



LAKE SUPERIOR
STATE UNIVERSITY

2009-2010 Catalog



Contents

Campus / Parking Map	2	College of Engineering, Technology, and Economic Development	
Mission Statement, Vision Statement, and Goals of the University	3	School of Engineering & Technology	79
Code of Ethics	4	Prototype Development Center	79
A Look at LSSU	5	College of Natural, Mathematical and Health Sciences	
Expectations for Student Learning	5	School of Biological Sciences	80
Accreditations	6	School of Math & Computer Science	80
University Talk	10	School of Nursing	81
Academic Policies	11	School of Physical Sciences	81
Equal Opportunity Statement	22	School of Recreation & Exercise Science	82
Admissions	24	College of Professional Studies	
CLEP, AP, IB	28-30	School of Business	83
Costs	31	School of Criminal Justice, Fire Science and EMS	83
Financial Aid	35	Division of Academic Services	
Consumer Information	39	Staff and Administration	85
Scholarships, Grants and Loans	41	Degrees and Programs	
Division of Academic Services	59	Listing by alphabetical order	86
Testing, English & Math Placement	62-63	Master of Arts	88
Student Life	64	Post-Baccalaureate Bachelor	90
Computer Services	68	Post-Baccalaureate Certificate	92
Enrollment Services	69	Bachelor	94
International Studies	70	Associate	212
International University College Division	71	Certificates	237
Degree Requirements	72	Minors	242
General Education	74	Course Descriptions	256
Graduation Procedures	75	Board of Trustees	307
Programs and Faculty Listings:		Distinguished Teachers / Employee of the Year	308
College of Arts, Letters and Social Sciences		Faculty	309
School of Communication Studies and the Fine & Performing Arts	77	Administrative Staff	315
School of Education	77	University Calendar	319
School of English & Language Studies	78	Index	320
School of Social Sciences	78		

Visit us at www.lssu.edu

About this catalog...

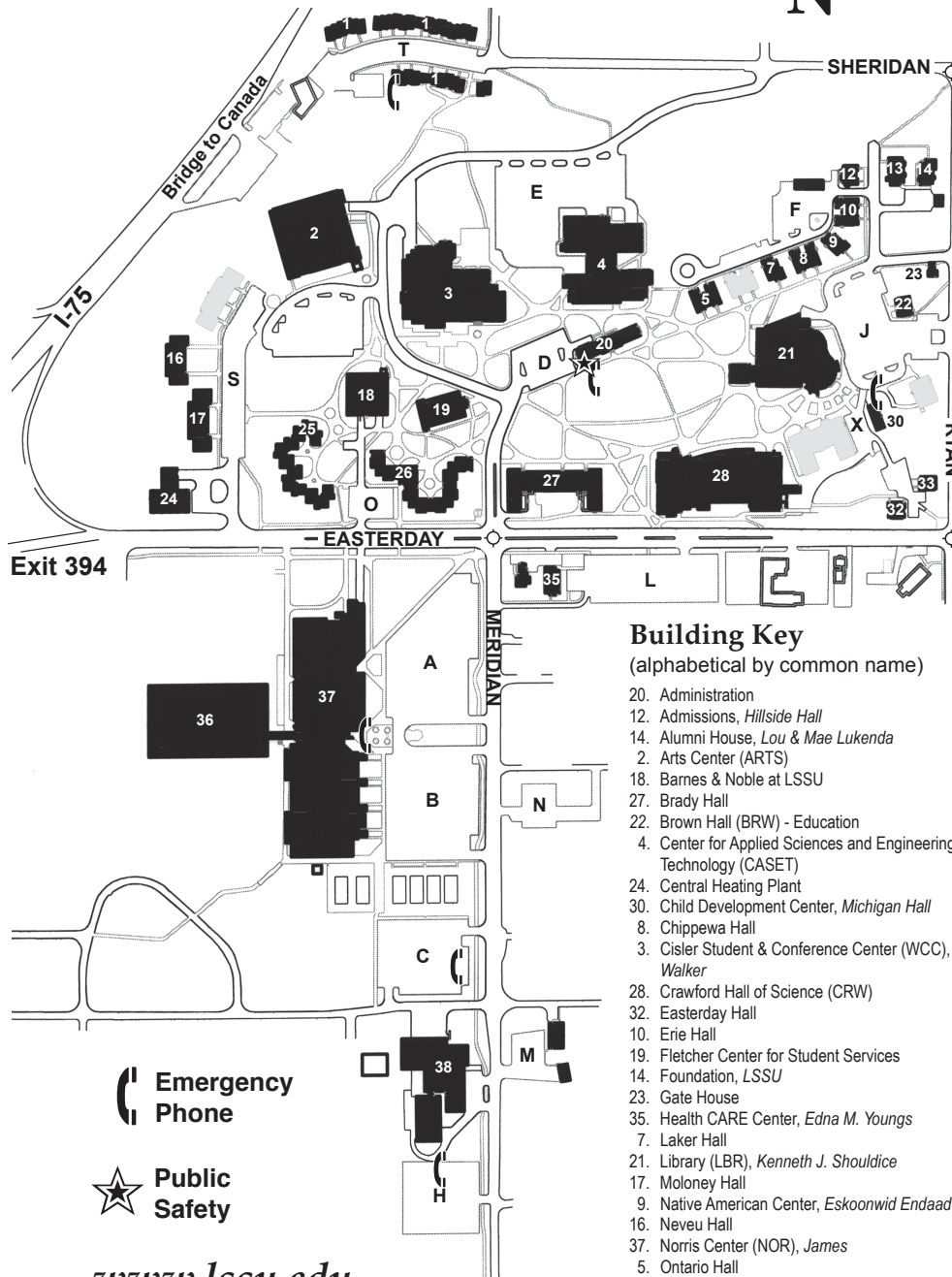
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It is the policy of Lake Superior State University that no person shall be discriminated against, excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination in employment, or in any program or activity for which the University is responsible on the basis of race, color, national origin or ancestry, gender, age, disability, religion, height, weight, sexual preference, marital status or veteran status.



