4
EN110	Freshman Comp	3
MA112	Calc Bus Life Sci	4
		<u>15</u>

CH226	Organic Chem II	4
PH222	Elem Physics II	4
EV249	Water Poll Control	3
SD101	Fund of Speech	3
CS100	Intro to Microcomp	3
		<u>17</u>

ID300	Man & His Environ	3
EV395	Junior Seminar	1
CH232	Instrumental Analy	3
BL230	Intro to Soils	4
Soc Sci	Elective	3
		<u>14</u>

EV499	Senior Thesis	1
GE211	Hydrology	3
Humanities	Elective	4
Free	Elective	3
Directed	Elective	3
		<u>13</u>



# ASSOCIATE DEGREE CHEMISTRY

The associate degree in chemistry provides the fundamentals required for additional studies in chemistry. The science and math component

provide a strong foundation for a bachelor's degree in chemistry or physics.

## Chemistry (23 credits)

CH115	General Chem I	5
CH116	General Chem II	4
CH225	Organic Chem I	4
CH226	Organic Chem II	4
CH231	Quantitative Analsis	3
CH232	Instrumental Analsis	3

EN205	Technical Report Writ	3
MA151	Calculus I	4
MA152	Calculus II	4
MA251	Calculus III	4
PH231	Elem Physics I	5
PH232	Elem Physics II	5
SD101	Fund of Speech	3
SS	Elective	3

## Other Departments (37 credits)

CS100	Intro to Microcomp	3
EN110	Freshman Comp	3

Students are required to take a total of 63 semester credits .

## ASSOCIATE DEGREE CHEMISTRY

### FALL

### FIRST YEAR

CH115	General Chem I	5
MA151	Calculus I	4
EN110	Freshman Comp	3
SD101	Fund of Speech	3
		<u>15</u>

### SPRING

CH116	General Chem II	4
MA152	Calculus II	4
CS100	Intro to Microcomp	3
SS or HU	Elective	3
Free	Elective	3
		<u>17</u>

### SECOND YEAR

CH225	Organic Chem I	4
CH231	Quant Analysis	3
PH231	General Physics I	5
EN205	Tech Report Writ	3
		<u>15</u>

CH226	Organic Chem II	4
CH232	Instrumental Anal	3
PH232	General Physics II	5
MA251	Calculus III	4
		<u>16</u>

## CHEMISTRY MINOR

This minor is open to all students. Requires a minimum of 20 credit hours of Chemistry courses. This is an approved teaching minor.

### Chemistry (20-21 credits)

CH115	General Chem I	5
CH116	General Chem II	4
CH225	Organic Chem I	4

CH226	Organic Chem II	4
CH231	Quant Analysis	3
	or	
CH351	Intro Biochem	4

At least six semester hours of the required courses must be taken at LSSU for a student to obtain this minor.

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# DEPARTMENT GEOLOGY AND PHYSICS

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Since the Beginning of the solar system our earth has been developing. Our present environment is the result of the cumulative interaction of many dynamic physical, chemical and biological processes.

Geology deals with the dynamic earth, its physical makeup, and its physical and organic history. It involves the study of changes which have taken place and the forces which cause, and are now causing, these changes. By drawing on concepts of biology, chemistry, mathematics and physics, geologists attempt to understand the physical environment in which we live and from which we derive most of the natural resources essential to our civilization. Our civilization requires many non-renewable natural resources in order to survive. Since the turn of the century, we have used more and more of these resources at an ever-increasing rate and now have critical supply problems. Our demands upon the environment have significantly changed the earth around us, and, if we are to survive, we must live within the constraints imposed by nature. Geologists study and understand these constraints. They must apply their knowledge to achieve harmony between the human race and its environment.

Geology has a broad scientific base in mathematics, physics, biology and chemistry as well as emphasizing fundamentals of geologic science and geophysics. Increases in the demand for energy fuels and mineral products result in an expansion of opportunities for graduates in geology. Students contemplating careers in geology should, upon

graduating, expect to travel, often to remote and uninhabited areas. Most of the jobs entail outdoor field work, often under difficult conditions.

Other new fields are now requiring geologists, such as NASA, EPA, and companies and agencies involved with environmental concerns. The geological environment of Lake Superior State University provides unexcelled opportunities for field study of classic sections illustrating Precambrian stratigraphy, structure, intrusions, and metamorphism and undisturbed Paleozoic sedimentary formations. Proximity to deposits of iron, copper, uranium, dolomite and the Michigan oil and gas fields as well as other minerals is an additional advantage. Students are eligible to participate in the department's active research in geology.

**ENTRANCE REQUIREMENTS:**  
To qualify for admission to the program in geology, applicants must satisfy University admission requirements as described in the Admissions section of the Catalog. (This information is also included in the Viewbook.)

Secondary school academic subjects should include: Three units of English, two units of algebra, one unit of geometry, and one unit of chemistry and physics. One-half unit of trigonometry is highly recommended.

Completion of the program may require more than four years for students who do not meet all entrance requirements.

For students with college-level achievement, the opportunity will be offered, by means of examination, to obtain course credit or placement into an advanced course.

## BACHELOR OF SCIENCE GEOLOGY

### Geology (54 Credits)

GE111 Physical Geology I	4
GE112 Physical Geology II	4
GE215 Historical Geology	3
GE216 Struct Geo & Geol Grphcs	4
GE221 Crystalgrphy & Mnrlgy	4
GE222 Mnrlgy & Petrography	4
GE321 Optical Mnrlgy	3
GE422 Ign and Metamor. Petro.	3
GE423 Sed Petrography	3
GE351 Invert Paleontology I	3
GE352 Invert Paleontology II	3
GE436 Field Geology	6
GE461 Strtgrphy & Sedimentation	4
GE471 Economic Geology I	3
GE472 Economic Geology II	3

### Support courses (33 to 36 Credits)

CH115 General Chemistry I	5
CH116 General Chemistry II	4
CS100 Intro to Microcomp	
or	3
CS111 Intro to Computer Sci I	
MA207 Princ Stat Methods	3
MA140 & MA141 Alg, Tch Clc I	
or	8
MA151 and MA152: Clc I & II	
NS103 Environmental Biology	3
PH221 & PH222: Elem Phy I&II	8
or	
PH231 & PH232: Gen Phy I&II	10

Free elective credits, approximately eleven, and General Education requirements must be completed such that at least 125 semester credits have been earned.

Sample four-year schedule of courses for this program follows. Numerous options for completing the program are possible and students will select these with assistance of their advisor.

### B.S., GEOLOGY

#### FALL

#### FIRST YEAR

EN110 Freshman Comp*	3
MA140 Algebra for Tech**	
or	4
MA151 Calculus I	
GE111 Physical Geology I	4
Soc Sci Elective	4
	15

#### SPRING

MA141 Technical Calculus I	
or	4
MA152 Calculus II	
GE112 Physical Geology II	4
Soc. Sci. Elective	4
CS100 or CS111	3
	15

#### SECOND YEAR

EN210 Res Paper Proc	3
GE215 Historical Geology	3
GE221 Cryst & Mnrlgy	4
CH115 General Chem I	4
	14

GE216 Struct Geology	4
GE222 Mnlg & Petrog	4
CH116 General Chem II	4
NS103 Environ Biology	3
	15

### THIRD YEAR

GE351 Invert Paleont I	3
PH221 Elem Physics I	
or	4-5
PH231 General Physics I	
Humanities Elective	4
SD101 Fund. of Speech	3
MA207 Prin Stat Methods	<u>3</u>
	17-18

GE321 Optical Mineralogy	3
PH222 Elem of Physics II	
or	4-5
PH232 General Physics II	
GE352 Invert Palntgy II	3
Humanities Elective	4
Elective	<u>3</u>
	17-18

#### SUMMER:

GE436 Field Geology	6
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### FOURTH YEAR

GE422 Ign & Metamor Pet	3
GE461 Strtrgphy & Sed	4
GE471 Econ Geology I	3
Electives	<u>6</u>
	16

GE423 Sed Petrography	3
GE472 Econ Geology II	3
Electives	<u>9</u>
	15

\*EN110 may be taken in Spring Semester

\*\*MA109 Trigonometry and Vectors is required for students without high school trigonometry credit.

## BACHELOR OF SCIENCE GEOLOGY: ENVIRONMENTAL GEOLOGY

#### Geology (33 Credits)

GE111 Physical Geology I	4
GE112 Physical Geology II	4
GE215 Historical Geology	3
GE216 Struct Geol/Geol Gr	4
GE221 Cryst & Mnrlgy	4
GE222 Mnrlgy & Petrography	4
GE436 Field Geology	6
GE461 Strtrgphy & Sedimentation	4

#### Support Courses (56 to 59 Credits)

CH115 General Chemistry I	5
CH116 General Chemistry II	4
CH225 Organic Chemistry I	4
CH226 Organic Chemistry II	4
CH231 Quantitative Analysis	3
CH232 Instrumental Analysis	3

CS100 Intro to Microcomp	3
or	
CS111 Intro Comp Sci I	
MA140,MA141: Alg, Tech Calc I	
or	8
MA151,MA152: Calculus I & II	
MA207 Prin Stat Methods	
or	3-4
MA308 Probability & Math. Stat.	
NS103 Environmental Biology	3
NS107 Phy Geo Lndfrms & Soils	3
PH221,PH222: Elem Phy I & II	
or	8-10
PH231,PH232: Gen Physics I & II	
GE311 Prin Hydrology	3
GE312 Groundwater Hydrology	3

Free elective credits, approximately eleven, and General Education requirements must be completed such that at least 125 semester credits have been earned.

Sample four-year schedule of courses for this program follows. Numerous options for completing the program are possible and students will select these with assistance of their advisor.

# B.S., GEOLOGY: ENVIRONMENTAL GEOLOGY OPTION

FALL

SPRING

## FIRST YEAR

MA140 or MA151*	4
EN110 Freshman Comp**	3
GE111 Physical Geology I	4
Soc Sci Elective	4
	<u>15</u>

MA141 or MA152	4
GE112 Physical Geo II	4
NS103 Env Biology	3
SD101 Fund. of Spch	3
	<u>14</u>

## SECOND YEAR

EN205 Tech Report Writ	3
CH115 General Chem I	5
GE215 Historical Geology	3
GE221 Cryst & Mnrlgy	4
	<u>15</u>

CS 100 or 111 Intro Comp	3
CH116 General Chem II	4
GE216 Struct Geol Grphcs	4
GE222 Mnrlgy & Petro	4
	<u>15</u>

## THIRD YEAR

CH225 Organic Chem I	4
Humanities Elective	4
PH221 or PH231 Physics	4-5
Soc Sci Elective	4
	<u>16-17</u>

CH226 Organic Chem II	4
Humanities Elective	4
PH222 or PH232 Physics	4-5
GE311 Prin Hydrology	3
	<u>15-16</u>

## SUMMER:

GE436 Field Geology	6
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## FOURTH YEAR

GE312 Grndwater Hydro	3
CH231 Quant Analysis	3
MA207 or MA308 Stat	3-4
Electives	7
	<u>16-17</u>

CH232 Instrum Analsis	3
NS107 Ph Geo Lndfm Soils	3
GE461 Strat & Sediment	4
Electives	6
	<u>16</u>

\*MA109 Trigonometry and Vectors is required for students without high school trigonometry credit.

\*\*EN110 may be taken in Spring Semester

# B.S. GEOLOGY/ELEMENTARY TEACHING OPTION

FALL

SPRING

## FIRST YEAR

MA109 Trig & Vectors	2	CS100 or 111 Intro Comp	3
EN110 Freshman Comp	3	GE112 Physical Geology II4	
GE111 Physical Geology I	4	GG108 Phy Geog: Met Cli	3
PY101 Intro Psychology	4	PS110 Intro Am Gov	4
TE150 Refl Lrn & Teach	3	SD101 Fund of Speech	3
	14-16		17

\*MA109 is not required for students with high school trigonometry.

## SECOND YEAR

EN215 Intro Lit & Res	3	CH108 Applied Chem	4
GE215 Historical Geology	3	EN232 Am Lit II	3
HS101 Hist World Civ I	4	HS102 Hist World Civ II	4
MA103 Num Sys Prob Sol	3	MA104 Geom & Measure	3
PY265 Child & Adol Dev	3	TE250 Student Div & Sch	3
	16		17

## THIRD YEAR

NS103 Environ Biology	4	EN335 Child Lit	3
GE221 Cryst & Mineralogy4		GE216 Stru Geol, Geo Gra4	
GG201 Wld Reg Geog	4	GE222 Mineralogy & Pet	4
MA111 College Algebra	3	MA207 Prin Stat Meth	3
or		NS101 Conceptual Physics	3
MA140 Alg for Tech	4		17
	15-16		

## SUMMER:

GE436 Field Geology	6
TE301 Lrns, Lrng, Tchng	4
	10

## FOURTH YEAR

EN320 Resp to Writing	3	GE352 Invert Paleo II	3
GE351 Invert Paleo I	3	Humanities Elec	4
Humanities Elect	4	NS119 Descript Astron	3
TE401 Lrn Div Tch Sub	5	TE402 Craft Tch Prac	6
	15		16

## FIFTH YEAR (Internship Year, MSU Graduate Courses)

TE501 Int Tch Div Lrnrs I	3	TE502 Int Tch Div Lrn II	6
TE801 Prof Role Tch Pra I	3	TE803 Pro Role Tch Pra II	3
TE802 Rrf Inq Tch Prac I	3	TE804 Rfl Inq Tch Pra II	3
	12		12

# B.S. GEOLOGY/SECONDARY TEACHING OPTION

*FALL*

*SPRING*

## FIRST YEAR

MA109 Trig & Vectors	2	CS100 or 111 Intro Comp	3
EN110 Freshman Comp	3	GE112 Physical Geology II	4
MA140 Alg for Tech		MA141 Tech Calc I	
or	4	or	4
MA151 Calculus I		MA152 Calculus II	
GE111 Physical Geology I	4	PY101 Intro Psychology	$\frac{4}{15}$
TE150 Refl Lrn & Teach	$\frac{3}{14-16}$		

\*MA109 is not required for students with high school trigonometry.

## SECOND YEAR

CH115 General Chem I	5	CH116 General Chem II	4
GE215 Historical Geology	3	GE216 Stru Geol, Geo Gra	4
EN210 Res Paper Proc	3	Humanities Elective	4
Humanities Elective	$\frac{4}{15}$	TE250 Student Div & Sch	$\frac{3}{15}$

## THIRD YEAR

BL110 General Zoology	4	GG108 Phy Geog: Met Cli	3
GE221 Cryst & Mineralogy	4	SD101 Fund of Speech	3
PH221 Elem of Physics I	4	GE222 Mineralogy & Pet	4
or		MA207 Prin of Stat Meth	3
PH231 Gen Physics I	5	PH222 Elem of Phy II	4
Elective	$\frac{3}{15-16}$	or	
		PH232 Gen Physics II	$\frac{5}{17-18}$

## SUMMER:

GE436 Field Geology	6
TE301 Lrns, Lrng, Tchng	$\frac{4}{10}$

## FOURTH YEAR

GE351 Invert Paleo I	3	GE352 Invert Paleo II	3
NS119 Descript Astron	3	TE402 Craft Tch Prac	6
Social Sci Elect	4	Electives	$\frac{7}{16}$
TE401 Lrn Div Tch Sub	$\frac{5}{15}$		

## FIFTH YEAR (Internship Year, MSU Graduate Courses)

TE501 Int Tch Div Lrn I	6	TE502 Int Tch Div Lrn II	6
TE801 Prof Role Tch Pra I	3	TE803 Pro Role Tch Pra II	3
TE802 Rrf Inq Tch Pra I	$\frac{3}{12}$	TE804 Rfl Inq Tch Pra II	$\frac{3}{12}$

# BACHELOR OF SCIENCE, DUAL MAJOR ENVIRONMENTAL SCIENCE AND GEOLOGY WITH ENVIRONMENTAL GEOLOGY OPTION

**Departmental Requirements (119-122)**

BL110	General Zoology	4
BL111	General Botany	4
BL230	Intro to Soils	3
BL337	General Ecology	3
CH115	General Chemistry I	5
CH116	General Chemistry II	4
CH225	Organic Chemistry I	4
CH226	Organic Chemistry II	4
CH231	Quantitative Analysis	3
CH232	Instrumental Analysis	3
CS100	Intro to Microcomp	3
EV101	Intro. to Env Science	3
EV249	Water Poll Control	3
EV288	Env Microbiology	4
EV311	Environmental Law	2
EV313	Solid & Hazardous Waste	3
EV395	Scientific Wrtg & Pres	1
EV499	Senior Thesis	1
GE111	Physical Geology I	4

GE112	Physical Geology II	4
GE215	Historical Geology	3
GE216	Struct Geol/Geol Graphics	4
GE221	Cryst & Mineralogy	4
GE222	Mnrlgy & Petrography	4
GE436	Field Geology	6
GE461	Strat & Sedimentation	4
ID300	Man & His Environment	3
MA109	Trigonometry and Vectors2 (may be waived by exam)	
MA111	Col Alg & MA112 Calc Bus & Life Sci	
	or	7-8
MA151-152	Calculus I and II	
MA207	Prin Stat Methods	3
PH221-PH222	Elem Phy I, II	
	or	8-10
PH231-PH232	General Physics I, II	
GE311	Prin Hydrology	3
GE312	Groundwater Hydrology	3

Nine credits of free electives and three credits of designated electives are required. GE112 serves as a designated elective for the Environmental Science major. A minimum of 153 semester credits is required for the dual major.

Below is a sample five-year schedule of courses for the double major in Environmental Science and Geology: Environmental Geology Option.

## BACHELOR OF SCIENCE, DUAL MAJOR: ENVIRONMENTAL SCIENCE AND GEOLOGY WITH ENVIRONMENTAL GEOLOGY OPTION

### FIRST YEAR

**FALL**

CH115	General Chem I	5
BL110	General Zoology	4
MA109	Trig. & Vectors	2
MA111	Coll Alg	
	or	3-4
MA151	Calculus I	
EV101	Intro Env. Sci.	3
		17-18

**SPRING**

CH116	General Chem II	4
BL111	General Botany	4
EN110	Freshman Comp	3
MA112	Calc Bus & Life Sci	4
	or	4
MA152	Calculus II	
		15



## SECOND YEAR

CH225 Organic Chem I	4
PH221 Elem Physics I	
or	4-5
PH231 Gen. Physics I	
GE111 Physical Geol I	4
EN205 Tech Report Writ	<u>3</u>
	15-16

CH226 Organic Chem. II	4
PH222 Elem Physics II	
or	4-5
PH232 Gen. Physics I	
GE112 Physical Geol II	4
EV249 Wtr. Poll Control	<u>3</u>
	15-16

## THIRD YEAR

BL337 General Ecology	3
CH231 Quant. Analysis	3
GE215 Historical Geol	3
CS100 Intro to Microcomp	3
Soc Sci Elective	<u>3</u>
	15

EV311 Environmental Law**2	
CH232 Instrum Analysis	3
GE216 Struct Geol/Graph**	4
BL230 Intro to Soils	3
MA207 Prin Stat Methods	<u>3</u>
	15

## FOURTH YEAR

EV313 Solid Haz Waste**	3
GE221 Cryst & Mnrlgy	4
SD101 Fund. of Speech	3
Soc. Sci. Elective	3
Elective	<u>3</u>
	16

EV395 Sci Wrtg & Pres	1
GE222 Mnrlgy & Petro	4
GE311 Prin Hydrology**	3
Soc. Sci. Elective	3
Elective	<u>3</u>
	14

## SUMMER:

GE436 Field Geology	6
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## FIFTH YEAR

EV288 Envir Microbiology	4
GE312 Grndwtr Hydro.**	3
Elective	3
Humanities Elective	<u>4</u>
	14

ID300 Man & His Environ	3
EV499 Senior Thesis	1
GE461 Strtgraphy & Sed**	4
Humanities Elective	<u>4</u>
	12

\*Prerequisite for PH221; may be waived by examination.  
 \*\*Alternate year courses.

## **GEOLOGY MINOR**

For a minor in geology a total of 23 semester credits must be selected as follows:

GE111	Phys Geology I	4
GE112	Phys Geology II	4
GE215	Historical Geology	3
GE216	Stru Geo/Geo Grph	4
GE221	Cryst & Mineralogy	4
GE222	Mnrlgy & Petr	4

## **GEOLOGY EARTH SCIENCE MINOR**

For an approved teaching minor in Geology/Earth Science a total of 20 semester credits must be selected as follows:

GE111	Phys Geology I	4
GE112	Phys Geology II	4
GE215	Historical Geology	3
GE351	Invert Paleontology I	3
GG108	Phy Geo: Met Clim	3
NS119	Descriptive Astron	<u>3</u>
		20

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## ***NOTES***

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# COMMUNITY SERVICES AND DEVELOPMENT

## Continuing Education

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Community Services and Development provides educational opportunities for non-traditional students in Lake Superior State University's region of service. In cooperation with academic departments, CSD creates opportunities to meet the educational needs of adult students through alternative delivery options such as distance learning, flexible schedules, off-campus sites and weekend courses. The CSD Division provides an academic focus for external and off-campus degree programs, continuing education, evening and weekend courses and public service programs. Quality programs are designed to be both flexible and accessible to learners whose job, family, and community responsibilities conflict with traditional academic schedules.

Regional representatives are located at Alpena Community College in Alpena, Bay de Noc Community College in Escanaba, North Central Michigan College in Petoskey and Northwestern Michigan College in Traverse City. Students may earn a Master of Business Administration (MBA), Bachelor of Science degree in Business Administration, Accounting, Nursing (B.S.N. completion program for registered nurses), and a Criminal Justice/Generalists (3+1 degree completion available at ACC Fall 1994). All degree requirements

(with exception of 3+1 programs) may be completed at the off-campus site where they are offered. The length of time required to complete the degree varies, according to each student's individual schedule and the number of college credits already completed.

The CSD Division is also committed to providing increased opportunities for non-traditional students to earn graduate and undergraduate degrees in the evenings or weekends on campus.

Professional development through non credit courses, seminars, workshops, interactive television, and video conferences are also available through the CSD Division. World-wide satellite uplink and downlink capabilities are available for teleconferences. Our mission is to empower individuals to meet the challenges of a changing world.

Training and development programs with business, industry, government, volunteer and social agencies to deliver consulting and customized training programs are also available through the CSD Division. Training programs may be of any desired length and intensity designed to fit the needs of the client.

Community enrichment courses are scheduled throughout the year and include a wide variety of inexpensive

courses and activities for adults and children. Learn to Swim and the children's dance are two popular programs for children. Adult enrichment courses in subjects such as computers, exercise, crafts, art and language, personal finance, gardening, etc, are also available.

Elderhostel is a nonprofit educational travel program for participants sixty

years or older. Hostellers stay a week on campus studying with LSSU professors. Field trips, social activities, and areas of local interest are included. The program has been offered since 1979.

LOCATION: Community Services & Development is located at 844 North Campus Court, near the Ryan Street campus entrance.

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## *NOTES*

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# COURSES

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Each course description is preceded by the following type of heading:

CH999 Chemistry  
(3-3)

5

or

CH999 Chemistry  
(3-3) alternate yrs

5

The first line provides the code number (CH999) and the course name; see below for an explanation of the abbreviations. The second line includes several pieces of information: The first two numbers are hours of lecture-lab per week; and the number of credit hours is the third number. Sometimes, no semester will be indicated, or there will be the alternate years or every third year notation. Consult either the Course Schedule Booklet published each semester prior to pre-registration; or your department chair concerning scheduling of such courses.

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## Abbreviations

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AC Accounting  
AM Automated Manufacturing Engr. Tech.  
AT Art  
BA Business  
BL Biology  
CH Chemistry  
CJ Criminal Justice  
CS Computer Science  
CT Computer Engineering Technology  
DP Data Processing  
DT Drafting & Design Engr. Tech.  
EC Economics  
ED Education  
EN English  
ES Exercise Science  
ET Electrical Engineering Technology  
EV Environmental Science  
FN Finance  
FS Fire Science  
FR French  
GE Geology  
GG Geography  
GN German  
HE Health Sciences  
HM Human Services  
HS History  
HU Humanities  
ID Interdisciplinary

JR Journalism  
JS Japanese Studies  
LA Legal Assistant Studies  
MA Mathematics  
MB Master Business Administration  
ME Mechanical Engineering  
MK Marketing  
MN Management  
MT Mechanical Engineering Technology  
MU Music  
NA Native American Studies  
NS Natural Science  
NU Nursing  
OA Office Administration  
PH Physics  
PL Philosophy  
PS Political Science  
PY Psychology  
RA Recreational Activities  
RC Recreation  
RT Natural Resources Technology  
SA Student Affairs  
SD Speech  
SO Sociology  
SP Spanish  
TC Construction Technology  
TE Teacher Education

Students must satisfy prerequisites and any other stated conditions before enrolling in a course; or have permission from the instructor to waive the prerequisites. Enrollment in a course may be revoked (with

an N grade) if it is found during the regular drop period that the proper prerequisites have not been met. Responsibility rests with students to be certain that they have the approved prerequisites.

# ACCOUNTING

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

## AC132 PRINCIPLES OF ACCOUNTING I (4,0) 4

An introduction to the principles of accounting as applied to proprietorships, partnerships and corporations. Areas of study include the accounting cycle for service and merchandising enterprises, internal control and items included in the asset section of the balance sheet.

## AC133 PRINCIPLES OF ACCOUNTING II (4,0) 4

This course includes a study of the equity portion of the balance sheet as well as an introduction to financial analysis and managerial accounting. Prerequisite: Grade of C or higher in AC132.

## AC232 INTERMEDIATE ACCOUNTING I (4,0) 4

A review of the general theoretical framework and process of accounting for use as a reference in an intensive study of accounting doctrines and procedures proposed by various authoritative groups. Topics: Generally accepted accounting principles; the accounting process; balance sheet; income statement; present value principles and application; cash and temporary investments; receivables; inventories, plant and intangible assets; and long term investments. Prerequisites: AC132 and 133 or permission of instructor.

## AC233 INTERMEDIATE ACCOUNTING II (4,0) 4

Continuation of AC232 with reference to accounting theory as applied to specific critical areas of financial data accumulation and presentation. Emphasis is placed on valuation concepts and their influence on contemporary practice. Topics: Liabilities; long term debt securities; owner's equity; earnings and revenue recognition; income taxes; leases; pensions; error correction; cash flows; and financial statement analysis. Prerequisite: AC232.

## AC332 COST ACCOUNTING I (4,0) 4

A study of the fundamentals of cost accounting: The cost cycle, cost terminology, cost behavior, cost-volume-profit analysis, budgeting, standard cost, relevant costs, cost allocation, and cost control. Emphasis is given to both product costing and costing for control purposes. Prerequisite: AC133.

## AC333 COST ACCOUNTING II (4,0) 4

A continuation of AC332 encompassing process costing, capital budgeting, inventory control, performance measurement, accounting systems and internal control, and cost accounting in relation to the certified public accountant and certified management accountant examinations. A study of various quantitative techniques and their application is included in the course content. Prerequisite: AC332.

## AC334 ACCOUNTING INFORMATION SYSTEMS (3,0) 3

Elements that constitute an accounting system and theories upon which a system should be designed. Emphasis upon computerized accounting systems with extensive use of computers. Prerequisites: AC233, AC332 and introductory data processing course.

## AC421 FEDERAL TAXATION ACCOUNTING I (3,0) 3

Basic concepts of the theory and practice applicable to the preparation of individual tax returns. A comprehensive analysis of regulations governing inclusions and exclusions of income; capital gains and losses; and personal, standard, and itemized deductions. Prerequisites: AC133 and junior standing or approval of the department.

## AC422 FEDERAL TAXATION ACCOUNTING II (3,0) 3

Theory and practice of income tax accounting as applied to tax credits, partnerships, and corporations. Includes some library tax research. Prerequisite: AC421.

## AC427 AUDITING (4,0) 4

A study of ethical, professional, and technical standards for independent audits and auditing procedures as they apply to internal controls. A study of audit program applications as they apply to elements of the financial statements. Prerequisites: AC233 and AC333 or permission of instructor.

## AC432 ADVANCED ACCOUNTING I (3,0) 3

This course begins with a review of accounting theory and income presentation followed by a study of accounting for corporate combinations and preparation of consolidated financial statements. Prerequisite: AC233.

**AC433 ADVANCED ACCOUNTING II**  
**(3,0) 3**

A study of special topics in accounting including partnerships, governmental accounting, accounting for non-profit organizations, fiduciary accounting, and insolvency. Prerequisite: AC233.

# **AUTOMATED MANUFACTURING ENGINEERING TECHNOLOGY**

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Special topics courses available as need and interest develop. Consult the semester Course Schedule for these.

**AM305 INTRODUCTION TO AUTOMATED  
SYSTEMS**

**(2,2) 3**

A non-technical introduction to the field of automation. Topics include: robotics overview, applications of robots, layout and performance evaluation, future trends in automated systems, automation economics, sociological and management issues in automation. Laboratory exercises involve basic programming in AML on IBM robots and automated systems simulation on the computer. Prerequisites: MA111 and knowledge of at least one computer programming language.

**AM315 PROGRAMMABLE LOGIC  
CONTROLLERS**

**(2,2) 3**

An introduction to the use of programmable logic controllers. Basic components of the programmable logic controller along with the interface to hydraulic/pneumatic systems and sensors will be discussed. Some higher level functions such as zone control, master control, and sequencers will also be covered. Written business communications is an integral part of the course. Pre or corequisite: ET201 or equivalent.

**AM325 ROBOTICS IN MANUFACTURING**  
**(3,3) 4**

Introduction to the field of robotics. Topics include classification of robot systems, robot anatomy, control systems, end effectors, characteristics and types of robot applications, robot sensors, robot hardware and software, and robot cell design. Orientation and configuration coordinate transformations and study of forward and inverse kinematics of robots. Laboratory work focuses on programming in AML for IBM robots.

**AM365 COMPUTER CONTROL  
CONCEPTS**

**(3,0) 3**

Introduction to the C programming language, with major emphasis on the topics of computer interfacing, serial and parallel ports, computer control architecture and control applications. Prerequisite: CT235 or CT265 or CS333 or permission of instructor.

**AM375 AUTOMATED MANUFACTURING  
SYSTEMS**

**(3,3) 4**

Study and analysis of the components of an automated manufacturing system. Topics include analysis of flow lines, automated assembly systems, materials handling and storage, group technology, NC and CNC control, CAD/CAM, FMS and CIM. Manufacturing factory simulation using SIMFACTORY II.5 software package. The laboratory work will focus on programming in VAL for PUMA robots and CAD/CAM exercises using Auto CAD and the Victor CNC machining center. Prerequisites: AM325 and MA141.

**AM399 COOPERATIVE EDUCATION 2**

Supervised industrial experience with cooperative industries. The student's work experience is related to academic studies, and contributes significantly to professional development. Can be repeated for credit. Permission of instructor required.

**AM445 INDUSTRIAL ENGINEERING**  
**(2,0) 2**

A detailed study of industrial organization, motion-time analysis, and plant layout. Under industrial organization, the topics covered are inventory management and control, MRP, purchasing and costing control. Manufacturing Planning and Control software package from will be used. Under motion-time analysis, the topics covered are methods engineering and work measurement. Finally, under plant layout, the topics covered will include preparation, quantitative analysis, and common problems of plant layout. Pre-requisite: Junior standing in Engineering Technology or permission of instructor.

**AM455 AUTOMATIC CONTROLS**  
**(3,3) 4**

Introduction to the analysis of linear feedback automatic control systems. The course will include a study of Laplace transform, system modeling, block diagrams, system response, stability, steady state error, bode analysis, and root locus. Laboratory work will focus on study of system stability and response using position and velocity feedback servo-controlled systems. Prerequisite: MT316 or MT220 and MA240.

## **AM465 SENSOR TECHNOLOGY & APPLICATIONS**

**(3,3) 4**  
Study of theory and applications of sensors and machine vision as used in robotics and automated systems. Topics include position sensors, incremental encoders, velocity sensors, accelerometers, proximity sensors, touch and slip sensors, force and torque sensors, interfacing electronics, systems integration, Local Area Networks, and real world electrical considerations. Machine vision topics include: lighting techniques, imaging techniques, image recognition, inspection, and robot guidance. Laboratory work will focus on systems integration using sensors and the Allen-Bradley PLC, programming PC-based vision card, and interfacing with robot controller in the "C" programming language. Prerequisite: AM315, AM365 and AM375.

## **AM485 AUTOMATED MANUFACTURING PROJECTS**

**(1,6) 3**  
Group projects in which students are required to design and implement an automated assembly system. Students are responsible for the design proposal, implementation, formal presentation, and users manual for the system. Project should be representative of a typical industrial project. Prerequisite: AM455, AM465, and ET485.

# **ART**

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

## **AT110 FUNDAMENTALS OF DRAWING AND COMPOSITION**

**(3,0) 3**  
This course will acquaint the student with the various drawing media, such as pencil, charcoal, ink, wash and the use of various papers. Studio problems in still life, object drawing, landscape, texture, and drawing from imagination and memory. Introduction to limited palette oil painting with emphasis on techniques of brush handling and concepts of visual organization language. Outside sketching required. Organic form, perspective, proportion, line, shape and tone are studied.

## **AT111 PAINTING COMPOSITION & DESIGN**

**(3,0) 3**  
Projects in various media, primarily oil, acrylic paints and water color. Emphasis on individual development and expression. Outside sketching required. Specific pictorial problems, advanced paint handling and brush techniques will be studied. Understanding of structural, value and color principles by which great paintings are organized will be studied. Prerequisite: AT110, or permission of instructor.

## **AT210 DRAWING, PAINTING AND COMPOSITION**

**(3,0) 3**  
Advanced concepts of color and design elements basic to drawing and painting. The study of painting employing figure, still life, and nature as source material. Emphasis on visual perception and the study of the formal elements of painting. Prerequisite: AT111 or permission of instructor.

## **AT211 GRAPHIC ARTS, WATERCOLOR AND MIXED MEDIA**

**(3,0) 3**  
Painting from figure, memory, portrait, and landscape stressing personal expression. Concentration on individual projects involving significant forms and symbols. Emphasis on advanced color and composition problems through study of spatial structure and color and order relative to pictorial meaning. Prerequisite: AT210 or permission of instructor.

## **AT250 ART HISTORY AND APPRECIATION I**

**(4,0) 4**  
Study of arts exemplified in prehistoric and primitive cultures, and in the Mesopotamian, Egyptian, Aegean, Greek, Roman, early Christian, Byzantine, Moslem, Romanesque and Gothic eras. The course presents a development of historic, social and aesthetic principles, including a study of signs and symbols for students of art education, science, letters, business and engineering. Art history is taught in terms of visual experience and knowledge with art films, slides and demonstrations with art materials in addition to class lectures. Universal standards that can be applied to any work of art are studied. Counts as humanities for General Education requirements.

## **AT251 ART HISTORY AND APPRECIATION II**

**(4,0) 4**  
A study of European and American art from the Renaissance to the twentieth century, including Renaissance, baroque, rococo, neoclassic, romantic, realist, and contemporary. The history of art is presented from a technical, social and aesthetic standpoint, along with a study of rhythm, motion, and proportion. Works of art are considered on their own merits and development rather than on the basis of preconceptions. Art films, color slide presentations, and demonstrations using art materials supplement class lectures. Counts as humanities for General Education requirements.



# BUSINESS

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

## **BA105 BUSINESS MATHEMATICS** 3 (3,0)

Solution of business problems. Topics include discounts, mark-ups, payroll, interest, financing charges, depreciation methods, real estate taxes, controlling cash, metric system conversion, inventory evaluation, annuities and insurance. Story problems. Prerequisite: MA091, mathematics placement beyond MA091, or satisfactory completion of LSSU's departmental arithmetic test during the first week of classes. Course not available for credit for students who have taken a full year of accounting.

## **BA121 INTRODUCTION TO BUSINESS** 3 (3,0)

Comprehensive coverage of the major activities of business and the key institutions that facilitate the business process. Topics covered include the following: American business enterprise system, international business, forms of business ownership, management and organization of human resources, production, marketing, information management and controls, business laws and ethics, finance, accounting, contemporary economic issues and business career opportunities. Contemporary business cases may be used for decision making simulations. Enrollment open to freshman and sophomore business majors or any non-business major.

## **BA211 BUSINESS STATISTICS** 3 (3,0)

An introduction to business statistics. Topics include collection and presentation of data, measures of central tendency, variation and skewness, probability, probability distributions, Bayes's Theorem, sampling, sampling distributions, estimation, hypothesis testing, simple linear regression and correlation. Prerequisite: MA111.

## **BA226 RECORDS MANAGEMENT** 3 (3,0)

Study and application of records control, forms design, filing systems (manual and electronic), microforms, and the records cycle. A computer simulation is completed utilizing a program to print, sort, and select records as reports or labels.

## **BA231 BUSINESS COMMUNICATIONS** 3 (3,0)

Business and management communications problems. Direct, indirect, and persuasive letters; memos, short reports, and directives. Some assignments must be typed. Extensive writing practice. Prerequisite: Satisfactory completion of LSSU's English competency examination.

## **BA254 BUSINESS LAW I** 3 (3,0)

This portion of business law covers the law applicable to contracts, sales, personal property, and bailments.

## **BA255 BUSINESS LAW II** 3 (3,0)

This portion of business law covers the law applicable to commercial paper, corporations; partnerships, agency and employment.

## **BA261 BUSINESS SKILLS** 1 (1,0)

A series of specific, business-skill classes. Each course will provide 15 classroom hours of instruction. A student may register for one or more sections per term, for a maximum of three credits earned in this course.

## **BA299 INTERNSHIP IN (DISCIPLINE)** 4 (4,0)

This course is designed to provide students with an opportunity to earn credit while obtaining meaningful discipline-related work experience outside the classroom setting. Students are expected to spend a minimum of 180 hours in an appropriate work setting. The course may be repeated once for a maximum of 8 credits. Prerequisite: 2.5 GPA, sophomore standing, employer and instructor approval, and submission to, and approval by, departmental faculty of internship plan including method of evaluation.