LAKE SUPERIOR STATE UNIVERSITY

650 W. Easterday Avenue • Sault Ste. Marie, MI 49783



Emergency
Phone

Public
Safety

www.lssu.edu

Public Safety: 906-635-2100

Admissions: 906-635-2231

Switchboard: 906-635-6841

Building Key

(alphabetical by common name)

- 20. Administration
- 12. Admissions, *Hillside Hall*
- 14. Alumni House, *Lou & Mae Lukenda*
- 2. Arts Center (ARTS)
- 18. Barnes & Noble at LSSU
- 27. Brady Hall
- 22. Brown Hall (BRW) - Education
- 4. Center for Applied Sciences and Engineering Technology (CASET)
- 24. Central Heating Plant
- 30. Child Development Center, *Michigan Hall*
- 8. Chippewa Hall
- 3. Cislser Student & Conference Center (WCC), *Walker*
- 28. Crawford Hall of Science (CRW)
- 32. Easterday Hall
- 10. Erie Hall
- 19. Fletcher Center for Student Services
- 14. Foundation, *LSSU*
- 23. Gate House
- 35. Health CARE Center, *Edna M. Youngs*
- 7. Laker Hall
- 21. Library (LBR), *Kenneth J. Shouldice*
- 17. Moloney Hall
- 9. Native American Center, *Eskoonwid Endaad*
- 16. Neveu Hall
- 37. Norris Center (NOR), *James*
- 5. Ontario Hall
- 26. Osborn Hall
- 38. Physical Plant [Maintenance Center], *Leno A. Pianosi*
- 32. President's Residence
- 33. Ryan House
- 36. Student Activity Center (SAC), *Robert Arbuckle*
- 1. Townhouses
- 25. The Village

Parking Key

- | | | |
|--|--------------------------------------|------------------------------------|
| A Commuter/Faculty-Staff | H Brady Hall Residents | N Commuter Parking |
| B Commuter/Faculty-Staff | J Faculty-Staff | O Osborn and Village Residents' |
| C Osborn and Village Residents | K Parking as designated for Barnes & | Day Use: No Overnight Parking |
| D Visitor Parking (<i>register at Public Safety</i>) | Noble, Faculty-Staff and Visitors | S Moloney and Neveu Hall Residents |
| E Senior Commuter/Faculty-Staff | L Osborn and Village Residents | T Townhouse Residents |
| F University Row Residents and Staff | M Motor Pool | X 30-Minute Parking |
| G Easterday and Ryan House Residents | | |

NO PARKING ON ANY UNIVERSITY DRIVE.

Departments (Alphabetical)

DEPARTMENTS	BLDG #
Academic Computing	4
Academic Records	19
Administrative Offices	20
Administrative Computing	4
Admissions	12
Alumni Relations	14
Arena - Taffy Abel	37
Athletics	37
Audio-Visual	21
Biological Sciences	28
Barnes & Noble at LSSU (UPS and USPS)	18
Black Box Theatre	2
Business, Finance & Economics	21
Business Operations	19
Café a la Carté	28
Campus Life	3
Cappuccino Corner	21
Career Services	21
Cashier	19
Catering	3
Chemistry & Physical Sciences	28
Compass (student newspaper)	3
Communication Studies	2
Continuing Education	21
Counseling Services	21
Concessions	37
Conference Rooms	3
Criminal Justice, Fire Science & EMS	37
Disability Services	21
Education	22
Engineering & Engineering Technology	4
English & Language Studies	2
Financial Aid	19
Fine & Performing Arts	2
Foundation	24
Food Services	3
Gallery, Art	21
Gallery, L.F. Noyes Collection	2
Galley, Grill 155°	3
Graphics	4
Gleason Environmental Institute	28
Gymnasium - Bud Cooper	37
Health CARE Center	35
Honors Program	2
Human Resources	20
Housing & Residential Life	3
ID Office	3
Interactive Television	21
Kemp Mineral Museum	28
Learning Center	34
Library	21
Mailroom	20
Mathematics & Computer Science	4
Native American & Student Diversity Center	9
Nursing	28
Payroll	20
Peacock Cove	3
Planetarium - Ben Long	12
President	20
Prototype Development Center (PDC)	4
Public Relations	4
Purchasing	20
Quarterdeck Dining Hall	3
Recreation & Exercise facilities	36 & 37
Recreation Studies & Exercise Science	37
Registrar	19
Residence Halls - student	
Brady Hall (freshman men)	27
Chippewa Hall (Row House-upper class)	8
Easterday Hall (Row House-upper class)	32
Erie Hall (Row House-upper class)	10
Laker House (upper class)	7
Moloney Hall (apts-upper class)	17
Neveu Hall (apts-upper class)	16
Ontario Hall (Row House-honors)	5
Osborn Hall (freshman women)	26
Ryan House (upper class)	33
Townhouses (upper class)	1
The Village (sophomores)	25
(Senter, Chelberg, Kemp & Young)	
Risk Management	20
Public Safety	20
Scheduling	19
Social Sciences	21
Student Government	3
Social Sciences	21
Student Service Counter	19
Testing Services	21
Upward Bound	27
Vice President for Academic Affairs & Provost	20
Vice President for Enrollment Services	20
Vice President for Finance	19
Vice President for Student Affairs	3
WLSO Radio Station	3

Lake Superior State University

The following mission and vision statements are currently under revision.

Mission and Vision Statement

*(approved by the Board of Trustees
March 28, 2008)*

Our principle mission at Lake Superior State University is to help students develop their full potential. We do this by providing high-quality, academically rigorous programs in an engaged, personal and supportive environment. This combination nurtures potential and sets students on paths to rewarding careers and productive, satisfying lives. We also serve the regional, national and global communities by contributing to the growth, dissemination and application of knowledge.

Values Statement

*(approved by the Board of Trustees
March 28, 2008)*

Our values at LSSU are to:

- be honest, open, forthright and courteous;
- respect and value each person as an individual;
- accept responsibility for our own conduct;
- be diligent in carrying out our responsibilities;
- welcome diverse perspectives and remain open to change and innovation;
- manage resources and facilities responsibly and with environmental sensitivity;
- be vigilant about potential threats to health or safety; and
- work cooperatively in the interest of achieving our common mission.



Code of Ethics

Code of Ethics

- We value a personal approach to education which provides the student access to faculty and staff — education provided in a small collegial atmosphere.
- We value our high quality academic programs which provide practical, technical education with the liberal arts tradition.
- We value a supportive, caring environment exemplified by mutual trust and respect and where each individual has worth through a holistic, student-centered focus. We respect not only the rights but the feelings of others.
- We value the exploration of new paradigms and the creative energy needed to stay at the forefront of knowledge.
- We value systematic assessment of all aspects of the University's operation and constructive

improvements based on these evaluations.

- We value our public service role. "Enter to learn, go forth to serve" is a traditional motto at Lake Superior State University.
- We value our collaborative partnerships characterized by high ethical standards with international colleagues, businesses, other educational institutions, community organizations, regional contacts and governmental entities.
- We value our unique geographical setting with its natural beauty and its international focus.
- We value the educational opportunities which are provided in a safer environment.
- We value the University's physical plant with its historical buildings which are both state and national treasures.
- We value a work ethic which emphasizes productive time-on-task, diligence, ethical behavior and responsibility in the student's personal development.
- We value our extracurricular, co-curricular programs and activities which contribute to the students' personal and professional growth.
- We value an environment which celebrates diversity and focuses on the value of each individual's contribution to the general welfare.
- We value the alumni and friends of the University who provide inspiration, loyalty and support.
- We value decisions which are in the best interests of the University and its students.



A Look at LSSU

Established in 1946 to address the needs of returning World War II veterans and to provide educational opportunities to the people of the Eastern Upper Peninsula, Lake Superior State University still embodies the essence of the early days. A personal education in a safe



and friendly environment remains a hallmark of today's LSSU.

Our beautiful 115-acre campus overlooks the Michigan and Ontario twin cities of Sault Ste. Marie, the St. Mary's River, and the world famous Soo Locks. The school is located at the beginning of Interstate 75 which ends in the Florida Keys.

The campus served as Ft. Brady starting in 1894 after the fort was relocated from the banks of the St. Mary's. The fort was deactivated in 1944 and, thanks to the efforts of local volunteers and leadership at Michigan College of Mining & Technology in Houghton, opened in the fall of that year as the Sault Ste. Marie Residence Center of MCMT.

The Sault Branch was rechristened Lake Superior State College of Michigan Technical University in 1966. Autonomy arrived for LSSC in 1970. University status was granted in 1987 to the state's smallest public institution of higher learning. Enrollment has grown

from the original class of 272 to more than 3,400 students.

There are 14 buildings on the National Historic Register contributing to the University's sense of tradition. This unique architectural blend is a reminder of the "weapons to plowshares" history of the setting.

Community: Sault Ste. Marie (pop. 18,000) is one of the oldest cities in North America, having begun as a fur trading center in the early 17th century. A Jesuit mission was established here in 1641, and Father Marquette founded the first permanent settlement 27 years later, within the boundaries of what was to become Michigan. The Sault celebrated its 300th birthday in 1968.

Our sister city, Sault Ste. Marie, Ontario, is a cultural, recreational, social and entertainment center. The combined population of the Twin Saults (98,000) allows for an international flavor abounding with the opportunities of a city, and the safety and comfort of a small town.

Expectations for Student Learning

Lake Superior State University utilizes a Student Academic Achievement Plan developed by the faculty to enhance continuous quality improvement and to meet the Assessment Initiative of the Higher Learning Commission of the North Central Association of Colleges and Schools. The intent of this plan is to document student learning at Lake Superior State University both in the major program and across the general education requirements. This continuous evaluation process works to assure high quality teaching and effective student learning. The faculty at Lake

Superior State University have collectively agreed upon the characteristics of the educated person the institution hopes to graduate and have identified outcomes that can be used to document these attributes. The following are areas that the faculty have deemed essential to a liberal education and have value for the students in their lives as responsible citizens: communication skills, mathematics, cultural diversity, humanities, and social and natural science. Students who complete the general education courses at Lake Superior State University will be able to

demonstrate attributes of the general education outcomes.

Students attending Lake Superior State University can expect commitment by the University to document and enhance student learning. Through the assessment process, the University demonstrates its commitment to improving student learning and ensures that when students graduate they have attained specific attributes and abilities.

Lake Superior State University expects a commitment on the part of its students to actively participate in the learning process.

Accreditations

Lake Superior State University is accredited by the following agencies:

- The Higher Learning Commission (a commission of the North Central Association of Colleges and Schools), 30 North LaSalle Street, Suite 2400, Chicago, Illinois 60602-2504. Phone: 312-263-0456; 800-621-7440. Fax: 312-263-7462; Internet: <http://www.ncahigherlearningcommission.org/>
- The **athletic training education program** is accredited by the Commission on Accreditation of Athletic Training Education (CAATE), 2201 Double Creek Drive, Suite 5006, Round Rock, TX 78864. Phone: 512-733-9700. Fax: 512-733-9701. caate@sbcglobal.net; www.caate.net
- The **bachelor of science in environmental health** is accredited by the National Environmental Health Science and Protection Accreditation Council, 2632 SE 25th Avenue, Suite D, Portland, OR 97202. Phone: 503-235-6047. Fax: 503-235-7300. ehacinfo@aeahap.org
- The **bachelor of science in nursing** is approved by the Michigan Board of Nursing and is accredited by the National League for Nursing Accreditation Commission, 3343 Peachtree Road NE, Suite 500, Atlanta, GA 30326. Phone: 404-975-5000. Fax: 404-975-5020. www.nlnac.org
- Council on Medical Education and Hospitals of the American Medical Association, 2450 North Street NW, Washington, DC 20037-1126. Phone: 202-828-0400. Fax: 202-828-1123/1125. www.aamc.org
- International Fire Service Accreditation Congress, 1700 West Tyler, Oklahoma State University, Stillwater, OK 74078. Phone: 405-744-8303, in the **bachelor of science for fire science**
- The **legal studies and business administration legal management programs** have been approved by the American Bar Association, Standing Committee on Paralegals, 541 North Fairbanks Court, Chicago, IL 60611. Phone: 312-988-5617; fax: 312-988-5710; Internet: <http://www.abanet.org/legalassessments/home.html>
- The **manufacturing engineering technology bachelor's program** is accredited by the Technology Accreditation Commission (TAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Phone: 410-347-7700
- The **computer, electrical and mechanical engineering bachelor's programs** are accredited by the Engineering Accreditation Commission (EAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Phone: 410-347-7700

Department Accreditation Requirements

ABET requires accredited programs within the Department of Engineering and Technology to publish their program educational objectives and outcomes in the university catalog.