## **BA399 INTERNSHIP IN (DISCIPLINE)** 4 (4,0)

This course is designed to provide students with an opportunity to earn credit while obtaining meaningful discipline-related work experience outside the classroom setting. Students are expected to spend a minimum of 180 hours in an appropriate work setting. The course may be repeated once for a maximum of 8 credits. Prerequisite: 2.5 GPA, junior standing, employer and instructor approval, and submission to, and approval by, departmental faculty of internship plan including method of evaluation.

## **BA403 BUSINESS, GOVERNMENT AND SOCIETY** 3 (3,0)

This course is designed to study the most significant forces in an organization's environments (internal and external) so as to understanding how they are changing the managerial job and how they are modifying the traditional role of business. This involves, among other things, an understanding of the ways in which a firm's organization, policies, strategies, procedures, decision-making processes, plans, and controls are changing in response to environmental forces. Prerequisite: MN360.

**BA466 BUSINESS POLICY****(3,0) 3**

This course provides an opportunity for the student to develop an understanding of the interrelationship of the various divisions, departments and functions of a business organizations from a top management perspective. Library research and case analysis are utilized. Prerequisite: Senior status and completion of business core.

**BA491 RESEARCH READING IN BUSINESS AND ECONOMICS****(1-3,0) 1-3**

Independent study and seminar; individual student guidance by faculty for selected research topics in business. Prerequisite: Senior status.

## **BIOLOGY**

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**BL105 FUNCTION OF THE HUMAN BODY****(3,2) 4**

Survey of the functional anatomy and the related physiological processes needed for the understanding of normal human activity. This course may be substituted for NS103. Not open to biological majors or minors.

**BL110 GENERAL ZOOLOGY****(3,2) 4**

Introduction to the diversity of the animal kingdom, invertebrates and vertebrates. Adaptation and evolution are stressed as unifying themes throughout the course. Prerequisites: MA091 and EN091 or equivalent scores on math and English placement exams. Note: "C" (2.0) or better is required to use this course as a prerequisite for other BL/EV courses.

**BL111 GENERAL BOTANY****(3,2) 4**

Introduction to the diversity of the plant kingdom. Will include the morphology, physiology, reproduction and general habitat of organisms traditionally considered as plants but with an organization reflecting modern concepts of evolutionary relationships. Prerequisites: MA091 and EN091 or equivalent scores on math and English placement exams. Note: "C" (2.0) or better is required to use this course as a prerequisite for other BL/EV courses.

**BL121 HUMAN ANATOMY & PHYSIOLOGY I****(3,3) 4**

A two semester sequence. This sequence does not apply toward a major or minor in biological science. The first semester covers organization of the human body, basic principles of chemistry, the integumentary system, the skeletal and muscular systems, the nervous system and special senses, and the endocrine system. Prerequisite: High School Chemistry, or equivalent. This course may not be used as a General Education Natural Science elective.

**BL122 HUMAN ANATOMY & PHYSIOLOGY II****(3,2) 4**

The continuation of BL121 with emphasis on the endocrine system, cardiovascular system, respiratory system, digestive system, urinary system and the reproductive system with an introduction to genetics. The course will conclude with a study of pregnancy and human embryology. Prerequisite: BL121.

**BL130 INTRODUCTION TO REMOTE SENSING****(2,4) 3**

Introduction to the use of remotely acquired imagery to evaluate various ground features, utilizing mainly aerial photographs. One all-day field trip required. This course does not count as a life science education requirement. Prerequisite: Completion of LSSU mathematics competency.

**BL201 PLANT MORPHOLOGY****(2,3) 3**

A survey of the principal groups of plants from the standpoint of their structure, development and reproduction. Emphasis is placed on evolutionary relationships as revealed by comparisons of the structural and reproductive traits. Prerequisite: BL111.

**BL202 FIELD BOTANY****(2,3) 3**

A course whose main objective is to allow the student to be able to recognize common families, genera, and species, especially those in the local flora. Prerequisite: BL111.

**BL204 GENERAL MICROBIOLOGY****(3,3) 4**

This course will deal with the history and scope of microbiology, a study of microbial structure, growth, nutrition, metabolism, genetics, taxonomy and control. Labs will emphasize the identification and cultivation of molds and bacteria with various staining techniques. A study of mycoplasma, viruses and molds will be incorporated along with the origin of life and biochemical evolution, genetic engineering and recombinant DNA. Prerequisites: CH108 or CH116.

- BL220 GENETICS** (3,0) 3  
A study of the nature, transmission, recombination, and function of hereditary material in animals, plants, and microorganisms. Prerequisites: BL110 or BL111, and CH116. A statistics course strongly recommended.
- BL221 GENETICS LABORATORY** (0,2) 1  
A course including exercises in Mendelian genetics, Cytogenetics, Microbial genetics, and computer simulations of population genetics. Corequisite or prerequisite: BL220.
- BL223 CLINICAL MICROBIOLOGY** (3,0) 3  
A basic course in microbiology dealing with the study of microorganisms and pathogens in humans. A survey of viruses, molds and bacteria. Their morphology and growth characteristics will be discussed along with the physical and chemical means to control pathogenic microorganisms causing human infections. Prerequisites: CH105 and BL122. Does not apply towards a major or minor in Biology.
- BL230 INTRODUCTION TO SOILS** (3,3) 4  
A course dealing with the soil ecosystem as a natural resource and as an environmental medium. Beginning with factors involved in soil formation the course will survey soil physical, chemical, and organic properties and how they respond to disturbance. Soil reactions to wastes and wetland interactions will be discussed. Laboratories will focus on description of local soils and the use of soil survey information in making soil interpretations. Prerequisites: CH108 or above; NS103 and RT102 or BL110 or BL111.
- BL239 WILDLIFE BIOLOGY AND MANAGEMENT** (2,0) 2  
A lecture course covering the basic biology and management of wildlife. Prerequisite: Enrollment in the Natural Resource Technology, Biology or Fisheries and Wildlife program.
- BL243 VERTEBRATE ANATOMY** (3,3) 4  
Study of the anatomy of vertebrates, including representatives of pre-chordates, Agnatha, Chondrichthyes, Osteichthyes, Amphibia, Reptilia, Aves, and Mammalia. Laboratories emphasize thorough dissection of representatives of at least two diverse classes of vertebrates. Prerequisite: BL110 and sophomore standing.
- BL249 WATER POLLUTION CONTROL** (2,3) 3  
An analytical study of the tests, operations, and solutions involved in contemporary water pollution problems. (Also listed as EV249.) Prerequisite: EV101 or permission of instructor.
- BL272 FRESHWATER FISH CULTURE** (2,0) 2  
Methods of fish propagation: egg taking and incubation, feeding and nutrition, water quality monitoring, carrying capacity determination, hatchery problem solving using computer models, and disease identification and treatment. At least one all-day field trip. Prerequisites: BL280 and sophomore standing or permission of instructor.
- BL273 FISH CULTURE PRACTICUM I** (0,6) 2  
Fish hatchery practices and management decisions. Students actively involved in fish culture procedures through the reading cycle of salmonid fishes and possibly other coldwater species. Prerequisite: Permission of instructor.
- BL274 FISH CULTURE PRACTICUM II** (0,6) 2  
Fish hatchery practices and management decisions. Students actively involved in fish culture procedures through the reading of salmonid fishes and possibly other coldwater species. Prerequisite: Permission of instructor.
- BL275 AQUATIC ENTOMOLOGY** (1,4) 3  
Survey of regional lake and stream insects with emphasis on identification and life histories. Role of various groups in aquatic systems and as fish food organisms. Prerequisite: BL110.
- BL280 BIOMETRICS** (3,0) 3  
Applications of statistics to biological problems, analysis of variance, multiple regression and correlation. Prerequisite: MA207. This does not count as a life science general education requirement.
- BL290 INDEPENDENT STUDY IN BIOLOGY** (1-4,0) 1-4  
Special studies and/or research in biology for individuals or small seminar groups. Course content to be arranged by student(s) and a supervising professor with approval of school dean. Prerequisites: Students must have an overall GPA of at least 2.5, and no I grades on their transcript. Independent study courses may be repeated for a maximum of eight credits. Additional information is available at the School of Science and Natural Resources office.
- BL302 INVERTEBRATE ZOOLOGY** (3,2) 4  
A study of the invertebrate groups with emphasis on morphology, phylogeny and life cycles. Prerequisites: BL110 and sophomore standing.

- BL310 ICHTHYOLOGY**  
(2,3) 3  
Anatomy, physiology, behavior, taxonomy and natural history of fishes, with emphasis on freshwater species. Prerequisite: BL110; sophomore standing.
- BL312 ORNITHOLOGY**  
(2,4) 3  
The biology and taxonomy of birds. Labs will focus upon bird anatomy and bird recognition using video tapes and specimens. Prerequisites: BL110 and junior standing.
- BL315 PLANT PHYSIOLOGY**  
(3,3) 4  
Organization of plants, plant replication, photophysiology and photosynthesis, mineral nutrition, water transport in higher plants, plant growth substances, physiology of seeds, control of plant growth and plant cell tissue culture. Prerequisites: BL111 and CH226.
- BL330 ANIMAL PHYSIOLOGY**  
(3,3) 4  
A study of the physical and chemical properties of the animal systems as they concern homeostasis. Prerequisites: BL110 with a C (2.0) or better and CH116 with a C (2.0) or better.
- BL332 EMBRYOLOGY**  
(2,2) Alternate Years 3  
A study of the development of representative vertebrates. Offered every other year alternating with BL422, Parasitology. Prerequisites: BL110 and sophomore standing.
- BL337 GENERAL ECOLOGY**  
(2,3) 3  
Fundamental concepts of plant and animal ecology, population dynamics and ecosystem analysis. Field trips are required during the first four week-ends of the semester. Prerequisites: BL110 and BL111 with a C (2.0) or better.
- BL380 CLINICAL HEMATOLOGY AND HEMOSTASIS**  
(3,3) 4  
A study of the components of blood. Discussions of the formed elements to include normal and malignant states; anemias, leukemias, lymphomas, hemostasis (coagulation) processes and disease states. Laboratories will cover routine and automated blood component measurements. Prerequisites: CH226 and BL330 or permission of instructor.
- BL395 JUNIOR SEMINAR**  
(0,2) 1  
Literature searching, scientific writing, and oral presentation of scientific data. Students will be expected to listen to presentations of peers enrolled in BL499 and develop a topic for their senior thesis. (also listed as EV395). Prerequisite: Junior standing.
- BL401 HONORS PROGRAM I**  
(0,8) 4  
Biological Sciences Honors Program I. (open to students earning a bachelor of science degree in biological sciences with a grade point of 3.5 or higher) An undergraduate research project will be outlined in consultation with the supervising instructor and submitted to the department for approval. Outline must be approved before the first semester of the senior year. All grades for this sequence will be deferred until the final semester. Eight credit hours of honors credit will be substituted for 8 hours of electives upon successful completion of the research sequence. The special problem sequence will not be open to students electing the honors program sequence. The completed research may be used for Senior Thesis.
- BL402 HONORS PROGRAM II**  
(0,8) 4  
Biological Sciences Honors Program II. This is a continuation of the honors research sequence.
- BL411 MAMMALOGY**  
(2,3) 3  
Emphasis will be on the physiological, behavioral and ecological adaptations of mammals. Identification and classification will be emphasized. Some field work may be included. Prerequisite: BL110 and BL315 or BL330.
- BL420 POPULATION GENETICS AND EVOLUTION**  
(3,0) 3  
A course including historical and modern concepts of evolutionary theory. Some coverage of origin of life concepts will be included. Prerequisite: BL220
- BL422 PARASITOLOGY**  
(2,2) Alternate Years 3  
A study of the morphology, taxonomy, habitats and life cycles of parasites. Offered every other year alternating with BL332, Embryology. Prerequisite: BL110.
- BL423 IMMUNOLOGY**  
(3,3) 4  
A study of antigens, antibodies, antigen-antibody reactions, blood groups, phagocytosis and hypersensitivity. Prerequisites: BL110, BL204, CH226.
- BL432 FISHERIES ECOLOGY AND MANAGEMENT**  
(2,3) 3  
Current concepts and techniques relating to the management of sport and commercial fishery resources including lake and stream surveys. Prerequisites: BL110 and junior standing or permission of instructor.

**BL433 HISTOLOGY**  
(2,2) Alternate Years 3  
Study of the microscopic anatomy of tissues, with emphasis on mammals. Related physiological processes are integrated with the anatomical studies. Prerequisites: BL110 and junior standing.

**BL437 PLANT ECOLOGY**  
(2,3) 3  
The measurement and description of plant communities as well as some autecological studies. Prerequisites: BL202, BL337 with a C (2.0) or better.

**BL439 WILDLIFE ECOLOGY AND MANAGEMENT**  
(2,3) 3  
A study of ecological principles as they relate to wildlife management. Discussion of the history, philosophy, and practice of wildlife conservation. Demonstration of field and laboratory techniques. Prerequisite: BL337.

**BL445 LIMNOLOGY**  
(2,3) 3  
An investigation of the principles of freshwater ecology of lakes and streams. Prerequisite: BL337.

**BL450 LABORATORY APPRENTICESHIP**  
(0,3) per credit 1-2  
Students will assist in laboratories, learning instructional techniques, under direction of faculty. Course may be repeated for a maximum of two credits. Students must gain approval of the faculty member in charge of the specific laboratory, and the Dean. Credits may be used as BL electives. This is a Credit/No Credit course.

**BL460 MEDICAL TECHNOLOGY INTERNSHIP**  
30  
(15 credits per semester for a maximum of 30 credits)  
Practical and didactic training with regular laboratory personnel. Branch training is supplemented by informal lectures, oral quizzes and written examinations. Offered only at approved or affiliated hospital laboratories. Prerequisite: Satisfactory completion of required college course work.

**BL480 APPLIED MICROBIOLOGY AND BIOTECHNOLOGY**  
(2,3) 3  
An advanced course in microbiology concerning the role of bacteria, viruses, Rickettsia and molds in cause and control of various human infections. Food, dairy, soil and industrial microbiology will also be discussed along with Recombinant DNA, genetic engineering and cell tissue culture. Prerequisites: BL204 and CH226, CH351 recommended.

**BL490 INDEPENDENT STUDY IN BIOLOGY**  
(1-4,0) 1-4  
Special studies and/or research in biology for individuals or small seminar groups. Course content to be arranged by student(s) and a supervising professor with approval of school dean. Prerequisites: Students must have junior or senior standing, have an overall GPA of at least 2.5, and no I grades on their transcript. Independent study courses may be repeated for a maximum of eight credits. Additional information is available at the School of Science and Natural Resources office.

**BL499 SENIOR THESIS**  
(1,3) 2  
Required of seniors majoring in biology. Students present seminars and provide an audience for fellow seniors. Each paper presented will be critically analyzed by the audience (also listed as EV499). Prerequisite: BL395.

## CHEMISTRY

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**CH091 BASIC CHEMISTRY**  
(3,0) 3  
Thorough exposure to elementary chemistry for students inadequately prepared for college level chemistry. Emphasis on drill to enhance problem solving skills. Proficiency in basic mathematics (MA091) required. Students must receive a C (2.0) or better in this course to qualify for CH104, CH108, or CH115. Credit in this course does not apply toward graduation.

**CH104 LIFE CHEMISTRY I**  
(3,0) 3  
An introduction to selected principles of chemistry, including organic chemistry, with emphasis on their physiological importance and their applications to nursing and other health related professions. (This course does not apply toward a major or minor in chemistry.) Prerequisite: MA091 or equivalent.

**CH105 LIFE CHEMISTRY II**  
(3,2) 4  
A continuation of organic chemistry presented in CH104 as well as a presentation of the chemical processes taking place in metabolism. The interrelationships between the metabolic processes of living systems are discussed along with their underlying chemical reactions. Prerequisite: CH104.

**CH108 APPLIED CHEMISTRY**  
(3,3) 4  
An introduction to selected principles of chemistry with emphasis on technological applications. Credit in this course does not apply toward a major or minor in chemistry.

- CH115 GENERAL CHEMISTRY I**  
(4,3) 5  
Fundamental principles of chemistry with emphasis on atomic structure, molecular structure, and stoichiometry. Prerequisites: High school chemistry and MA092 or equivalent, each with a grade of C (2.0) or better.
- CH116 GENERAL CHEMISTRY II**  
(3,3) 4  
Continuation of CH115 with emphasis on equilibrium. Prerequisite: CH115 with a grade of C (2.0) or better.
- CH225 ORGANIC CHEMISTRY I**  
(3,3) 4  
Fundamental principles of organic chemistry, covering the structures, reactions and properties of aliphatic and alicyclic compounds. The course will introduce the study of organic nomenclature, functional group chemistry, stereochemistry, reactive intermediates, organic synthesis, reaction mechanisms, and conjugated unsaturated systems. The Laboratory introduces basic organic laboratory techniques and includes experiments in organic separations, synthesis, and analysis. Prerequisite: CH116.
- CH226 ORGANIC CHEMISTRY II**  
(3,3) 4  
A continuation of CH225 covering the structures, properties, and reactions of aromatic compounds, carbonyl compounds, carboxylic acids and their functional derivatives, phenols, amines, organometallics, carbohydrates, amino acids, and proteins. The course will introduce the study of spectral methods of structure determination and expand the study of organic synthesis and mechanisms. The laboratory will include experiments in spectroscopy, organic synthesis and mechanisms, qualitative organic analysis, and instrumental analysis. Prerequisite: CH225 with a grade of C (2.0) or better.
- CH231 QUANTITATIVE ANALYSIS**  
(2,3) 3  
Evaluation of analytical data and study of gravimetric and titrimetric methods of analysis. Prerequisite: CH116 with a grade of C (2.0) or better.
- CH232 INSTRUMENTAL ANALYSIS**  
(2,3) 3  
Continuation of CH231. An instrumental analysis course involving the theory and use of spectrochemical, electroanalytical, and separation methods for the characterization and determination of selected chemical substances. Prerequisite: CH231.
- CH290 INDEPENDENT STUDY IN CHEMISTRY**  
(1-4,0) 1-4  
Special studies and/or research in chemistry for individuals or small seminar groups. Course content to be arranged by student(s) and a supervising professor with approval of school dean. Prerequisites: Students must have an overall GPA of at least 2.5, and no I grades on their transcript. Independent study courses may be repeated for a maximum of eight credits. Additional information is available at the Schol of Science and Natural Resources office.
- CH341 ENVIRONMENTAL CHEMISTRY I: WATER**  
(3,3) 4  
A study of the environmental chemistry of water, the measurement and remediation of water quality problems, the toxicology of water pollutants, and the environmental aspects of energy use. Prerequisites: CH225, CH231, NS103.
- CH342 ENVIRONMENTAL CHEMISTRY II: AIR AND SOLID WASTES**  
(3,3) 4  
A study of the environmental chemistry of the atmosphere and the geosphere, including the measurement and remediation of air pollution and soil contamination problems. The nature and handling of hazardous wastes will also be covered. Prerequisites: CH225, CH231, NS103.
- CH351 INTRODUCTORY BIOCHEMISTRY**  
(3,3) 4  
Introduction to the chemistry of biological molecules, including the general properties and chemical transformation of amino acids, proteins, carbohydrates, lipids and nucleic acids. Emphasis will be on correlating chemical reactions with biological function. An introduction to the intermediary metabolism of the carbohydrates, amino acids, lipids and nucleic acids will also be presented. Prerequisite: CH226.
- CH353 INTRODUCTORY TOXICOLOGY**  
(3,0) Alternate Years 3  
An introduction to toxicology, including its history, types of poisons, their mode of operation, and the biochemistry of detoxification. Environmental problems caused by toxic contaminants will be discussed. Prerequisite: CH351 or permission of instructor.
- CH361 PHYSICAL CHEMISTRY I**  
(4,0) 4  
Chemical thermodynamics with applications to both phase and chemical equilibria. Prerequisite: CH116, one year of calculus and one year of physics.

**CH362 PHYSICAL CHEMISTRY II**  
(3,3) 4  
Continuation of CH361 with emphasis on chemical dynamics, quantum chemistry, and structure. Laboratory experiments complement the lecture. Prerequisite: CH361.

**CH450 LABORATORY APPRENTICESHIP**  
(0,3) per credit 1-2  
Students will assist in laboratories, learning instructional techniques, under direction of faculty. Course may be repeated for a maximum of two credits. Students must gain approval of the faculty member in charge of the specific laboratory, and the Dean. Credits may be used as CH electives. This is a Credit/No Credit course.

**CH490 INDEPENDENT STUDY IN CHEMISTRY**  
(1-4,0) 1-4  
Special studies and/or research in chemistry for individuals or small seminar groups. Course content to be arranged by student(s) and a supervising professor with approval of school dean. Prerequisites: Students must have junior or senior standing, have an overall GPA of at least 2.5, and no I grades on their transcript. Independent study courses may be repeated for a maximum of eight credits. Additional information is available at the School of Science and Natural Resources office.

## **CRIMINAL JUSTICE**

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**CJ101 INTRODUCTION TO CRIMINAL JUSTICE**  
(3,0) 3  
A survey of the evolution of criminal justice with particular emphasis on the development of western models of justice. Included will be the role of law enforcement, corrections, the courts and loss control.

**CJ102 POLICE PROCESS**  
(3,0) 3  
Basic principles and techniques of administration which apply to criminal justice organizations. Emphasis on decision making, authority, human relations, and communication within organizations.

**CJ106 JUVENILE JUSTICE**  
(3,0) 3  
Theories of juvenile delinquency and the roles of criminal justice personnel are considered with emphasis on legal rights, treatment, confinement, and the role of a community.

**CJ110 INTRODUCTION TO CORRECTIONS**  
(3,0) 3  
History and philosophy of correctional policy and need for correctional reform; correctional system from arrest through sentencing; correctional personnel and clients.

**CJ130 CLIENT RELATIONS IN CORRECTIONS**  
(3,0) 3  
Meaning and functions of culture and discrimination, minorities in Michigan, affirmative action and attitude formation; ethics, values and professional responsiveness.

**CJ140 CORRECTIONAL CLIENT GROWTH AND DEVELOPMENT**  
(3,0) 3  
Emphasis on needs, identities and development of recipients of correctional services; to assist students in gaining insights into development of sensitivity to behavior and motivations of corrections clients. Specific problems of prisoners and intervention strategies are reviewed.

**CJ201 FIREARMS TRAINING**  
(0,2) 1  
Emphasis on safe weapon handling, the fundamentals of good marksmanship, proper methods of cleaning, and weapon nomenclature. A variety of weapons will be used. Students will have to provide their own targets and ammunition. Prerequisite: Criminal justice student, sophomore standing or permission of department chair.

**CJ202 CANADIAN CRIMINAL LAW**  
(3,0) 3  
Survey of Canadian substantive and procedural criminal law including search and seizure, arrest, evidence and statutory and case law. Prerequisite: Permission of instructor.

**CJ206 LAW ENFORCEMENT/LOSS CONTROL INTERNSHIP**  
(3,0) 3  
Field experience for correlation of theoretical knowledge with practice in participatin law enforcement or loss control agencies. Prerequisite: Permission of the instructor or sophomore standing. Course may be elected twice for credit of six hours.

**CJ212 LOSS CONTROL**  
(3,0) 3  
Study of security, including historical, legal and philosophical framework for various phases of security operations in our society today.

**CJ220 INSTITUTIONAL CORRECTIONS**  
(3,0) 3  
A survey of the history and philosophy of correctional institutions focusing on: The use of imprisonment as a mechanism of social control, custody versus treatment, rights of prisoners, prison and jail management, institutional training programs, examination of contemporary correctional institutions, prison and jail architecture, and prisoner society.

**CJ240 COMMUNITY BASED CORRECTIONS**  
(3,0) 3  
A survey of the history, development, techniques, and fundamentals of non-institutional correctional programs and services. Emphasis will be placed on the necessity of correctional programs to interact with other human service agencies within the community.

**CJ243 INVESTIGATION**  
(3,0) 3  
Introduction to investigation and the techniques of forensic science with emphasis upon gathering and documenting information for determination of fact. Prerequisite: CJ101 or permission of instructor.

**CJ250 CORRECTIONAL LAW**  
(3,0) 3  
Survey of substantive and procedural correctional law including sentencing, probation, parole, imprisonment, fines and restitution, and prisoners rights. Case law method used, based on appellate court decisions which evolve from criminal defendant litigation, complex legal issues concerning American corrections.

**CJ306 SECURITY SYSTEMS**  
(3,0) 3  
Overview of specialized areas of security in specific facilities with special attention given to management of security information. Prerequisites: CJ212 or permission of instructor.

**CJ313 CRISIS INTERVENTION OF  
DEVIANT BEHAVIOR**  
(3,0) 3  
Survey of philosophy, theory and practice involved in the treatment of different crisis situations most commonly confronting the law enforcement officer in the performance of regular duties. Prerequisite: CJ101, 102 or approval of instructor.

**CJ319 SUBSTANTIVE CRIMINAL LAW**  
(3,0) 3  
Survey of substantive criminal law as a means of attaining socially desirable ends including protection of life and property. Deals with historical, philosophical concepts as well as case law. Prerequisite: CJ101 or permission of instructor.

**CJ321 ETHICAL ISSUES IN PUBLIC  
SAFETY**  
(3,0) 3  
Consideration of selected issues in public safety organizations. Emphasis on the role of practitioners and relations with the various publics. Students will be given moral dilemmas and will consider their individual value system. Prerequisites: CJ101, 102, or permission of instructor.

**CJ330 CORRECTIONAL CASEWORK**  
(3,0) 3  
The history, standards and principles of correctional casework are presented; the roles, functions and goals of casework are discussed, the competencies and training required for effective casework are considered correctional clients - probation and parole selection and appraisal - are concentrated upon. Prerequisites: CJ220, CJ240, junior or senior standing and permission of instructor.

**CJ341 FIRE AND ARSON INVESTIGATION**  
(3,0) 3  
Determination of fire cause and origin and explosion causes. Prevention, documentation and legal aspects examined. Prerequisite: Junior standing or permission of instructor.

**CJ345 STATISTICS AND DESIGN FOR  
PUBLIC SAFETY**  
(4,0) 4  
Introduction to research methodology and designs utilized in public safety. Includes sampling, descriptive statistics, inferential statistics, sources of error in presenting findings, and preparing and reading research reports. Prerequisite: Junior standing in criminal justice or fire science and fulfillment of mathematics competency graduation requirement.

**CJ401 SENIOR SEMINAR**  
(3,0) 3  
Seminar and independent study course with individual student guidance by faculty on selected research topics in criminal justice. Prerequisites: Senior standing or permission of instructor.

**CJ402 CRIMINAL JUSTICE INTERNSHIP**  
3-9  
Criminal justice internship with an agency. Credit is based on 34 hours of field work per credit hour. Students must make application by the ninth week of the previous semester. Prerequisite: Senior standing or permission of instructor.

**CJ406 ADVANCED CANADIAN  
JURISPRUDENCE**  
(3,0) 3  
Expands upon the material covered in CJ202, Canadian Criminal Law, including trial tactics and procedures, sentencing, jurors, invasion of privacy, and other current topics. Prerequisite: CJ202 or permission of instructor.

**CJ409 PROCEDURAL CRIMINAL LAW**  
(3,0) 3  
Principles, duties and mechanics of criminal procedures as applied to important areas of arrest, search and seizure. Prerequisite: CJ319 or approval of the instructor.

**CJ425 WOMEN AND CRIMINAL JUSTICE**  
(3,0) 3  
An examination of theories of female criminality and the treatment of women in criminal justice. Various issues relating to women as professionals in criminal justice will be covered. The unique issues which arise when females are incarcerated will also be examined. Prerequisites: CJ101, junior or senior standing, or permission of instructor.



**CJ444 CRIMINALISTICS****(3,3) 4**

Criminalistic methodology and practice including crime scene techniques for specific offenses, collection and preservation of evidence, narcotics and dangerous drugs, fingerprinting, presentations, and other related topics. Contains MLEOTC mandated hours. Prerequisite: CJ243 or permission of instructor.

**CJ484 FUTURES RESEARCH: LONG-RANGE PLANNING FOR CRIMINAL JUSTICE****(3,0) 3**

This course will explore probable and possible futures and the impact on crime, criminality, and the criminal justice system. It will explore alternative methods and systems to deal with projected change. Prerequisites: CJ101, CJ102, CJ321 or permission of instructor.

**CJ490 INDEPENDENT STUDY FOR CRIMINAL JUSTICE****(1-4) 1-4**

This may take the form of either a research project or a directed reading on a specific subject. One to four credits over a period of one or more semesters may be granted according to the nature of the student's project. Prerequisite: Permission of instructor. May be repeated up to six credits.

# COMPUTER SCIENCE

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**CS100 INTRODUCTION TO MICROCOMPUTER APPLICATIONS****(3,0) 3**

The study of a selection of contemporary microcomputer applications, including operating system concepts, programming in BASIC, word processing, database management systems, and spreadsheets. Brief survey of other applications, such as presentation graphics, computer-assisted drafting, and desktop publishing. Prerequisite: Completion of mathematics competency graduation requirement.

**CS111 INTRODUCTION TO COMPUTER SCIENCE I****(3,0) 3**

Fundamental concepts of computer science, using the Pascal programming language as a vehicle. Input and output, the standard data types, arithmetic, and control structures. Functions and procedures. Primitive data structures, including arrays, records, and strings. Files and multidimensional data. Text processing and simple parsing. Applications to illustrate these basic programming concepts. Prerequisite: CS100 or appropriate programming experience, and completion of, or current enrollment in a mathematics course numbered 100 or above.

**CS112 INTRODUCTION TO COMPUTER SCIENCE II****(3,0) 3**

Continuation of CS111 with an emphasis on program design and data structures. Sorting, searching, pointer-variables, and free storage management. Stacks and queues and general trees, and graphs. Prerequisite: CS111 with grade of C or better.

**CS205 COMPUTER ORGANIZATION AND ARCHITECTURE****(3,0) alternate years 3**

A hardware-oriented introduction to the structure of modern computer systems, emphasizing the role of, and interrelationships between the various components. The evolution of modern computer systems. Memory organization, peripheral devices, and their connectivity. Instruction sets, arithmetic, and central processing unit structure. Control unit organization and operation. Alternative computer architectures. Prerequisite: CS112 with grade of C or better.

**CS210 COBOL PROGRAMMING****(3,0) alternate years 3**

An introduction to the COBOL programming language emphasizing facilities for the effective management of files and databases. Overview of COBOL syntax, arithmetic, input/output and control structures in COBOL. Report generation and table management. COBOL facilities for sorting and merging files. Sequential, relative, and indexed file organizations and their applications. Facilities for interfacing with database management systems. Prerequisite: CS112.

**CS212 FILE AND DATABASE MANAGEMENT****(3,0) alternate years 3**

An introduction to files and file processing, with an emphasis on non-sequential organizations for supporting multi-file databases. Direct file structures and hashing, indexing, tree-structures organizations. Expandable file structures. Secondary key retrieval. Application to database structures. Prerequisite: CS112.

**CS290 INDEPENDENT STUDY IN COMPUTER SCIENCE****(1-4,0) 1-4**

Special studies and/or research in computer science for individuals or small seminar groups. Course content to be arranged with instructor and with approval of the department head. This course may be repeated for a maximum of eight credits. Prerequisites: Sophomore standing or higher and permission of the instructor.

**CS321 COMPUTER GRAPHICS**

**(3,0) alternate years 3**  
 An introduction to the generation of graphical images by computer. Survey of common graphics devices. Generation of lines and curves. Representation of two-dimensional objects. Techniques for area filling. Scaling, rotation, and translation in two dimensions. Rendering three-dimensional objects by projections. Scaling, rotating and translating in three dimensions. Hidden line and hidden surface detection and removal. Prerequisite: CS112, and MA141 or MA151.

**CS333 SYSTEMS PROGRAMMING**

**(3,0) alternate years 3**  
 An introduction to systems-level programming using C and assembly language. Design and development of specialized systems utilities, such as window-management packages and command interpreter shells. Overview of the function and design of system utility programs, such as text editors, language processors, and linkers. Prerequisite: CS205.

**CS334 OPERATING SYSTEMS CONCEPTS**

**(3,0) alternate years 3**  
 Definition and historical development of operating systems. Characteristics of batch, interactive, and multiprogramming systems. File systems, processor and memory management. Communication, concurrency, deadlock, and protection. Prerequisite: CS333.

**CS340 COMPUTER SIMULATION**

**(3,0) alternate years 3**  
 Introduction to the use of computer simulation as an alternative approach to finding solutions for difficult mathematical problems. Numerical generation of random deviates from several standard distributions. Theoretical concepts from probability, statistics, and queuing theory. Simulation exercises and languages for performing computer simulations. Prerequisites: CS112 and MA308.

**CS401 AUTOMATA THEORY, LANGUAGES, AND COMPUTABILITY**

**(3,0) alternate years 3**  
 An introduction to the theoretical foundations of computer science. Topics include automata theory, grammars and formal languages, decidability and computability. Prerequisites: CS112 and MA216.

**CS411 PROGRAMMING LANGUAGE CONCEPTS**

**(3,0) alternate years 3**  
 Comparative treatment of common programming languages and their underlying structure. Formal language definition, interpretive and compiled implementations. Data representation and control structures. Run-time support requirements. Prerequisite: CS333

**CS418 SOFTWARE ENGINEERING**

**(1,4) 3**  
 A project-based introduction to the design and implementation of computer software. Requirements analysis, software specification, design methodologies, implementation, testing, verification, documentation, and maintenance. Development of a complete software system for "real-world" clients by project teams. Prerequisite: CS212.

**CS490 RESEARCH TOPICS IN COMPUTER SCIENCE**

**(1-4,0) 1-4**  
 Special studies and/or research in computer science for individuals or small seminar groups. Course content to be arranged with instructor and with approval of the department head. This course may be repeated for a maximum of eight credits. Prerequisites: Junior standing or higher and permission of the instructor.

## COMPUTER ENGINEERING TECHNOLOGY

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**CT224 DIGITAL ELECTRONICS**

**(3,2) 4**  
 A detailed study of the electronic behavior of combinational and sequential digital circuitry. Proper utilization of MSI/LSI digital integrated circuits and programmable logic devices (PLD's) will be stressed. Prerequisite: ET124.

**CT235 MICROPROCESSOR FUNDAMENTALS**

**(3,2) 4**  
 An introduction to number systems, binary arithmetic, microprocessor architecture, machine and assembly language program development, and computer system hardware and interfacing techniques. Prerequisite: CS100 or CS111.

**CT265 COMPUTER-AIDED PROBLEM SOLVING**

**(3,0) 3**  
 Use of QBasic, Spreadsheet and TK Solver software for technical problem solving with computers. (Intended primarily for students in Mechanical Engineering Technology.) Prerequisite: MT100 or CS100. Prerequisite or Corequisite: MT220 or permission of instructor.

**CT335 DIGITAL DESIGN**  
(3,2)

4

Detailed logical and electronic design considerations using combinational and sequential digital techniques. State machines and programmable logic devices are emphasized. Prerequisite: CT224.

**CT336 MICROCONTROLLER SYSTEMS**  
(3,3)

4

An introduction to microcontroller architecture focusing on the MC68HC11. Assembly and C languages are used for program development. Fuzzy logic is introduced for embedded system design. Interfacing techniques, real-time control and logic analyzer use is emphasized. Prerequisite: CT235 and CT224. Corequisite: AM365.

**CT435 DIGITAL SIGNAL PROCESSING**  
(3,2)

4

An introduction to the application of real-time digital signal processing. The course emphasizes Fourier analysis and digital filtering use of signal processing in instrumentation, control systems, and telecommunications. Offered on demand. Prerequisites: AS365, ET342.

## **DATA PROCESSING**

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**DP151 COMPUTER APPLICATIONS**  
(1-2,0)

1-2

A series of courses using computer applications programs. Each course will provide 15 classroom hours of instruction per credit. A student may register for one or more sections per term, for a maximum of five credits earned in this course. Students without computer experience are expected to take the introduction to computers module as a prerequisite.

**DP160 PERSONAL COMPUTERS WORK-  
STATION OPERATING SYSTEMS**  
(1-3,0)

1-3

A series of courses covering popular personal computer workstation operating systems. Each course will provide 15 classroom hours of instruction per credit hour. A student may repeat this course covering a different workstation operating system for a maximum of six credit hours.

**DP163 TROUBLESHOOTING AND REPAIR  
OF PERSONAL COMPUTERS**  
(2,2)

3

A basic introduction to the architecture, installation, maintenance, troubleshooting, and repair of personal computers. The student will learn elementary principles of electronics, magnetism, and logic. The disassembly and upgrading of a personal computer will be covered in the laboratory as well as the use of diagnostic hardware and software. Prerequisite: at least one credit hour of DP160.

**DP225 WORD PROCESSING  
TECHNIQUES**  
(3,0)

(3,0)

3  
Comprehensive training using WordPerfect 5.1 and WordPerfect Office including advanced WordPerfect and desktop publishing techniques using WordPerfect 5.1 E-Mail, Calendar, Scheduler and Notebook parts of WordPerfect Office included in course work. Prerequisite: Basic keyboarding skills and working knowledge of computers. Hands-on experience is scheduled in labs outside of classroom hours.

**DP241 DESKTOP PUBLISHING**  
(3,0)

3

Emphasis is on understanding the basic concepts of desktop publishing and how to produce well designed desktop publications. Focus is on creating designed desktop publications. Focus is on creating brochures, graphics, newsletters, reports and resumes using a high-end page composer, paint and vector graphics software. Prerequisite: English competency and a working knowledge of a word processing software application, or permission of instructor.

**DP260 PERSONAL COMPUTERS  
NETWORK OPERATING SYSTEMS**  
(1-3,0)

1-3

A series of courses covering popular personal computer network operating systems. Each course will provide 15 classroom hours of instruction per credit hour. A student may repeat this course covering a different network operating system for a maximum of six credit hours. Prerequisite: At least one credit hour of DP160.