COMPUTER ENGINEERING Program Educational Objectives

1. Experienced graduates of the Computer Engineering program will have successfully applied engineering skills and tools to solve problems in their profession.
2. Experienced graduates of the Computer Engineering program will have successfully demonstrated professional application of design principles subject to technical, practical, and

societal constraints.

3. Experienced graduates of the Computer Engineering program will have set professional goals, experienced professional growth, and engaged in ongoing professional development and learning activities. Through life-long learning, they will have the ability to adapt in a constantly changing world and will be capable self-learners.

Program Outcome Objectives

1. Employability. Each graduate of the Computer Engineering program will receive an engineering education that is respected by relevant engineering and manufacturing organizations, companies, and

societies. Graduates will have the ability to seek employment in a variety of engineering or engineering technology positions or enter a related graduated school.

2. Learning Environment. Each graduate of the Computer Engineering program will have experienced a learning environment administered by quality faculty, utilizing both internal and external review processes to ensure students are being educated using accepted educational methods. The assessment process will assure continuous improvement for the program, the facilities, and the meeting of students' needs.

3. Societal Awareness. Each graduate of the Computer Engineering program will have knowledge of contemporary issues and cultures and will recognize the impact of technological decisions within both global and societal contexts.
4. Engineering Professionalism. Each graduate of the Computer Engineering program will be able to utilize appropriate basic sciences, mathematics, and engineering sciences to design systems, components, or processes that meet desired outcomes and design constraints. They will have the ability to apply these skills and use modern engineering tools to solve engineering problems through the analysis, design, and implementation of digital systems and through the development of computer algorithms. The fundamental technical skills will include those in the areas of complex variables, linear algebra, discrete mathematics, calculus, differential equations, statistics, chemistry, physics, C/C++ programming, data structures and algorithms, computer networks, discrete structures, numerical methods, electronic devices, signals and systems, analog circuits, digital circuits and systems, digital signal processing, microprocessors, assembly language programming, and control systems.
6. Specialized Technical Skills. Each graduate of the Computer Engineering program will either possess specialized technical skills in robotics and automation, as well as the ability to apply these skills to solve practical engineering problems, or will possess additional skills in mathematics, engineering, or computer science. This will have been accomplished by completing the Robotics and Automation option or by

selecting approved courses in mathematics, engineering and computer science.

ELECTRICAL ENGINEERING Program Educational Objectives

1. Experienced graduates of the Electrical Engineering program will have successfully applied engineering skills and tools to solve problems in their profession.
2. Experienced graduates of the Electrical Engineering program will have successfully demonstrated professional application of design principles subject to technical, practical, and societal constraints.
3. Experienced graduates of the Electrical Engineering program will have set professional goals, experienced professional growth, and engaged in ongoing professional development and learning activities. Through life-long learning, they will have the ability to adapt in a constantly changing world and will be capable self-learners.

Program Outcome Objectives

1. Employability. Each graduate of the Electrical Engineering program will receive an engineering education that is respected by relevant engineering and manufacturing organizations, companies, and societies. Graduates will have the ability to seek employment in a variety of engineering or engineering technology positions or enter a related graduated school.
2. Learning Environment. Each graduate of the Electrical Engineering program will have experienced a learning environment administered by quality faculty, utilizing both internal and external review processes to ensure students are being educated using accepted educational methods. The assessment process will assure continuous improvement for the program, the facilities, and the meeting of students' needs.

3. Societal Awareness. Experienced graduates of the Electrical Engineering program will have knowledge of contemporary issues and cultures and will recognize the impact of technological decisions within both global and societal contexts.
4. Engineering Professionalism. Each graduate of the Electrical Engineering program will be able to utilize appropriate basic sciences, mathematics, and engineering sciences to design systems, components, or processes that meet desired outcomes and design constraints. They will have the ability to interact in all aspects of the design process from product inception to completion. They will have the ability to act professionally and ethically as individuals or as members of multi-disciplinary teams. They will be able to clearly communicate their ideas in both written and oral forms as typically expected within the engineering discipline. They will have the ability to generate various forms of documentation necessary for product design and production.
5. Fundamental Technical Skills. Each graduate of the Electrical Engineering program will possess fundamental technical skills in mathematics, science, software, and engineering, as well as the ability to apply these skills and use modern engineering tools to solve engineering problems through the analysis, design, and implementation of electrical systems. The fundamental technical skills will include those in the areas of complex variables, linear algebra, calculus, differential equations, statistics, chemistry, physics, computer programming, numerical methods, electromagnetics, electronic devices and circuits, signals and systems, analog circuits, digital circuits, microprocessors,

assembly language programming, and control systems.

6. Specialized Technical Skills. Each graduate of the Electrical Engineering program will possess specialized technical skills in either digital systems, robotics and automation, or mechanical systems, as well as the ability to apply these skills to solve practical engineering problems. This will have been accomplished by completing one of the approved Electrical Engineering program options in addition to the Electrical Engineering program core.

MECHANICAL ENGINEERING Program Educational Objectives

1. Experienced graduates of the Mechanical Engineering program will have successfully applied engineering skills and tools to solve problems in their profession.
2. Experienced graduates of the Mechanical Engineering program will have successfully demonstrated professional application of design principles subject to technical, practical, and societal constraints.
3. Experienced graduates of the Mechanical Engineering program will have set professional goals, experienced professional growth, and engaged in ongoing professional development and learning activities. Through life-long learning, they will have the ability to adapt in a constantly changing world and will be capable self-learners.