**DP263 STORAGE, PROTECTION, AND  
RECOVERY OF PERSONAL COMPUTER**  
(2,2)

3

Continues and expands upon DP163 with emphasis on disk; drives, formatting disk; editing, virus detection, prevention, and eradication. Prerequisite: DP163.

**DP345 PRESENTATION GRAPHICS**  
(3,0)

3

The design of overheads and slides used in presentations. Color, font size, placement and visual effect will be studied to produce effective visuals. The effective use of visuals in presentations will be covered. Graphics programs will be used to prepare visuals. Prerequisites: English competency and working knowledge of word processing or desktop publishing or permission of instructor.

## **DRAFTING & DESIGN ENGINEERING TECHNOLOGY**

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**DT125 ELECTRONIC DRAFTING**  
(1,3) **2**  
An introduction to electronic drafting to include instruments, lettering, sketching, multiview projection, dimensioning, reproduction, standard electronic symbols, schematic diagrams and circuit board layout.

**DT132 CONSTRUCTION SKETCHING AND DRAWING**  
(2,3) **3**  
Free hand and computer-aided drafting (CAD) of orthographic and pictorial representations to include the study and development of architectural working drawing, plan views, elevations, details and schedules.

**DT263 DESIGN FOR MANUFACTURING**  
(2,2) **3**  
A survey of design principles related to tooling design for cutting tools, jigs, fixtures and dies. An introduction to precision measurement and design concepts for assembly. Prerequisite: MT113 or permission of instructor.

## **ECONOMICS**

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**EC201 PRINCIPLES OF MACROECONOMICS**  
(3,0) **3**  
Nature and scope of economics; national income accounting; problems of unemployment and price instability; public revenues and expenditures; money and banking; fiscal and monetary policies to promote stability and economic growth. Prerequisite: Mathematics competency.

**EC202 PRINCIPLES OF MICROECONOMICS**  
(3,0) **3**  
Principles of economic reasoning; supply and demand analysis; theories of production; price and output determination under each of the four market structures; factor returns, and income distribution theories; public policy implications. Prerequisite: Mathematics competency.

**EC302 MANAGERIAL ECONOMICS**  
(4,0) **4**  
A study of the application of economic analysis to managerial decisions. Topics include the firm and its environment, demand estimation, production and cost analysis, optimization and profit maximization, analysis of markets, pricing strategy and analysis of project decisions. Prerequisite: MA112 or MA141 or equivalent.

**EC304 MONEY, BANKING AND MONETARY POLICY**  
(3,0) **3**  
Monetary theory; study of financial institutions and central bank authorities; monetary policy and its limitations; changing structure of financial markets and industry; relationships between money, prices and national income. Prerequisite: EC201.

**EC305 PUBLIC FINANCE**  
(3,0) **3**  
The economics of public finance, including taxation, public expenditures and fiscal policy. Rationale and objectives of government activity in a market system; distribution of tax burden; income redistribution effects of taxation and expenditure programs. Prerequisite: EC201 or EC202.

**EC308 INTERMEDIATE MICROECONOMICS**  
(3,0) **3**  
Theory of demand; consumer choice and utility analysis; production and cost analysis; price-output determination under the four market structures; resource allocation; public policy and managerial applications emphasized. Prerequisite: EC202.

**EC309 INTERMEDIATE MACROECONOMICS**  
(3,0) **3**  
Determinants and measurement of national income; theories of consumption and investment; aggregate economic analysis including IS-LM and aggregate demand-aggregate supply models; unemployment and inflation; stabilization policies; economic growth. Prerequisite: EC201.

**EC403 PRIVATE ENTERPRISE AND PUBLIC POLICY**  
(3,0) **3**  
Review of price theory; structure, conduct and performance; antitrust laws and application: restraint of trade, monopoly, mergers, trade practices; regulation. Prerequisite: EC202.

**EC408 INTERNATIONAL ECONOMICS**  
(3,0) **3**  
Pure theory of trade and comparative advantage; free trade versus protectionism; trade problems of developing nations; balance of payment accounting; exchange rates; international monetary systems. Prerequisites: EC201 and EC202.

**EC409 SEMINAR IN ECONOMICS**  
(1-2,0) **1-2**  
Discussion of economic issues, theories and their applications. May be repeated for credit with the approval of the instructor for a total of 4 credits.

# EDUCATION

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

## ED101 FOUNDATIONS OF EARLY CHILDHOOD EDUCATION (3,0) 3

An introduction to the field of Early Childhood. Topics include its history, application of theories to curriculum, types of programs, and issues in the field of child care. Observations of various early childhood settings will be required.

## ED105 CHILD GUIDANCE AND WELFARE (3,0) 3

Through readings, discussions, observations, and interactions with children, the student will learn how to develop guidance strategies when working with children in an early childhood setting. Prerequisite: PY155 or PY265.

## ED110 CURRICULUM DEVELOPMENT AND TEACHING PRACTICES (3,0) 3

Developing curriculum and teaching practices based on the whole child's development: cognitive, physical, social, emotional, and creative. Emphasis on planning play activities for learning centers. Observations of children in an early childhood setting will be required.

## ED111 INFANTS AND TODDLERS: DEVELOPMENTALLY APPROPRIATE PRACTICES (3,0) 3

Includes theories of emotional, physical, social and cognitive stages of development of children ages 0 to 36 months. The knowledge of these stages will be applied to matching developmentally appropriate teaching and caregiving practices. Issues in administering Infant/Toddler programs will also be discussed. Prerequisite: PY155 or PY265.

## ED220 EARLY CHILDHOOD LITERATURE (3,0) 3

Readings in developmentally appropriate literature and related activities across the curriculum for young children, ages birth through kindergarten. Prerequisite: EN110 and SD101.

## ED260 PRACTICUM I (1,12) 4

The student will complete 12.5 hours weekly in an early childhood laboratory setting. Attendance at a weekly seminar is also required. Prerequisites: Completion of ED101, ED105, ED110, and ED111, and permission of instructor. Students should seek permission of instructor no later than 10th week of semester preceding enrollment. Credit/No Credit grade.

## ED261 PRACTICUM II (1,12) 4

The student will complete 12.5 hours weekly in an early childhood laboratory setting. Attendance at a weekly seminar is also required. Prerequisites: Completion of ED260 and permission of instructor. Students should seek permission of instructor no later than 10th week of semester preceding enrollment. Credit/No Credit grade.

## ED270 ADMINISTRATION OF EARLY CHILDHOOD PROGRAMS (3,0) 3

Knowledge of financial, legal, supervisory and administrative procedures used in operating an early childhood program will be gained through lectures, discussions, readings, and activities. Prerequisite: Completion of ED260 Practicum I or permission of instructor.

# ENGLISH

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

## EN091 BASIC ENGLISH (3,0) 3

Thorough review of basic language skills for students who need preparation for Freshman Composition; weekly vocabulary tests and writing assignments. Credit/no credit final grade. Credit in this course does not apply toward graduation. All students whose English placement examination score does not place them in EN110 must receive credit for EN091 before taking EN110.

## EN110 FRESHMAN COMPOSITION (3,0) 3

Emphasis on writing, usage and rhetoric which may include narration, process, description, comparison/contrast, definition and classification. Introduction to library resources and documentation. Prerequisite: Appropriate score on the English placement examination or credit for EN091.

## EN205 TECHNICAL REPORT WRITING (3,0) 3

A course in research methods, critical readings and written reports typical in technology, including memos, short reports, articles, resumes, and research processes and reporting of results in a long project. Emphasis on critical analysis and evaluation: APA style. Prerequisites: EN110 and sophomore standing. Students will not receive credit for this course if they have already received credit for EN210 or EN215.

**EN210 RESEARCH PAPER PROCESS**  
(3,0) 3  
A course in research methods and critical reading and writing. Includes introduction to library resources and research protocols. Emphasis on critical analysis and evaluation of primary and secondary source material. Requires one short and one long research paper. APA style. Prerequisites: EN110 and sophomore standing.

**EN215 INTRODUCTION TO LITERATURE AND RESEARCH**  
(3,0) 3  
A course in research methods and critical reading and writing, including the study of traditional and modern techniques of literary interpretation. Requires one research paper and five critical papers: MLA style. Prerequisites: EN110 and sophomore standing.

**EN220 ADVANCED COMPOSITION**  
(3,0) 3  
Study and practice of the various forms of academic discourse. Library research paper required. Prerequisite: EN210 or EN215.

**EN221 CREATIVE WRITING**  
(3,0) 3  
Writing and discussion of art forms such as poetry, fiction and drama consistent with the student's individual interests. Prerequisite: EN210 or EN215, or permission of instructor.

**EN231 AMERICAN LITERATURE I**  
(3,0) 3  
A chronological study of American literature from the colonial writers through the Romantic period, ending with the Civil War. Prerequisite: EN110, or permission of instructor.

**EN232 AMERICAN LITERATURE II**  
(3,0) 3  
A chronological study of American literature from the Civil War through the present, covering the Age of Realism and the development of twentieth century literature. Prerequisite: EN110, or permission of instructor.

**EN233 ENGLISH LITERATURE I**  
(3,0) 3  
Reading and discussion of selected works from the Old English period to the beginning of the eighteenth century. Emphasis on major writers and works, evaluated in their historical context. Prerequisite: EN110, or permission of instructor.

**EN234 ENGLISH LITERATURE II**  
(3,0) 3  
Reading and discussion of selected works from the eighteenth century to the twentieth century. Emphasis on major writers and works, evaluated in their historical context. Prerequisite: EN110, or permission of instructor.

**EN235 SURVEY OF NATIVE AMERICAN LITERATURE**  
(3,0) 3  
An overview of Native American Literature, including myths, poetry, biographies, legends, and stories from recognized Indian and non-Indian authors. The significance of Indian philosophy found in such literature will be emphasized. Prerequisite: EN210 or EN215 or permission of instructor. (Also listed as NA235)

**EN320 RESPONDING TO WRITING**  
(3,0) 3  
A course in the theory and practice of effective writing with emphasis on evaluating and responding to writing across the disciplines recommended for ombudsmen, tutors, education students, and other interested students. Course includes rhetorical and linguistic theory, current research on writing as process, theory and practice of responding to student writing, computer assisted writing and revision, tutorial strategies, and characteristics of writing in various disciplines. A strong theoretical framework with student paper examples from interdisciplinary fields.

**EN321 RHETORIC AND COMPOSITION THEORY**  
(3,0) 3  
A course in the theory of rhetoric and composition. The course takes an historical approach, tracing the growth, uses, and transformations of rhetoric from the classical period to the present day, highlighting the major underlying cultural forces which fostered change in rhetoric and fueled the development of composition theory. Emphasis is upon modern rhetoric and composition theory. Prerequisite: EN110.

**EN322 LINGUISTICS**  
(3,0) 3  
This course will acquaint students with various approaches to the study of languages as well as some of the major social, political, and educational issues that revolve around the study of language. Topics include phonetics, syntax, semantics, pragmatics, psycholinguistics, orality and literacy. Prerequisite: EN110.

**EN330 DEVELOPMENT OF THE NOVEL IN ENGLAND AND AMERICA I**  
(3,0) Alternate Years 3  
Study of the leading novelists—English and American—of the eighteenth century and the first half of the nineteenth century, beginning with Defoe and ending with the works of the 1840's. Prerequisite: EN231-232 or EN233-234, or permission of instructor.

**EN331 DEVELOPMENT OF THE NOVEL IN ENGLAND AND AMERICA II**

(3,0) Alternate Years 3  
Study of the background and art of the Anglo/American novel from approximately 1850 to the present. Intensive examination of characteristic forms, techniques, and themes in major works. Prerequisite: EN231-232 or EN233-234, or permission of instructor.

**EN332 THE SHORT STORY**

(3,0) Alternate Years 3  
A study of the background and development of the short story. Readings will include selections from Boccaccio, the French conte and the German novella in addition to English and American short stories. Prerequisite: EN210 or EN215.

**EN333 STUDIES IN THE DRAMA: THE GENRE AND THEATRE IN CONTEXT**

(3,0) Alternate Years 3  
A study of major plays in the context of theatre and literary history from the beginning to the present, including European, British, and American development. Prerequisite: EN210 or EN215.

**EN334 APPROACH TO POETRY**

(3,0) Alternate Years 3  
This is an introduction to the appreciation of poetry for junior-senior students (not exclusively English majors). Prerequisite: EN210 or EN215, or permission of instructor.

**EN335 CHILDREN'S LITERATURE**

(3,0) 3  
A review of the rich and diverse field of literature for children from infancy to adolescence. Required for non-English elementary teacher candidates and an elective for English majors. Prerequisites: EN210 or EN215 and SD101; or permission of instructor.

**EN420 HISTORY AND STRUCTURE OF THE ENGLISH LANGUAGE**

(3,0) Alternate Years 3  
Development and structure of the English language; relationship with other Indo-European languages. Prerequisite: EN233-234, or permission of instructor.

**EN421 HISTORY OF LITERARY CRITICISM**

(3,0) Alternate Years 3  
An investigation of the history of critical theory to include classicism, neoclassicism, romanticism, the New Critics, and contemporary critical trends. Prerequisite: EN233-234, or permission of instructor.

**EN430 CHAUCER**

(3,0) Alternate Years 3  
Intensive study of Chaucer's life and times and principal literary works: Canterbury Tales, Troilus and Criseyde, and The Romaunt of the Rose. Prerequisite: EN233, or permission of instructor.

**EN431 MILTON AND THE METAPHYSICAL POETS**

(3,0) Alternate Years 3  
Intensive study of Milton's principal poetic works including Paradise Lost and Samson Agonistes; Donne's poetry and prose, and the metaphysical poets. Prerequisite: EN233 or permission of instructor.

**EN432 SHAKESPEARE**

(3,0) Alternate Years 3  
Intensive study of Shakespeare's comedies, tragedies, and historical dramas. Prerequisite: EN233, or permission of instructor.

**EN433 SEMINAR IN MAJOR AMERICAN AND ENGLISH WRITERS**

(3,0) 3  
An intensive study of a single writer, or of two or three writers who might be studied together profitably along thematic, technical or other lines. Prerequisite: Junior-senior standing, or permission of instructor. May be repeated twice for credit.

**EN450 DIRECTED INDIVIDUAL STUDY**

(3,0) 3  
Individual study of an author, period, genre, or other related topic relevant to literary scholarship. Each student will do extensive research and prepare a paper.

## **EXERCISE SCIENCE**

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**ES140 HEALTH AND FITNESS**

(3,0)  
Introductory course: theoretical basics of exercise diet and nutrition and the wellness lifestyle. Topics include aerobic and musculoskeletal fitness, weight control, stress reduction, alcohol and tobacco abuse and presents principles for promoting a wellness lifestyle.

**ES141 INTRODUCTION TO MOVEMENT**

(3,0) 3  
This course reviews and applies the pertinent aspects of the prerequisite disciplines of anatomy and physiology. Specific attention will be placed on muscles, bones, joint structures, and functions as well as the fundamentals of leverage, balance, and "the feel of the movement". A detailed understanding of movement description is the most critical element in the student's mastery of the subject matter.

**ES240 TECHNIQUES OF ATHLETIC TRAINING**

(2,0) 2  
Athletic training supportive taping and protective bracing and padding procedures; techniques of fitting athletic and orthopaedic equipment. Administration of athletic training room including facility design, budget and inventory.

**ES242 SPORTS MEDICINE**

(3,0) 3  
This course will deal with the principles of athletic training sciences concerned with the evaluation, recognition, treatment, and therapeutic exercises practiced for the athlete's safe return to participation after an injury. Lectures and laboratory experiences will introduce the student to the updated theories in sport medicine with specific respect to injuries incurred in athletics.

**ES248 PSYCHOLOGY OF SPORT AND ATHLETICS**

(3,0) 3  
A general introduction in the history and evolution of sport psychology in North America. Areas of interest are cognitive interventions, aggression, and socialization in sport, and the relationship between exercise and psychological well-being.

**ES295 PRACTICUM**

(1-2,0) 1-2  
Practical experiences that explore various types of work setting in Exercise Science, working under specialist in the various chosen areas of interest. May be repeated for a total of 4 credits.

**ES342 EXERCISE PHYSIOLOGY**

(3,0) 3  
Examines physiological energy systems; their recruitment, recovery, acute and chronic adaptations to training. Applications to specific sports, and health and fitness programming.

**ES344 KINESIOLOGY**

(3,0) 3  
Science of movement applied to muscle, joint structure and function and application of physical laws of gravity, leverage, motion and balance to human performance. Video tape motion analysis is used to apply these theories into practical experience.

**ES348 LABORATORY PROCEDURES AND MEASUREMENT IN EXERCISE SCIENCE**

(2,2) 3  
Provides theoretical background and measurement concepts in conjunction with developing laboratory skills specific to field and laboratory procedures.

**ES349 ORTHOPAEDIC ASSESSMENT IN SPORTS MEDICINE**

(3,0) 3  
Provides a clear concise process of physical examination of the spine and extremities which would direct the student in a logical, efficient and thorough search of anatomy relevant to the field of sports medicine. This course will allow the student to continue to build a solid foundation in anatomy specific to orthopaedic education. Prerequisite: BL122. (Formerly ES230)

**ES358 RESEARCH METHODS IN EXERCISE SCIENCE**

(3,0) 3  
Introduction to research methods and related statistical procedures for constructing and analyzing research activities. Presentation of statistical concepts including correlation, t-tests and analysis of variance and their use in exercise science. Introduction to measurement concepts of validity and reliability and the facets of writing a research report. Prerequisites: MA207 and ES342.

**ES390 RECREATION LEADER APPRENTICESHIP**

(1,0) 1  
Practical experience in learning to teach and lead various recreation experiences. Students serve with qualified instructors. Prerequisites: Basic skills and knowledge of activity or permission of instructor. May be repeated for a total of 3 credits.

**ES440 EXERCISE PHYSIOLOGY SEMINAR**

(2,0) 2  
Examines current issues in the field and students will prepare and present advanced physiological concepts related to special topics.

**ES442 ELECTROCARDIOGRAPHY IN EXERCISE SCIENCE**

(2,0) 2  
Examines electrophysiological basis of ECG, Cardiac anatomy, metabolism responses to rest and exercise. Prerequisite: ES342 with a C grade or better. Offered alternate years.

**ES444 EXERCISE PRESCRIPTION**

(2,0) 2  
Provides experience in writing and developing advanced training and conditioning programs for a variety of populations. Process oriented; considers needs analysis and cyclic training.



**ES481 PROFESSIONAL DEVELOPMENT SEMINAR**

(1,0) 1  
Opportunities for students to refine personal and professional goals and initiate preparation of resumes and interviewing skills. Career planning and placement will be emphasized as well as internship evaluation. Seminar format. Prerequisite: Senior status required.

**ES492 INTERNSHIP**

6  
Comprehensive practical application of students formal academic preparation. Prerequisites: junior status and permission of instructor.

**ES496 SELECTED RESEARCH TOPICS**

(1-3,0) 1-3  
Student carries out approved project(s) of his/her own initiative. Prerequisites: Junior standing and permission of instructor.

# **ELECTRICAL- ELECTRONICS ENGINEERING TECHNOLOGY**

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**ET115 ELECTRICAL CIRCUITS I**

(3,2) 4  
Basic principles of DC electricity including series and parallel circuits, mesh and nodal analysis, and RC and RL transient analysis. Laboratory exercises will reinforce the lecture material and introduce circuit board fabrication. No prior knowledge of electricity is assumed. Corequisites: MA109, MA140.

**ET116 ELECTRICAL CIRCUITS II**

(3,2) 4  
A continuation of ET115 covering the basic principles of AC electricity. Topics include: R,L,C series and parallel circuits using phasor algebra, analysis techniques and theorems, power, and three phase circuits. Prerequisite: ET115.

**ET201 APPLIED ELECTRICITY I**

(2,2) 3  
A study of basic circuit theory and electrical machinery for non-electrical technicians. Topics include DC and AC circuits, inductance, capacitance, three-phase circuits, and DC and AC motors and controls. Prerequisite: MA140.

**ET205 SIMULATION SOFTWARE FOR ELECTRONIC CIRCUITS**

(3,0) 1  
An introduction to software packages available for simulating and analyzing electronic circuits. Pspice and MathCAD software are used to analyze different types of electronic circuits. Prerequisites: ET115 and CS100 or permission of instructor. Course meets the first five weeks of Fall Semester.

**ET206 SELECTED TOPICS IN CIRCUIT ANALYSIS I**

(3,0) 1  
A study of the fundamental laws and properties used in electronic circuit analysis. Topics include Kirchhoff's Laws, nodal and mesh analysis, and Thevenin's Theorem. Prerequisites: ET115 or equivalent, and ET205 or permission of instructor. Course meets weeks 5-9 of the Fall Semester.

**ET207 SELECTED TOPICS IN CIRCUIT ANALYSIS II**

(3,0) 1  
A study of transient and steady-state AC transient analysis of RL and RC circuits, phasor algebra, and AC power. Prerequisites: ET116 or equivalent, and ET205 or permission of instructor. Course meets weeks 10-14 of the Fall Semester.

**ET211 ELECTRONIC DEVICES**

(3,3) 4  
An introduction to the operation of basic electronic devices including diodes, bipolar transistors, and field-effect transistors. Topics of study include power supplies, bias circuits, and small signal models. Prerequisite: ET115.

**ET212 ANALOG ELECTRONICS**

(3,3) 4  
A study of the operation and application of electronic devices including bipolar transistors, field-effect transistors, and operational amplifiers. Topics of study include bias circuits, small signal model, frequency response, multistage amplifiers, and operational amplifier circuits. Prerequisite: ET211.

**ET244 ELECTRICAL MACHINERY**

(3,2) 4  
Study of the operation and application of DC and AC machines, transformers, and programmable logic controllers. Prerequisite: ET116.

**ET299 COOPERATIVE EDUCATION**

2  
Supervised industrial experience with cooperative industries. The students' work experience is related to academic studies, and contributes significantly to professional development. Can be repeated for credit. Permission of instructor required.

**ET302 APPLIED ELECTRICITY II**  
 (2,2) 3  
 A study of electronic devices and circuits for non-electrical technologists. Topics include diodes, transistors, and analog and digital integrated circuits. Prerequisite: ET201.

**ET342 NETWORK ANALYSIS**  
 (3,2) 4  
 A study of the analysis of networks using differential equation, Laplace transform, Fourier Series, and computer simulation techniques. Prerequisite: ET116. Corequisite: MA142.

**ET345 ANALOG DESIGN**  
 (3,3) 4  
 Design of linear circuits including operational amplifier circuits, instrumentation amplifiers, waveform generators, active filters, and A/D and D/A conversion circuits. Prerequisite: ET212.

**ET437 COMMUNICATION SYSTEMS**  
 (3,2) 4  
 A study of analog and digital communications systems with an emphasis on modulation techniques, microwave systems, antennas, and fiber-optic systems. Prerequisite: ET342.

**ET447 INDUSTRIAL CONTROLS AND INSTRUMENTATION**  
 (3,2) 4  
 A study of programmable logic controllers, industrial electronic controls, and data acquisition systems. Topics include: operation, programming, and interfacing of PLC's; industrial motor control circuits; and computer-based data acquisition and instrument interfacing. Prerequisite: ET342.

**ET448 CONTROL SYSTEMS**  
 (3,2) 4  
 An introduction to the analysis and design of analog and digital feedback control systems. Emphasis is on velocity and position control using DC and stepper motors. Offered on demand. Prerequisite: ET342.

**ET485 SENIOR DESIGN PROJECT I**  
 (1,1) 1  
 Students develop the proposal of a team design project. The project covers a computer controlled process or electronic system that is representative of a typical industrial project. Corequisite: ET437 or ET447. Prerequisite: CT336.

**ET486 SENIOR DESIGN PROJECT II**  
 (1,6) 3  
 A continuation of ET485 where students complete the design, testing, and documentation of the team design project. A formal presentation of the project is required. Prerequisite: ET485.

## **ENVIRONMENTAL SCIENCE**

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**EV249 WATER POLLUTION CONTROL**  
 (2,3) 3  
 An analytical study of the tests, operations, and solutions involved in contemporary water pollution problems. (Also listed as BL249) Prerequisite: NS103 or permission of instructor.

**EV290 INDEPENDENT STUDY IN ENVIRONMENTAL SCIENCE**  
 (1-4,0) 1-4  
 Special studies and/or research in environmental science for individuals or small seminar groups. Course content to be arranged by student(s) and a supervising professor with approval of school dean. Prerequisites: Students must have an overall GPA of at least 2.5, and no I grades on their transcript. Independent study courses may be repeated for a maximum of eight credits. Additional information is available at the School of Science and Natural Resources.

**EV311 ENVIRONMENTAL LAW**  
 (2,0) 2  
 Study of fundamental concepts of environmental law, basic legal research techniques, state and federal environmental statutes, and cases pertaining to environmental law. Prerequisite: Junior standing or permission of instructor.

**EV313 SOLID AND HAZARDOUS WASTE**  
 (3,0) 3  
 Identification and classification of solid and hazardous wastes, including discussion of storage and processing, collection and transportation, resource recovery and recycling, ultimate disposal. Topics on radiation, decay, health effects and sources of hazardous materials will also be covered. Prerequisite: MA112 or equivalent.

**EV395 JUNIOR SEMINAR**  
(0,2) 1  
Literature searching, scientific writing, and oral presentation of scientific data. Students will be expected to listen to presentations of peers enrolled in EV499 and develop a topic for their senior thesis. (Also listed as BL395)  
Prerequisite: Junior standing.

**EV425 ENVIRONMENTAL SYSTEMS ANALYSIS**  
(2,3) 3  
The basic approach and statistical concerns associated with conducting an environmental analysis, as required for an environmental impact analysis will be integrated with interpretation of data from actual situations. Students will learn how analysis of soil, water, air, plant communities, animal communities, and organic tissue analysis can be combined to evaluate the environmental health of a specific site. Prerequisite: CH341, CH342.

**EV450 LABORATORY APPRENTICE**  
(0,3) per credit 1-2  
Students will assist in laboratories, learning instructional techniques, under direction of faculty. Course may be repeated for a maximum of two credits. Students must gain approval of the faculty member in charge of the specific laboratory, and the Dean. Credits may be used as EV electives. This is a Credit/No Credit course.

**EV490 INDEPENDENT STUDY IN ENVIRONMENTAL SCIENCE**  
(1-4,0) 1-4  
Special studies and/or research in environmental science for individuals or small seminar groups. Course content to be arranged by student(s) and a supervising professor with approval of school dean. Prerequisites: Students must have junior or senior standing, have an overall GPA of at least 2.5, and no I grades on their transcript. Independent study courses may be repeated for a maximum of eight credits. Additional information is available at the School of Science and Natural Resources office.

**EV499 SENIOR THESIS**  
(1,3) 2  
Required of seniors majoring in environmental science. Students present seminars and provide an audience for fellow seniors. Each paper presented will be critically analyzed by the audience. (Also listed as BL499) Prerequisite: EV395.

## **FINANCE**

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**FN242 PERSONAL FINANCE**  
(3,0) 3  
An introduction to the principles of personal financial planning. Topics include the financial planning process, credit and borrowing fundamentals, analysis of savings, investments and taxes, individual insurance, retirement and estate planning. Prerequisite: Mathematics competency.

**FN245 PRINCIPLES OF FINANCE**  
(3,0) 3  
An introduction to the principles of business finance. Topics include math of finance, working capital management, financial planning and forecasting, debt and leasing, common and preferred stock, leverage and capital structure, capital budgeting, cost of capital. Students with credit in FN341 may not enroll in this course. Prerequisite: AC132 or OA119 and mathematics competency.

**FN248 REAL ESTATE**  
(3,0) 3  
A study of the basic principles of real estate practice. Coverage includes broker-agent relationships, real estate marketing, real estate law, financing, appraising, taxation, and math. Prerequisite: Mathematics competency.

**FN341 MANAGERIAL FINANCE**  
(4,0) 4  
The nature and scope of financial management including math of finance, financing instruments, leverage and capital structure, financial planning and forecasting, risk and return analysis, capital budgeting. Prerequisites: AC133 and BA211.

**FN443 INSURANCE**  
(4,0) 4  
A study of the financial, legal and social aspects of the insurance industry with emphasis on risk and actuarial analysis, insurance institutions and operations, insurance contracts and policies including life, annuity, health, property, liability, group, business and governmental coverages. Financial planning worksheets are utilized to determine personal insurance needs and appropriate policy selection. Prerequisites: BA254 and mathematics competency.

**FN446 FINANCIAL ANALYSIS AND POLICY**  
(4,0) 4  
An analytical study of long and short term financial policy and strategy through case problems. Selected readings in financial theory supplement the case studies. Prerequisite: FN341.

**FN448 INVESTMENT STRATEGY**  
(4,0) 4  
A study of investment media and securities markets, risk and return analysis, valuation theory, portfolio construction and investment mechanics. Prerequisite: FN341.

# **FIRE SCIENCE**

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

## **FS101 INTRODUCTION TO FIRE SCIENCE (3,0) 3**

Survey of the history and philosophy of fire protection. Examines present fire protection problems and future challenges, public fire protection agencies, firefighting equipment, and extinguishing agents. Special emphasis is placed on emergency responder's safety and hazard material recognition.

## **FS111 HAZARDOUS MATERIALS (3,0) 3**

Principles of combustion; examination of theoretical and practical aspects of combustion. Investigation of physical and chemical properties of substances which may harm responders, the general public and the environment.

## **FS204 FIRE PROTECTION HYDRAULICS AND PUMPS (3,0) 3**

The application of mathematics and physics laws to properties of water, force, pressure and flow velocities. Emphasis: applying principles of hydraulics to fire protection problems, use of water supply sources and needs; examines fire department apparatus testing, inspection and maintenance; deals with apparatus specifications and requirements. Prerequisite: Successful completion of math competency graduation requirement.

## **FS205 FIRE PROTECTION SYSTEMS EQUIPMENT (3,0) 3**

Use and water supply needs of sprinkler and stand pipe systems and devices, fixed extinguishing and detection systems and devices, fire department testing, inspection, and maintenance. Alarm centers, warning devices, and safety considerations are covered along with fire flow calculations, and risk assessment. Prerequisite: Successful completion of math competency graduation requirement.

## **FS211 TACTICS AND STRATEGY (3,0) 3**

Utilization of manpower, equipment, and apparatus on the fireground. Emphasis: pre-fire planning, fire ground decision making. Implementing tactics; and disaster planning. Students will use fire simulation programs and interactive technology to apply and implement the principles covered in didactic instruction.

## **FS301 CODE ENFORCEMENT INSPECTION AND FIRE PREVENTION (3,0) 3**

An introduction to fire inspection procedures and inspection techniques as related to building construction, fire load, fire protection systems, plans and the storage of hazardous materials. A study of safety code enactment, formulation and its relation to fire prevention and public education efforts and responsibilities of the fire service. Prerequisite: FS101 or permission of instructor.

## **FS321 INDUSTRIAL FIRE PROTECTION (3,0) 3**

Examination of fire and life-style hazards in business and industry. Emphasis on managing the codes process, fire prevention, and training private fire brigades. Prerequisite: FS101 or permission of instructor.

## **FS401 SENIOR SEMINAR (3,0) 3**

Seminar and independent study course with individual student guidance by faculty on selected research topics in fire science. Prerequisite: Senior standing or permission of instructor.

## **FS403 FIRE SCIENCE INTERNSHIP (3,0) 3-9**

Fire science internship with an agency. Credit is based on 34 hours of field work per credit hour. Students must make application by the ninth week of the previous semester. Prerequisite: Senior standing or permission of instructor.

## **FS420 FIRE SCIENCE MANAGEMENT AND INCIDENT ANALYSIS (3,0) 3**

An application of the principles of fire attack and strategy through the use of exercises and computer generated simulations. Hazmat incident analysis and other major disaster case studies are used in this class. Prerequisite: FS111, FS205, and FS211.

## **FS490 INDEPENDENT STUDY FOR FIRE SCIENCE (1-4) 4**

This may take the form of either a research project or a program of directed reading on a specific subject. One to four credits over a period of one or two semesters may be granted according to the nature of the student's project. Prerequisite: Permission of instructor. May be repeated up to six credits.

# FRENCH

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**FR151 FIRST YEAR FRENCH I** 4  
(4,1)  
Introduction to basic French grammar and vocabulary, designed to acquaint the student with the minimum essentials of oral and written French. Students will learn to read magazines, newspapers and elementary texts as well as to express themselves orally.

**FR152 FIRST YEAR FRENCH II** 4  
(4,1)  
Further study of French grammar and vocabulary. Emphasis on student's ability to communicate both orally and in writing. The reading of various materials with the aim of translating English, enlarging the vocabulary, and improving understanding of the language. Prerequisite: FR151 or equivalent.

**FR251 SECOND YEAR FRENCH I** 4  
(4,1)  
Review of basic grammar; introduction to advanced idiom; use of oral French in classroom; writing of compositions in French; reading of French texts. Prerequisite: FR152 or equivalent.

**FR252 SECOND YEAR FRENCH II** 4  
(4,1)  
Emphasis on use of oral French; reading, translation, and explication of text; conducted as much as possible in French. Prerequisite: FR251 or equivalent.

**FR351 ADVANCED CONVERSATION AND COMPOSITION I** 3  
(3,0)  
Extensive reading of French contemporary prose and writing of compositions on related current issues. Directed discussion of all oral and written assignments. Systematic review of grammar. Prerequisite: FR252 or equivalent.

**FR352 ADVANCED CONVERSATION AND COMPOSITION II** 3  
(3,0)  
Continuation of FR351 with special emphasis on the development of a more mature oral and written expression. Prerequisite: FR351 or equivalent.

**FR353 BUSINESS FRENCH I** 3  
(3,0)  
An initiation into the language skills for use in business situations in a French speaking environment. The course is organized around twelve different professional situations in the service industry. A conversational approach is used with systematic oral and written practice from authentic documents. May be taken concurrently with FR351. Prerequisite: FR252 or equivalent.

**FR354 BUSINESS FRENCH II** 3  
(3,0)  
Continuation of FR353. The course is organized around twelve different professional situations within the industrial sector. Further systematic practice through visits to French speaking companies and individual reports. Aims to bring students to a level of proficiency in French business communication that would enable them to function in an internship situation. May be taken concurrently with FR352. Prerequisite: FR353 or equivalent.

**FR355 SURVEY OF FRENCH LITERATURE I** 3  
(3,0)  
A chronological study of the major works of French literature from its origins to the 18th century. Emphasis on the development and continuity of ideas and their evaluation within the political, social, and religious framework of the time, their influence on the formation of the language and literature. May be taken concurrently with FR351. Prerequisite: FR252 or equivalent.

**FR356 SURVEY OF FRENCH LITERATURE II** 3  
(3,0)  
Study and discussion of the major works of French literature of the 18th, 19th, and 20th century. May be taken concurrently with FR352. Prerequisite: FR355 or equivalent.

# GEOLOGY

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**GE111 PHYSICAL GEOLOGY I** 4  
(4,1)  
The study of the materials, processes and features of the rocks and surficial materials that form the earth's crust. Laboratory exercises involve minerals, rocks, and topographic maps.

**GE112 PHYSICAL GEOLOGY II** 4  
(4,1)  
Surficial processes and landforms continued from GE111. Geologic time, earthquakes, earth's interior, ocean basins, mountains, plate tectonics and other aspects of our dynamic earth are also studied, supplemented by appropriate laboratory exercises and two field trips. Prerequisite: GE111 or NS102 or permission of instructor.

**GE114 FIELD EXCURSIONS IN EARTH SCIENCE**

(0,9) **3**  
A three-week field-based educational experience in which aspects of geology including environmental geology and the interrelationships among geology and other natural sciences will be addressed. Each week will include forty-five hours of instruction. Travel destinations will vary to include regions with unique natural history. Trip expenses are the responsibility of the student. Prerequisite: Successful completion of one NS course or equivalent or permission of instructor.

**GE215 HISTORICAL GEOLOGY**

(3,1) **3**  
Summary review of the geologic record concerning origin and evolution of earth through geologic time. Emphasis upon stratigraphic principles, depositional environments, the tectonic framework of North America and significant events in the history of plants and animals. Laboratory exercises involve stratigraphic maps and introductory paleontology. Prerequisite: GE112 or permission of instructor.

**GE216 STRUCTURAL GEOLOGY AND GEOLOGIC GRAPHICS**

3,3) alternate years **4**  
Study of stress, strain and deformation of rocks and the structural features commonly occurring in them. Laboratory exercises deal with structures in three-dimensional space and emphasize graphic methods of solving problems and of communicating geologic data. Prerequisite: GE215

**GE221 CRYSTALLOGRAPHY AND MINERALOGY**

(3,4) **4**  
A laboratory course initially emphasizing the crystalline structure of minerals followed by mineral identification techniques. Major topics include symmetry, crystals, physical properties, composition and related topics. Prerequisite: GE112 or NS102 or permission of instructor. Pre or Corequisite CH115.

**GE222 MINERALOGY AND PETROGRAPHY**

(3,4) **4**  
A continuation of GE221 emphasizing mineral identification leading to hand lens identification of igneous, sedimentary, metamorphic and other rocks. Related topics include chemical tests and a student research project. Prerequisite: GE221 or permission of instructor.

**GE290 INDEPENDENT STUDY IN GEOLOGY**

(1-4,0) **1-4**  
Special studies and/or research in geology for individuals or small seminar groups. Course content to be arranged with instructor and with approval of the school dean. This course may be repeated for a maximum of eight credits. Prerequisites: Sophomore standing or higher and permission of the instructor.

**GE311 PRINCIPLES OF HYDROLOGY**

(3,0) alternate years **3**  
Origin, movement, and uses of water with emphasis on water resources in relation to human needs and environmental considerations. Hydrologic principles, runoff analysis, flood routing, urban hydrology, floodplain hydraulics, groundwater hydrology. Prerequisite: PH221 or PH231, or permission of instructor. Prior computer programming experience recommended. (Formerly PH311)

**GE312 GROUNDWATER HYDROLOGY**

(3,0) alternate years **3**  
Uses, preservation and protection of ground water. Physics and chemistry of ground water. Influences of geological structures and ground water exploration. Hydraulics and modeling techniques for ground water and water wells. Water well design, construction, and testing. Prerequisites: PH221, 222 or PH231, 232; GE311; and a course in computer programming. (Formerly PH312)

**GE321 OPTICAL MINERALOGY**

(2,3) alternate years **3**  
Optical properties of minerals and their underlying principles studied by oil immersion and thin section methods. Laboratory work consists of measuring optical properties and learning to identify unknown non-opaque minerals. Prerequisite: GE221.

**GE331 INTRODUCTION TO GEOPHYSICS**

(4,0) **4**  
This course will include an introduction to gravity, magnetic, electric, seismic and radiometric geophysical techniques and their application to geophysical, geological and environmental problems. Emphasis will be placed on understanding the principles, techniques and applications of each to solving specific geologic/environmental problems and to understanding the structure and history of the earth. Prerequisite: GE112, MA112 or MA141 or MA151, and PH222 or PH232 (mathematics may be taken concurrently) or permission of instructor.

- GE351 INVERTEBRATE PALEONTOLOGY I**  
(3,1) alternate years **3**  
Common invertebrate fossils, their evolutionary trends, anatomical features and geological significance. Special emphasis upon use of fossils for geologic dating and correlation, fossil description and classification. Prerequisite: GE215 or permission of instructor.
- GE352 INVERTEBRATE PALEONTOLOGY II**  
(3,1) alternate years **3**  
Common invertebrate fossils and microfossils, their evolutionary trends, anatomical features and geological significance. Special emphasis upon use of fossils for geologic dating and correlation and use of paleontologic data. Prerequisite: GE351.
- GE410 ENGINEERING GEOLOGY**  
(3,2) **4**  
This course examines rock types and stratigraphy, geological structures, surface processes, earth materials, and methods of geological investigation in the context of behavior of soils and rocks as related to planning and construction. The course includes coverage of in-situ investigations including shallow geophysical methods and emphasizes environmental applications and concerns. Prerequisites: MA141 or MA151, CS100 or CS111, PH221 or PH231 or permission of instructor.
- GE422 IGNEOUS AND METAMORPHIC PETROGRAPHY**  
(2,3) alternate years **3**  
Description and classification of igneous and metamorphic rocks including laboratory study of rocks in thin section. Prerequisite: GE321.
- GE423 SEDIMENTARY PETROGRAPHY**  
(2,2) alternate years **3**  
The study of the history of sedimentary rocks with emphasis placed upon depositional models. Major topics include lithology, facies and microfacies recognition and relationships, and diagenesis. Prerequisites: GE215 and GE321.
- GE434 GEOTECTONICS**  
(2,2) alternate years **3**  
A study of the general structure of the earth with emphasis on the dynamics of continental and oceanic crust. Includes a history of geologic thought leading to plate tectonics, with appropriate laboratory and student research projects. Prerequisites: GE222 and GE216.
- GE436 FIELD GEOLOGY**  
(0,16) alternate summers **6**  
Six weeks of training and field experience in the observation, mapping, recording and interpretation of the great variety of geologic features in the Sault Ste. Marie region. Some extended field trips will be required. A supply and travel fee will be charged. Prerequisites: GE216 and GE222 and senior status or instructor approval.
- GE461 STRATIGRAPHY AND SEDIMENTATION**  
(4,1) alternate years **4**  
The study and interpretation of sedimentary processes and stratigraphic principles, emphasis on sedimentary relationships and depositional environments. Prerequisite: GE215.
- GE471 ECONOMIC GEOLOGY I**  
(2,2) alternate years **3**  
A study of mineral resource forming processes, major rock-metal associations, and a survey of classic ore deposits. Related topics include exploration, mining metallurgy, marketing and environmental aspects. Laboratory exercises appropriate to the topic and student research project. Prerequisites: GE112 and GE222 or equivalent.
- GE472 ECONOMIC GEOLOGY II**  
(2,2) alternate years **3**  
A continuation of the resource forming processes and deposits begun in GE471. Coverage of minor metals, industrial minerals, energy resources, and the economic, environmental and political aspects of the demand for limited resources are included as time permits. Student research project and field trip. Prerequisite: GE471.
- GE490 RESEARCH TOPICS IN GEOLOGY**  
(1-4,0) **1-4**  
Special studies and/or research in geology for individuals or small seminar groups. Course content to be arranged with instructor and with approval of the school dean. This course may be repeated for a maximum of eight credits. Prerequisites: Junior standing or higher and permission of the instructor.

## GEOGRAPHY

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

- GG106 PHYSICAL GEOGRAPHY: LANDFORMS**  
(3,1) alternate years **3**  
Introduction to the description and distribution of landforms with emphasis on lithospheric, hydrospheric, and atmospheric relationships. Natural (physical) science credit given. Prerequisite: Completion of mathematics competency graduation requirement. Credit for both GG106 and NS107 not permitted.

**GG108 PHYSICAL GEOGRAPHY: METEOROLOGY AND CLIMATOLOGY**  
 (3,1) alternate years 3  
 Introduction to earth-sun relationships, maps, and elementary principles of atmospheric science. Natural (physical) science credit given. Prerequisite: Completion of mathematics competency graduation requirement. Credit for both GG108 and NS105 not permitted.

**GG201 WORLD REGIONAL GEOGRAPHY**  
 (4,0) alternate years 4  
 A study of the physical environment, resources, past and present economic development, population distribution, and historical development of Europe, Asia, The Islamic Middle East and North Africa, Sub-Saharan Africa, Latin America, and North America.

**GG302 ECONOMIC GEOGRAPHY**  
 (4,0) alternate years, F92 4  
 A study of the internal and external interrelationships of the various economic groupings of the world, i.e. North America, Europe, and the emerging 3rd world.

**GG306 CULTURAL GEOGRAPHY**  
 (3,0) 3  
 A study of the relationship of environment, culture, and adaptive patterns, i.e., socio-economic development. A special emphasis will be placed upon the current problems associated with food supplies, shortages, and 3rd world development.

**GG321 GEOGRAPHY OF EUROPE AND GREAT BRITAIN**  
 (4,0) alternate years 4  
 A study of the physical, cultural, and economic interdependence of the Western European Community. Special emphasis will be placed upon the role of the EEC in world economic development. Prerequisite: Junior standing or instructor permission.

**GG322 GEOGRAPHY OF SOUTH AMERICA, CENTRAL AMERICA, AND THE CARIBBEAN REGION**  
 (4,0) alternate years 4  
 The study of the geographical features, cultural history of the major regions in South America, Central America, and the Caribbean with special concern for their 20th century development. Prerequisite: Junior standing or instructor permission.

**GG323 GEOGRAPHY OF EAST AND SOUTHEAST ASIA**  
 (4,0) alternate years 4  
 The study of the geography of Japan, China, Korea, Southeast Asia, and India with special emphasis on the impact of the major religions, regional rivalries, and 20th century development. Prerequisite: Junior standing or instructor permission.

**GG325 REGIONAL GEOGRAPHY OF NORTH AMERICA**  
 (4,0) alternate years 4  
 The study of the physical, cultural, and economic development of various regions of Canada and the United States with special emphasis on the development of regional characteristics and cultural traditions. Prerequisite: Junior standing or instructor permission.

**GG360 HISTORICAL GEOGRAPHY OF EASTERN NORTH AMERICA**  
 (4,0) alternate years 4  
 A study of the impact of the physical features upon the historical development of Eastern Canada and the Eastern regions of the United States. Special attention will be given to the Western Migration patterns. Prerequisite: Junior standing or instructor permission.

**GG490 INDEPENDENT STUDY IN GEOGRAPHY**  
 (1-4) 1-4  
 Special topics such as regional, historical, economic, urban, cultural or physical geography. Prerequisites: junior standing and permission of instructor. May be repeated up to a total of twelve credits.

**GG492 INDIVIDUALIZED STUDIES IN GEOGRAPHY**  
 (2-4,0) 2-4  
 This is designed to provide an opportunity for specialized study of issues, problems, and selected topics in geography. Prerequisite: Junior standing or instructor permission.

## **GERMAN**

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**GN141 FIRST YEAR GERMAN I**  
 (4,1) 4  
 Introduction to basic German grammar and vocabulary, acquainting the students with minimum essentials of oral and written German. Reading of German texts.



**GN142 FIRST YEAR GERMAN II**  
(4,1) 4  
Further study of German grammar and vocabulary. Emphasis on oral expression. Reading of various materials in German with aim of enlarging the student's vocabulary and improving understanding of the language. Prerequisite: GN141 or equivalent.

**GN241 SECOND YEAR GERMAN I**  
(4,1) 4  
Review of basic German grammar; study of vocabulary, idiom, and word formation to improve reading and conversational abilities. Prerequisite: GN142 or equivalent.

**GN242 SECOND YEAR GERMAN II**  
(4,1) 4  
Reading and discussion of more advanced German literary materials; conducted as much as possible in German. Emphasis on spoken language. Prerequisite: GN241 or equivalent.

## HEALTH

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**HE104 NUTRITION FOR EARLY CHILDHOOD**  
(3,0) 3  
Introduction to the function and metabolism of nutrients with special emphasis on the relationship between nutrition and childhood growth and development between 0-8. Lectures, discussion and community based assignments will relate the body systems to the child's nutritional status, review recent developments in nutrition as they relate to childhood development, and provide basic nutrition education principles for adaptation in community settings.

**HE181 FIRST AID**  
(0.5,1.5) 1  
Basic course in first aid. Theoretical and practical experience in university laboratory.

**HE190 PREHOSPITAL EMERGENCY CARE AND CRISIS INTERVENTION I**  
(2,3) 3  
Techniques of emergency medical care needed by the emergency medical technician-ambulance attendant. Theoretical and practical experience in administering preliminary emergency care and transportation of sick and injured victims to medical care centers.

**HE191 PREHOSPITAL EMERGENCY CARE AND CRISIS INTERVENTION II**  
(1,3) 2  
Simulated practice with some in-hospital observation. Emphasis on laboratory practice of skills needed for functions of an EMT-A. Prerequisite: HE190.

**HE208 NUTRITION**  
(2,0) 2  
Basic principles of normal nutrition with emphasis on basic nutrients and food groups. Nutrition throughout life cycle including stressors impacting on nutritional requirements. Social, biological and physical sciences integrated throughout course. Prerequisite: BL105 or BL121.

**HE209 PHARMACOLOGY**  
(3,0) 3  
Study of basic concepts of pharmacology and their relationships to health care. Drug metabolic processes are described providing foundation for clinical judgments about drug actions, reactions, and interactions. Prerequisites: BL122 or BL105, HE232.

**HE232 PATHOPHYSIOLOGY**  
(3,0) 3  
Study of physiological alterations in the body which disrupt homeostasis. Integrates anatomy, physiology and biochemistry into framework for studying disease. Core content provides understanding of mechanism and principles of disruptions of health. Emphasis on clinical correlations and physiological basis for common disorders. Prerequisite: BL122, or permission of instructor.

**HE235 COMPUTER APPLICATION IN HEALTH SCIENCES**  
(1,2) 2  
Introduces students to computer usage and its application to education, research and practice in health care professions. Topics include computer fundamentals, computer language, information systems, data-base systems, expert systems, health care applications, ethical considerations and relationships of computers to health care trends. Prerequisite: NU213 or permission of instructor.

**HE328 MULTICULTURAL APPROACH TO HEALTH CARE**  
(2,0) 2  
This course explores values, beliefs, and practices related to health behaviors in a variety of culturally diverse groups. Methods for fostering culturally sensitive care are explored. Content includes communication, biological and nutritional considerations, and assessment techniques.

**HE329 WOMEN'S HEALTH ISSUES**  
(2,0) 2  
This course explores the diverse health needs of women across the life span. Students are encouraged to take an active participation in identifying topics of interest. Social, cultural, political, economic, legal and ethical issues are analyzed for their influences on women's health and the health care women receive.

**HE330 APPLIED NUTRITION**  
(2,0) 2  
Application of nutrition principles in health care; obesity, anorexia nervosa, and bulimia; emphasis on gathering information and relevant objective measurements (anthropometric, biochemical) for use in developing nutritional care plans. Prerequisite: HE208 or permission of instructor.

**HE352 HEALTH ISSUES OF AGING POPULATIONS**  
(3,0) 3  
This course is designed to assist students from a variety of disciplines to gain a greater understanding of health related issues that are associated with advancing age. In addition to exploring physiological and psychological changes experienced by our elderly clients, students will learn how they can adapt their work strategies to work more effectively for the elderly clients that they serve. Prerequisite: PY155 or permission of instructor.

## HUMAN SERVICES

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**HM204 FUNDAMENTALS OF DRUG ABUSE**  
(3,0) 3  
Examines the pharmacology of commonly abused psychoactive and high-use drugs. Emphasizes the physiological effects of drug use and abuse. Topics include stimulants, depressants, opiates, hallucinogens, inhalants, cannabis, over-the-counter drugs, alcohol, and drug testing. Prerequisites or corequisites: BL105 or equivalent.

**HM250 HUMAN SERVICES PRACTICUM**  
(1,9 - 27) 3-9  
This course provides a field placement opportunity for students to practice skills and use knowledge gained in skill minor coursework. Prerequisite: Instructor permission.

**HM292 ALCOHOL ABUSE PREVENTION & TREATMENT**  
(3,0) 3  
This course examines current prevention, detection, and treatment approaches for alcohol abuse and alcoholism. Prerequisite: HM204.

**HM480 GRANTWRITING**  
(3,0) 3  
This course gives advanced students experience in the research, writing, and planning skills involved in preparing grant proposals for human service problems. Prerequisite: Instructor permission.

## HISTORY

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**HS101 HISTORY OF WORLD CIVILIZATION I**  
(4,0) 4  
A study of world civilization from earliest time through the baroque.

**HS102 HISTORY OF WORLD CIVILIZATION II**  
(4,0) 4  
A study of world civilization from the baroque to the present.

**HS131 UNITED STATES HISTORY I**  
(4,0) 4  
A study of United States history from the colonial settlement to the end of the American Civil War in 1865.

**HS132 UNITED STATES HISTORY II**  
(4,0) 4  
A study of United States history from the end of the Civil War to the present.

**HS201 CLASSICAL WORLD AND MEDIEVAL EUROPE**  
(4,0) every third year 4  
A survey of Mediterranean civilization from the Bronze Age to the eve of the Renaissance.

**HS202 RENAISSANCE, REFORMATION AND BAROQUE EUROPE**  
(4,0) every third year 4  
A study of the political, institutional, religious, social, economic, and cultural developments from 1400 to 1700.

**HS230 SURVEY OF AMERICAN INDIAN HISTORY**  
(4,0) 4  
A study of American Indian History from earliest times to the present, with emphasis placed on the historical development of Indian tribes located in the Great Lakes Region.

- HS231 AMERICAN MILITARY HISTORY** 4  
(4.0)  
A general survey of American military history with a specific emphasis on the Midwest and Great Lakes regions to utilize the unique geographic location of LSSU. Field trips to the Straits of Mackinac and St. Joseph's Island are a part of the course.
- HS235 HISTORY OF APPLIED SCIENCE AND TECHNOLOGY** 4  
(4.0) every third year  
An introductory study of the origins and development of the applied sciences and technology from 1790 to the present. This survey will focus on the scientists, engineers, and inventors responsible for the rapid rise of modern technology, industry, and business with particular emphasis on the developments in chemistry, metalurgy, electromagnetism, thermodynamics, and cybernetics. The impact of these developments on the marketplace and society in general will be a major concern.
- HS301 HISTORY OF ENGLAND-1000 TO 1714** 4  
(4.0) every third year  
These seven hundred years witness the formation and maturing of most of the important political and social institutions that have come to be the Anglo-Saxon civilization and tradition. This period is critical to understanding present-day American culture and civilization.
- HS302 ENGLAND IN THE MODERN WORLD** 4  
(4.0) every third year  
A history of England from 1715 to the present, emphasizing the struggle for parliamentary government, the Anglo-French conflict for commercial and colonial empire, the Industrial Revolution, the evolution of democracy, and the recession of the British Empire.
- HS310 RUSSIA: FROM UNDERDEVELOPED STATE TO SUPERPOWER** 4  
(4.0) every third year  
A study of Russian history from Peter the Great to the present.
- HS315 EUROPE FROM NAPOLEON TO WORLD WAR I** 4  
(4.0) every third year  
A study in the political and economic history of Europe in the period 1789-1914.
- HS316 EUROPE IN THE 20TH CENTURY** 4  
(4.0) every third year  
A study of Europe in the age of Nazism, Communism, World War I and II, and the Common Market.
- HS331 AMERICAN INTELLECTUAL AND CULTURAL HISTORY I** 4  
(4.0) alternate years  
A study of American cultural and intellectual institutions as they developed from their Elizabethan and European origins to the mid-nineteenth century. The emphasis will be placed upon the emergence of the unique and variant adaptations that arose in the first 250 years of English settlement in America.
- HS332 AMERICAN INTELLECTUAL AND CULTURAL HISTORY II** 4  
(4.0) alternate years  
A study of American culture from the mid-nineteenth century until the present. Often considered our finest century, the nineteenth century witnesses many of America's most unique, fascinating, and important contributions. The physical and philosophical aspects of these years will be surveyed. Particular attention will be given to areas where America comes to exercise important influences overseas.
- HS335 AMERICAN POLITICAL PARTIES** 4  
(4.0) every third year  
A study of the rise and development of the American party system and the large number of major and minor parties that have participated in this system in the years prior to 1945. These parties will be treated in an historical fashion rather than structurally. May be taken for political science credit.
- HS346 CANADIAN HISTORY** 4  
(4.0) every third year  
A survey of Canadian History including the moving frontier, relations with the United States, British-French rivalry, the establishment of democratic government, and the changing relationship to Great Britain.
- HS361 LATIN AMERICA** 4  
(4.0) every third year  
A study and analysis of Latin American History from the end of the Colonial Period to the present. This course will examine the basic political, social, and religious institutions of Latin America and their evolution and role in the change of problems of U.S.-Latin American relations will be an important focus of this study. Prerequisite: GG322 Geography of South America, or permission of instructor.
- HS371 FAR EAST CIVILIZATION 1850 - PRESENT** 4  
(4.0) every third year  
A study of the history of China, Japan, India, and adjoining areas of Asia from 1850 to present. Prerequisite: Permission of instructor.

**HS420 FIELD METHODS OF  
ARCHAEOLOGY**

**(4,4) 8**  
Field course in archaeological survey and excavation methods and techniques, at various sites in area including 1822 Fort Brady. Course held on-site M-R for eight weeks. Only four credit hours may count toward 300- and 400-level courses for History majors. No prerequisites.

**HS440 THE DECLARATION OF  
INDEPENDENCE AND THE CONSTITUTION**

**(4,0) every third year 4**  
The events between 1763 and 1791 which produce these documents are the United States in the historical sense. Using original documents and contemporary comments, this critical era will be studied in depth to determine whence we came. Prerequisite: U.S. history sequence desired or permission of instructor.

**HS441 DIPLOMATIC HISTORY OF THE UNITED STATES I**

**(4,0) alternate years 4**  
American diplomacy from 1775 through the nineteenth century to U.S. entry into World War I in 1917. May be used as political science credit.

**HS442 DIPLOMATIC HISTORY OF THE UNITED STATES II**

**(4,0) alternate years 4**  
American diplomacy from the entry of the U.S. into World War I in 1917 up through the present day. May be used as political science credit.

**HS490 INDIVIDUAL HISTORICAL RESEARCH**

**(0,1-4) 1-4**  
Independent study under supervision of History faculty. May be repeated up to a total of six (6) credits. Does not apply toward 300- or 400-level requirements in History. Prerequisite: Permission of the supervising faculty.

**HS496 HISTORICAL METHODS**

**(2,0) 2**  
Survey emphasizing research aids and techniques and historical analysis. Readings, discussions, and written exercises introduce students to problems, methods, and techniques of historical research. Discussion of and practice in main techniques of historical method, including bibliography and documentation. Prerequisites: Senior standing and pursuit of a major or a minor in history, or permission of instructor.

**HS497 SENIOR SEMINAR IN HISTORY**

**(0-6) 2**  
Students will complete an historical research project under the supervision of a faculty member; at end of term participants make oral presentation at seminar for other students and invited guests, and submit the final paper. Prerequisite: HS496.

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## **HUMANITIES**

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**HU251 HUMANITIES I**

**(4,0) 4**  
The humanities in the life of mankind from prehistory to the Medieval epoch. Emphasizes significant values evolved in the Hebrew, Greek, Roman, and early Christian cultures. Includes consideration of the origins of the arts, language, religion, mythology, philosophy, and ancient Chinese and Indian systems of religious thought. Prerequisite: EN110

**HU252 HUMANITIES II**

**(4,0) 4**  
Continuation of HU251, the humanities in the age of science, from the early Renaissance to the present. Prerequisite: EN110

**HU255 WORLD MYTHOLOGY**

**(3,0) 3**  
A survey of world mythology from "Gilgamesh" to "Finnegan's Wake". Prerequisite: EN110.

**HU256 INTRODUCTION TO FILM: IMAGES OF OUR CULTURE**

**(2,2) 3**  
An exploration of film as an image of our culture in both its technical sense and in its role as a contemporary art form which conveys and delimits our aesthetic and social values. Focus on the visual elements of film, historical development of the medium, and its narrative modes through screening of significant films. Applies toward humanities general education requirement. Prerequisite: EN110.

**HU261 WORLD LITERATURE I**

**(4,0) 4**  
The Ancient World to the Renaissance. Readings in translation of significant texts. Primarily Western. Selection can include the Bible and works by such authors as Homer, Virgil, Thucydides, Tacitus, Boccaccio, Montaigne, Rabelais, and others. Applies toward Humanities General Education requirement. Prerequisite: EN110.

**HU262 WORLD LITERATURE II**

(4,0) 4  
 The Renaissance to modern times. Readings in translation of significant, primarily western, texts. Selections can include works by Galileo, Voltaire, Racine, Goethe, Ibsen, Dostoevsky, Brecht, Kafka, Sartre, and others. Applies toward Humanities General Education requirement. Prerequisite: EN110.

**HU490 DIRECTED STUDIES IN HUMANITIES**

(1,0) 1  
 To provide students who need one credit of general humanities with an opportunity to read or explore material related to the content of that term. Papers and tutorial session required. Prerequisites: Seven hours of humanities credit; evidence that students are capable of carrying out independent study; approval of department chair.

## INTER-DISCIPLINARY

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**ID300 MAN AND HIS ENVIRONMENT**

(3,0) 3  
 Designed to assist the participant in understanding how the individual can become involved with solving environmental problems. Prerequisite: Junior status or permission of course coordinator.

**ID399 INTERNSHIP IN (DEPARTMENT)**

(2-4,0) 2-4  
 This course is designed to provide students with an opportunity to earn credit while obtaining meaningful discipline-related work experience outside the classroom setting. Students are expected to spend a minimum of 45 hours in an approved work setting for each credit hour earned. The course may be repeated once for a maximum of 4 credits. Prerequisite: 2.5 GPA in major, junior standing and permission of department head at least one semester in advance of registering for the course.

## JOURNALISM

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**JR210 WRITING FOR THE MASS MEDIA**

(3,0) 3  
 Acquaints journalism students with the basic similarities and differences in news writing among the mass media, particularly newspapers, radio, and television. Students will practice writing in the various formats. Prerequisites: EN110; ability to type 40 words per minute.

**JR211 PRINT NEWSWRITING**

(3,0) 3  
 Improves students' print news writing skills. Writing of basic print news stories, such as speech, news conference and meetings, obituaries, accidents, fires, natural disasters, schools, taxation, police and the courts. Prerequisite: JR210, or permission of instructor.

**JR310 ELECTRONIC EDITING AND PRODUCTION**

(2,3) 3  
 Students gain an understanding of basic copyediting responsibilities--use of symbols, headline writing, and newspaper design and layout--and the ability to discharge those responsibilities under deadline pressure. Prerequisite: JR211.

**JR311 SUPERVISING SCHOOL PUBLICATIONS**

(3,0) 3  
 Teaches the elements of supervising high school publications including the high school newspaper or yearbook; methods of production; problems of production; the elements of libel; good taste. Prerequisite: JR211, or permission of instructor.

**JR410 BROADCAST NEWSWRITING**

(2,3) 3  
 Designed to improve students' broadcast news writing skills from the fundamental level of those developed in JR210. Upon completion of this course, the student will be familiar with the process by which broadcast news is reported, written, and performed on the air. Prerequisite: JR210, or permission of instructor.

**JR411 BROADCAST EDITING AND PRODUCTION**

(2,3) 3  
 Designed to build upon the broadcast reporting, writing and performing skills developed in JR410. Students will become familiar with production of newscasts, public affairs documentaries, the role of the producer in modern radio, the function and operation of the console, tape recording and playback units, microphones and sound, splicing and dubbing, achieving effects, and news-oriented talk shows. Prerequisite: JR410, or permission of instructor.

**JR413 DIRECTED INDIVIDUAL STUDIES**  
 (2,0) 2  
 Shine Sundstrom journalism internship at Sault Ste. Marie EVENING NEWS: Experience in newsroom and on assignment; writing, rewriting; use of word processor. Prerequisites: Junior status; JR210 and JR211. File application with dean of Arts, Letters and Social Sciences School by fifth week of previous semester.

## JAPANESE STUDIES

The Japan Center for Michigan Universities provide staff and resources for the courses in this minor. These courses are offered ONLY AT THE Japan Center in Hikone, Japan.

**JS105 INTENSIVE INTRODUCTORY JAPANESE LANGUAGE I**  
 (5,5) 5  
 This course is designed as an intensive introductory study of Japanese. The class meets five hours per week and the laboratory/recitation/practice sessions meet 5 hours each week. The "New Jordan method" of Japanese Language Studies for English speakers is used in both class and lab sessions.

**JS106 INTENSIVE INTRODUCTORY JAPANESE LANGUAGE II**  
 (5,5) 5  
 This course is designed as a continuation of JS105. It will stress uses of written Japanese and a research project in which communication with Japanese in the community will be vital. The "New Jordan Method" will be the basis of the instruction.

**JS201 CULTURE AND SOCIETY OF JAPAN I**  
 (3,0) 3  
 This is a very broad overview course which examines the social and political development of Japan from prehistoric times to 1300 A.D. It combines written text materials with field work. An emphasis will be placed on the social organization of Japan and its relationships with traditional religious values, economic structures, and socialization of children, and political institutions.

**JS202 CULTURE AND SOCIETY IN JAPAN II**  
 (3,0) 3  
 This is an overview of Japanese history which examines the political and social developments of Japan from 1300 A.D. to the present. Special emphasis will be placed on the Shogunate Tradition, the Meiji Restoration and 20th century political, economic and social developments.

**JR301 JAPANESE ART AND CULTURE I**  
 (4,0) 4  
 This course is a broad overview of the development of the painting, sculpturing, architecture, and literary traditions of Japan from earliest times to 1300 A.D. Special emphasis will be placed on the historic collections available in Nara and Kyoto. Biweekly field trips to examine and study local sites will be a regular portion of the instruction.

**JR302 JAPANESE ART AND CULTURE II (1300 TO PRESENT)**  
 (4,0) 4  
 This course is designed as a study of the development of Japanese art, architecture, and literature from the Ashikaga Shogunate to the present. Special attention will be given to the influences from Western Civilization and its impact on Japanese culture.

## LEGAL ASSISTANT STUDIES

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**LA102 LEGAL RESEARCH AND CASE ANALYSIS**  
 (3,0) 3  
 Introduction to the law library and its use. Students will develop research techniques and skills in using encyclopedias, treatises, digests, case reporters, looseleaf services, annotated reports, legal periodicals, legislation, legislative history, administrative materials, shepardization, and citation of legal authorities. Students will also develop skills in analyzing, evaluating, and synthesizing court opinions and statutory law.

**LA125 CIVIL LITIGATION AND PROCEDURE**  
 (4,0) 4  
 Concentration on Federal and Michigan rules of procedure prior to, during, and after trial. Detailed study of drafting pleadings, discovery procedures, and case preparation for trial and appeal. Prerequisite: LA102 and LA150.

**LA140 PERSONAL INJURY LITIGATION AND INVESTIGATIVE TECHNIQUES**

(3,0) 3  
The study of personal litigation shall include principles of negligence, intentional torts, strict liability, products liability, and professional malpractice. Emphasis will be placed on investigative techniques utilized in personal injury cases; students will draft complaints and other documents used in such litigation. The course also covers interview techniques, utilization of experts, and documentary evidence.

**LA150 THE LEGAL ASSISTANT PROFESSION AND ETHICAL CONSIDERATIONS**

(3,0) 3  
Overview of the legal assistant profession including job qualifications and employment opportunities. General legal principles and terminology shall be discussed. The Code of Professional Responsibility and its application to legal assistants shall be studied in detail including such areas as: confidentiality, conflict of interest, legal advertising, competency considerations, and legal malpractice.

**LA202 LEGAL WRITING AND ANALYSIS**

(3,0) 3  
Introduction to legal writing styles and skills. Through review and preparation of legal documents, students will become acquainted with basic principles, style, organization, and structure of certain legal documents which shall include letter writing, and preparation of memorandum of law and an appellate brief. Research skills and analysis of court opinion will be further refined. Prerequisites: LA102 and LA125.

**LA250 LAW OFFICE MANAGEMENT, SYSTEMS AND TECHNOLOGY**

(3,0) 3  
The management and organization of a law office, including such areas as staffing, timekeeping, equipment, legal systems, file maintenance, public relations, and the utilization of computer technology in law office organization, litigation and case preparation shall be discussed. Prerequisites: LA202 and LA125 or permission of instructor.

**LA299 LEGAL ASSISTANT INTERNSHIP AND PROFESSIONAL DEVELOPMENT SEMINAR**

(1,3-7) 4-8  
A supervised work experience as a legal assistant with a law firm, government agency, court, or business enterprise such as a bank, corporation, or insurance company. Personal and professional goals shall be refined, including resume preparation, interviewing skills, job search plan, and overall career planning. Prerequisites: LA202, LA125, and permission of instructor.

**LA300 SEMINAR IN LEGAL ASSISTANT STUDIES**

(variable) 1-4  
A seminar dealing with selected topics in Legal Assistant Studies. The content of this course may vary each time the course is offered. May be repeated with permission of advisor. Prerequisites: LA202, LA125, and/or permission of Legal Assistant Advisor.

**LA305 TRIBAL LAW AND GOVERNMENT**

(3,0) 3  
A study of tribal law which will explore such areas as the structure of tribal government; tribal sovereignty; treaties; civil and criminal court jurisdiction in Indian country; tribal resources; tribal economic development; taxation and regulation; rights of individual Indians; and various federal laws and court cases concerning and affecting tribes and their members. Prerequisite: HS230 or permission of instructor.

**LA320 REAL ESTATE LAW**

(3,0) 3  
Various aspects of real estate law and procedures will be studied and include conveyances, mortgages, land contracts, titles, environmental concerns, foreclosure proceedings, and landlord-tenant relationships. Emphasis will be placed on preparation of legal documents and pleadings regarding real estate law. Prerequisites: LA102 and LA125 or permission of instructor.

**LA321 FAMILY LAW**

(2,0) 2  
Areas of Family Law including marriage contracts, divorce, separation, child custody, juvenile law, and adoption will be explored. Prerequisites: LA102 and LA125 or permission of instructor.

**LA322 PROBATE LAW AND PROCEDURE**

(3,0) 3  
The Probate Code will be discussed in detail along with the major topics of wills, estates trusts, guardianships, conservatorships, and other Probate Court procedures. Preparation of probate documents and pleadings will be emphasized. Prerequisites: LA202, LA125, and LA320.

**LA401 EVIDENCE AND TRIAL PRACTICE**

(3,0) 3  
An in-depth study of trial preparation and practice including gathering and organization of materials and information; discovery; depositions; voir dire; preparing trial witnesses and exhibits; preparing trial motions and briefs; jury instructions and forms; organizing the trial; and post-trial procedures and documents. The course also covers evidentiary rules as they relate to trial practice and preparation. Prerequisites: LA202, LA125, LA240, and LA150.

**LA405 NO-FAULT AUTOMOBILE LAW**  
(3,0) 3  
The study of the Michigan No-Fault Automobile Law, including Michigan statutory and case law developments; first and third party cases; recoverable benefits and damages; review of insurance policies; and the preparation and evaluation of such cases for settlement and trial. Prerequisites: LA202, LA125, LA140, and LA150.

**LA406 WORKER'S DISABILITY COMPENSATION LAW**  
(2,0) 2  
A study of the Worker's Disability Compensation Act, including both Michigan statutory and case law developments. Also, the administrative procedures and worker's compensation case preparation will be addressed. Prerequisites: LA202, LA125, and LA140.

**LA450 ADVANCED LEGAL WRITING AND INTERVIEWING SEMINAR**  
(3,0) 3  
An advanced study of legal research and writing including the preparation of complex pleadings, legal documents, mediation summaries, settlement brochures and trial and appellate briefs. Development of interviewing and investigative skills and techniques with regard to client and witnesses will also be discussed. Prerequisites: LA202, LA125, LA150 and senior standing or permission of instructor.

**LA490 INDEPENDENT STUDY IN LEGAL ASSISTANT STUDIES**  
(1-4) 1-4  
This may take the form of either a research project or a program of directed reading on a specific topic. One to four credits over a period of one or two semesters may be granted according to the nature of the student's project. Prerequisite: Permission of instructor. May be repeated up to a total of 8 credits.

## MATHEMATICS

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

Based on a series of exams each student is placed in the beginning mathematics course judged most appropriate for successful completion and mathematical progress. For courses number 100 and above a student's curriculum major also affects course selection. Courses numbered below 100 do not count toward graduation.

The following three courses are successive components of MA089 and are offered in a four-week, four meetings per week, format for one credit each.

**MA081 PRE-ALGEBRA I**  
(1,0) 1  
The first third of MA089. Prerequisite: none.

**MA082 PRE-ALGEBRA II**  
(1,0) 1  
The second third of MA089. Prerequisite: MA081 or placement by examination.

**MA083 PRE-ALGEBRA III**  
(1,0) 1  
The final third of MA089. Prerequisite: MA082 or placement by examination.

The following three courses are successive components of MA090 and are offered in a four-week, four meeting per week format for one credit each.

**MA084 INTRODUCTORY ALGEBRA I**  
(1,0) 1  
The first third of MA090. Prerequisite: MA083 or MA089 or placement by examination.

**MA085 INTRODUCTORY ALGEBRA II**  
(1,0) 1  
The second third of MA090. Prerequisite: MA084 or placement by examination.

**MA086 INTRODUCTORY ALGEBRA III**  
(1,0) 1  
The final third of MA090. Completion of this course with credit satisfies the mathematics competency graduation requirement. Prerequisite: MA085 or placement by examination.

**MA089 PRE-ALGEBRA**  
(3,0) 3  
Arithmetic operations, fractions, decimals, proportions, percentages, descriptive statistics and elementary geometry. Grading in this course is credit/no credit. Credit in this course does not apply toward graduation. Prerequisite: None (Completion and content of the set of courses MA081, MA082 and MA083 are equivalent to those of MA089.)

**MA090 INTRODUCTORY ALGEBRA**  
(3,0) 3  
Elementary algebra including equations, inequalities, problem solving, polynomials and operations, graphing, systems of equations and radical expressions. Grading in this course is credit/no credit. Credit in this course does not apply toward graduation. Prerequisite: Completion of MA083 or MA089 or placement by examination. (Completion and content of the set of courses MA084, MA085 and MA086 are equivalent to those of MA090.)



**MA091 BASIC MATHEMATICS**  
(4,0) 4  
Arithmetic calculations including basic arithmetic skills, fractions, decimals, proportions and percentages. Fundamental concepts and techniques of introductory algebra including polynomial manipulations, factoring, solving equations, and graphing. Prerequisite: None. This course is graded on a credit/no credit basis. This course will be discontinued as of December, 1994.

**MA092 INTERMEDIATE ALGEBRA**  
(4,0) 4  
Algebra for students who have not had second level high school algebra or who need a refresher course in that level of algebra. Real numbers and operations, solving and graphing first degree equations and inequalities, solving systems of equations and quadratic equations, algebra of polynomials, radical and rational expressions and equations, exponential and logarithmic functions. Prerequisites: One year of high school algebra and a satisfactory score on the mathematics placement exam or MA086 or MA090 with credit. Credit in this course does not apply toward graduation.

**MA103 NUMBER SYSTEMS AND PROBLEM SOLVING**  
(3,0) 3  
General notions of problem solving. Sets, functions, numeration systems and number theory. Properties and operations of whole numbers, integers, fractions and decimals. Prerequisite: Satisfactory mathematics placement examination score or MA092 with a grade of "C" (2.00) or better.

**MA104 GEOMETRY AND MEASUREMENT**  
(3,0) 3  
Basic notions of geometry. Constructions, congruence and similarity. motion geometry, symmetry and Tessellations. Concepts of measurement. Coordinate geometry. Prerequisite: MA103 with a grade of "C" (2.00) or better.

**MA109 TRIGONOMETRY AND VECTORS**  
(2,0) 2  
Trigonometric functions of a right triangle, and of real numbers, graphs of trigonometric functions, identities, inverse trigonometric functions, vectors, and complex numbers. Prerequisite: Satisfactory mathematics placement score or MA092 with a grade of C or better.

**MA111 COLLEGE ALGEBRA**  
(3,0) 3  
Algebra for business, life and social science students. Inequalities, functions, graphs of linear, polynomial and rational functions, exponential and logarithmic functions, mathematics of finance, systems of linear equations and matrices, linear programming, and introduction to probability. Prerequisite: Two years of high school algebra and satisfactory achievement on the mathematics placement exam or MA092 with a grade of C or better. High school plane geometry not recommended. This course will not count toward a major or minor in mathematics.

**MA112 CALCULUS FOR BUSINESS AND LIFE SCIENCES**  
(4,0) 4  
Limits, differentiation, applications of the derivative, integration, application of the definite integral, techniques of integration. Calculus of exponential and logarithmic functions, elementary differential equations, functions of several variables. Prerequisite: MA111 with a grade of C or better. This course will not count toward a major or minor in mathematics.