Program Outcome Objectives

1. Students of the Mechanical Engineering program at graduation will receive an engineering education that is respected by relevant engineering and manufacturing organizations, companies, and societies. Graduates will have the ability to seek employment in a variety of engineering positions or enter a related graduate school.
2. Students of the Mechanical

Engineering program at graduation will have experienced a learning environment administered by quality faculty, utilizing both internal and external review processes to ensure students are being educated using accepted educational methods. The assessment process will assure continuous improvement for the program, the facilities, and the meeting of students' needs.

3. Students of the Mechanical Engineering program at graduation will have knowledge of contemporary issues and cultures and will recognize the impact of technological decisions within both global and societal contexts.
4. Students of the Mechanical Engineering program, at graduation, will be able to utilize appropriate basic sciences, mathematics, and engineering sciences to design systems, components, or processes that meet desired outcomes and design constraints. They will have the ability to interact in all aspects of the design process from product inception to completion. They will have the ability to act professionally and ethically as individuals or as members of multi-disciplinary teams. They will be able to clearly communicate their ideas in both written and oral forms as typically expected within the engineering discipline. They will have the ability to generate various forms of documentation necessary for product design and production.
5. Students of the Mechanical Engineering program at graduation will have foundational skills in technical areas including basic and advanced mathematics, science, software, and engineering, as well as applied skills involving industrially-relevant problems, laboratory experiences, computer-based experiences, and applied research. The

graduate will use these skills and modern engineering tools to conduct experiments and to identify, analyze, and solve engineering problems. Such skills are to be obtained in areas including, but not limited to: linear algebra, calculus, differential equations, complex variables, statistics, computer programming, numerical methods, chemistry, physics, manufacturing processes, drafting and solid modeling, dimensioning and tolerancing, statics, strength of materials, dynamics, thermodynamics, fluid mechanics, heat transfer, material science, machine design, electronics, analog circuit analysis, automatic controls.

6. Each graduate of the Mechanical Engineering program will have the opportunity to develop breadth or depth in their foundational skills in the Robotics and Automation, the Vehicle Systems or General options, as well as the ability to apply these skills to solve practical engineering problems. This will have been accomplished by completing one of the approved Mechanical Engineering program options in addition to completing the core Mechanical Engineering program courses.

MANUFACTURING ENGINEERING TECHNOLOGY Program Educational Objectives

1. Experienced graduates of the Manufacturing Engineering Technology program will have successfully demonstrated professional application of technical skills and engineering judgement to solve problems in their profession subject to technical, practical, and societal constraints.
2. Experienced graduates of the Manufacturing Engineering Technology program will have set professional goals, experienced professional growth, and are engaged in ongoing

professional development and learning activities. They will appreciate the need for life-long learning in a constantly changing world and be capable self-learners.

Program Outcome Objectives

1. Students of the Manufacturing Engineering Technology program at graduation will receive an engineering education that is respected by relevant engineering and manufacturing organizations, companies, and societies. Graduates will have the ability to seek employment in a variety of engineering positions or enter a related graduate school.
2. Students of the Manufacturing Engineering Technology program at graduation will have experienced a learning environment administered by quality faculty, utilizing both internal and external review processes to ensure students are being educated using accepted educational methods. The assessment process will assure continuous improvement for the program, the facilities, and the meeting of students' needs.
3. Students of the Manufacturing Engineering Technology program at graduation will have knowledge of contemporary issues and cultures and will recognize the impact of technological decisions within both global and societal contexts.
4. Each graduate of the Manufacturing Engineering Technology program will possess foundational technical skills in mathematics, science, software, and engineering technology, as well as the ability to apply these skills and use modern engineering technology tools through the analysis and implementation of manufacturing systems. The fundamental technical skills will include those in the areas of algebra, trigonometry, differential and integral calculus, statistics, physics, chemistry, computer applications, drafting and solid modeling, statics, strength of materials, electricity and electronics, manufacturing operations, CNC applications, PLC applications, robotic systems, and quality engineering.
5. Each graduate of the Manufacturing Engineering Technology program will have the opportunity to broaden knowledge in the manufacturing area and/or develop in-depth specialized skills in robotics and automation, as well as the ability to apply these skills to solve practical engineering technology problems. This will have been accomplished by completing one of the approved Manufacturing Engineering Technology program options in addition to the Manufacturing Engineering Technology core.
6. Students of the Manufacturing Engineering Technology program at graduation will be able to systematically apply the basic sciences, mathematics, and technology to design systems or processes that meet desired outcomes and satisfy design constraints. They will have the ability to act professionally and ethically both as individuals and as members of multi-disciplinary teams. They will be able to clearly communicate their ideas in both written and oral forms as typically expected within the engineering technology discipline. They will understand the need for, and will have the ability to generate, various forms of documentation necessary for process/system design and production.



University Talk

Terms & phrases you should know...

Academic Credit: (or **credit hours** or **credit**): One academic credit is generally earned for every 14 hours in lecture during a semester.

Academic Probation: The result of a grade point average falling below an acceptable level.

Academic Year: Two 15-week semesters.

Accredited: Quality of academic programs has been approved by an outside rating agency.

Admission: Your acceptance for enrollment.

Advisor: Faculty member who offers you academic advice, explains requirements and assists in scheduling.

Associate Degree: Awarded for a “two-year” program.

Bachelor Degree: or Baccalaureate — awarded for a “four-year” program.

Calendar: Important dates of the academic year.

Certificate: Requires one year of study.

College: Academic unit administered by a dean, comprising two or more departments or schools.

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.

Courses: Descriptions in this catalog generally show a course number, followed by the course name, and the number of academic credits shown at the right of the column.

ENGL110 *First-Year*
Composition I 3

Credit: See academic credit.

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

Departments: Academic units, each administered by a “chair” or “dean” and offering courses in one or more related disciplines.