**MA140 ALGEBRA FOR TECHNOLOGISTS**  
(4,0) 4  
Algebra for students of science and technology. Algebraic operations, functions and graphs, factoring and fractions, quadratic equations, exponents and radicals, complex numbers, exponential and logarithmic functions, systems of linear equations, determinants and matrices, analytic geometry. Prerequisites: Two years of high school algebra and satisfactory achievement on the mathematics placement examination or MA092 with a grade of C or better. This course will not count toward a major or minor in mathematics.

**MA141 TECHNICAL CALCULUS I**  
(4,0) 4  
The derivative and procedures of differentiation, integration and applications of integration, derivatives of trigonometric and inverse trigonometric functions, exponential functions, and logarithmic functions. Prerequisites: MA109 and MA140 each with a grade of C or better. High School trigonometry may be substituted for MA109 with instructor approval.

**MA142 TECHNICAL CALCULUS II****(4.0) 4**

Integration of trigonometric, exponential and logarithmic functions, methods of integration, partial derivatives and double integrals, polar coordinates, curve fitting, series expansion of functions, using MacLaurin, Taylor, and Fourier Series. First and second order differential equations and Laplace transform methods. Prerequisite: MA141 with a grade of C or better.

**MA150 PRECALCULUS MATHEMATICS****(4.0) 4**

Basic theory of functions including polynomial, exponential, logarithmic and trigonometric functions. Inequalities, topics from analytic geometry and plane trigonometry. Provides the essential background for calculus and subsequent upper level mathematics. Prerequisites: Two years of high school algebra and one year of plane geometry and satisfactory achievement on the mathematics placement exam, or MA092 with a grade of C or better. Courses in trigonometry and analytic geometry are recommended. This course will not count toward a major or minor in mathematics.

**MA151 CALCULUS I****(4.0) 4**

Limits, continuity, differentiation, applications of the derivative, integration, applications of the definite integral. Prerequisite: High school mathematics which includes two years of algebra, one year of plane geometry, and one-half year of trigonometry and satisfactory achievement on the mathematics placement exam, or MA150 with a grade of C or better.

**MA152 CALCULUS II****(4.0) 4**

Logarithm and exponential functions, inverse trigonometric functions, techniques of integration, improper integrals, L'hospital's rule, infinite series, conic sections, polar coordinates, parametric equations. Prerequisite: MA151 with a grade of C or better.

**MA207 PRINCIPLES OF STATISTICAL METHODS****(3.0) 3**

Descriptive statistics, probability distributions (including normal, binomial and chi-square), techniques of statistical inference including tests of hypotheses and selected nonparametric tests. (This course is a survey of elementary statistical concepts.) Prerequisite: Completion of mathematics competency graduation requirement. This course will not count toward a major in mathematics.

**MA215 FUNDAMENTAL CONCEPTS OF MATHEMATICS****(3.0) 3**

Elements of set theory, set algebra, cardinality, logic, mathematical induction, methods of proof, functions, relations, equivalence relations. Prerequisite: MA151 or MA142 or MA112 (latter course with permission of instructor only)

**MA216 DISCRETE MATHEMATICS AND PROBLEM SOLVING****(3.0) 3**

Selected topics from discrete mathematics including fundamental counting principles, recurrence relations, and an introduction to graph theory. A strong emphasis is placed on fundamental problem solving techniques. Prerequisite: MA215 or permission of instructor.

**MA240 MATHEMATICS FOR AUTOMATED SYSTEMS****(3.0) 3**

Applied linear algebra and vector algebra, Laplace transform methods for solution of first and second order linear differential equations. Spherical and cylindrical coordinate systems, graphing of kinematic quantities. Pre or co-requisite: MA142.

**MA251 CALCULUS III****(4.0) 4**

Three dimensional space, vectors, vector-valued functions, partial differentiation, multiple integration, topics in vector calculus. Prerequisite: MA152 with a grade of C or better.

**MA261 INTRODUCTION TO NUMERICAL METHODS****(2.0) alternate years 2**

Floating point representation of numbers and floating point arithmetic. Survey of numerical methods for solving a wide variety of common mathematical problems, including Solution of a single non-linear equation, solution of a system of linear equations, matrix inversion, numerical integration, function approximation, interpolation. Emphasis will be on the actual computer implementation of common algorithms for solving these problems. Prerequisites: CS111 and either MA142 or MA152.

**MA290 INDEPENDENT STUDY IN MATHEMATICS****(1-4.0) 1-4**

Special studies and/or research in mathematics for individuals or small seminar groups. Course content to be arranged with instructor and with approval of the department head. This course may be repeated for a maximum of eight credits. Prerequisites: Sophomore standing or higher and permission of the instructor.

- MA305 COMPUTATIONAL LINEAR ALGEBRA**  
(3.0) alternate years 3  
Introduction to matrix algebra and vector spaces. An examination of the topics of linear algebra, with an emphasis on computational aspects. Applications of matrices and linear algebra in the natural and social sciences. Prerequisites: CS111, and either MA112, MA141, or MA151.
- MA308 PROBABILITY AND MATHEMATICAL STATISTICS**  
(4.0) 4  
An introductory course in probability and mathematical statistics. Probability, probability distributions, mathematical expectation, moment generating functions and the Central Limit Theorem. Prerequisite: MA142 or MA152.
- MA309 APPLIED STATISTICS**  
(3.0) 3  
A continuation of MA308 including estimation of parameters, testing hypotheses, nonparametric methods, analysis of variance, multiple regression, and an introduction to statistical software packages. Prerequisite: MA308
- MA310 DIFFERENTIAL EQUATIONS**  
(3.0) 3  
Differential equations of first order, linear differential equations of second and higher orders. Introduction to power series methods, applications. Prerequisite: MA152
- MA321 HISTORY OF MATHEMATICS**  
(3.0) alternate years 3  
Selected topics in the development of mathematics from the time of the ancient Babylonians and Egyptians to the twentieth century. Prerequisites: MA152 and MA215
- MA325 COLLEGE GEOMETRY**  
(3.0) alternate years 3  
Selected topics in geometry, including some or all of the following: Modern elementary geometry, transformations, Euclidean constructions, dissection theory, projective geometry, introduction to non-Euclidean geometry, and problems in foundations of geometry. Prerequisites: MA152 and MA215.
- MA341 ABSTRACT ALGEBRA I**  
(3.0) alternate years 3  
An introduction to congruences, groups, subgroups, quotient groups, fundamental homomorphism theorems, Sylow theorems. Prerequisite: MA215.
- MA342 ABSTRACT ALGEBRA II**  
(3.0) on demand 3  
A continuation of MA341 including rings, integral domains, ideals, quotient rings, the natural homomorphism, fields and polynomial rings. Prerequisite: MA341.
- MA351 GRAPH THEORY**  
(3.0) alternate years 3  
Selected topics in graph theory, including connectivity, matchings, edge and vertex colorings, networks and tournaments. Prerequisite: MA216.
- MA401 MATHEMATICAL MODELING**  
(3.0) alternate years 3  
Selected applications of mathematics in such areas as biology, economics, social science and engineering are discussed. The construction of a mathematical model used to study a real situation will be stressed, as well as interpretation of mathematical results in that context. Prerequisites: Jr/Sr standing, a course in computer programming, and mathematical maturity at the level of MA305, MA308, or MA310.
- MA411 ADVANCED CALCULUS**  
(3.0) alternate years 3  
An extension of the calculus in one, two, and three dimensions leading to the formulation and solution (in simple cases) of the partial differential equations of mathematical physics. Differential and integral calculus of vectors, divergence, curl, line, surface and volume integrals, Green's divergence and Stokes' theorems, heat and wave equations, Fourier series, orthogonal sets, boundary value problems, separation of variables. Prerequisite: MA251.
- MA413 INTRODUCTION TO COMPLEX ANALYSIS**  
(3.0) on demand 3  
The calculus of functions of a complex variable, algebra and geometry of complex numbers, elementary functions, limits, derivatives, Cauchy-Riemann equations, integrals, Cauchy integral theorem, series, singularities, residue theorem. Prerequisite: MA251.
- MA421 REAL ANALYSIS I**  
(3.0) alternate years 3  
An examination of some of the foundations of the calculus, including basic topology of the real line, limits, continuity, metric spaces, function spaces, some uniformity concepts. Prerequisites: MA215 and MA251.

**MA422 REAL ANALYSIS II** 3  
(3,0) on demand  
Continuation of MA421 with emphasis on measure and integration. Prerequisite: MA421.

**MA490 RESEARCH TOPICS IN MATHEMATICS** 1-4  
(1-4,0)  
Special studies and/or research in mathematics for individuals or small seminar groups. Course content to be arranged with instructor and with approval of the department head. This course may be repeated for a maximum of eight credits. Prerequisites: Junior standing or higher and permission of the instructor.

## **MASTER BUSINESS ADMINISTRATION**

**MB503 BUSINESS LAW** 3  
(3,0)  
Basic principles of contract law and its application to sale of goods, with emphasis on legal aspects of product marketing. Law of agency/employment; business organizations, including partnerships and corporations.

**MB508 STATISTICAL ANALYSIS** 3  
(3,0)  
Overview of statistical analysis methods; application to business analysis and decision making. Emphasis: development of problem solving and computational skills. Prerequisite: Mathematics competency.

**MB521 FINANCIAL ACCOUNTING** 3  
(3,0)  
Basic accounting principles; their application in business with emphasis on management uses of accounting data, in decision making. Includes discussions of accounting control systems and ethical issues.

**MB525 BUSINESS FINANCE** 3  
(3,0)  
Mathematics of finance; risk-return analysis and portfolio theory; financial markets and securities; financial analysis; capital structure, leverage, and financing alternatives; financial planning and forecasting; capital budgeting; valuation and cost of capital. Prerequisites: MB508 and MB521 or equivalent.

**MB561 ORGANIZATIONAL THEORY** 3  
Fundamental theories and concepts of management and their application to organization theory and management functions, and processes.

**MB581 MARKETING CONCEPTS AND APPLICATIONS** 3  
(3,0)  
Planning, organizing, directing, and controlling of marketing sub-system in business organizations. Focus on environment that influences marketing, and marketing decisions facing marketing managers such as selection, target marketing, designing marketing strategy, and organizing and controlling marketing activities.

**MB601 QUANTITATIVE METHODS** 3  
(3,0)  
Orientation to management science; introduces students to variety of deterministic and probabilistic models useful in resolution of business related problems in functional application areas. Prerequisite: MB508.

**MB602 MANAGEMENT OF QUALITY** 1  
(1,0)  
An examination of quality control techniques used by managers in both manufacturing and service organizations.

**MB604 MANAGERIAL ECONOMICS** 3  
(3,0)  
Application of economic theory and analysis to managerial decision-making including demand theory and estimation, production theory and cost analysis, profit planning and optimization techniques, consumer behavior, pricing strategy, economic forecasting. Prerequisites: EC201, EC202, and MB508.

**MB608 RESEARCH TECHNIQUES** 3  
(3,0)  
Survey of research methods used in business; emphasis on development of a research design. Survey techniques, experimental design, non-experimental designs, and case study method. Prerequisite: MB508.

**MB610 MANAGEMENT INFORMATION SERVICES** 3  
(3,0)  
The use of computers in business and industry. Modern applications will be provided. Through the use of computers, students will become familiar with several software packages. Prerequisites: Introductory data processing course or equivalent experience.

**MB611 OPERATIONS MANAGEMENT** 3  
(3,0)  
In-depth exposure to the management of operational systems. Focus: development and implementation of realistic solutions to complex problems related to operations management. Prerequisites: An introductory data processing course or equivalent experience, MB508, and MB601.

- MB621 MANAGERIAL ACCOUNTING AND CONTROL** (3,0) 3  
A study of accounting concepts, budgeting, management planning and control, and elements of cost accounting systems. Emphasis is placed on analysis and interpretation of accounting reports for management purposes: measuring performance, controlling costs, and evaluating proposals. Prerequisite: MB521 or waiver of MB521.
- MB625 FINANCIAL MANAGEMENT** (3,0) 3  
Advanced study of modern financial theory and issues with emphasis on the utilization of current analytical techniques in the decision-making process. Case discussions and readings from contemporary financial literature supplement the text assignments. Prerequisite: MB525
- MB626 MONEY, BANKING & MONETARY POLICY** (3,0) 3  
An understanding of money, banking and monetary policy in both the U.S. and Canada will be discussed. Monetary policy will be examined in some detail.
- MB631 REVISING BUSINESS PROSE** (1,0) 1  
Students will contribute documents from the work place. Students will learn to edit such documents for clarity, conciseness and appeal. Prerequisite: BA231.
- MB652 INTERNATIONAL BUSINESS MANAGEMENT** (3,0) 3  
An examination of international and multinational management. A review of the issues and concepts that are needed by the manager with the increasing globalization of business.
- MB653 BUSINESS AND SOCIETY** (2,0) 2  
The role of business and society; government regulations, labor values and ethics, social responsibility, changing international environment and future of the corporation.
- MB654 CANADIAN BUSINESS ENTERPRISE** (3,0) 3  
A course designed to provide students with an understanding of the small business environment in Canada. Topics include a current socio-economic perspective of the Canadian economy, Canadian entrepreneurs, and public policy as it relates to small business in Canada.
- MB659 ADMINISTRATIVE POLICY** (3,0) 3  
Concepts and relationships between a firm and its economic, social, and political environment. Focus: position of general manager in formulating strategic policy and implications for attainment of corporate objectives. Prerequisite: Completion of common professional component.
- MB660 ORGANIZATIONAL BEHAVIOR** (3,0) 3  
Study and analysis of characteristics common to all organizations (behavior, structure, and process); application to the effective management of organizational behavior. Prerequisite: MB561.
- MB661 ETHICS IN MANAGEMENT** (1,0) 1  
Every business decision or situation has ethical components. This course is designed to integrate ethical reflection with management decision making.
- MB670 HUMAN RESOURCES MANAGEMENT** (3,0) 3  
An examination of human resource management in organizations. Topics will include the traditional approach (i.e. recruitment, compensation, etc.) as well as the contemporary approach to HRM (i.e. equal opportunity employment, career planning, organizational development, etc.)
- MB673 EMPLOYEE ASSISTANCE** (1,0) 1  
A survey of employee assistance programs that have been developed for workers who have personal problems that affect job performance.
- MB678 COLLECTIVE BARGAINING AND DISPUTE SETTLEMENT** (3,0) 3  
Introduction to theories and practices of negotiating and administering collective bargaining agreements; negotiation process, legal constraints, subject matter of contracts, grievance procedures, and arbitration. Prerequisite: MB561.
- MB681 MARKETING MANAGEMENT** (3,0) 3  
Decision-making activities of marketing and consumer selection; promotional sales force management; pricing; distribution channels. Emphasis is placed on the growing fields of international marketing and the behavioral science contributions. Prerequisite: MB581.

**MB687 ADVERTISING MANAGEMENT****(3,0) 3**

An analysis of ways promotion techniques are applied to marketing-related activities. The focus is on the entire promotion mix and to include areas associated with solving problems regarding the mix and various media. The course will examine how areas like consumer behavior, the competitive climate, and the legal environment may have an impact on decision-making. Prerequisite: MB581.

# MECHANICAL ENGINEERING

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**ME104 TECHNICAL DRAWING****(3,2) 4**

Technical drawing to include instruments, lettering, geometric construction, sketching, multiview projection, sectioning, auxiliary views, dimensioning, tolerancing, fasteners, design and working drawings, reproduction and control drawings, pictorial drawings, intersections, graphical vector analysis, and graphs.

**ME106 DESCRIPTIVE GEOMETRY AND GEOMETRIC DIMENSIONING AND TOLERANCING****(2,1) 2**

This course covers points, lines, and planes in space, parallelism and perpendicularity, intersections, developments, line and plane tangencies, cartography, and graphical vector analysis. Topics in geometric dimensioning and tolerancing include form controls, datums, orientation, position tolerancing, runout, and profiles. Prerequisite: ME104 or permission of instructor.

**ME124 BASIC COMPUTER AIDED DRAFTING (CAD)****(3,0) 3**

Basic Autocad to include setting up and configuring Autocad software, MS-DOS, graphical primitives, editing, (2-D) construction techniques, symbols, drawing enhancements, printer-plotting, isometric drawing, system variables, and dimension variable.

**ME214 ADVANCED COMPUTER-AIDED DRAFTING****(3,0) 3**

Advanced AutoCad to include attributes, data extraction, (3-D) construction techniques, solid modeling, customization of macros and menus, system management, intelligent symbols, slide shows, interfacing AutoCad with WordPerfect, and AutoShade. Prerequisite: ME124.

# MARKETING

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**MK281 MARKETING PRINCIPLES AND STRATEGY****(3,0) 3**

A study of the marketing principles, variables, institutions, target markets, marketing mix, and the development of marketing strategy. Prerequisite: EN110

**MK283 PRINCIPLES OF SELLING****(3,0) 3**

The study of personal selling and its requirements. Topics included are buyer behavior, sales presentations from prospecting to closing the sale, and overcoming objections. Sales interviews by students are an integral part of the course.

**MK285 RETAIL MANAGEMENT****(3,0) 3**

A study of the field of retailing. A survey of retail institutions; store location and organization; buying and merchandising techniques; retail advertising, sales promotion and image; human resource policies; and store protection.

**MK381 CONSUMER BEHAVIOR****(3,0) 3**

A study of behavioral concepts related to consumer behavior. Attention is directed toward understanding consumer needs, perceptions, attitudes, intentions, and behavior within a strategic and managerial framework. Topics include the differences of complex decision making and habit and between high and low involvement decision making. Emphasis is on predicting and understanding purchase behavior for best firm/consumer needs match. Prerequisite: MK281.

**MK384 PHYSICAL DISTRIBUTION****(3,0) 3**

An analysis of the physical supply-physical distribution system. Studies areas of movement control, including distribution centers and warehousing, traffic and transportation, inventory management, information flow and cost-service alternatives. Prerequisite: MK281.

**MK387 ADVERTISING THEORY AND PRACTICE****(3,0) 3**

A study of the principles and practices in various advertising media such as newspaper, radio, television, outdoor and direct mail; consideration of creative methods, consumer behavior, measurement of effectiveness, and coordination with other aspects of the promotional program.

**MK480 MARKETING RESEARCH**  
(3,0) 3  
Application of research methods to the field of marketing. Methods of gathering and presenting data, market analysis, consumer surveys and sales forecasting. Students will participate in a research project. Prerequisites: BA211 and MK281

**MK481 MARKETING MANAGEMENT**  
(3,0) 3  
A study of the essential tasks of marketing managers: (1) identifying marketing opportunities, (2) developing marketing plans, (3) and implementing these plans by introducing marketing strategies. Prerequisite: MK281.

**MK483 SALES FORCE MANAGEMENT**  
(3,0) 3  
Principles and policies of sales organization; career opportunities; recruiting, selecting, and training sales people; motivation, supervision, and evaluation of sales performance; compensation plans, quotes, and expense accounts. Prerequisites: MK281, MK283.

**MK486 INTERNATIONAL MARKETING**  
(3,0) 3  
Principles and methods of international marketing; strategies for foreign market entry and operations. Analysis of the environment of international marketing management with emphasis on problems connected with social, cultural, institutional, and economic variables found in foreign markets. Prerequisite: MK281.

## **MANAGEMENT**

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**MN360 PRINCIPLES OF MANAGEMENT**  
(3,0) 3  
Principles and techniques applicable to the functions of management: planning, organizing, directing (staffing and leading), and controlling; development of management thought and decision making; current issues and future concerns in management. Foundation course for study and understanding of management theory and practice. Prerequisite: Junior standing or permission of instructor.

**MN365 HUMAN RESOURCE MANAGEMENT**  
(3,0) 3  
An examination of current practices and recommended techniques by which management procures, develops, utilizes and maintains an effective work force. The major areas studies are: recruitment and selection, equal employment opportunity and affirmative action programs, training and development, career planning and performance appraisal, compensation and benefits, safety and health

issues, employee and labor relations, including grievance handling, contract negotiation and remaining union free as an organization. Prerequisite: Junior standing or permission of instructor.

**MN451 LABOR LAW**  
(4,0) 4  
An analysis of labor laws pertaining to union-management relations; emphasis on the private sector as well as on laws relating to health care institutions; legal aspects of relationships between unions and their members; federal wage and hour laws, including administration of the statutes and their relationship; applicable remedies for violations of federal labor laws. Prerequisite: MN370.

**MN461 MANAGEMENT SIMULATION**  
(1,4) 3  
Realistic simulations of business operations with an opportunity to practice the functions of management by means of computerized models and cases. Prerequisite or corequisite: FN341 or permission of instructor.

**MN464 ORGANIZATIONAL BEHAVIOR**  
(3,0) 3  
An analysis of problems and cases relating to management and organizational behavior typically requiring decisions by an administrator. Topics include leadership, motivation, communication, negotiation, problem solving, decision making, conflict resolution, group dynamics, stress management, job design, and organization structure. Prerequisite: MN360.

**MN469 COLLECTIVE BARGAINING**  
(3,0) 3  
An analysis of the process of collective bargaining, the major subjects of negotiation, including arbitration of grievances; process of dispute settlements; and influence of larger environment. The discussion includes theories of bargaining, strategies, and weapons available to both parties. Also examines collective employee-employer relationships in the public sector and tactics of public employee groups and agencies. Prerequisite: Junior standing or permission of instructor.

**MN471 PRODUCTION AND OPERATIONS MANAGEMENT: MODELS, METHODS AND APPLICATIONS**  
(5,0) 5  
Study and analysis of operations of modern industrial and service organizations. Topics covered include scheduling and assignment problems, forecasting, inventory models, project management, mathematical programming, decision theory, game theory, Markov models, replacement problems, queuing problems, and simulation. Prerequisite: BA211 and MN370, or permission of instructor.

# MECHANICAL ENGINEERING TECHNOLOGY

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

## MT100 INTRODUCTION TO MECHANICAL SYSTEMS AND COMPUTER PROGRAMMING

(2,1) 2  
Careers and opportunities. Reviews technical competence expected of engineering technologists. Engineering computations using BASIC. (New course in Fall 1991)

## MT112 MANUFACTURING PROCESSES I

(2,2) 3  
Capabilities and limitations of machines and processes for promotion planning or designing machinery, mechanical parts, and systems. Corequisite: MT100 or permission of instructor.

## MT113 MANUFACTURING PROCESSES II

(2,3) 3  
Continuation of MT112. In addition, computer-aided numerically controlled machining. Prerequisite: MT112.

## MT200 COOPERATIVE EDUCATION 4

(2,0) 2  
Supervised industrial experience with cooperative industries. The student's experience is related to academic studies, and contributes significantly to professional development. Can be repeated for credit. Permission of instructor is required.

## MT220 STATICS

(3,0) 3  
Theory and application of principles of statics with emphasis on problem solving, free body diagrams and vector analysis. Theory applied to equilibrium of particles and principles of rigid body equilibrium. Prerequisite or corequisite: MA141, PH221, and MT100, or permission of instructor.

## MT241 STRENGTH OF MATERIALS

(3,3) 4  
A study of the concepts in stress analysis and stress measurement. Topics include axial, shear, torsion, bending, and transverse stresses. Also covered are axial strain, shear strain, Poisson's ratio, Hooke's Law, and the transformation of stress and strain. Stress measurement in the laboratory will include use of a tensile machine and strain gages. A final project with oral and written communication are incorporated as an integral part of the course. Prerequisites: MT220, ET201.

## MT253 ENGINEERING MATERIALS

(3,3) 4  
Physical structure of engineering materials, properties, testing, and applications. In the laboratory, the student will prepare and analyze the microstructure of various specimens. Prerequisite: CH108. Corequisite: MT241.

## MT260 QUALITY ENGINEERING I

(2,0) 2  
An introduction to the philosophy, principles, and methods for the use of statistical process control in the manufacturing environment. Numerous control charts and frequency distributions will be covered in detail. Management methods and philosophy will also be discussed. Prerequisite: MA141.

## MT316 STATICS AND STRENGTH OF MATERIALS

(3,1) 3  
Fundamental concepts of statics and strength of materials. Solution of problems including forces, moments, normal stress, shear stress, bending stress, and torsional stress. Theory and application of strain gages. Not for credit for a degree in Mechanical Engineering Technology. Prerequisite: PH221.

## MT320 DYNAMICS

(3,2) 3  
Covers theory and application of the principles of dynamics and how to approach and solve technical problems. Topics include position, velocity, and acceleration analysis of particles and rigid bodies. Newton's Second Law, work and energy, impulse and momentum are covered. The laboratory includes experiments demonstrating the principles of dynamics and lays special emphasis on creative problem solving techniques as well as technical report writing. Prerequisite: MT220. Corequisite: MA142.

## MT341 FLUID MECHANICS

(3,0) 3  
Theory and application of principles of fluid mechanics with emphasis on problem solving. Basic measurement, statics, kinematics, continuity, energy balances, and impulse-momentum principles of ideal and real fluids. Prerequisites: MT220 and MA142 or permission of instructor.

## MT360 QUALITY ENGINEERING II

(3,0) 3  
This course will cover advanced applications of quality principles in manufacturing and design; advanced control charting; predicting with small sample sizes; experiments with comparison, and design of experiments. Emphasis will be on engineering decision making. Prerequisite: MT260 or permission of instructor.



**MT371 NC/CNC MANUFACTURING PROCESSES**  
(2,3) 3  
Writing NC/CNC programs in machine code, and the setup and trial runs to produce production parts from these programs. Computer software interfacing between programming languages and various industrial machines will be stressed. Prerequisite: MT113 or permission of instructor.

**MT410 MACHINE DESIGN I**  
(3,2) 4  
Design and selection of machine elements, power transmission units, and their components. Prerequisites: MT241, MT253, MT320 or permission of instructor.

**MT411 MACHINE DESIGN II**  
(3,2) 4  
Continuation of MT410. In addition, the design of a machine for a particular application including specifications, details, and working drawings. The results are presented in oral and written form. An industrial setting will be simulated. Prerequisite: MT410.

**MT412 INTRODUCTION TO FINITE ELEMENT ANALYSIS**  
(2,2) 3  
This course will cover the fundamentals of finite element analysis. Topics to include modeling elements, boundary conditions and loading, convergence, and an introduction to model analysis. Corequisite: MT410 or permission of instructor.

**MT430 THERMODYNAMICS**  
(3,0) 3  
Theory and application of principles of thermodynamics. First and second laws of thermodynamics, energy conversions, properties of working substances, processes and cycles. Prerequisite: MT341.

**MT431 THERMODYNAMICS AND HEAT TRANSFER**  
(3,3) 4  
Continuation of MT430. In addition, fundamentals of steady state and transient conduction, convection, and radiation heat transfer. Design and analysis of heat exchangers. Prerequisite: MT430.

## MUSIC

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

MU110 through MU161 count as Humanities for General Education requirements.

**MU110 ORCHESTRA**  
(0,3) 1  
Perform regular series of concerts as a member of the Sault Symphony Orchestra. Prerequisite: Permission of instructor.

**MU111 ORCHESTRA**  
(0,3) 1  
Perform regular series of concerts as a member of the Sault Symphony Orchestra. Prerequisite: Permission of instructor.

**MU112 BAND**  
(0,3) 1  
Open to all students in University. The Concert Band performs representative band and wind ensemble literature and provides a challenging musical experience.

**MU113 BAND**  
(0,3) 1  
Open to all students in University. The Concert Band performs representative band and wind ensemble literature and provides a challenging musical experience.

**MU140 CHORUS**  
(0,3) 1  
Regular rehearsals and participation in various campus activities. Admission by permission of the instructor.

**MU141 CHORUS**  
(0,3) 1  
Regular rehearsals and participation in various campus activities. Admission by permission of the instructor.

**MU160 JAZZ ENSEMBLE**  
(0,3) 1  
Regular rehearsals and performances during school year. Prerequisite: permission of instructor.

**MU161 JAZZ ENSEMBLE**  
(0,3) 3  
Regular rehearsals and performances during the school year. Prerequisite: Permission of the instructor.

**MU170 CLASS PIANO I**  
(0,2) 1  
Beginning piano techniques. Music reading ability helpful but not required.

**MU171 CLASS PIANO II**  
(0,2) 1  
To improve proficiency and techniques gained in MU170. Prerequisite: MU170 or permission of instructor.

**MU180 CLASS GUITAR I**  
(0,2) 1  
Introduction to guitar playing including knowledge of musical rudiments, left and right hand techniques and ensemble performance.

**MU181 CLASS GUITAR II**  
(0,2) 1  
Course emphasizes increasing technical achievement, musicianship and the development of individual musicality.

**MU220 HISTORY AND APPRECIATION OF MUSIC I**  
(4,0) 4  
A survey of music from the Middle Ages to the early nineteenth century with emphasis on the music of Bach, Handel, Haydn, Mozart and Beethoven. Counts as Humanities for General Education requirements.

**MU221 HISTORY AND APPRECIATION OF MUSIC II**  
(4,0) 4  
A survey of music of the nineteenth and twentieth centuries. Counts as Humanities for General Education requirements.

**MU250 CHAMBER MUSIC I**  
(0,2) 1  
For advanced students interested in solo and ensemble performance in a supervised program. Prerequisite: Admission by permission of instructor.

**MU251 CHAMBER MUSIC II**  
(0,2) 1  
For advanced students interested in solo and ensemble performance in a supervised program. Prerequisite: Admission by permission of instructor.

**MU260 HISTORY & APPRECIATION OF JAZZ**  
(4,0) 4  
The course explores the historical and stylistic development of jazz and explains how to listen to this type of music. Counts as a Humanities General Education requirements.

## **NATIVE AMERICAN STUDIES**

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**NA225 NATIVE CULTURES OF NORTH AMERICA**  
(3,0) 3  
A study of the Native American-Indian and Inuit-cultures of North America from earliest times to the present with emphasis on contrasting patterns of cultures. (Also listed as SO225)

**NA230 SURVEY OF AMERICAN INDIAN HISTORY**  
(4,0) 4  
A study of American Indian History from earliest times to the present, with emphasis placed on the historical development of Indian

tribes located in the Great Lakes Region. (Also listed as HS230)

**NA235 SURVEY OF NATIVE AMERICAN LITERATURE**  
(3,0) 3  
An overview of Native American literature including myths, poetry, biographies, legends, and stories from recognized Indian and non-Indian authors. The significance of Indian philosophy found in such literature will be emphasized. Prerequisite: EN210 or EN215 or permission of instructor. (Also listed as EN235)

**NA305 TRIBAL LAW AND GOVERNMENT**  
(3,0) 3  
A study of tribal law which will explore such areas as the structure of tribal government; tribal sovereignty; treaties; civil and criminal court jurisdiction in Indian country; tribal resources; tribal economic development; taxation and regulation; rights of individual Indians; and various federal laws and court cases concerning and affecting tribes and their members. Prerequisite: NA230 or permission of instructor. (Also listed as LA305)

**NA310 SEMINAR IN NATIVE AMERICAN STUDIES**  
(3,0) 3  
A seminar dealing with selected topics in Native American Studies. The content of this course may vary each time the course is offered. Prerequisites: NA225, SO226, NA230, NA235, and NA305 or permission of instructor.

**NA320 CONTEMPORARY NATIVE AMERICAN ISSUES**  
(3,0) 3  
A study of current Native American issues, problems, and concerns. Prerequisites: NA225, SO226, NA230, NA235, and NA305 or permission of instructor.

## **NATURAL SCIENCES**

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**NS101 CONCEPTUAL PHYSICS**  
(3,1) 3  
A survey of basic physical science principles emphasizing their applications in daily life. Prerequisite: Completion of the mathematics competency graduation requirement.

**NS102 INTRODUCTION TO GEOLOGY**  
(3,1) 3  
A survey course to acquaint students with the major concepts and phenomena inherent in a

study of geology. It will also provide sufficient background for a better understanding of human relationship to the physical environment. Prerequisite: None.

**NS103 ENVIRONMENTAL SCIENCE**  
(3,0) 3

An introduction to environmental concepts and a brief survey of environmental issues facing society. Emphasis is placed on solutions and the responsibility of the individual towards these solutions.

**NS104 ENVIRONMENTAL SCIENCE LABORATORY**  
(0,3) 1

Laboratory component of Environmental Science. Corequisite: NS103.

**NS105 PHYSICAL GEOGRAPHY: EARTH, SUN AND WEATHER**

(3,1) alternate years 3

Study of the physical properties of the earth's surface as they relate to weather and climate. Credit for both GG108 and NS105 not permitted. Prerequisite: None.

**NS107 PHYSICAL GEOGRAPHY LANDFORMS AND SOILS**

(2,1) alternate years 3

Study of the physical properties of the earth's surface as they relate to landforms and soils. Credit for both GG106 and NS107 not permitted. Prerequisite: None.

**NS119 DESCRIPTIVE ASTRONOMY**  
(3,1) 3

Introductory course with a balanced, comprehensive account of contemporary astronomy with emphasis placed on the broad principles of astronomy rather than on a chronological or historical framework. Prerequisite: Completion of the mathematics competency graduation requirement.

## **NURSING**

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**NU110 INTRODUCTION TO PROFESSIONAL NURSING I**  
(1,0) 1

Focus on origin of nursing and its evolution into current status as major profession. Role of nursing in the health care delivery system; philosophy of nursing; human needs theory; introduction to nursing process.

**NU211 INTRODUCTION TO PROFESSIONAL NURSING II**

(3,0) 3

Theoretical foundation for nursing practice, nursing concepts and theories needed to promote, maintain, and restore health throughout the life cycle, including nursing theory, stress adaptation, ethics, teaching-learning and legal aspects. Prerequisites or corequisite: NU110. Prerequisite: PY155, acceptance into nursing major.

**NU212 HEALTH APPRAISAL**  
(2,3) 3

An introduction to nursing assessment component of the nursing process as a method of determining a well individual's health potential and status across the lifespan. Emphasis is on obtaining a health history, performing a nursing assessment and formulating a nursing diagnosis. Prerequisites: PY155, HE208, BL122. Corequisite: HE232 and NU211.

**NU213 FUNDAMENTALS OF NURSING**  
(3,6) 5

Theoretical and clinical foundation upon which nursing is applied to individual client experiencing common health stressors. Emphasis: forming nursing diagnoses derived from human needs theory and implementation of both appropriate nursing interventions and related psychomotor nursing skills. Responsibilities as a health team member and as a self-directed learner are also considered. Prerequisites: NU211, NU212, HE208, HE232. Corequisites: HE209, BL223

**NU325 PARENT/NEWBORN NURSING**  
(3,6) 5

Theoretical and clinical foundation for care of the child-bearing family using family centered approach. Emphasis: teaching and health promotion. Stress Adaptation and Self Care theories used to help clients cope with stressors encountered during child-bearing cycle. Prerequisites: NU212, NU213, HE232, HE209, PY155.

**NU326 PARENT/CHILD NURSING**  
(4,6) 6

Theoretical and clinical foundation for application of nursing process in caring for children and their families. Emphasis: health promotion, maintenance and restoration with application of principles and concepts related to growth and development, family theory and stress adaptation. Prerequisites: NU212, NU213, HE232, HE209, PY155.

**NU327 ADULT NURSING I**  
**(4,12)**

**8**

Combined theory and clinical laboratory with concepts of stress adaptation related to common health alterations in each of the basic human need areas. Nursing clinical experience is primarily in secondary care settings for adult clients. Prerequisites: NU212, NU213, HE209, HE232.

**NU330 APPLIED NUTRITION**  
**(2,0)**

**2**

Application of nutrition principles in health care; obesity, anorexia nervosa, and bulimia; emphasis on gathering information and relevant objective measurements (anthropometric, biochemical) for use in developing nutritional care plans. Prerequisite: HE208 or permission of instructor.

**NU361 TRANSITION TO PROFESSIONAL NURSING**

**(3,0)**

**3**

Explores concepts of socialization and professionalism in relation to baccalaureate education in nursing; examines conceptual frameworks, nursing models and theories pertinent to practice of nursing and selected legal, social, ethical, economic and political issues in professional nursing and health care delivery. Prerequisites: Acceptance into BSN program or permission of instructor.

**NU363 COMPREHENSIVE HEALTH APPRAISAL**  
**(2,3)**

**3**

Application of theories from nursing and related sciences to health appraisal of the individual through the lifespan. Emphasis on principles of comprehensive history taking and physical assessment skills. Pre- or co-requisite: NU361.

**NU364 HEALTH PROMOTION THROUGH THE LIFESPAN**

**(3,0)**

**3**

Application of nursing process and theories from nursing and related sciences to health promotion and illness prevention of the individual, family, and groups throughout the lifespan. Concepts of wellness, health counseling and teaching, and marketing strategies addressed. Pre- or co-requisite NU361.

**NU431 ADULT NURSING II**  
**(4,12)**

**8**

This is a theory and clinical laboratory course focusing on application of the nursing process in care of the adult client with multiple health stressors. Basic human needs theory and concepts of Stress/Adaptation, Health Promotion, Health Maintenance, Health Restoration and Teaching-Learning are applied. The student collaborates with the health team and applies theory and principles of leadership and management in providing

care in secondary and tertiary care settings. Prerequisites: NU325, NU326, NU327. Corequisite: NU435.

**NU432 COMMUNITY HEALTH NURSING**  
**(3,6)**

**5**

Theoretical and clinical foundation in community health nursing. The nursing process is applied to communities, groups, families and individuals. Content includes the application of public health nursing principles, levels of prevention and epidemiology. Expands the roles of the nurse as teacher, collaborator, advocate and direct care provider. Examines health care delivery trends and issues. Prerequisites: NU327, HE232, SO327 and all required junior level nursing courses.

**NU433 MENTAL HEALTH NURSING**  
**(3,6)**

**5**

Theoretical and clinical foundation in mental health nursing. Emphasis is on the use of the therapeutic relationship and communication skills to help clients cope with stressors of life experiences. Nursing, human needs theory, family theory, stress adaptation theory and developmental theory are used to help the client achieve optimum level of mental health. Prerequisites: HE232 and all required junior level nursing courses.