Discipline: Group of related courses, such as mathematics.

Elective: Course distinguished from required course. You select 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 credits in a semester (nine credits for graduate students).

General Education Requirements: Courses you must take in addition to your major to earn a bachelor’s or an associate’s degree in liberal arts; provides you with broadly based education.

GED Examinations: (General Education Development examination): If you didn’t finish high school, but believe you learned enough in other ways to qualify for university, this is the test for you.

Grade Point Average (GPA): Number of points divided by the hours of credit attempted. It calculates your average grade for all classes. Cumulative grade point average is the average for all your classes numbered 100 and above.

Internship: (practicum, field placement or clinical): working in a ‘real life’ setting for academic credit.

Major (curriculum): A concentration of courses in your specific area of study.

Minor: A lesser concentration (20 credits or more).

Part-Time Student: You, if you take fewer than 12 credits in a semester (fewer than nine if you are a graduate student).

Practicum: Another word for internship.

Prerequisite: Certain courses you must successfully complete before enrolling in a specific course. You must satisfy prerequisites, and other stated conditions, before enrolling in a course, or have permission from an instructor to waive the prerequisites. It is your responsibility to be certain you have 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 register for specific classes for the next semester, pay tuition, etc.

Required Courses: You must take these to earn your degree. Failed courses must be repeated.

School: See Departments.

Semester: Sometimes called term: See academic year.

Term: Sometimes called semester: See academic year.

Transcript: Official record of your coursework maintained by the LSSU Registrar’s Office.

Transcript, Official: Mailed directly from principal’s or registrar’s office of issuing institution to LSSU Registrar’s 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.

Academic Policies

Please familiarize yourself with the academic policies described in this catalog. They will help you obtain your educational objectives. Faculty advisors, staff and administrative personnel will also help you negotiate your way through these policies — seek their advice whenever you have questions!

The Academic Year

Lake Superior State University operates on a semester system. There are two regular 15-week semesters (fall and spring) which begin in August or September and end in April or May. The summer semester consists of classes offered in two six-week sessions, or one 12-week session. Starting and ending dates are listed in the Academic Calendar in the back of this catalog and also online.

Academic Credit

One credit is equal to 14 hours of classroom instruction in lecture/recitation courses. For example, a three-credit course might be sched-

Student Classifications

0 to 25 credits = freshman

26 to 55 credits = sophomore

56 to 87 credits = junior

88+ = senior

uled 9-9:50 a.m. Monday, Wednesday and Friday for 14 weeks plus one week for exams. Laboratory classes, field work or other non-lecture classes meet for more than one hour a week per credit.

You should expect to spend two hours of study or class preparation for each hour spent in class.

The average credit-hour load for full-time students is 16 credits. A minimum of 124 credits is required for all baccalaureate degrees; a minimum of 62 credits is required for all associate degrees.

Student Curriculum Choice and Advising

When you apply for admission, you are asked to declare a major. The major you declare will determine which major department you are in and the academic advisor assigned to you. Please get to know your advisor well and meet with him/her often to get help in class selection, degree progress and career advice. You may change your major curriculum by processing a Curriculum Change Form through the Registrar's Office. The Registrar's Office and departmental offices have the form and instructions. Curriculum change forms must be filed with the Registrar's Office for each curriculum change.

If you are unsure of your major, you will be assigned to the Liberal Arts-Unclassified major and the academic advisor assigned to you will be a staff member of Career Services.

Semester Course Selection

Registration for the next semester takes place near the end of your current semester.

Three weeks before registration, course schedules listing times, dates and locations will be available online at: <http://www.lssu.edu/scheduling>, and in Anchor Access. Review the class offerings, read the instructions for scheduling, and meet with your advisor to select courses for the next semester.

You must sign up for classes for the semester in which you will be doing the actual work.

Please review all the registration information carefully as it has dates for registration according to class level, dates for tuition payments, and information regarding prerequisites, corequisites and other course requirements.



Grades and Grade Points

Grade	Grade Points per Credit
A+	4.00
A Excellent	4.00
A-	3.70
B+	3.30
B Good	3.00
B-	2.70
C+	2.30
C Average	2.00
C-	1.70
D+	1.30
D Inferior	1.00
D-	0.70
F Failure	0.00
I Incomplete	0.00
N No Grade	0.00
W Late Withdrawal	0.00
AU Audit	0.00
CR Credit	0.00
CR (undergraduate level)	is equal to a 2.00
CR (graduate level)	is equal to a 3.00
NC No Credit	0.00

It is your responsibility to ensure that the classes you take count toward your degree program. You may, however, be required to take developmental courses (course numbers beginning with "0", such as MATH081), which will not count toward graduation.

Test Scores: When you apply for admission, you will send your ACT scores to Lake Superior State University. Your scores determine the level of English and math courses into which you will be placed. If you have been out of high school more than 26 months and have not taken the ACT, you will take placement tests at the Testing Center at Lake Superior State to determine your placement in English and math.

Maximum credit load: You may carry up to 20 credits per semester. You may take more credits if you have a 3.00 GPA or higher and have written approval from the appropriate dean. Students on academic probation should not take more than 15 credits.

Prerequisites: Many courses require that you complete English and math, or other preliminary classes before signing up to take these courses. If you have not met the prerequisite, you will not be allowed to register for the class. If you registered for a course, and later are found not to have the necessary prerequisite, the instructor may drop you from the class with an *N* grade. Some courses require that you earn a *C* or better in prerequisite courses before registering for the next course. Exceptions may be made only by the dean of your college or the instructor of the subsequent class.

Repeats: You may repeat a class in which you earn a grade other than "*W*" or "*N*" only twice without special permission and only under the following conditions:

1. Courses transferred from other institutions are included in this policy.

2. Both the original and repeat grades will show on the transcript, but hours earned toward graduation will only count once.
3. For the purpose of calculating the cumulative grade point average, only the grade of the last attempt will be used, if the last class was taken at LSSU. If you transfer in a class to repeat a class from LSSU, the LSSU grade will be removed from your grade point average.
4. To repeat a course more than twice, you must obtain the permission of the course instructor and the appropriate dean. Permission is granted only under exceptional circumstances.

This policy began fall 2001 for all new students either as transfer or new freshmen.

Policy on substitutions or waivers for failed classes: If you fail a class required for your degree program, you must repeat the class and receive a passing grade. If the failed class is no longer offered because of program changes and/or course deletions, the dean may approve a substitution or waiver recommended by the academic chair. The chair must provide reasons for the recommendation on the substitution/waiver form which is sent to the dean's office.

The dean will then send the form to the Assistant to the Provost for Academic Records.

Non-attendance of the first class: Your instructor may drop you from a course if you do not attend or if you do not call the instructor before classes begin. The course instructor will fill out a Drop Form and notify you if you are dropped from the course.

Adding/Dropping courses through the sixth day of the semester: You may add or drop courses online using Anchor Access through the sixth day of the fall or spring semester. If you are attending a summer semester, you

can add or drop courses online through the fourth day of the semester.

If you wish to add a course that is full or without having the necessary prerequisites, you must contact the instructor for that course to request permission. If the instructor approves the request, he/she will complete an Instructor Override for you. You must then go online and register for that course.

Courses dropped through the sixth day (fourth for summer semester) will not appear on your academic transcript.

Adding courses after the sixth day of the semester: Online registration ends on the sixth day of the semester (fourth for summer semester). If you wish to add a course after this date, you must have the instructor's permission. You will need to complete a Schedule Adjustment Form, have the instructor sign it giving permission, and then process the form at the Student Service Counter in the Fletcher Center for Student Services.

Dropping courses after the sixth day of the semester: You may drop a full-semester course during the first eight weeks (40 days) of the semester. For courses running less than a full semester (e.g. seven-week class), check online for the official drop dates — the time period for dropping will be approximately equal to one-half of the course instructional period. If you drop a course, you will receive an *N* grade on your academic transcript. *N* grades are not counted in the academic GPA.

Dropping a class after the official drop dates requires extenuating circumstances, and you must obtain a late Withdrawal form. You must:

1. Complete the form (including listing a reason for the drop).
2. Get the instructor's signature **and** the instructor's recommendation.
3. Take the completed form to the appropriate dean (of the class

being dropped), for his/her review and decision.

4. If the dean approves the drop, you must then take the form to the registrar's office for processing.

A *W* grade will appear on your permanent record and will not affect your GPA.

Class attendance: Regular class attendance and active participation in classes are important elements in the learning process. You are at the University primarily for the sake of intellectual growth and development. Attendance and participation provide appropriate opportunities for the evaluation of your progress.

You are personally responsible for the satisfactory completion of the course work prescribed by your instructors. This means that you are expected to attend classes regularly, and that you are responsible for the work assigned in class, the material covered in class, and for participation in class activities (including discussion and listening) designed by the instructor as part of the learning experience. However, mere physical attendance should not be a criterion for evaluation of your performance.

Participation in an official University function is an excused absence when approved by the provost. You will not be penalized for such participation. You are responsible for work missed and must confer with your instructor on this matter.

Complete withdrawal: If you are a full-time student and drop all of your classes during the first eight weeks of the semester, you may be eligible for tuition refund. To receive any refund, fill out a Withdrawal Form at the Student Service Counter. This office will authorize your refund from the Business Office. (Please check online for the refund policy and dates.)

Before leaving, be sure you have cleared any holds on your records so you can return at a later date or have transcripts of your academic records sent.

Grading System

Grade Point Average (GPA): To calculate your GPA for a semester, divide the total quality points earned by the GPA hours. GPA hours include those earned or failed but not those classes taken for credit/no credit. Cumulative GPA is calculated by dividing total quality points earned by the number of GPA hours carried in all semesters. If you repeat a course, count only the credits carried and the points of the last grade earned. Only the grade of your last attempt is calculated in your GPA.

A cumulative GPA of 2.00 for all credits is required for graduation. Further, a 2.00 cumulative grade point average for all credits in major, minor(s), and general education is required. Some programs require a higher GPA in the major curriculum.

"I" (incomplete) grade: Students may request an "I" (incomplete) grade for a course if extenuating circumstances beyond their control prevent the completion of the course requirements by the end of the semester. Examples of extenuating circumstances may include health issues, death of a parent/spouse/child, or military service. Appropriate documentation is required. Students will need to be enrolled and have completed a majority of the work required for a course during the semester to be eligible to request an "I" (incomplete grade). An "I" (incomplete) grade may be issued in a course that by design can not be completed in one semester. An example of this type of course would be a study abroad course that requires the student to be out of the country until after the official semester end date.

Students must work with the instructor to complete all missing requirements by a date specified by the instructor. If a date is not given, the student will have a maximum of two semesters (excluding

Academic Standing Table

Full- and Part-Time Students

Academic Probation and Dismissal Policy

effective Summer 2005

Cumulative GPA Hours Carried at LSSU	Minimum for Good Standing*	On Probation	Dismissal
1 - 18.99	2.00	less than 2.00	two consecutive semesters on probation
19 - or more	2.00	less than 2.00	two consecutive semesters on probation or 1.60 or less gpa

You will be dismissed for academic deficiencies if you are on probation for two consecutive semesters at Lake Superior State University. If your cumulative GPA Hours (as shown on your transcript) are 19 or more and your grade point average is 1.60 or less, you will be dismissed. GPA Hours are those used in figuring your grade point average. Classes not at the 100-level or above are not counted in the GPA Hours. Classes with grades of CR/NC are not counted in the GPA Hours.

*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 your major, minor and general education is necessary for graduation (effective fall 2007).