**NU434 NURSING RESEARCH**  
**(3,0)**

**3**

Focus is on the ethics, methods, evaluation of research studies and consideration of application of nursing research findings in delivery of health care. Students discuss and evaluate nursing research studies and develop and present sections of a research proposal. Prerequisites: PY210 or MA207, NU325, NU326, NU327 or NU361.

**NU435 MANAGEMENT IN NURSING**  
**(3,0)**

**3**

Analysis of the leadership and management roles in professional nursing; focus is leadership/management theories basic to the planning, organizing, directing and controlling of nursing services in health care settings. Includes concepts of continued quality improvement, risk management, performance appraisal, employee relations. Prerequisite: NU361 (for BSN Completion). Corequisite: NU431 (for four-year program).

**NU436 CONTEMPORARY ISSUES IN NURSING**  
**(2,0)**

**2**

Analysis of issues involving the professional nurse. Explores role socialization from student to professional nurse. Selected social, ethical, economic, and legal issues will be examined. Prerequisites: NU325, NU326, NU327.

**NU451 CRITICAL CARE NURSING** 3  
(3,0)  
Assists student in developing nursing knowledge essential to care of critically ill client/family. Health promotion maintenance and restoration interventions are stressed in care of clients with severe alterations in basic human needs. Prerequisite: NU431 or graduate nurse.

**NU490 INDEPENDENT STUDY** 1-4  
(1-4,0)  
Individual investigation of topics tailored to student interest and need. Prerequisites: Junior or Senior standing and permission of the instructor.

## **OFFICE ADMINISTRATION**

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**OA111 KEYBOARDING/DOCUMENT  
FORMATTING I** 3  
(3,0)

Introduction to typewriter and computer keyboard; development of basic keyboarding skill-alphabetic, numeric, and IO-key pad numeric; to assist student to reach optimal skill and more efficiently use computer terminals, information processor, and typewriter keyboards. This course is intended for students with no previous typing experience. Students will be pretested by the instructor the first day of class for placement in accordance with beginning skill level. Also, formatting of business letters, memos, tables, and reports (APA, MLA, and Turabian formats), using word processing software.

**OA112 KEYBOARD SKILLBUILDING** 2  
(4.0) 7 1/2 WEEKS

Improvement of keyboarding speed and accuracy (both alphabetic and numeric), using developmental programs and keyboarding drills. Student may take this course to accumulate 2-4 credits. Once an office administration student reaches 60 wpm skill on alpha/numeric text (error rate - 1 per minute) this course becomes an elective. Prerequisite: OA111 or 30 wpm keyboarding skill.

**OA113 DOCUMENT FORMATTING II** 2  
(2,0)  
Formatting of legal documents, medical histories and reports, governmental correspondence, accounting statements, and technical text/data, using word processing software. Prerequisite: OA111.

**OA119 ACCOUNTING PROCEDURES** 4  
(4,0)

Accounting experiences common to small business or professional offices; development of basic principles underlying accounting procedures; techniques and records used in analyzing, classifying, recording, and summarizing transactions; accounting procedures applied to a computer simulation for small businesses. May not be taken for credit following successful completion of AC132.

**OA235 AUTOMATED OFFICE SYSTEMS** 3  
(3,0)

Lectures and discussions about effects of new technology on the work place and the role students are expected to play in the office. Such topics as technology, communications, human relations, and customer service techniques will be covered. A practice simulation in either Medical Office or Legal Office will also be covered. Prerequisite: Word Processing and a grade of C or higher in EN210 or EN215, or permission of instructor.

## **PHYSICS**

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**PH221 ELEMENTS OF PHYSICS I** 4  
(3,2)

General principles of rigid body mechanics (kinematics, laws of motion, energy and momentum), fluid mechanics, and thermal physics. Prerequisite: MA109, and either MA111 or MA140.

**PH222 ELEMENTS OF PHYSICS II** 4  
(3,2)

Vibrations and waves, electricity and magnetism, optics, relativity and modern physics. Prerequisite: PH221 with a grade of C or better.

**PH224 TOPICS IN PHYSICS FOR ELECTRICAL TECHNOLOGY**

(3,2) 4  
Vibrations and waves, optics, relativity and modern physics (identical to PH222). Electricity and magnetism topics of particular relevance to electronic engineering technology. Prerequisite: PH221 with a grade of C or better, Sophomore standing in EET coursework, and MA141 (which may be taken concurrently).

**PH231 GENERAL PHYSICS I**

(4,2) 5  
An introductory calculus-based course in rigid body mechanics and fluid mechanics. Intended primarily for students in physical science, mathematics and pre-engineering curricula. Pre- or corequisite: MA152.

**PH232 GENERAL PHYSICS II**

(4,2) 5  
Continuation of PH231. Introduction to thermal physics, optics, electricity, magnetism, and topics from modern physics. Prerequisite: PH231 with a grade of C or better.

**PH290 INDEPENDENT STUDY IN PHYSICS**

(1-4,0) 1-4  
Special studies and/or research in physics for individuals or small seminar groups. Course content to be arranged with instructor and with approval of the school dean. This course may be repeated for a maximum of eight credits. Prerequisites: Sophomore standing or higher and permission of the instructor.

## PHILOSOPHY

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**PL204 INTRODUCTION TO PHILOSOPHY**

(3,0) 3  
A study of selected philosophical problems and of methods and ways to answer them. Counts as Humanities for General Education requirement. Prerequisite: EN210 or EN215; or permission of instructor.

**PL205 LOGIC**

(3,0) 3  
An introductory course in logic; study of the role of logical methods of the rational approach to knowledge, consideration of such concepts as definition, implication, inference, syllogism, deduction. Counts as Humanities for General Education requirement. Prerequisite: EN210 or EN215; or permission of instructor.

**PL302 ANCIENT WESTERN PHILOSOPHY**

(3,0) 3  
A study of the origins and the development of Greek and Roman philosophy from the pre-Socratics to the early Christians. Counts as Humanities for General Education requirement. Prerequisite: EN210 or EN215; or permission of instructor.

## POLITICAL SCIENCE

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**PS110 INTRODUCTION TO AMERICAN GOVERNMENT AND POLITICS**

(4,0) 4  
An introductory survey of American national government and politics.

**PS120 INTRODUCTION TO LEGAL PROCESSES**

(3,0) 3  
An introduction to the nature and characteristics of law as it operates in the United States: structure and function of judiciary, process of litigation, influences on law, and impact and enforcement of decisions.

**PS130 INTRODUCTION TO STATE AND LOCAL GOVERNMENT**

(4,0) 4  
A study of the politics and organization of state and local governments, with an emphasis on specific policy issues such as education, criminal justice, and economic development.

**PS160 INTRODUCTION TO CANADIAN GOVERNMENT AND POLITICS**

(3,0) 3  
An introductory survey of Canadian government and politics.

**PS201 INTRODUCTION TO PUBLIC ADMINISTRATION**

(3,0) 3  
This course provides an overview of the field of public administration. It examines the types of organizations, the relation of administration to politics, and public management.

**PS222 INTRODUCTION TO THE LEGAL PROFESSION**

(2,0) 2  
Students will become familiar with how the law functions, how the legal profession has evolved, how to prepare for and apply to law school, and how law schools differ from college. Prerequisites: PS110, 120.

- PS241 INTRODUCTION TO INTERNATIONAL RELATIONS**  
(4,0) 4  
An introductory study of the factors that influence the conduct of international relations and of the various methods by which those relations are conducted. This material will then be applied to an examination of some appropriate current international controversies.
- PS247 MODEL UNITED NATIONS**  
(1,0) 1  
This course includes required participation in the model United Nations program, in which students represent specific countries and become familiar with their background and politics. The goal is an understanding of how the United Nations functions. May be repeated for up to a total of 4 credits, but no more than 2 credits may be counted toward a political science major or minor. Prerequisite: Permission of the instructor.
- PS290 RESEARCH TOPICS IN POLITICAL SCIENCE**  
(1-4,0) 1-4  
This may take the form of either a research project or a program of directed reading on a specific topic. One to four credits over a period of one or two semesters may be granted according to the nature of the student's project. Prerequisite: Permission of instructor.
- PS301 POLICY ANALYSIS AND EVALUATION**  
(4,0) 4  
Examines how public issues and problems are analyzed to assist in the development of public policies. Considers the process of evaluating public programs to determine whether they are to be expanded, cut back, or continued at the current level. Prerequisite: Permission of instructor.
- PS325 POLITICS AND MEDIA**  
(3,0) 3  
Examines the impact of electronic and print media on contemporary American politics. Evaluates proposals for changing the method and role of media coverage of government and politics. Prerequisites: PS110 and junior standing or permission of instructor.
- PS331 COMPARATIVE POLITICS OF WESTERN EUROPE AND RUSSIA**  
(4,0) 4  
Institutions and functioning of government in major European states, such as Great Britain, France, Germany, and Russia. Prerequisite: PS110.
- PS334 MIDDLE EAST POLITICS**  
(3,0) 3  
An examination of government and politics in the Middle East, with special emphasis on the influences of Islam and nationalism on both international and domestic politics of the area. Prerequisite: Junior or senior standing, or permission of instructor.
- PS351 POLITICAL PHILOSOPHY I**  
(4,0) 4  
An examination of political philosophy from the ancient Greeks through the Reformation, concentrating on Plato, Aristotle, Augustine, Aquinas, and Machiavelli. Prerequisites: PS110 and junior or senior standing, or permission of instructor.
- PS352 POLITICAL PHILOSOPHY II**  
(4,0) 4  
An examination of political philosophy from the seventeenth century to the twentieth century, concentrating on Hobbes, Locke, Rousseau, Hume, Burke, Bentham, Mill, Hegel, and Marx. The course includes analysis of the period's main ideologies: conservatism, liberalism, socialism, communism, anarchism, fascism, and national socialism. Prerequisites: PS110 and junior or senior standing, or permission of instructor.
- PS357 POLITICS OF VIOLENCE**  
(3,0) 3  
An interdisciplinary examination of the origin, nature, and consequences of political violence, including war, revolution, and terrorism. Prerequisite: Junior or senior standing or permission of instructor. May also be used for sociology credit.
- PS364 POLITICAL PARTIES, INTEREST GROUPS AND PUBLIC OPINION**  
(3,0) 3  
Examines the roles of political parties and interest groups in the American political system, especially in elections and lobbying activities. The formation and uses of public opinion are also analyzed. Prerequisite: PS110.
- PS367 CONGRESS AND THE PRESIDENCY**  
(4,0) 4  
Examines the legislative and executive branches of government as parts of the policy making process. Prerequisite: PS110.
- PS401 PRINCIPLES OF PUBLIC ADMINISTRATION**  
(3,0) 3  
Examines major issues and methods in public administration. Analysis of specific public policy issues. Prerequisite: Advanced standing or permission of instructor.

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# ADMINISTRATIVE STAFF

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**Katherine A. Albrough**, accountant (1989); B.S., Lake Superior State University, 1989.

**Thomas A. Allan**, manager, Vermilion project (1984); B.S., Central Michigan University, 1973; M.S., Michigan Technological University, 1978; Ph.D., University of Maine, Orono, 1984.

**Francis I. Atkinson**, manager/director student activities (1981); B.S., University of Detroit, 1956.

**Susan Autore**, health services nurse (1990); assoc., Lake Superior State University, 1981.

**Mary L. Baker**, administrative coordinator/professional nurse (1989); B.S.N., St. Olaf College, 1971; M.S., Mankato State University, 1983.

**John L. Banks**, supervisor of computer operations and maintenance (1988); assoc., Madison Area Technical College, 1970.

**Paul A. Besteman**, assistant director physical plant (1973, 1987); Lake Superior State University, (ex1973).

**Susan M. Branstner**, director, interpretive center and educational programming for schools (1990); B.S., Michigan State University, 1982; M.A., 1986; Ph.D., 1990.

**Thomas R. Bugbee**, manager of labor relations (1988); B.A., Michigan State University, 1973; M.A., Eastern Michigan University, 1974.

**Mary L. Cahill**, supervisor inventory/accounts receivable/loans (1975, 1981).

**Susan K. Camp**, coordinator of MBA program (1977, 1988); B.S., Lake Superior State University, 1985.

**Alden E. Campbell**, manager of projects/CHP (1973); B.S., Lake Superior State University, 1973.

**Cheryl L. Castner**, textbook services supervisor (1980); B.S., University of Wisconsin Stout.

**David H. Castner**, asst. prof. and director of counseling and testing services (1978, 1986); B.S., University of Wisconsin Stout, 1972; M.S., 1974.

**Jeffrey A. Chaney**, microcomputer specialist (1988); B.S., Lake Superior State University, 1991 assoc., Lake Superior State University, 1988.

**Bruce G. Clark**, assistant dean of admissions (1976, 1986); B.A., Lake Superior State University, 1976.

**Robert S. Coon**, systems analyst (1989); B.S., Lake Superior State University, 1980.

**Georgiana M. Cox**, staff accountant (1979); B.S., Lake Superior State University, 1979; M.B.A., 1988.

**Juliana L. Cox**, staff accountant (1983); B.S., Lake Superior State University, 1983 and 1987.

**William J. Crawford**, director of public relations (1988); B.S., Western Michigan University, 1970.

**Katherine M. Crisp**, administrative assistant (1990); Muskegon Business College, 1986.

**Stella R. DePlonty**, registrar (1960, 1987).

**Cheryl L. Dozier**, assistant women's basketball coach (1989); B.A. and B.S., Aquinas College, 1989.

**Wanda Eby**, director of purchasing (1974, 1980, 1990).



**Leroy A. Fake**, electronic technician (1983); assoc., Lake Superior State University, 1984.

**James E. Fallis**, assoc. prof., director athletics/manager Norris Center (1974, 1988); B.A., Lake Superior State University, 1974; M.S., Northern Michigan University, 1976.

**Deborah Faust**, director of auxiliary enterprises (1979, 1990); assoc., Lake Superior State University, 1985.

**Paul T. Fenlon**, assistant to executive vice president (1981, 1987); B.A., Western Michigan University, 1964.

**Kathryn L. Flandt**, clinical director of Wellness C.A.R.E. Center (1990); B.S.N., University of Maryland, 1971; M.S.N., Indiana University, 1976.

**Kay A. Floyd**, executive secretary office of board of regents (1990).

**Lee M. Freedman**, textbook assistant (1988); Lake Superior State University, (ex1988).

**Ruth E. Gendzwill**, director of employee relations (1969, 1985); B.A., Calvin College, 1955.

**Donald J. Gerrie**, prof. marketing and director, MBA program (1966, 1985); B.A., College of William and Mary, 1951; M.A., Michigan State University, 1953.

**Roger W. Greil**, aquatics lab manager (1989); assoc., Lake Superior State University, 1988.

**Charles J. Gustafson**, media specialist (1970); assoc., Lake Superior State University, 1968.

**Suzette M. Hazel**, personnel assistant (1988); assoc., Lake Superior State University, 1986 and 1987.

**Jo Ann Hill**, admissions counselor/ internal operations (1990); B.A., Michigan State University.

**Karen M. Huhtala**, reading specialist (1983); B.A., Albion College, 1965; M.A., Northern Michigan University, 1980.

**Amanda A. Izzard**, office records aide (1989); Lake Superior State University, (ex1991).

**Jeffery L. Jackson**, head hockey coach (1986, 1990); B.A., Michigan State University, 1977; B.A., 1978.

**Mary P. Jason**, director of Regional Center (1986); B.S., Michigan State University, 1966.

**Beverly A. Johnson**, executive secretary to the president (1978, 1986); B.S., Northern Michigan University, 1970.

**Bruce R. Johnson**, dean of admissions (1985, 1986); B.S., State University College, 1967; M.S., State University of New York - Buffalo, 1971.

**Patricia A. Kellan**, coordinator of health services (1989); B.S.N., Lake Superior State University, 1989.

**Helen M. Kennedy**, secretary, information services (1989, 1991).

**John F. Kibble**, director of Native American Center (1986); B.A., Lake Superior State University, 1976.

**Erica L. Ledy**, women's basketball coach (1990); B.S., Lake Superior State University, 1988.

**Dr. James Leete**, university physician.

**Annette M. Malaski**, systems analyst (1990); B.S., University of Wisconsin-Stevens Point, 1985.

**Robbin S. Manor**, Campus Shoppe manager (1990); Lansing Community College, (ex-1977).

**J. Dennis McPherson**, financial aid counselor (1967, 1981); Lake Superior State University, (ex19-55).

**Cynthia F. Merkel**, systems development manager (1987, 1988); B.A., Syracuse University, 1979.

**Fredrick A. Michels**, assoc. prof. and director of library and audio

**PY459 PHYSIOLOGICAL PSYCHOLOGY**  
 (3,0) 3  
 This course is an introduction to the neurophysiological structures of the brain and their functions as regulators of animal and human behavior. Prerequisite: PY311.

**PY490 RESEARCH TOPICS IN PSYCHOLOGY**  
 (1-4) 1-4  
 This may take the form of either a research project or a program of directed reading on a specific topic. One to four credits over a period of one or two semesters may be granted according to the nature of the student's project. Prerequisite: Permission of instructor. May be repeated up to a total of 6 credits..

**PY498 SENIOR RESEARCH I**  
 (3,0) 3  
 The study of methods employed in gathering data for research purposes including direct observational techniques and self-report measures. Students will also learn to use the computer to gather data, analyze data, and present data graphically; and will develop a research prospectus. Prerequisites: PY210, PY212, PY311.

**PY499 SENIOR RESEARCH II**  
 (4,0) 4  
 Applications of the principles derived from PY498 to the investigation of a research topic. Also, presentations on recent developments and approaches in psychology, including ethical issues in research. Prerequisite: PY498.

## RECREATIONAL ACTIVITIES

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**RA103 BADMINTON AND RACQUETBALL**  
 (0,2) 1  
 This course will serve to introduce the student to two racquet sports: racquetball and badminton. The course will offer each sport for 7.5 weeks and then the student will rotate to the "other" racquet sport.

**RA105 BOWLING**  
 (0,2) 1  
 This course will emphasize delivery, scoring etiquette, strategies for converting spares, spot vs. pin bowling, and learning about handicapping. The course will involve theory as well as practical experience.

**RA106 BACKPACKING**  
 (0,2) 1  
 Introduction to equipment, safety precautions, environmental concerns, and skills needed to successfully backpack. Class will experience a weekend backpacking trip.

**RA107 CANOE TECHNIQUES**  
 (0,2) 1  
 This course will introduce the student to the basic strokes and canoe safety associated with flat water canoeing.

**RA108 OUTDOOR SURVIVAL**  
 (0,2) 1  
 This class will focus on the appropriate strategies to employ to avoid a survival situation. It will also expose the student to various techniques and strategies to employ should they find themselves "lost" or unexpectedly spending several days and nights in the out-of-doors.

**RA109 ROCK CLIMBING AND RAPPELLING**  
 (0,2) 1  
 This course will introduce the student to the components associated with top rope climbing and rappelling. The student will become familiar with equipment, knots, setting up a safe site, terminology and technique.

**RA110 GOLF**  
 (0,2) 1  
 This course is designed to provide the beginning golfer with the fundamentals of the activity and to further play as a lifetime recreational activity.

**RA114 SELF DEFENSE**  
 (0,2) 1  
 This course is designed to introduce the student to the philosophy, concepts, and various strategies associated with the martial arts. Physical and mental conditioning and physical techniques associated with the art of self defense will be presented and practiced.

**RA119 CROSS COUNTRY SKIING**  
 (0,2) 1  
 This course will introduce the student to the sport of cross country skiing. Emphasis will be placed on basic skill development, equipment selection, maintenance of equipment, and the enjoyment of winter and the beauty it has to offer. The majority of class time will be spent skiing; class instruction will occur during the ski, usually on a one-to-one basis to meet the needs of the student.

**RA125 TENNIS** 1  
(0,2)  
This course is intended to develop each student's present knowledge and skills in order that they will be able to pursue tennis as a lifetime leisure activity.

**RA127 VOLLEYBALL** 1  
(0,2)  
This course is designed to develop basic skills and progression in power volleyball. Conditioning, drill, game tactics, and rules will be practically applied.

**RA129 BASKETBALL** 1  
(0,2)  
This course is designed to expand each student's present knowledge and skill specific to skill execution, game play, game strategy, and rules. May not be repeated for credit. Not available for credit to any student/athlete playing intercollegiate basketball.

**RA130 INTERCOLLEGIATE SPORTS SKILLS** 1  
(0,2)  
Will meet as directed by instructor. The course is designed for student-athletes involved in intercollegiate athletics. It provides the opportunity to develop advanced skills in their respective sports. The course may be taken two times for a total of two credits. It may be taken only once per academic year and only during the term in which the student-athlete is participating in an intercollegiate sport.

**RA150 INDIVIDUALIZED PHYSICAL FITNESS** 1  
(0,2)  
This class is designed to enable the student to discover his or her own level of fitness and develop and implement an exercise program that will address personal fitness concerns. Central to this process is introducing the student to various aspects of a balanced fitness program and providing personal assistance to the student in selecting beginning fitness goals and appropriate progression of those goals.

**RA151 JOGGING FOR FITNESS** 1  
(0,2)  
Introduction to jogging as a means of developing physical and mental fitness. Development of an activity ideal for lifetime leisure involvement.

**RA152 ORIENTEERING** 1  
(0,2)  
The focus of this class will be to introduce the student to map and compass reading skills and techniques associated with coordinating their use. It will also introduce the student to the competitive sport of orienteering.

**RA153 WEIGHT TRAINING** 1  
(0,2)  
This class is designed to familiarize each student with basic weight training knowledge. The student will become familiar with muscular systems, functions, and safe and effective ways to organize and implement a weight training routine.

**RA160 ADAPTED ACTIVITIES** 1  
(0,2)  
Leisure activities adapted to meet the needs of students with disabilities. Emphasis on walking, jogging and aquatics. (May be repeated for credit).

**RA173 SOCIAL DANCE** 1  
(0,2)  
This course is designed to provide participants with a broad range of dancing patterns and rhythmic skills. Through social interaction, the following social dances will be learned: mixers, round dance, square dance, and ballroom dance.

**RA174 AEROBIC DANCE** 1  
(0,2)  
This course will provide the student with an opportunity to become exposed to and involved in a structured aerobic dance program. The purpose of this type of programming is to improve an individual's physical fitness through rhythmic and dance activities.

**RA180 BEGINNING SKATING** 1  
(0,2)  
The students will be provided with an opportunity to learn the basic fundamentals of skating and to gain sufficient knowledge of the sport so that they may continue to enjoy and improve for the rest of their lives.

**RA194 SCUBA** 1  
(0,2)  
This course is designed to introduce the student to the appropriate and safe use of self-contained underwater breathing apparatus.

**RA195 BEGINNING AND ADVANCED BEGINNING SWIMMING** 1  
(0,2)  
Course meets in pool two hours a week. Mostly lab work but some lecture. Students cover material in Red Cross Beginner and Advanced Beginner courses and receive certification in one or both depending on skill level attained.

**RA196 INTERMEDIATE AND ADVANCED SWIMMING** 1  
(0,2)  
Course meets in pool two hours a week. Mostly lab work but some lecture. Students cover material in Red Cross Intermediate and Swimmer courses and receive certification in one or both depending on skill level attained. Prerequisite: Red Cross Advanced Beginner certification or equivalent skills.

**RA197 PHYSICAL FITNESS FOR LAW ENFORCEMENT**

(0,2) 1  
This course will provide senior criminal justice students enrolled in the Michigan Law Enforcement Officers Training Council certification track with the opportunity to maintain their physical prowess and to prepare for the state physical ability test. Prerequisite: Senior criminal justice students enrolled in the MLEOTC track.

**RA210 LIFEGUARDING**

(0,4) 2  
Course meets in pool four hours a week. Mostly lab work, some lecture. Students cover material in Red Cross Basic and Emergency Water Safety course and Red Cross Lifeguarding course. Students receive certification in one or both depending on skill level attained. Either certificate qualifies students to take Water Safety and Lifeguarding Instructor course, RA211. Prerequisite: American Red Cross Intermediate Swimming certificate or equivalent skills.

**RA211 WATER SAFETY AND LIFEGUARD INSTRUCTOR**

(0,4) 2  
Course meets four hours a week, 70% of the time in the pool and 30% of the time in the classroom. All students cover material in Red Cross Water Safety Instructor course and do a teaching practicum at the Lake Superior State University Pool. Those students entering with a current lifeguarding card may also cover Lifeguarding Instructor material. Prerequisites: Current Emergency Water Safety or Lifeguarding certificate.

## **RECREATION**

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**RC101 INTRODUCTION TO RECREATION AND LEISURE SERVICES**

(3,0) 3  
Overview of philosophy, history, theory, programs, professional leadership and organizations, economics and leisure service delivery systems.

**RC105 PROGRAM DEVELOPMENT AND LEADERSHIP IN RECREATION AND LEISURE SERVICES**

(3,0) 3  
Principles of leadership skills and styles are applied to various recreation settings with emphasis on group interaction and face to face leading. Programming fundamentals for effective leisure services delivery are explored and implemented. Prerequisite: RC101.

**RC212 INSTRUCTIONAL METHODS IN ADAPTED AQUATICS**

(1,2) 2  
Based on American Red Cross adapted aquatics guidelines, the course is designed to help students develop skills used when planning implementing, instructing, and evaluating water activity programs for those with a disability. Current water safety instructors (WSI) may become American Red Cross certified as adapted aquatics instructors. People who do not have a WSI may become American Red Cross certified adapted aquatics aides.

**RC220 METHODS IN ARTS AND CRAFTS**

(3,0) 3  
A variety of arts and crafts media are studied and applied to specific recreation settings with concentration on leading and programming. Prerequisites: RC101 and RC105.

**RC240 FOUNDATIONS OF THERAPEUTIC RECREATION**

(3,0) 3  
An introduction to the profession of Therapeutic Recreation. Students will be introduced to history, philosophy, current professional trends, professional organizations, professional literature and career opportunities for Therapeutic Recreation Specialists. The health care team and the role of the Therapeutic Recreation Specialist will also be explored. Prerequisite: RC101 and RC105.

**RC262 OUTDOOR RECREATION**

(3,0) 3  
This course will introduce the student to a variety of topics and content areas related to outdoor recreation. These topics will include outdoor education, organized camping and adventure education. Also included will be an opportunity to become familiar with outdoor living skills.

**RC270 SPORTS MANAGEMENT** 3  
(3,0)  
This course will provide philosophies, organization techniques, and administration principles for youth sports, officiating, intramurals, organized athletics, and recreational sports. Issues on assessment, design, implementation, and evaluation for sports programs in today's society will be explored. Investigation of appropriate resources, professional organization's impact, training methods, certification processes, and gender issues will be highlighted. Prerequisites: RC101 and RC105 or permission of instructor.

**RC280 READINESS IN GAMES, ACTIVITIES, AND SPORTS** 3  
(3,0) alternate years  
This course will focus on the selection and implementation of games, activities and sports which are age-appropriate for the clientele being served. Psychological, sociological, emotional and physiological readiness will be studied as it relates to implementation, modification and presentation of games, activities, and sports to various age groups. Both positive and negative outcomes will be identified.

**RC295 PRACTICUM** 1-2  
Practical experiences designed to provide the student with various types of recreation programs. The student will work under a site supervisor specialized in that particular area of the student's interest. One credit hour for every 45 hours of practical experience. May be repeated for up to four credits.

**RC320 DANCE AND RHYTHMIC ACTIVITIES FOR RECREATION** 3  
(3,0)  
Study of dance in social and therapeutic settings; developing skills to lead programs and adopt a variety of rhythmic activities for individuals and groups: Creative Movement, Improvisation, Variety of Social Dance, Historical Significance to Actual Implementation. Prerequisites: RC101 and RC105.

**RC340 PROGRAM DEVELOPMENT IN THERAPEUTIC RECREATION** 3  
(3,0)  
Students will explore in detail the Therapeutic Recreation service model which will include the components of treatment, leisure education and recreation participation. All aspects of comprehensive and specific program planning will be explored with a special concern for the development of individualized behavioral objectives. Prerequisite: RC240.

**RC342 DISABILITIES SEMINAR IN THERAPEUTIC RECREATION** 3  
(3,0)  
An extensive survey of disabling conditions which the Therapeutic Recreation Specialist may encounter. Emphasis will be placed on incidence, characteristics, etiology, restrictions to involvement and most current research. Class will be taken on a student research/presentation format. Prerequisite: RC240.

**RC344 RECREATIONAL PURSUITS AND DISABLING CONDITIONS** 3  
(3,0)  
A study of specialized recreational and athletic opportunities available to individuals with disabling conditions; such opportunities will be presented as potential activities to be included as part of comprehensive Therapeutic Recreation services. Practical applications will be encountered. Prerequisite: RC342.

**RC346 CLINICAL ISSUES AND PRACTICE IN THERAPEUTIC RECREATION** 3  
(2,4)  
Through a combination of directed fieldwork and classroom instruction, students will begin to apply Therapeutic Recreation theory and program development to the clinical environment. Issues of professional development, confidentiality, assessment, documentation and evaluation will be covered. Prerequisites: RC340, RC 342.

**RC362 LAND MANAGEMENT FOR RECREATION PURPOSES** 3  
(3,0)  
This course is designed to meet the needs of the student pursuing a Parks and Recreation degree. Provides insight and understanding for problems inherent to managing recreation lands for optimum use and minimum impact. Also, for Recreation majors in outdoor recreation option. Prerequisites: RC101, RC262.

**RC365 EXPEDITION MANAGEMENT** 3  
(2,2)  
Intensive study of performance, programming, leadership and management skills involved in conducting wilderness and back country recreation programming. The student will become aware of various theoretical support structures and paradigms associated with adventure education and the values associated with the use of outdoor programming as a therapeutic intervention modality. Course content includes: initiating and programming wilderness/back country experiences, group dynamics, and outdoor living skills. A ten-day outing is required immediately upon completion of the semester. Prerequisite: RC262 or permission of instructor.

**RC370 RECREATION FOR THE ELDERLY**

(3,0) **3**  
 Geared to individuals who will be working with senior citizens in recreation programs, hospitals, nursing homes, and family members. The aging process will be studied from the perspective that sound principles will be applied to leading and programming for this growing segment of our population. Prerequisite: RC101, RC105, and 200 level recreation electives.

**RC390 RECREATION LEADER APPRENTICESHIP**

(1,0) **1**  
 Practical experience in learning to teach and lead various recreation experiences. Students serve with qualified instructors. Prerequisite: Basic skills and knowledge of activity or permission of instructor.

**RC435 PROBLEMS AND ISSUES IN THERAPEUTIC RECREATION**

(3,0) **3**  
 This course will serve as a culminating educational component for the student majoring in therapeutic recreation and recreation management. The course will focus in part on current problems and issues in therapeutic recreation and will also have a major emphasis on developing an original research project. Prerequisite: RC346, PY210, or permission of instructor.

**RC436 THERAPEUTIC RECREATION AND LEISURE SCIENCE RESEARCH**

(2,0) **2**  
 This course is the second part of a two-part research sequence required by Therapeutic Recreation and Recreation Management majors. This course will focus upon research methodology associated with implementing a research project, collecting data, data analysis and presentation. Current state, national and global issues and trends in the recreation field will also be presented. Prerequisite: RC435.

**RC481 PROFESSIONAL DEVELOPMENT SEMINAR**

(1,0) **1**  
 Opportunities for students to refine personal and professional goals and initiate preparation of resumes and interviewing skills. Career planning and placement will be emphasized as well as internship evaluation. Seminar format. Prerequisite: Senior status required.

**RC482 ADMINISTRATION OF RECREATION AND LEISURE SERVICES**

(4,0) **4**  
 This course will emphasize organizational patterns and administration problems encountered in operating various types of recreation departments and agencies. Additional content will include budgeting, fund raising, grant writing, personnel management, and public relations. Prerequisites: RC105 and junior standing.

**RC492 INTERNSHIP**

**2-6**  
 This is a comprehensive practical application of the student's formal academic preparation. Prerequisites: Completion of 20 of the 25 hours of departmental core requirements and junior or senior standing.

**RC496 SELECTED RESEARCH TOPICS**

(1-3,0) **1-3**  
 Student carries out approved project(s) of his/her own initiative. Prerequisites: junior standing or permission of instructor.

# NATURAL RESOURCES TECHNOLOGY

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**RT102 METHODS IN NATURAL RESOURCES**

(0,3) **1**  
 A lab course introducing students to field techniques utilized in the Natural Resources Technology Program. Methods in forestry, soils, water quality, fishes, and wildlife will be presented.

**RT206 WILDLIFE MANAGEMENT TECHNIQUES**

(1,3) **2**  
 A lab and field course working with techniques and specimens commonly associated with wildlife management. Prerequisites: Enrollment in Natural Resource Technology program, NS103, RT284.

**RT207 BIOLOGY AND MANAGEMENT OF FISHES**

(2,3) **3**  
 Identification and natural history of important regional fishes followed by a study of their ecology and management, with emphasis on management techniques. Prerequisite: Enrollment in Natural Resource Technology program.

**RT284 PRINCIPLES OF FORESTRY**

(2,4) **4**  
 An introduction to the various areas of forestry, some techniques utilized by foresters, and an analysis of an area for management purposes. Prerequisites: NS103, BL130 with a C or better.

**RT285 WATER QUALITY INTERNSHIP**

(1,9) **4**  
 A work experience training session designated to provide practical application of knowledge and skills in water quality technology. Prerequisite: Permission of instructor.

**RT286 LIMNOLOGICAL TECHNIQUES**  
(3,3) 4  
A course designed to provide training in hydrographic methods, sampling techniques and aquatic surveys. Prerequisite: Permission of instructor.

**RT287 INDUSTRIAL WASTEWATER TREATMENT**  
(3,0) 3  
This course will give the students a background in the workings of a wastewater plant and preparation to spend the needed hours for the internship in this program.

## **STUDENT SERVICES**

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**SA090 DEVELOPMENTAL READING I**  
(2,2) 3  
A combination of lectures, activities, and labs provide information and experiences needed to help eliminate inefficient reading habits and develop better reading skills. Emphasis is placed on reading/study strategies, comprehension, reading rate/flexibility, vocabulary, and concentration and memory improvement. Labs are individualized to accommodate the student's needs based on assessment tests. This course is required of those students who score below the reading proficiency level on the college placement test.

**SA091 DEVELOPMENTAL READING II**  
(2,2) 3  
This course is a sequel to SA090 for those students who need additional work to meet the minimal reading proficiency requirement. Greater emphasis will be given to the application and practice of critical reading/thinking skills, textbook reading strategies, vocabulary in the disciplines, and comprehension. Individualized labs will be based on personal needs. Prerequisite: SA090.

**SA100 HOW TO SUCCEED IN COLLEGE**  
(1.5,0) 1  
A general overview of the importance attitude and motivation play toward academic success. Help students understand L.S.U. programs, policies, and procedures. Focus on the various study skills that can help students improve upon their note-taking, preparing for and taking tests, time management, memory, and reading skills. The course consists of lectures, discussions, and quizzes.

**SA105 DEVELOPMENT OF READING ABILITIES**  
(1,1) 1  
Lectures, discussion, activities, and labs provide students with the information and experiences needed to develop reading-rate flexibility, vocabulary skills, critical reading/thinking skills for reading in the context areas, and concentration and memory improvement. Labs are individualized to fit each student's needs, as determined by a reading test given at the beginning of the semester.

**SA125 CAREER PLANNING AND DECISION MAKING**  
(0,1.5) 1  
Expanding awareness of personal strength and career options, this course will help students make realistic decisions relating to planning and implementation of academic and life career goals. Follows a student self-directed framework utilizing video-tapes and career/self-exploration to complete assignments. Prerequisite: student must be fully admitted for enrollment at L.S.S.U. and currently enrolled in six (6) credits.

**SA150 PERSONAL GROWTH SEMINAR**  
(0,1.5) 1  
A seminar to help students make the transition to university life, communicate effectively on an interpersonal level, strengthen self-concept, and build positive relationships. Course content addresses the personal-social, educational and vocational aspects of individual development.

**SA205 GROUP INTERACTIONS**  
(3,0) 3  
This course is designed for the first year resident advisors to develop a better understanding of self and others, particularly in regard to group responsibilities. There will be a three-day Pre-Fall Orientation Program. Group activities will be aimed at developing cohesiveness. Curriculum will increase awareness of group processes and interaction skills including: leadership, referral, conflict resolution, assertiveness, crisis intervention, programming, empathy and active listening. Prerequisite: for first year resident advisors only.

## **SPEECH**

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**SD101 FUNDAMENTALS OF SPEECH COMMUNICATION**

(3,0) 3  
A study of communication theory as it relates to the oral sender and receiver in interpersonal, dyadic, small group and public speaking situations. Application will be in perceptual analysis, dyadic encounters, small group problem-solving and discussion, and public speaking situations.

**SD161 PROBLEMS IN SPEECH/DRAMA**

(1-3,0) 1-3  
Practical problems in speech or theatre. Requires participation in Forensics, Debate, Reader's Theatre or Theatre. May be repeated for a maximum of three credits. Prerequisite: SD101 or permission of instructor.

**SD201 SMALL GROUP COMMUNICATION**

(3,0) 3  
Analysis of verbal communication in small groups as related to information processing, problem solving, agenda establishment, decision making, and policy formation. Prerequisite: SD101.

**SD202 INFORMATIVE SPEAKING**

(3,0) 3  
Development of effective informative discourse in theory and practice. The preparation and use of audience analysis, organizational structures and visual aids will be applied to descriptive, conceptual, and expository situations. Prerequisite: SD101.

**SD251 HISTORY OF DRAMA & THEATRE I**

(3,0) 3  
The study of the historical and esthetic drama and theatre from the Greek period to the European Renaissance. Counts as Humanities for General Education requirement. Prerequisite: EN110.

**SD252 HISTORY OF DRAMA & THEATRE II**

(3,0) 3  
The study of the historical and esthetic drama and theatre from the Renaissance to current theatre and drama. Counts as Humanities for General Education requirement. Prerequisite: EN110.

**SD302 PERSUASION AND ARGUMENTATION**

(3,0) 3  
The development of persuasive oral discourse which emphasizes audience analysis and adaptation, organization, reasoning, and debate. Exercises in individual and team debates are included. Prerequisite: SD101.

**SD307 CLASSICAL/CONTEMPORARY RHETORIC**

(3,0) 3  
A study of the development of rhetoric beginning with the Greeks and continuing to the present. An emphasis will be placed on the influences of past rhetoric to current theory. Prerequisite: SD101 or permission of instructor.

**SD308 COMMUNICATION THEORY**

(3,0) 3  
A study of the sources, dimensions and applications of contemporary communication theory, including the impact of mass communication in modern society. Prerequisite: SD101 or permission of instructor.

**SD309 SPEECH AND DRAMA PRODUCTIONS**

(3,0) 3  
Practical problems in the development and production of dramatic works, Forensics workshops, tournaments, and festivals. Prerequisite: SD101 and permission of instructor.

**SD320 PUBLIC RELATIONS**

(4,0) 4  
Public relations theory and practice will form the two emphases of the course. Theory will be explored and discussed as foundation for the application of public relations concepts and strategies. Students will be responsible for working with organizations in order to develop realistic PR campaigns which reflect the awareness of the significant structures and responsibilities involved in a professional approach to public relations. Prerequisite: SD101 or permission of instructor.

**SD325 ORGANIZATIONAL COMMUNICATIONS**

(3,0) 3  
Focus on oral communication as it impacts on and permits coordination among people and thus allows for organized behavior. Focus on business and organizational contexts for interpersonal transactions. Participant involvement in simulation designed to generate insights into the elements involved in coordinated and competitive organizational communication. Selected topics for theory and practice: interpersonal transactions, communication rules, conflict management, negotiations, trust, power, and influence. Prerequisite: SD101 or permission of instructor.



# SOCIOLOGY

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

## SO101 INTRODUCTION TO SOCIOLOGY (3,0) 3

An introduction to the basic concepts of sociology. Explanation of human behavior which emphasizes human groups, institutions, social change, social forces.

## SO102 SOCIAL PROBLEMS (4,0) 4

An introductory course providing data and theory for a variety of contemporary social problems such as poverty, unemployment, teenage pregnancy, inequality, housing shortages, violence, and pollution.

## SO113 SOCIOLOGY OF THE AMERICAN FAMILY (3,0) 3

A study of the development and change of the American family since 1890. This study will explore the impact of urbanization, industrialization, increased mobility, extended education, and the changing status of women on the American family.

## SO201 SOCIAL RESEARCH AND STATISTICS (4,0) 4

The student will be required to design four types of research projects: experiment, survey, field research, unobtrusive research. The social foundation of statistical inference is discussed and elementary statistical concepts are introduced through numerical problems: z scores, t-test, chi square, correlation, ANOVA, etc. Prerequisite: Fulfillment of mathematics competency graduation requirement.

## SO213 INTRODUCTION TO ANTHROPOLOGY (3,0) 3

A study of the evolution of humankind and the evolution and development of culture and society. Prerequisite: One introductory sociology course.

## SO214 CRIMINOLOGY (3,0) 3

A study of the nature and causes of crime and the results of various attempts to reduce crime.

## SO225 NATIVE CULTURES OF NORTH AMERICA (3,0) 3

A study of the Native American-Indian and Inuit-cultures of North America from earliest times to the present with emphasis on contrasting patterns of cultures.

## SO226 RACES AND MINORITIES (3,0) 3

Study of various social and ethnic minorities in the United States with an emphasis on Black-White relations. Competition, conflict, and prejudice as they influence social and ethnic minority group relations. Social movements and their effects on majority minority relations. Prerequisite: Sophomore standing.

## SO227 POPULATION (3,0) 3

Study of the basic problem of the world's population increase and distribution in relation to natural resources and standards of living.

## SO238 SOCIAL PSYCHOLOGY (3,0) 3

Relation of the individual to his social environment with special reference to group processes and interaction, social structure, and language.

## SO242 SOCIOLOGY OF SEX (3,0) 3

Socio-psychological study of the impact of human sexuality upon human behavior.

## SO301 DEVELOPMENT OF SOCIOLOGICAL THEORY (3,0) 3

A critical analysis of the contributions to sociological theory by Comte, Spencer, Marx, Durkheim, Pareto, Weber, and others.

## SO313 WORK AND ORGANIZATION (3,0) 3

Development and structure of the workplace; includes contemporary trends in formal organization and management styles, changing career patterns, sources of conflict, and some cross-cultural comparisons. Prerequisite: Junior standing or three hours of sociology.

## SO314 SOCIAL CHANGE (3,0) 3

Study of trends in industrial societies, theories explaining these changes, and the role of social movements in social change; focusing primarily on industrialized societies with some discussion of developing countries. Prerequisite: Junior standing or three hours of sociology.

**SO321 SOCIOLOGY OF WOMEN** 3  
(3,0)  
This analysis of the roles and status of women in contemporary American society covers social structure, social psychology, and social movements; also includes some cross-cultural comparisons.

**SO325 SOCIAL STRATIFICATION** 3  
(3,0)  
Class, caste, status, power, general concept of stratification, and consequences of stratification will be related to social institutions.

**SO326 THE SOCIOLOGY OF AGING AND THE AGED** 3  
(3,0)  
Examines aging and the aged in American society from the sociological perspective.

**SO327 THE SOCIOLOGY OF DYING AND DEATH** 3  
(3,0)  
Sociological examination of dying and death.

**SO338 DEVIANCE** 3  
(3,0)  
Analysis of causes and consequences of deviance and development of deviant subcultures: examination of various societal responses to control deviance and their effectiveness. Included are alcoholism, crime, mental illness and homosexuality among others. Prerequisite: Junior standing or three hours of sociology and/or human services.

**SO339 CULTURE AND PERSONALITY** 3  
(3,0)  
Analysis of the role of culture in shaping personality using both contemporary industrial society and also cross-culture material. Prerequisite: Three hours of sociology or junior standing.

**SO341 SOCIOLOGY OF ADDICTION** 3  
(3,0)  
Study of the nature of chemical dependence with emphasis on individual, social, and cultural variations of drug effects. Relationship of chemical use to the family system. Comparisons between chemical and non-chemical dependent behaviors. Prerequisite: Six hours of sociology or permission of instructor.

**SO344 SOCIAL WELFARE SYSTEMS** 3  
(3,0)  
Development of social welfare systems including changing programs and philosophy and interrelationships with economic, political, and family institutions; cross-cultural comparisons; current issues and problems in social welfare. Prerequisites: Junior standing or three credits in sociology.

**SO401 RESEARCH SEMINAR I** 3  
(3,0)  
A research topic is developed by the student using library resources. Prerequisites: Senior standing and completion of SO201 and SO301, or permission of instructor.

**SO402 RESEARCH SEMINAR II** 3  
(3,0)  
The student conducts the research project initiated in SO401 and analyzes the results. Prerequisite: SO401.

**SO490 INDEPENDENT RESEARCH TOPICS IN SOCIOLOGY** 1-4  
(1-4)  
This may take the form of either a research project or a program of directed reading on a specific topic. One to four credits over a period of one or two semesters may be granted according to the nature of the student's project. Prerequisites: SO402. May be repeated to a total of 6 credits.

## SPANISH

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Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**SP161 FIRST YEAR SPANISH I** 4  
(4,1)  
Introduction to basic Spanish grammar and vocabulary, designed to acquaint the student with the essentials of oral and written Spanish.

**SP162 FIRST YEAR SPANISH II** 4  
(4,1)  
Further study of Spanish grammar and vocabulary; emphasis on oral communication; reading of various materials in Spanish with the aim of understanding the meaning, enlarging the vocabulary and using Spanish for communication. Prerequisite: SP161 or equivalent.

**SP165 SPANISH FOR PUBLIC SAFETY** 4  
(4,1)  
A continuation of SP161, with emphasis on vocabulary relevant to work in criminal justice. Prerequisite: SP161 or equivalent.

**SP261 SECOND YEAR SPANISH I** 4  
(4,1)  
Intensive review of grammar and further vocabulary development. Emphasis on composition and conversation based on the reading of Spanish texts and newspapers. Prerequisite: SP162 or equivalent.

**SP262 SECOND YEAR SPANISH II**  
(4,1) 4  
Conducted as much as possible in Spanish with the primary aim of dealing fluently with basic conversation situations. Prerequisite: SP261 or equivalent.

**SP305 SPANISH LITERATURE IN TRANSLATION I**  
(3,0) 3  
From the Medieval period through the works of Miguel de Cervantes. The course is taught in English and the readings are in English. This course counts as Humanities for General Education requirement.

**SP306 SPANISH LITERATURE IN TRANSLATION II**  
(3,0) 3  
Representative 18th, 19th and 20th century Spanish works and some representative Latin American works. The course is taught in English and the readings are in English. This course counts as Humanities for General Education requirement.

## **CONSTRUCTION TECHNOLOGY**

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**TC101 CONSTRUCTION I**  
(3,0) 3  
An overview and analysis of properties, processing and applications of conventional construction materials. Wood, concrete, masonry, ferrous and nonferrous metals, glass, plastics and other materials are examined in detail. The application of building code as they pertain to these materials will also be presented.

**TC102 CONSTRUCTION II**  
(3,0) 3  
Concepts in construction blueprint reading and the development of skills in reading construction drawings. The correlation of building codes and specifications to the production of working drawings. Prerequisite: TC101.

**TC103 SURVEYING**  
(2,4) 3  
Concepts and operation of distance and angular measurement. Use of transit and level, land description, traverse, construction and earth work calculations.

**TC104 INDUSTRIAL SAFETY AND SMALL ENGINE MECHANICS**  
(2,2) 3  
Study of occupational safety, occupational health, and industrial hazard control. Focus on basic principles, concepts, and techniques proven useful in reducing industrial injuries and occupational diseases (one-half semester). Practical study of the operation and repair of small engines (one-half semester).

## **TEACHER EDUCATION**

Special topics courses will be available as need and interest develop. Consult the semester Course Schedule for these.

**TE150 REFLECTIONS ON LEARNING AND TEACHING**  
(3,0) 3  
Students will examine their experiences and assumptions as learners and teachers, contrasting them with psychological, sociological, and anthropological theories about learning in and out of school.

**TE250 STUDENT DIVERSITY AND SCHOOLS**  
(3,0) 3  
A study of the forms of diversity found among students and how these differences affect participation in schools. Schools are studied in terms of their goals, impact on students, and as workplaces for teachers. Course activities include school visits and discussions of classroom teaching. Prerequisite: Sophomore standing or permission of instructor.

## **NOTES**

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# DISTINGUISHED TEACHERS

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Nominations for the Distinguished Teacher Award come from across the entire campus of Lake Superior State University. Selection of the Distinguished Teacher, however, is done by a committee, composed of graduating seniors with the highest LSSU grade-point averages in their class and faculty who have previously received the Distinguished Teacher Award. The following have been recipients of the Distinguished Teacher Award:

1957-58	Raymond Chelberg
1963-64	C. Ernest Kemp
1971-72	Margaret Howe
1972-73	David Blair
1973-74	Gerald Samson
1974-75	Thomas Mickewich
1975-76	Arthur Duwe
1976-77	Thomas Kelly
1977-78	Larry Schneider
1978-79	Steven Person
1979-80	Bernard Arbic
1980-81	Edeltraute Vialpando
1981-82	Timothy Sawyer
1982-83	Paul Wilson
1983-84	Michael Flynn
1984-85	Margaret Malmberg
1985-86	Robert Money
1986-87	Rosa Kavanaugh
1987-88	Dimitri Diliiani
1988-89	David Behmer
1989-90	Susan Ratwik
1990-91	William Haag
1991-92	James Madden
1992-93	Sally Childs
1993-94	Carol Campagna

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# FACULTY

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**Adams, M. L.**, assoc. prof. of business admin. and quantitative methods (1984, 1991); B.A., Lawrence University, 1959; M.S., University of Calif. at Berkeley, 1965; Ph.D., Michigan State University, 1981.

**Allan, Thomas A.**, asst. prof. of biology/chemistry, (1990); B.A., Central Michigan University, 1973; M.A. Michigan Technological University, 1978; Ph.D., University of Maine, 1984.

**Andary, Carol**, assoc. prof. and coordinator of legal assistant studies, (1984, 1993); B.S., Western Michigan University, 1977; Juris Doctor, Wayne State University, 1980.

**Anderson, Colleen**, asst. prof. of English, (1992); B.A., State University of New York at Cortland, 1978; M.A. Catholic University of America, 1988; Ph.D. Catholic University of America, 1992.

**Anleitner, Donna**, asst. prof. of nursing (1985); B.S.N., Indiana State University, 1971; M.S.N., Northern Illinois State University, 1976.

**Arbic, Bernard J.**, prof. of mathematics (1967, 1986); B.S., Massachusetts Institute of Technology, 1962; M.A., Bowdoin, 1967; Ph.D., University of Wyoming, 1972.

**Ayers, Jeffrey M.**, asst. prof. of political science (1994); B.A., University of Virginia, 1987; M.A., University of Wisconsin, 1989; Ph.D., University of Wisconsin, 1994.

**Behmer, David J.**, prof. of biology (1967, 1981); B.S., Wisconsin

State College, 1963; M.S., 1965; Ph.D., Iowa State University, 1966.

**Blashill, James**, asst. prof. and coordinator of criminal justice and coordinator of Institute for Public Safety (1975); chair of the department of criminal justice and fire science (1975) (1993); B.S., Wayne State University, 1973; M.S., Michigan State University, 1976.

**Bloch, Joel G.**, asst. prof. of composition, (1993); B.S. 1991, New York University; M.A. 1973, York University; Ph.D. 1980, Carnegie Mellon University.

**Boger, Thomas**, assoc. prof. of computer science, (1981, 1991); B.S., 1973; M.S., Michigan State University, 1974.

**Bolio, Lawrence A.**, assoc. prof. of mechanical engineering technology (1984); B.S., Michigan Technological University, 1966 and 1975; M.A., Northern Michigan University, 1979.

**Brown, Lewis M.**, prof. and coordinator of geology (1979, 1989), chair of of the department of geology and physics (1993); B.A., Cornell College, 1965; M.S., University of Iowa, 1967; Ph.D., University of New Mexico, 1973.

**Brown Patrick**, department head Biology and Chemistry, (1990 - 1994); assoc. prof. of biology, (1994); B.S., Central Michigan University, 1974; M.S., Iowa State University, 1977; Ph.D., University of Missouri, 1981.

**Campagna, Carol A.**, assoc. prof. of nursing (1984); B.S.N., D'Youville College, 1964; M.S.N., University of Colorado, 1969.

**Castner, David G.**, assoc. prof. counselor, (1978, 1979, 1993); B.S., University of Wisconsin-Stout, 1972; M.S., 1974.

**Chejlava, Michael**, asst. prof. of chemistry, (1993); B.S., 1975, Harvey Mudd College; Ph.D., 1982, Kansas State University, Ph.D..

**Childs, Sally A.**, prof. of physical education and recreation and coordinator of recreation studies (1981, 1987); chair of the department of recreation studies and exercise sciences (1994); B.S., Eastern Michigan University, 1971; M.S., Northern Michigan University, 1978; Ph.D., Ohio State University, 1986.

**Connaughton, Carole**, prof. of nursing and coordinator of B.S.N. program (1984); B.S.N., Saint Mary's College, Notre Dame, 1956; M.S.N., 1967; Ph.D., Indiana University, 1974.

**Crandall, Richard C.**, prof. of sociology (1969, 1987); B.S., 1967; M.A., Central Michigan University, 1969; Ph.D., University of Michigan, 1974.

**Cullen, John C.**, prof. of Spanish and English (1967, 1985); B.A., 1963; M.A., Michigan State University, 1965; Ph.D., Interamerican University, 1973.

**Delaney-Lehman, Maureen**, asst. prof./ librarian (1989, 1992); B.M., Western Michigan University, 1975; M.S., Michigan State University, 1980; M.L.S., University of Kentucky, 1988.

**Devaprasad, James**, asst. prof. and coordinator of automated systems engineering technology (1986, 1991); chair of the department of automated systems manufacturing technology (1994); B.E., University of Madras, India, 1983; M.S., University of New Mexico, 1986.

**Dobbertin, Gerald**, asst. prof. of sociology (1972, 1982); B.S., Wayne State University, 1967; M.A., Central Michigan Univer-

sity, 1973; Ph.D., Michigan State University, 1981.

**Dobbertin, Leslie**, assoc. prof. of sociology (1974, 1982, 1991); chair of the department of sociology (1994); B.A., Central Michigan University, 1965; M.A., Iowa State University, 1972; Ph.D., Michigan State University, 1989.

**Dorrity, Daniel T.**, prof. of his-tory (1970, 1990); chair of the department of humanities and history (1994); B.A., 1966; M.A., Wayne State University, 1967; Ph.D., University of Michigan, 1973.

**Dowd, Donner**, assoc. prof. of business (1982); B.S., Wheaton College, 1960; M.S., Purdue University, 1966.

**Duesing, Paul**, assoc. prof. and of mechanical engineering technology and coordinator of Cooperative Education (1984, 1990); chair of the department of mechanical engineering technology (1994); B.S.M.E., 1971; M.S.M.E., University of Michigan, 1973.

**Duesing, Sherilyn R.**, instr. of developmental mathematics 1994; B.S., Central Michigan University, M.A.,

**Erkkila, John**, assoc. prof. of economics, and coordinator of Recruitment and Transfer (1990); chair of the department of business administration (1994); B.S., Lake Superior State University, 1970; M.A., University of Windsor, 1971; Ph.D., The University of Western Ontario, 1987.

**Evans, Barbara I.**, (1994); asst. prof. of biology; B.S., University of Ottawa, Canada, 1980; Ph.D., University of Kansas, 1986.

**Foley, Elizabeth A.**, asst. prof. of criminal justice and coordi-nator of corrections (1981, 1987); B.A., Madonna College, 1969; M.A., Northern Michigan University, 1982.

- Furr, Richard S.**, assoc. prof. of biology (1971, 1981); A.B., Pfeiffer College, 1963; M.S., North Carolina State University, 1966; Ph.D., University of Tennessee, 1971.
- Gaertner, Georgegeen P.**, assoc. prof. of English and coordinator of Writing in the Disciplines (1965, 1974); B.A., Michigan State University, 1959; M.A., University of Michigan, 1963.
- Gaertner, Robert**, assoc. prof. of finance (1965, 1989); B.B.A., University of Notre Dame, 1964; M.B.A., Michigan State University, 1965.
- Gardiner, R. Lee**, asst. prof. of exercise science (1988, 1992); B.S., Grand Valley State University, 1979; M.S., Northern Michigan University, 1988.
- Gerrish, Steven J.**, asst. prof. of mechanical engineering technology (1981, 1988); B.S., Lake Superior State College, 1978; M.A., Michigan State University, 1981.
- Godby, Marjorie B.**, asst. prof./counselor (1986, 1992); B.S., University of Minnesota, 1962; M.A., University of Michigan, 1966.
- Grounds, Patrick M.**, asst. prof. and coordinator of automated systems engineering technology (1986, 1989); department head of engineering technology, (1989-90); B.S., 1984; M.A., University of Michigan, 1986.
- Gutowska, Janina**, asst. prof. of mathematics (1988); M.S. University of Lodz, Poland, 1966.
- Gutowski, Mieczyslaw**, assoc. prof. of mathematics (1984, 1990); M.S., University of Lodz, 1965; Ph.D., University of Gdansk, 1973.
- Haag, William**, prof. of biochemistry (1984); B.S., Loras College, 1961; M.S., 1965; Ph.D., University of Nebraska, 1971.
- Halsey, Alice**, assoc. prof. of nursing (1973, 1983); B.S.N., University of Michigan, 1962; M.S.N., Wayne State University, 1977.
- Harrison, Galen H.**, asst. prof. of mathematics (1963, 1967); B.S., 1960; M.A., Michigan Technological University, 1963.
- Hellow, Elizabeth**, asst. prof. of nursing (1979, 1985); B.S.N., Lake Superior State University, 1977; M.S.N., Wayne State University, 1986.
- Heyns, Terry L.**, prof. of fire science (1989); A.B., Saint Louis University, 1965; M.A., University of Kansas, 1967; Ph.D., Kansas State University, 1989.
- Holmes, Dennis K.**, asst. prof. of criminal justice (1992); B.G.S. Oakland University, 1978, M.P.A. Oakland University, 1982.
- Hudson, John S.**, assoc. prof. of accounting (1970, 1986); B.A., 1963; M.A., Michigan State University, 1965; M.B.A., Western Michigan University, 1967.
- Jennings, Richard P.**, prof. of speech and coordinator of Reader's Theater, (1970, 1990); B.A., University of Michigan, 1950; B.D., Virginia Theological Seminary, 1953; M.A., Central Michigan University, 1970.
- Johnson, Gary R.**, prof. of political science (1978, 1990); chair of the department of political sciences (1994); B.A., Augustana College, 1972; M.A., 1975; Ph.D., University of Cincinnati, 1979.
- Jones, Charles W.**, prof. of chemistry (1970, 1981); A.B., Western State College of Colorado, 1954; M.S., 1957; Ph.D., Oklahoma State University, 1973.
- June, Mary M.**, asst. prof./librarian (1988, 1993); B.A., 1978; M.L.S., University of Wisconsin-Milwaukee, 1980.

**Kabke, Lynn**, instr. of health sciences; (1991); B.S.N., Lake Superior State University, 1990; M.S.N., Northern Michigan University, 1991.

**Kelso, Paul R.**, asst. prof. of developmental math, (1993); B.S., University of Minnesota 1986; M.A., University of Minnesota 1990; Ph.D., 1993.

**Kornmueller, Hellmuth**, prof. of humanities (1968, 1983); Ph.B., 1951; Ph.L., 1952; Ph.D., Salzburg University, Austria, 1953.

**Lehman, John W.**, prof. of chemistry (1966, 1982); chair of the department of chemistry and environmental sciences (1993); B.S., McPherson College, 1960; Ph.D., University of Colorado, 1969.

**Lewis, Diane K.**, asst. prof. of nursing (1993); B.S.N., Depauw University, 1984; M.A., Wright State University, 1993.

**Linderoth, Leon W.**, prof. of English (1968); A.B., 1958; B.S., Central Michigan University, 1958; M.A., 1960; Ph.D., Florida State University, 1966.

**Lundin, Jean M.**, assoc. prof. of business (1991); B.S., University of Wisconsin, 1975; M.B.A., Roosevelt University, 1977; Ph.D., University of Wisconsin, 1991.

**Madden, James**, assoc. prof. of criminal justice (1984, 1989); B.S., William Carey College, 1971; M.S., University of Southern Mississippi, 1975.

**Madl, John T.**, assoc. prof. of mechanical engineering technology (1967, 1981); B.S.M.E., 1965, M.S.M.E., Michigan Technological University, 1967.

**MalMBERG Margaret A.**, assoc. prof. of psychology (1971, 1989); department head of social sciences (1989-1994); chair of the department of psychology (1993); B.S., Muskingum College, 1964; M.A., 1970; Ph.D., Texas Christian University, 1971.

**Marinoni, Ann B.**, prof. of business and coordinator of hospitality management (1976, 1980, 1993); B.S., Lake Superior State University, 1975; M.S., Central Michigan University, 1977; Michigan State University 1992.

**McCaffery, Jean**, inst. of reading (1994); B.A., University of Michigan, 1967; M.A., Central Michigan University, 1981.

**McDonald, David M.**, assoc. prof. and coordinator of electrical engineering technology (1973, 1986); chair of the department of electrical engineering technology (1994); B.S.E.E., 1969; M.S.E.E., Michigan Technological University, 1970.

**McGowan, Laura C.**, asst. prof. of speech and coordinator of forensics and debate (1990, 1993); B.A., Albion College, 1987; M.A., Central Michigan University, 1990.

**McPherson, Debra**, asst. prof. of physical education and recreation, (1976, 1983); B.S., 1974; M.S., Northern Michigan University, 1982.

**Meehan, Mary Jo**, asst. prof./counselor (1983, 1987); M.A., Northern Michigan University, 1981.

**Meiser, Charles W.**, assoc. prof. of quantitative economics and coordinator of business data processing (1968, 1982); B.S.E.E., 1963; M.S., Purdue University, 1966.

**Merkel, Dennis**, prof. of biology (1988, 1993); B.S., 1977; M.S. State University of New York-Syracuse, 1983; Ph.D., Michigan State University, 1988.

**Mickewich, Thomas**, prof. of mathematics (1967, 1988); B.A., 1964; M.A., University of Maine, 1967.

**Mohamad, S. Qatu**, assoc. prof. of engineering technology (1994); B.S., Yarmouk University, 1985; M.S., Ohio State University, 1986; Yarmouk University, 1989.



- Money, Robert M.**, prof. of history (1969, 1976, 1993); A.B., Northern Michigan University, 1953; M.A., University of Michigan, 1958.
- Moody, James W. T.**, prof. of history (1971, 1992); B.A., Greenville College, 1959; M.A., Michigan State University, 1960.
- Mugavero, Daniel C.**, assoc. prof. of accounting (1976, 1991); B.A., 1966; M.B.A., Michigan State University, 1967.
- Mullin, C. Randall**, prof. of chemistry and physics and coordinator of the planetarium (1969, 1986); B.S., St. Vincent College, 1959; Ph.D., University of Notre Dame, 1964.
- Myton, David R.**, (1993); asst. prof. of analytical chemistry; B.A., George Fox College, 1980; M.S.T., Portland State University, 1988; Ph.D., Portland State University, 1991.
- Neveu, Ruth**, asst. prof./librarian (1984, 1988); B.A., Lake Superior State University, 1977; M. S., University of Michigan, 1984.
- Niemi, Alan D.**, asst. prof. of computer engineering technology (1986); B.S., Lake Superior State University, 1981; M.S.E.E., Illinois Institute of Technology, 1985.
- Person, Steven J.**, prof. of biology (1974, 1989); B.S., 1966; M.S., Iowa State University, 1968; Ph.D., University of Alaska, 1976.
- Pichot, Marcel**, assoc. prof. of French (1989, 1992); B.A., Andrews University, 1967; M.A., Western Michigan University, 1968; Ph.D., University of Michigan, 1975.
- Pike, Ruth Johnston-**, asst. prof. of nursing (1983); B.S.N., Lake Superior State University, 1982; M.S.N., Wayne State University, 1985.
- Pingatore, Diana**, assoc. prof. of English and coordinator of Writing Lab (1988, 1992); chair of the department of English and speech, (1994); B.A., Lake Superior State University, 1977; M.A., 1981; Ph.D., Michigan State University, 1987.
- Qatu, Mohamad**, assoc. prof. of engineering technology (1994); B.S., Yarmouk University, Jordan, 1985; M.S. Ohio State University, 1986; Ph.D., Yarmouk University, Jordan.
- Rackliffe, Gary**, asst. prof. of teacher education (1990, 1992); A.A.S., Ferris State University, 1976; M.A., Central Michigan University, 1977; Ph.D., Michigan State University, 1991.
- Ralph, Paige H.**, asst. prof. of criminal justice (1993); B.S. Lake Superior State University, 1988; M.A., Sam Houston State University, 1989; Ph.D., Sam Houston State University, 1992.
- Ratwik, Susan H.**, prof. of psychology and coordinator of the Center for Social Research (1977, 1990); B.A., University of Minnesota, 1969; M.S., 1975; Ph.D., University of Notre Dame, 1978.
- Roose, John H.**, asst. prof. of wildlife ecology and management (1990); B.S.F., Stephen F. Austin State University, 1982; M.S. 1984; Ph.D., Stephen F. Austin State University, 1989.
- Ryckman, Annette J.**, asst. prof. of marketing (1994); B.S., Eastern Michigan University, 1960; Ed.S., Michigan State University, 1978; Ph.D., 1984;
- Ryckman, Lynn A.**, assoc. prof. of marketing (1992); B.A., Michigan State University, 1977; M.A., Michigan State University, 1978; Ph.D., Michigan State University, 1982.
- Rynberg, Nina Lynn**, instructor/counseling center, (1992); B.A., Central Michigan University, 1969; M.A., Central Michigan University, 1983.
- Saluja, Madan**, prof. of management (1969, 1981); B.A., University of Delhi, 1960; LL.B., 1962;

B.A., MacAlester College, 1964; M.A., 1966; Ph.D., University of Minnesota, 1977.

**Sawyer, Timothy J.**, prof. of psychology (1976, 1989); B.A., Northern Michigan University, 1972; M.A., 1974; Ph.D., University of Nevada, 1976.

**Schirer, Thomas.**, prof. of English (1984, 1987, 1993); B.A., 1971; M.A., University of California, 1976; Ph.D., Friedrich-Alexander University, 1983.

**Schmitgal, Linda**, asst., office administration (1991, 1993); B.S., Lake Superior State University, 1982; M.B.E., Central Michigan University, 1990.

**Schoenemann, Shirley**, asst. prof. and supervisor of child care center (1983, 1990), B.A., Western Michigan University, 1966; M.A. Oakland University, 1986.

**Schwiderson, Keith H.**, asst. prof. of engineering technology and coordinator of drafting design engineering technology (1977, 1985); B.S., Lake Superior State University, 1976; M.S., Northern Michigan University, 1981.

**Shannon, MaryAnne P.**, asst. prof. (1991); B.S.M., University of Michigan, 1975; M.S.M., Wayne State University, 1979.

**Sherman, Karl J.**, assoc. prof. of accounting (1971, 1980); B.S., Northern Michigan University, 1965; M.S., Southern Illinois University, 1967; C.P.A., 1970.

**Smith, Bryce E.**, prof. of biology (1970, 1976); B.S., 1952, M.A., University of Michigan, 1957; Ph.D., University of Wisconsin, 1965.

**Spencer, Lester W.**, asst. prof. of engineering technology (1977, 1983); B.S., Lake Superior State University, 1977; M.S., Northern Michigan University, 1980.

**Stai, Deborah**, asst. prof. of biology/chemistry (1991); B.S., (biology), 1974; B.S., (medical

technology), 1978; M.A., Mankato State University; Ph.D., Union Institution, 1989.

**Stevens, John R.**, assoc. prof. of English (1967, 1983); B.A., 1958; M.A., University of Michigan, 1959.

**Suggitt, Randall G.**, asst. prof. of mathematics (1983, 1988); B.S., Lake Superior State University, 1976; M.A., University of Montana, 1979.

**Susi II, Joseph D.**, instructor/athletic trainer (1992); B.A., Ohio Northern University, 1988; M.S., Indiana University, 1989.

**Terwilliger, Mark G.**, instr. of mathematics and computer science (1990); chair of the department of mathematics (1994); B.S., Lake Superior State University, 1988, M.S., Michigan State University, 1990.

**Thesing, Gary L.**, prof. of mathematics (1971, 1981); department head of Computer/Geology/Mathematics (1971 - 1994); B.A., St. Mary of the Plains College, 1960; M.S., University of Notre Dame, 1964; Ed.D., Oklahoma State University, 1971.

**Toffolo, E. Gary**, prof. of English (1970, 1990); B.S., Northwestern University, 1958; M.A., University of Chicago, 1961.

**Voight, Nancy L.**, assoc. prof. of human services and psychology and coordinator of psychology, sociology, and human services (1988); B.A., Wittenberg University, 1967; M.A., Ball State University, 1971; Ph.D., Michigan State University, 1975.

**Walworth, Maurice**, asst. prof. of engineering technology (1991), B.S.E.E., Michigan Technological University, 1981; M.S.E.E., 1983.

**Weber, Charles L.**, assoc. prof. of electrical engineering technology and coordinator of computer engineering technology (1970, 1980); B.S., 1964; M.S.E.E., Michigan Technological University, 1970.

**Wilkinson, John S.**, prof. of music and coordinator of music and cultural affairs (1976, 1989); B.M.E., 1969; M.M., University of Nebraska, 1972; D.M.A., University of Michigan, 1974.

**Wilson, Paul W.**, prof. of mathematics (1963, 1988); B.S., 1962; M.A., Central Michigan University, 1963.

**Yanni, Stephen R.**, asst. prof. of therapeutic recreation (1987, 1992); B.S., Lake Superior State University, 1986; M.S., Western Illinois University, 1987.

**Zabelka, Richard J.**, prof. of physics (1966, 1984); B.S., Michigan Technological University, 1956; M.S., University of California (LA), 1960; Ph.D., Purdue University, 1964.

#### EMERITI FACULTY

**Anderson, Melvin L.**, prof. of chemistry (1969-1993); B.S., 1953; M.S., Michigan Technological University, 1955; Ph.D., Michigan State University, 1965.

**Anderson, Roland A.**, assoc. prof. of office administration (1969-1986); B.A., Wisconsin State University-Whitewater, 1953; M.A., Northern Colorado University - Greeley, 1961.

**Bruce, Russell D.**, prof. of physical education and recreation (1976 - 1987); B.A., Cornell College, 1953; M.A., University of Michigan, 1956; Ph.D., University of Wisconsin, 1966.

**Carlson, Arthur F.**, assoc. prof. of physics (1947-1970); B.S., University of Minnesota, 1935. (deceased)

**Carlson, Delphine**, assoc. prof. of mathematics (1947-1969); B.A., 1934; M.A., University of Michigan, 1938.

**Cole, Wallace**, assoc. prof. of mathematics (1955-1969); B.S., 1926; M.A., University of Wisconsin, 1928.

**Cooper, Ronald R.**, prof. of physical education (1956-1986); director of intercollegiate athletics and James Norris Physical Education Center (1976-1986); B.S., 1951; M.A., Central Michigan University, 1958.

**Curtis, Robert W.**, prof. of engineering technology (1955-1986); B.S.M.E., Michigan Technological University, 1948; B.S.Ed., Northern Michigan University, 1950; M.A., University of Michigan, 1954. (deceased)

**Dahlman, Marvin**, assoc. prof. of mechanical engineering technology (1952-1985); B.S., 1947; M.S., University of Minnesota, 1952.

**Duwe, Arthur E.**, prof. of biological science (1968-1991); B.S., Alma College, 1949; M.S., Ohio State University, 1950; Ph.D., 1953. (deceased)

**Flynn, Michael**, prof. of English (1961-1986); B.A., Central Michigan University, 1954; M.A., Northern Michigan University, 1964.

**Francisco, Wayne H.**, asst. prof. of criminal justice (1973-1983); B.S., Eastern Michigan University, 1950; M.A., 1967; M.S., Michigan State University, 1971.

**Gleason, Gale R.**, prof. of biology and department head of biology and chemistry (1965-1986); B.S., Central Michigan University, 1950; M.S., 1951; Ph.D., Michigan State University, 1960.

**Gleason, Gilbert J.**, prof. of biology (1961-1988); B.S., 1958; M.A., Central Michigan University, 1960.

**Harris, Earle B.**, assoc. prof. of English (1976-1987); A.B., University of Michigan, 1946; B.D., 1947; Th.M., Princeton Theological Seminary, 1964.

**Hatfield, Kenneth G.**, instr. of geology (1983-1993); B.S., Michigan Technological University, 1950.

**Howe, Margaret**, assoc. prof. of humanities (1969-1981); A.B., Northwestern University, 1932; M.A., Northern Michigan University, 1965.

**Jemison, Eugene F.**, assoc. prof. of humanities (1969-1986); B.A., Washburn University, 1946; M.F.A., Kansas City Art Institute, 1948.

**Kelly, Thomas M.**, prof. of sociology (1971-1992); B.A., St. Mary of the Lake University, 1952; S.T.L., Gregorian University, Rome, 1956; M.A., University of Notre Dame, 1964; M.Ed., Loyola University, 1979.

**Kemp, C. Ernest**, assoc. prof. of geology (1944-1980); dean emeritus of Lake Superior State University; B.S., Michigan Technological University, 1949.

**Marken, Marzale**, assoc. prof. of engineering technology (1955-1984); B.S., 1948; M.A., University of Minnesota, 1956.

**Matheson, John M.**, prof. of journalism and secretary, Board of Control (1969-1984); B.A., Michigan State University, 1948; M.A., 1965; Ph.D., Southern Illinois University, 1967.

**McCabe, John C. III**, prof. of English (1970-1987); Ph.B., University of Detroit, 1947; M.F.A., Fordham University, 1948; Ph.D., Shakespeare Institute, University of Birmingham, England, 1954.

**Poisson, Joseph A.**, assoc. prof. of physical education (1963-1976); S.S., Northern Michigan University, 1940; M.A., University of Michigan, 1957.

**Reilly, Raymond, E.**, prof. of Michigan State University, 1951; M.S., 1963; Ph.D., 1970.

**Sampson, Gerald**, prof. of mathematics (1966-1990); B.A., University of Michigan, 1952; M.A., Texas A & M University,

1955; M.S. Texas A & M University, 1966.

**Sawczak, George J.**, asst. prof. of English (1965-1982); B.A., Alliance, 1952; M.A., Kent State University, 1954.

**Shouldice, Kenneth J.**, prof. of business administration and president (1965-1982); B.S., Marquette, 1949; M.S., North-western, 1951; Ph.D., Iowa, 1969.

**Smith, Bernard M.**, prof. of behavioral science (1966-1980); B.A., 1947; M.A., University of Louisville, 1949; M.A., University of Kentucky, 1956; Ph.D., Iowa, 1960.

**Stough, Bessie**, assoc. prof. of mathematics (1947-1963); B.A., 1923; M.A., University of Michigan, 1929.

**Truckey, John**, assoc. prof. of counseling (1966-1986); B.S., 1958; M.A., Northern Michigan University, 1964.

**Vialpando, Edeltraute**, prof. of foreign languages (1967-1988); Ph.D., Charles University, Prague, Czechoslovakia, 1944.

**Ward, Louis R.**, prof. of English (1961-1981); B.A., 1939; M.A., University of Colorado, 1940; Ph.D., Purdue University, 1959.

**Wentz, Elena**, asst. prof. of nursing (1971-1993); B.A., Simpson College; M.S.N., Wayne State University, 1977.

**Youngs, Stephen P.**, prof. and psychometrist (1947-1968); B.S., Northern Michigan University, 1930; M.Ed., Colorado, 1941. (deceased)

#### ACADEMIC DEANS

**ARTS, LETTERS and SOCIAL SCIENCES:** **Conboy, Richard T.**; prof. of political science and assoc. coor-dinator for policy research/ Cen-ter for Social Research (1988, 1993); dean,

(1994); B.A., 1967; M.P.A., University of Dayton, 1969; Ph.D., The American University, 1984.

**SCIENCE and NATURAL RESOURCES:** Rogers, Karel, dean, (1994); B.S., Michigan State University, 1969; M.S., Michigan State University, 1972; Ph.D. Michigan State University, 1975.

**BUSINESS:**

Harger, Bruce T., prof. of economics (1967, 1985); department head of business/ economics (1986 - 1993); dean, (1993); B.A., Michigan State University, 1966; M.A., Michigan State University, 1967; Ph.D., Michigan State University, 1991.

**ENGINEERING TECHNOLOGY and MATHEMATICS:**

Adams, Raymond L., assoc. prof. of mechanical engineering technology, (1986, 1993); acting department head of engineering technology, 1993; dean (1993); B.S., 1975; dean (1993) M.S., Nicholls State Thibodaux, Louisiana, 1978.

**HEALTH and HUMAN SERVICES:**

Markstrom, Mae E., assoc. prof. (1968, 1981); department head of health sciences (1985 - 1993); dean, (1993); B.S., Lake Superior State University, 1970; M.S.N., Wayne State University, 1977; Ph.D., Michigan State University, 1990.

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## *NOTES*

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# SCHOOL SECRETARIES

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**ARTS, LETTERS AND SOCIAL  
SCIENCES:**

Sheri Davie  
Audrey Morley

**BUSINESS:**

Laurine Kelly

**ENGINEERING TECHNOLOGY  
AND MATHEMATICS:**

Cynthia Hopper  
Judith Jones

**HEALTH AND HUMAN  
SERVICES:**

Donna Payment  
Jeanne Thompson

**SCIENCE AND NATURAL  
RESOURCES:**

Cynthia Hopper  
Kathy Person

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## *NOTES*

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# ADMINISTRATIVE STAFF

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**Gerald J. Albert**, director, Hospitality Institute, (1992); M.A., Eastern Michigan University, 1983.

**Katherine A. Albrough**, accountant (1989); B.S., Lake Superior State University, 1989.

**Francis I. Atkinson**, manager Walker Cisler Center (1981); B.S., University of Detroit, 1956.

**Susan Autore**, student health center nurse (1990); assoc., Lake Superior State College, 1981.

**Elsi M. Baccari**, D.O., medical director of student health center (1993).

**M. Debra Barrett**, typist/clerk (1994), student health center. Lake Superior State University, (ex-1990).

**Judy A. Bawks**, secretary, Politics & the Life Sciences, (1991); B.A., Lake Superior State College, 1976.

**Andra L. Bedard**, office records aide, upward bound (1991); assoc., Lake Superior State University, 1991.

**David A. Berry**, computer operator, (1991); B.S., Lake Superior State University, 1990.

**Paul A. Besteman**, assistant director physical plant (1973, 1987); Lake Superior State College, (ex-1973).

**Susan M. Branstner**, director, interpretive center and educational programming for schools (1990); B.S., Michigan State University, 1982; M.A., 1986; Ph.D., 1990.

**Mary L. Cahill**, supervisor inventory/accounts receivable/loans (1975, 1981).

**Susan K. Camp**, acting director of continuing education (1977, 1988, 1993, 1994); B.S., Lake Superior State College, 1985; M.B.A., Lake Superior State University, 1992.

**Alden E. Campbell**, manager of projects/CHP (1973); B.S., Lake Superior State College, 1973.

**Cheryl L. Castner**, textbook services supervisor (1980); B.S., University of Wisconsin-Stout.

**Bruce G. Clark**, assistant director of admissions (1976, 1986); B.A., Lake Superior State College, 1976.

**Timothy J. Coffey**, director of intramural athletics/tennis coach (1994); B.S., Tennessee Technological University, 1989.

**Debbie L. Cook**, graphics manager (1994); B.S.A. Kendall College of Art and Design, 1989.

**Georgiana M. Cox**, accountant (1979); B.S., Lake Superior State College, 1979; M.B.A., Lake Superior State University, 1988.

**Juliana L. Cox**, accountant (1983); B.S., Lake Superior State College, 1983 and 1987.

**William J. Crawford**, associate athletic director (1988, 1993); B.S., Western Michigan University, 1970.

**Stella R. DePlonty**, registrar (1960, 1987).

**David J. Eby**, computer operator, (1992); B.S., Lake Superior State University, 1989.

**Wanda M. Eby**, director of purchasing (1974, 1980, 1990).

**Deborah Faust**, assistant director of financial aid (1979, 1990, 1994); assoc., Lake Superior State College, 1985.

**Paul T. Fenlon**, director of career development and placement (1981, 1987); B.A., Western Michigan University, 1964.

**Kay A. Floyd**, executive secretary administrative assistant (1990, 1994) President's Office.

**Victoria J. Fox**, data/account clerk II, information services (1994); B.A., Lake Superior State University, 1994.

**Lee M. Freedman**, textbook assistant (1988); Lake Superior State University, (ex-1988).

**Donald J. Gerrie**, prof. marketing and associate vice president, Community Services and Development (1966, 1985, 1993); B.A., College of William and Mary, 1951; M.A., Michigan State University, 1953.

**Roger W. Greil**, aquatics lab manager (1989); assoc., Lake Superior State University, 1988.

**Charles J. Gustafson**, media specialist (1970); assoc., Lake Superior State College, 1968.

**C. Michelle Hansen**, head women's volleyball coach (1993); B.S. Cal Poly, 1992; M.S. Idaho State University, 1993.

**Terry Hossack**, building manager/Norris Center (1992); B.S., Lake Superior State University, 1988; M.B.A. 1992.

**Jeffery L. Jackson**, athletic director and head hockey coach (1986, 1990, 1993); B.A., Michigan State University, 1977; B.A., 1978.

**Mary P. Jason**, program developer (1986, 1993); B.S., Michigan State University, 1966.

**Mark A. Jastorff**, director of alumni relations (1993); B.S. Black Hills State University, 1980.

**Bruce R. Johnson**, director of admissions (1985, 1986); B.S., State University College, 1967; M.S., State University of New York-Buffalo, 1971.

**Patricia A. Kellan**, coordinator of student health center (1989); B.S.N., Lake Superior State University, 1989.

**Alexia L. Kroll**, career and employment testing specialist (1994); M.A., Northern Michigan University, 1989.

**Erica L. Ledy**, women's basketball coach/senior woman athletic administrator (1990); B.S., Lake Superior State University, 1988.

**Jon H. MacLeod**, director of physical plant, (1993, 1994); B.S., Michigan Technological University, 1963; M.B.A., Central Michigan University, 1978.

**Annette M. Malaski**, systems analyst (1990); B.S., University of Wisconsin-Stevens Point, 1985.

**Robbin S. Manor**, Campus Shoppe manager (1990); Lansing Community College, (ex-1977).

**Peter J. Marcotte**, men's and women's cross country coach (1994), B.S., Lake Superior State University, 1994.

**Roylance A. Mayry**, director, Business Development Center (1993), B.S., Sault Branch of Michigan Technological University, 1959.

**Michael J. McQuade**, staff photographer/writer (1994), B.S., University of Wisconsin-Madison, 1990.

**Cynthia F. Merkel**, systems analyst (1987, 1988, 1994); B.A., Syracuse University, 1979.

**Fredrick A. Michels**, prof. and director of library and audio visual services (1976, 1981); B.S., University of Wisconsin, 1968; M.L.S., Western Michigan University, 1971; Ed.D., 1976.

**Linda K. Miller**, administrative assistant to registrar (1969, 1987); LPN, Lake Superior State University, 1969, (ex-1987).

**K. Scott Monaghan**, assistant athletic director (1989); B.A., Michigan State University, 1987.

**Barbara K. Mugavero**, pool director (1991); B.A., Oakland University, 1968; M.A., University of Michigan, 1970.

**William T. Munsell**, financial aid director (1967); Lake Superior State College, (ex-1968).

**Gwen M. O'Connor**, assistant women's basketball coach/ athletic equipment manager (1991); B.S., Lake Superior State University, 1991.

**Margaret E. Olson**, payroll supervisor (1965, 1975); B.A., Lake Superior State College, 1985.

**Scott A. Olson**, network specialist (1985, 1990, 1992); Lake Superior State University, (ex-1990).



**Suzette M. Olson**, administrative assistant (1988); assoc., Lake Superior State College, 1986 and 1987.

**Larry J. Perron**, custodial operations manager (1986, 1988).

**Beatrice Peters**, director of Native American Center (1993) B.A., Michigan State University, 1984

**Noel L. Pingatore**, exercise fitness instructor (1991); B.S., Lake Superior State University, 1990.

**Thomas A. Pink**, manager of public Relations (1989, 1993); B.A., Lake Superior State University, 1984.

**Gerald L. Rabbitt**, director, learning resource center (1994); Ed.S. University of Toledo, 1971.

**Denise A. Roe**, admissions officer/transfer equivalencies (1986, 1994); B.A., Lake Superior State College, 1975.

**James D. Roque**, restricted earnings assistant hockey coach/athletic alumni relations and support group liason (1994); B.S., Lake Superior State College, 1987.

**Ronald T. Rolston**, associate hockey coach (1990, 1994); B.S., Michigan Technological University, 1990.

**George A. Rye**, systems analyst (1991); B.S. Lake Superior State College, 1968.

**Katherine M. Rye**, executive secretary, board of regents office (1990, 1994); Muskegon Business College, 1986.

**Richard A. Rynberg**, microcomputer lab manager and technician (1988); B.S., Central Michigan University, 1969.

**Ray Schebel**, food service management (1988); Lake Superior State University, (ex-1994).

**Conrad A. Schmitgal**, mechanical technician (1982).

**Karen L. Shackleton**, admissions officer/media specialist (1990); B.A., University of Michigan, 1988.

**Debra L. Smart**, head teacher, child care center (1989); B.S. Lake Superior State University, 1994.

**Scott W. Smart**, director of business operations (1988, 1993); B.S., Lake Superior State College, 1986, M.B.A. Lake Superior State University, 1992.

**Terry J. Smith**, men's basketball coach (1988); B.S., Michigan State University, 1984.

**Jessica A. Stanaway**, institutional research analyst, (1979, 1983, 1993); B.A., Lake Superior State College, 1970.

**Jerry A. Stephens**, systems analyst (1986, 1990); B.S., Lake Superior State College, 1986.

**Jacquey A. Swailes**, executive secretary, provost (1990).

**William G. Thompson**, supervisor of grounds/pool/rink and receiving (1979, 1987).

**Earl C. Tomlinson**, director of financial planning and investments (1985, 1987, 1993); B.S., Ferris State University, M.A., Central Michigan University, 1975.

**Dale A. Ulrich**, manager of building maintenance and operations (1989).

**Wade W. Warner**, academic coordinator upward bound, (1994), M.P.A. Michigan State University, 1991.

**Beverly E. White**, director of employee relations/affirmative action officer (1976, 1990, 1994); B.S. Lake Superior State University 1988.

**Patricia A. Whyte**, director of housing (1978, 1987); B.S., Lake Superior State College, 1985

**Pamela A. Williamson**, assistant director of upward bound (1970, 1986); B.A., Michigan State University, 1968.

**Heidi L. Witucki**, director of upward bound (1991); B.A., Northern Michigan University, 1982.

**Jeffrey Wolfe**, catering manager (1994)

**E. Kelani Woodruff**, director of food services (1993).

**Michael J. Worley**, director of student activities (1984, 1989,

1993); B.S., Lake Superior State College, 1983.

**Jenny L. Zissler**, buyer/administrative assistant (1978, 1991); B.S., Lake Superior State University, 1988.

## OFFICERS OF ADMINISTRATION

**Robert D. Arbuckle**, president, (1992); B.S. in Education, Clarion State University, 1964; M.S. 1966; Ph.D., Penn State University, 1992.

**Thomas R. Bugbee**, special assistant to the president, secretary, Board of Regents, (1988, 1993); B.A., Michigan State University, 1973; M.A., Eastern Michigan University, 1974.

**Roger T. Murphy**, vice president for business and financial operations (1984, 1986, 1993); B.A., Michigan State University, 1969; M.B.A., 1980.

**Harry E. Pike**, vice president for student programs and services and assoc. prof. (1969, 1972); B.A., University of Washington, 1957; M.A., 1959; Ph.D., Michigan State University, 1969.

**David L. Toppen**, executive vice president and provost and Professor, (1994); B.S., Cornell College, 1965; Ph.D., University of Missouri, 1970.

## DEPARTMENT CHAIRS

Automated Manufacturing  
Engineering Technology

Prof. James Devaprasad

Biology

Dr. Karel Rogers

Business and Economics

Dr. John Erkkila

Chemistry and Environmental  
Science

Dr. John Lehman

Criminal Justice/Fire Science

Prof. James Blashill

Electrical/Electronics Engineering  
Technology

Prof. David McDonald

English and Speech

Dr. Diana Pingatore

Geology and Physics

Dr. Lewis Brown

Humanities and History

Dr. Daniel Dorrity

Mathematics

Prof. Mark Terwilliger

Mechanical Engineering Technology

Prof. Paul Duesing

Nursing

Dr. Mae Markstrom

Political Science

Dr. Gary Johnson

Psychology

Dr. Margaret Malmberg

Recreation Studies and Exercise  
Science

Dr. Sally Childs

Sociology

Dr. Leslie Dobbertin

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## NOTES

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# BOARD OF REGENTS

**Lake Superior State University** is governed by an eight-member Board of Regents appointed by the Governor and confirmed by the Michigan Senate to serve terms of eight years. Expiration of current terms are shown below. Board meetings are open to the public.

**Dr. Robert D. Arbuckle**  
ex-officio



**Reverend Louis C. Cappelletti**  
Marquette, 1996

**Dr. Harry E. Pike**  
Treasurer of the Board



**William Gregory**  
Sault Ste. Marie, 2002

**Thomas Bugbee**  
Secretary of the Board



**Susan Harrison**  
Pickford, 2002



**Leonard Jaques, Esquire**  
Grosse Pointe Shores, 1996



**Mrs. Sigrun Kast**  
Bloomfield, 2000



**Mr. Michael McDonald**  
Gladstone, 2000



**Mr. Devereaux Trepp**  
Iron Mountain, 1998



**Mr. Thomas H. Weiss**  
Gaylord, 1998

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# ADVISORY COMMITTEES

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## **BUSINESS VOCATIONAL:**

Karen Corbiere, Sault Area High School; Cindy Dodds, Chippewa County War Memorial Hospital; Linda Harger, Michigan Employment Security Commission; Marv Henderson, Anderson Tackman Company; Daniel Hewitt, Soo Co-op Credit Union; Jack Kibble, Sault Ste. Marie Tribe of Chippewa Indians; Dave Nichols, Walmart; Trinda Pontus, LSSU ESP/MEA; Paul Schemanski, Edison Sault Electric Company; Cindy Suppa JTPA Eastern Upper Peninsula Employment and Training Consortium.

**CRIMINAL JUSTICE:** *Law Enforcement Members:* Scott Fitzgerald, Sault Ste. Marie; Tim Matelski, St. Ignace; Charles Ludwick, Michigan State Police; Dan Frazier, Cheboygan; Ralph Boudreau, Michigan State Police; Harris Miller, Sault Ste. Marie; Barry King, Sault Ste. Marie, Ontario; Ed Berkompas, Chippewa County Sheriff; Michael Roy, Alpena Community College; William Winans, Mackinaw City Police Department; Ugo Cary, Sault College.

*Corrections Members:* Robert LeCureux, Kinross Correctional Facility; Wayne Fortin, John Ferroni, Gary McLeod, Sault Ste. Marie Probation/Parole.

*Judicial Member:* Patrick Shannon, Chippewa County Prosecutor.

*Federal Members:* Mel Hendrickson, US Customs Port Director; Robert McNamara, US Border Patrol.

*Security/Fire Science Members:* Robin Robinson, Algoma Steel Corporation; Kenneth Eagle, Sault Ste. Marie Fire Chief; Wayne Francisco, Atlanta, Michigan; David Fluke, Sault, Ontario, Fire Chief.

## **HEALTH AND HUMAN SERVICES:**

Dr. Elsie Baccari, War Memorial Hospital, Sault Ste. Marie, Michigan; Ms. Mary Baker, Wellness Care Center, Sault Ste. Marie, Michigan; Ms. Antoinette Blunt, Victorian Order of Nurses, Sault Ste. Marie, Ontario; Ms. Mary Bold, Tendercare Nursing Homes of Michigan, Sault Ste. Marie, Michigan; Ms. Nancy Heynes, Chippewa County Health Department, Sault Ste. Marie, Michigan; Ms. Mary Jason, North Central Michigan College, Petoskey, Michigan; Ms. Barbara Kurtz, North Central Michigan College, Petoskey, Michigan; Ms. Mary Ellen Luukkonen, Plummer Memorial Hospital, Sault Ste. Marie, Ontario; Ms. Terry Malloy, Kinross Correctional Facility, Kinross, Michigan; Ms. Kathleen McGillis, Alpena Community College, Alpena, Michigan.; Ms. Sandra Poffenbarger, Consumer Advocate, Sault Ste. Marie, Michigan; Ms. Pam Porter, Northern Michigan Hospital,

Petoskey, Michigan; Dr. Susan Ratwik, Lake Superior State University, Sault Ste. Marie, Michigan; Ms. Helen Ross, Group Health Centre, Sault Ste. Marie, Ontario; Ms. Alda Routhier, Sault Area Skill Center, Sault Ste. Marie, Michigan; Ms. Rosanne Schultz, District Health Department, Alpena, Michigan; Ms. Laurie Semeniuk, General Hospital, Sault Ste. Marie, Ontario; Ms. Beverly Stewart, Community Action Agency, Sault Ste. Marie, Michigan; Ms. Janet Stratton, War Memorial Hospital, Sault Ste. Marie, Michigan; Ms. Ruth Thesing, Sault Tribe of Chippewa Indians, Sault Ste. Marie, Michigan; Ms. Donna Tremblay, Sault College, Sault Ste. Marie, Ontario; Ms. Julie Truckey, Sault Area High School, Sault Ste. Marie, Michigan; Ms. Anna Zuccato, Algoma Health Unit, Sault Ste. Marie, Ontario

**LEGAL ASSISTANT STUDIES:**  
Honorable Joanna Neale, Cheboygan County Probate Court; Honorable Michael MacDonald, Chippewa County District Court; Michael Mulder, President, First of America - Sault Branch; Thomas Evashevski, St. Ignace Attorney; Dennis Valkanoff, Escanaba Attorney; John D. Peacock, Sault Attorney; Patrick Shannon, Chippewa County Prosecutor; Dr. Margaret A. Malmberg, Social Sciences Department Head; Dr. Gary R. Johnson, Faculty; Dr. Madan Saluja, Faculty; James Blashill, Faculty; Vicki Voisin, Charlevoix Legal Assistant; Christine England, Alumni; Carol S. Andary, Attorney and Program Coordinator.

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## *NOTES*

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# Computer Services

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Students at Lake Superior State University utilize a wide variety of computer services. Available are computer laboratories in several locations, network access to a Digital Equipment Corporation MicroVax minicomputing system, computerized Library reference systems, departmental computer labs and an electronic phone message system for students living in the dorms.

Students use PCs that are located throughout campus in convenient locations. The University's computer laboratory in the Center for Applied Sciences and Engineering Technology is equipped with DEC VAX terminals and IBM compatible PCs supporting minicomputer studies. Those studies include C++, Cobol, and Pascal programming languages which are

on our DEC MicroVax 3400. The Shouldice Library has one computer classroom that supports operating systems and applications software using a networked environment. Freshman dormitories, Osborn Hall, and Brady Hall, are equipped with computer labs available for resident's use.

The Shouldice Library provides students an on-line public access catalog, periodical reference resources, and information databases resident on CD-ROM. Students also network with other Upper Peninsula libraries through the NOTIS system.

Phonemail electronic voice message service is available to instructors, student residents and administrative personnel. Phonemail services include off campus access.

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## NOTES

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# LSSU Foundation

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The Lake Superior State University Foundation strengthens the University by creating, receiving, investing and distributing resources solely for the benefit of the University, its students, faculty and staff.

Established by the LSSU Board of Regents in 1983, the Foundation works closely with University Officials to provide scholarships, grants, loans, research and equipment as well as student and faculty development opportunities to ensure a viable learning environment. Since its founding, the Lake Superior State University Foundation has raised more than \$2 million in private and corporate gifts in support of its mission.

The Foundation is governed by an independent Board of Directors representing a cross-section of the University's constituency. Board members are: Dr. Mark Mercer, Chair; Dr. Robert D. Arbuckle, first vice-chair; James C. Park, second vice-chair; Scott W. Smart, Treasurer; Dawn Baetsen, Anthony Bosbous, H. James Bourque, Bernard Bouschor, Frank V. Fazi, David Hubbard, Daniel T. Laur, Dr. Louis B. Lukenda, Gary E. McClellan, Joanna Neale, Walter North, Evan L. Noyes, John Peacock, Dr. Thomas G. Robinson, Richard Schuemann, Kelvin P. Smyth, Thomas Weiss.

Call 635-2665 for additional information about the Foundation, its mission or Board of Directors.

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## Alumni Association

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The Lake Superior State University Alumni Association was formally reestablished in January, 1994. The Association's goal is to strengthen the relationships between the University and alumni as well as current students, faculty and staff.

Among its initial programs are alumni Regional Chapters, reunions, Alumni Weekend, Graduate Luncheon, student Alumni Association, Alumni Recognition Awards and an Athletic Hall of Fame.

Alumni status is conferred upon any person who: completed a degree or certificate program; or earned academic credits from the Sault Branch prior to 1967; or attended Lake Superior State College or University and completed the equivalent of 24 semester hours.

Current students and all alumni are welcome and encouraged to help shape the future of the University through the Association.

The Board of Directors are: Kevin Cooper, President; Tim Hall, vice president, Bill Munsell, Linda Schmitigal, Ron Sober, Kevin Mullin, Marylyn Carriere, Joe Claxton, Randy Pingatore, Gary Kay, Rick Fitzpatrick, Ronald 'Bud' Cooper, Terry Malloy, Wendy Wells, Student Representative. Ex-officio officers are: Dr. Robert Arbuckle, President of LSSU and Mark Jastorff, Executive Director Alumni Association.

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# LIBRARY

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The Library provides a wide variety of resources and services for students and faculty. It contains more than 126,000 volumes of books, 16,000 bound volumes of periodicals, 75,000 microforms, and over 40,000 paper government documents. The current subscription list exceeds 1,000 individual titles. The Library has been a depository of select U.S. Government publications since 1982. The Audio-Visual Center, on the main floor of the Library, maintains a diverse collection of cassettes, filmstrips, games, kits, 16mm films, slides and video tapes. A closed-circuit television system transmits many of these materials to campus classrooms. To assist faculty and students in obtaining materials from other libraries, the Library maintains an interlibrary loan service through OCLC, a computer service linked to libraries throughout the United States with access to more than 19 million books and periodicals.

Library facilities include stacks open to all faculty and students, group study areas, CD-ROMs, microform

readers and printers, photocopy machines, equipment for using audio-visual materials, production equipment for making transparencies and other materials.

Reference librarians on the main floor offer personal guidance in the use of the computerized catalog, indexes and abstracts and bibliographies. A handbook of library services and bibliographies are published by the library to assist faculty and students. Library tours and lectures are available to introduce students to the Library and teach library research skills.

The Library is a member of an Upper Peninsula-wide consortium of 105 libraries.

The Library Staff includes a director, Dr. Fredrick Michels; librarians, Ruth Neveu, Mary June, Maureen Delaney-Lehman; and audio-visual specialist, Charles Gustafson.

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## NOTES

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# INDEX

## A

Abbreviations; 255  
Absences; 19  
Academic;  
policies; 16  
probation; 21  
standing; 22  
Accounting; 148-149, 256-257  
Accreditation; 7-8  
Additional Degree; 92-93  
Administrative Staff; 329-332  
Admissions; 39  
Advanced Placement Program; 50  
Advisory Committees; 334-335  
Alcohol; 34  
Alumni Association; 337  
American College Test; 42  
American Indians; 84  
Art; 258  
Minor; 132  
Arts, Letters & Social Sciences; 91-141  
Associate Degree; 88, 92, 100-101  
Athletics; 57  
Auditing; 54  
Automated Manufacturing Engr. Tech.; 163-166,  
257-258

## B

BA/BS Requirements; 89  
Biology; 224-229, 260-263  
honor program; 224  
Minor; 238  
Board and Room; 54-55, 60-61  
Board of Regents; 333  
Business; 142-159  
Administration; 150-151, 153  
Courses; 259-260  
French Minor; 142

## C

Calendar; 343-344  
Canadian Students; 43  
Career Planning; 55  
Catalog Terms; 10-11  
Cheating; 34  
Chemistry; 243, 263-265  
Minor; 243  
Chemistry and Environmental Science Dept; 239-243  
Child Care Center; 95-96  
Child Development Minor; 132  
Class Attendance; 19  
Classification of Students; 16  
CLEP; College Level Examination Program; 50  
Computer and Mathematical Sciences - 172-173  
Computer;  
Drafting; 181  
Engineering Technology; 268-269

Science; 267-268  
Science Minor; 185  
Services; 336  
Construction Technology; 317  
Continuing Education; 253-254  
Corrections; 188, 200  
Minor; 203  
Costs; 58  
Counseling Minor; 132  
Counseling Service; 55  
Course Fees; 59  
Courses; 255-317  
Credit/No Credit; 22  
Credit;  
by examination; 50, 52, 60  
hours; 16  
transfer; 41  
Criminal Justice; 187-196, 265-267  
Criminal Justice/Fire Science Department; 187-203  
Criminalistics; 189  
Curricular Changes; 17

## D

Damage Deposit; 61  
Data Processing; 269  
Dean's List; 21  
Degree Requirements; 88-93  
Dentistry-pre; 233  
Department Chairs; 332  
Diplomas; 87  
Discipline; 34-38  
Dismissal Policy; 21-22  
Division General Studies; 47-48  
Drafting & Design Engr. Tech.; 269-270,  
Dropping Classes; 19  
Drugs; 34  
Dual Enrollment; 48-49

## E

Early Childhood Education; 128-129  
Economics; 270  
Minor; 158  
Economics/Finance Minor; 158  
Education; 130-131, 271  
Elective Credit; 42, 89  
Electrical-Computer Engr. Tech; 169  
Electrical/Electronics Engineering Tech.; 167-168,  
275-276  
Emeriti; 325  
Employment, Student; 83  
Engineering Technology; 152-153  
Engineering Technology & Mathematics; 160-185  
English Courses; 271-273  
English Language & Literature; 97-100  
Minor; 133  
English and Speech Department; 97-101  
Environmental Chemistry; 240-241

Environmental Engineering Technology; 182-183  
Environmental Sci.; 97-99, 239, 241-242, 276-277  
Equal Opportunity; 12  
Exception to Graduation Requirements; 91  
Executive Masters Business Administration; 143-146, 294-296  
Exercise Science; 211-212, 273-275  
Athletic Training; 213-214

## F

Faculty; 319-325  
Fees; 61  
Finance and Economics; 151-152, 277  
Financial Aid ; 62  
Financial Obligations; 35  
Firearms & Explosives; 35  
Fire Science; 196-199, 202, 278  
Minor; 203  
Fisheries/Wildlife Management; 230-231  
Food; 54  
Foreign Students; 45  
Foundation; 337  
French; 279  
Frech Language & Literature Minor; 134

## G

General Business Minor; 158  
General Education Requirement; 88  
General Engineering; 183-184  
General Engineering Technology; 184  
Geology; 279-281  
Geography; 281-282  
Minor; 134  
Geology; 245-251  
Environmental Geology; 246-247  
Geology Minor; 252  
German; 282-283  
Gerontology Minor; 134  
Goals of University; BC  
Grades and Grade Points; 20-21  
Graduation Procedures; 86  
Grants; 78-80  
Guest Speakers; 35  
Guest Student Admission; 43

## H

Health; 283-284  
Health and Human Services Dept; 186-222  
Health Records; 52  
Health Service; 55  
History; 102-106, 284-286  
Minor; 135  
History and Humanities Department; 102-106  
History of University; 6  
Honors, Graduation; 87  
Housing; 35  
Human Resource Management; 158  
Human Services; 118, 284  
Human Services Adm. Minor; 135  
Humanities; 286-287  
Minor; 136

## I

I.D. Cards; 35  
Indians, American; 84  
Individualized Studies Degree; 93

Institutional Loss Control Minor; 203  
Interdisciplinary; 287  
Intramurals; 222

## J

Japanese Study Minor; 136, 288  
Journalism; 287  
Minor; 136  
Journalism-Writing Minor; 136

## L

Late Adds; 19  
Law-pre; 115-116  
Law Enforcement; 191-193, 201  
minor; 203  
Legal Assistant; 107-109, 116-117, 288-290  
Specialties: Criminal Law, Labor Law, Legal Administration, Legislative/Constitutional Law.  
Personal Injury; 107-109  
Legal Assistant Studies Minor; 137  
Liberal Arts; 93, 100-101  
Library; 338  
Loans; 80-83  
Lodging; 54  
Loss Control; 194  
Minor; 203

## M

MACRAO Agreement; 42-43  
Management; 297  
Map, Campus; IFC  
Marketing; 296-297  
Minor; 158  
Master of Business Administration; 294-296  
Mathematics; 173-177, 290-294  
Minor; 158  
Mathematics & Computer Sci Dept; 171-177  
Mathematics Competency; 89-90  
Maximum Student Credit Load; 18  
Mechanical Engineering; 296  
Mechanical Engr. Tech.; 178-181, 298-299  
Medical Technology; 232-233  
Medicine-pre; 233  
Minors; 88, 132-141, 158-159, 185, 202-203, 221, 238, 243, 252  
Mission Statement; BC  
Multiple Majors; 92  
Music; 299-300

## N

Native American Studies; 300  
Minor; 137-138  
Native American Tuition Waiver; 87  
Natural Resources Tech.; 236-237, 312-313  
Natural Sciences; 300-301  
Nonattendance; 19  
Nursing; 204-210, 303-303

## O

Office Administration; 154, 158 303  
Minor; 158  
Officers of Administration; 332  
Ontario Grade 13; 44  
Organizations, Student; 53  
Orientation; 49

**P**

Parking; 35  
 Part-time Studies; 46  
 PELL Grants; 78-80  
 Perkins Loan; 80  
 Personal Computer Specialist; 155, 157, 159  
 Pharmacy-pre; 234-235  
 Philosophy; 304  
 Physical Education; 222  
 Physics; 303-304  
 Plagiarism; 34  
 Placement; 49, 56  
 Political Science; 110-115, 304-305  
 Minor; 138  
 Political Science Department; 107-117  
 Prerequisites; 18  
 President; 2-3  
 Privacy Act; 24  
 Probation, Academic; 21-22  
 Programs Offered; 4  
 Provisional Credit; 42  
 Psychology; 119-120, 306-308  
 Psychology Minor; 138  
 Psychology Department; 118-124  
 Public Administration Minor; 139  
 Public Relations Minor; 139  
 Public Safety; 195-196

**R**

Readmission of Former Students; 43  
 Records; 36  
 Recreation Management; 215-218, 311-312  
 Parks Option; 218-219  
 Recreation Studies & Exercise Sci. Dept.; 211-222  
 Recreational Activities; 308-310  
 Recreation Studies Minor; 221  
 Recreation Studies Skill Minor; 139  
 Refunds; 60  
 Registration and Scheduling; 17-19  
 Religious Organizations; 54  
 Repeats; 18  
 Residency. Graduation Requirements; 43, 91  
 Residency, Michigan; 58  
 Room and Board; 60-61

**S**

Satisfactory Academic Progress; 22  
 Schedule Changes; 18  
 Schedule of Subjects; 17-19  
 Scheduling Programs; 49  
 Scholarships; 62, 64, 67-78  
 School Secretaries; 328  
 Science and Natural Resources; 223-252  
 Social Science; 121-122  
 Sociology; 125-127, 315-316  
 Sociology Department; 125-127  
 Sociology Welfare Minor; 139-140  
 Sociology-General Minor; 140  
 Spanish; 316  
 Speech; 313-314  
 Student:  
 Classification; 16  
 Notices; 36  
 Organizations; 54  
 Senate; 53  
 Services; 53  
 Service Courses; 313

Standards of Behavior; 34-38  
 Substance Abuse Prevent. & Treatment; 123-124  
 Substance Abuse Counseling Minor; 140-141  
 Supplemental Educational Opportunity Grant; 79

**T**

Teacher Education; 95, 130, 317  
 Tech Prep; 46-47  
 Technical Accounting; 156  
 Testing Service; 55  
 Theft; 36  
 Therapeutic Recreation; 220-221  
 Transfer Students; 40  
 Transcripts; 23, 58  
 Tuition; 59

**U**

Upward Bound; 56

**V**

Vehicle; 59  
 Veterans; 85  
 Vet. Medicine-Pre; 233  
 Vocational Rehabilitation; 84

**W**

Waiver of Competency Requirements; 91  
 Withdrawal; 19, 20, 60  
 Work Study; 83  
 Writing Competency; 90-91  
 Writing Minor; 141

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# *NOTES*

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# WHO DID IT?

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For further details concerning any program contact the Director of Admissions, Lake Superior State University, Sault Ste. Marie, Michigan, 49783. Telephone:

1-906-635-2231; or  
1-800-682-4800 toll-free in Michigan; or  
759-4903 in Sault Ste. Marie, Ontario, only.

# University Calendar

## 1994-1995

### FALL SEMESTER • 1994

INSTRUCTION BEGINS Final day to add classes	SEPTEMBER 7, Wed. 8:00 a.m. 14, Wed., 5:00 p.m.
Canadian Thanksgiving	OCTOBER 10
Final day to drop classes Thanksgiving recess Classes resume	NOVEMBER 1, 5:00 p.m. 22, Tues., 10 p.m. 28, Mon.
SPRING SEMESTER SCHEDULING and Registration	DECEMBER 5-8
SPRING SEMESTER tuition payment Classes end	5- Jan. 17, 3:00 p.m. 16, Fri.
Final Examinations SEMESTER ENDS	17-22, Sat.-Thu. 22, Thu. 6 p.m.

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### SPRING SEMESTER • 1995

INSTRUCTION BEGINS Final day to add classes	JANUARY 16, Mon. 23, Mon.
Spring break begins Classes resume	MARCH 3, Fri., 10 p.m. 13, Mon.
Final day to drop classes	17, Fri, 5:00 p.m.
FALL SEMESTER SCHEDULING and Registration Classes end	APRIL April 3-6 28, Fri.
Final Examinations SEMESTER ENDS Commencement	MAY 1-5, Mon.-Fri., 6 p.m. 5, Fri., 6 p.m. 6, Sat.

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### SUMMER SEMESTER • 1995

SCHEDULING OF CLASSES Registration, tuition payment	APRIL/MAY April 3-6 Begins April 3
INSTRUCTION BEGINS	May 15
SEMESTER ENDS	AUGUST 4

# University Calendar

## 1995-1996

### FALL SEMESTER • 1995

INSTRUCTION BEGINS Final day to add classes	SEPTEMBER 6, Wed. 8:00 a.m. 13, Wed., 5:00 p.m.
Canadian Thanksgiving Final day to drop classes	OCTOBER 9 31, 5:00 p.m.
Thanksgiving recess Classes resume	NOVEMBER 21, Tues., 10 p.m. 27, Mon.
SPRING SEMESTER SCHEDULING and Registration	DECEMBER 4-7
SPRING SEMESTER tuition payment Classes end Final Examinations SEMESTER ENDS	4-Jan. 16, 3:00 p.m. 15, Fri. 18-22, Mon.-Fri. 22, Fri. 6 p.m.

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### SPRING SEMESTER • 1996

INSTRUCTION BEGINS Final day to add classes	JANUARY 15, Mon. 22, Mon.
Spring break begins Classes resume Final day to drop classes	MARCH 1, Fri., 10 p.m. 11, Mon. 15, Fri, 5:00 p.m.
FALL SEMESTER SCHEDULING and Registration Classes end Final Examinations SEMESTER ENDS Commencement	APRIL/MAY April 1-4 26, Fri. Apr. 29-30, May 1-3, Mon.-Fri. May 3, Fri., 6 p.m. 4, Sat.

---

### SUMMER SEMESTER • 1996

SCHEDULING OF CLASSES Registration, tuition payment	APRIL/MAY April 1-4 Begins April 1 May 13
INSTRUCTION BEGINS	AUGUST 2
SEMESTER ENDS	

# LAKE SUPERIOR STATE UNIVERSITY

## MISSION STATEMENT

Lake Superior State University is a co-educational, public institution that recognizes as its primary mission the offering of challenging undergraduate programs and services to students and other constituencies from its region and from the rest of Michigan, Northern Ontario, and the near Midwest.

Lake Superior State University accomplishes its mission by presenting a personal approach to education through a small, collegial, and diverse community in which all its constituencies share in the teaching, research, and regional service activities of the Institution. In this supportive environment, students, staff, faculty, and administrators demonstrate high regard for one another as valued members of the community, thus providing opportunities for emotional and social maturation as well as intellectual growth.

Every educational program at Lake Superior State University acknowledges its commitment to an integrated relationship between the professional/technical and liberal arts fields. The University's international setting complements its efforts to present unique educational experiences, expand students' perspectives, and foster their ability to critically evaluate ideas and information.

## GOALS OF THE UNIVERSITY

### *GOAL NUMBER I*

To develop and provide academic programs in the liberal arts and in technical and professional education that demonstrate excellence and relevance for the students served by the University

### *GOAL NUMBER II*

To provide services and programming for students that will complement their educational experiences and prepare them to live and work in the 21st century.

### *GOAL NUMBER III*

To offer a holistic, caring, and supportive environment for all learners.

### *GOAL NUMBER IV*

To enhance the University's efficiency and effectiveness in order to help fulfill its vision and mission.