- | | | |
|---|--|--|
| <p>1. You will be on academic probation if your cumulative grade point average falls below 2.000. Academic Probation limits you to 15 credits. You must contact your advisor to adjust your schedule before classes start for the next semester.</p> | <p>a. Allow two semesters (summer may be counted for one semester) to elapse before re-enrollment, or</p> <p>b. Petition the Scholastic Standards Committee for immediate readmission should extenuating circumstances exist. This action is initiated with the Assistant to the Provost for Academic Records. The Committee can either permit early readmission with specific conditions required of you or deny your request. Subsequent to the Committee's denial, you can further appeal in writing to the Provost, whose decision is final.</p> | <p>The Assistant to the Provost for Academic Records may allow you to continue "on probation," with the record showing "on probation" instead of "academic dismissal" if your record has shown improvement during the semester and you have a 2.00 grade point average in courses carried for that semester.</p> |
| <p>2. If you are on probation for two consecutive semesters (summer semester included if you are enrolled in summer classes), you will be academically dismissed or, if your cumulative GPA Hours are 19 or more and your grade point average is 1.60 or less, you will be academically dismissed. Your classes for the next semester(s) will be deleted.</p> | <p>4. If you continue after a dismissal, you will be dismissed again after any semester in which your cumulative grade point average falls below a 2.00.</p> | <p>5. If you are dismissed a third time, you will not be reinstated without the permission of the Provost. Three semesters must elapse from the time of dismissal before you may petition for readmission. Summer may be counted for one semester.</p> |
| <p>3. After a first or second dismissal you may choose one of the following options:</p> | | <p>6. The Scholastic Standards Committee may dismiss you from the university for demonstrated academic dishonesty.</p> |

summer semesters) to complete the requirements for the course and to have the "I" (incomplete) grade changed to an appropriate final grade.

If the "I" (incomplete) grade has not been changed to an appropriate final grade by the end of two semesters (excluding summer semesters) the "I" (incomplete) grade will be changed to an "F" (failure) grade.

N and W grades: These grades are given to those classes that you have officially dropped (N) or withdrawn (W).

Grade change: Students may appeal a final grade if they feel it is not reflective of their course work. This appeal must be made within one calendar year from the end of the semester the course was taken. Students need to make the appeal directly to the instructor responsible for the course in question.

Dean's List: Full-time students carrying at least 12 graded credits of college-level courses (100 level or above) in a semester with a grade point average of 3.500 or higher, and NOT having any incomplete (I) grades, will earn Dean's List honors, which acknowledge out-standing academic achievement.

If a grade is changed, prior to the conclusion of the following semester, because of "instructor error" or because the student has completed work for a course which received an I grade, the student will be considered for Dean's List honors.

If the grade change is for some other reason or occurs after the conclusion of the following semester, the student will not be reevaluated for Dean's List honors.

Effective fall semester 2006, students earning Dean's List honors will have this designation noted on their LSSU academic transcript.

Credit/No Credit Courses

You may enroll in some courses on a credit/no credit basis if you are in good academic standing. The following conditions exist:

1. One course per semester may be taken as credit/no credit.
2. Only 12 credits of courses taken as credit/no credit may be applied toward a degree.
3. Courses that are required by your major, minor, or that are general education courses, can not be taken for credit/no credit.
4. You apply at the Registrar's Office to enroll for a credit/no credit course during the drop/add period; cannot change to regular grades after the drop/add period ends.
5. You maintain a 2.00 C average in a course to receive a CR grade.
6. Instructors are not notified that you are taking a course as credit/no credit; the CR or NC credit is assigned based on the grade your instructor submits.

Certain courses are always offered with a credit/no credit format. These courses have this information in the official course description and course syllabi. The policy and limitations outlined above do not apply to these courses.

Cheating and Plagiarism: Academic Integrity

Academic integrity is a key component of the core values of Lake Superior State University. All members of the University community are expected to be honorable and ethical and observe standards of conduct appropriate to a community of scholars. Students are expected to behave in an ethical manner. The University community will not tol-

erate academic dishonesty as such behavior will cause harm to the reputation of students, faculty, and graduates of the institution. Such dishonorable behavior includes, but is not limited to, cheating, fabrication, plagiarism, and obtaining an unfair advantage. These terms are defined below:

Cheating

Cheating is defined as using or attempting to use unauthorized materials or information of any kind during an exam or graded assignment of any kind. Using notes, texts, help from individuals, or copying information from another individual's exam, or by using electronic or any other means constitutes cheating unless such resources are EXPLICITLY allowed by the instructor.

Fabrication

Fabrication is any unauthorized falsification, invention, or copying of data, falsification of information, citations, or bibliographic references in any academic work. It also includes falsifying any academic record or other University document.

Plagiarism

Plagiarism is representing someone else's work as one's own. Failing to cite references or presenting material, verbatim or paraphrased, that is not acknowledged and cited also constitutes plagiarism.

Obtaining an Unfair Advantage

Academic integrity is violated when one obtains an unfair advantage by stealing, reproducing, circulating, or otherwise gaining access to examination materials before they are distributed by the instructor. Also prohibited are stealing, destroying, defacing, or concealing library materials with the purpose of depriving others of their use.

Possible Sanctions for Offenses

It is in the best interest of the University community to sanction any individual who chooses not to accept the principles of academic honesty by engaging in the above

acts. Appropriate sanctions may include failure of an assignment or exam, failure of a course, or dismissal from the University.

Faculty and University Responsibilities

Unless the faculty member has explicitly specified otherwise, students are to assume that exams are individual, closed book, and without the use of notes or similar reference materials. Unless specifically allowed by the faculty member, papers, projects, and similar products are expected to be the original individual work of the student. If notes, texts, other reference materials, group work or similar activities are to be allowed, the faculty member will specify what is permitted for a particular assignment or exam prior to disseminating the assignment or exam.

A faculty member who observes a violation in one or more of the above areas shall meet with the student to address the violation. If, in the judgment of the faculty member, academic integrity has been violated, the faculty member will impose the appropriate sanction, either a failure for the assignment or exam, or failure for the course. The faculty member will then file an *Academic Integrity Incident Report* with the department chair, dean, the Provost's Office, and the office of Student Affairs. This report will be kept in the Provost's Office as well as in the office of the Vice President of Student Affairs for a period of five years. A copy of this report will also be placed in the student's advising file. Academic Departments or Schools may have additional policies and procedures that could provide further recommendations to the Provost's Office when instances of academic dishonesty are suspected. This policy is also applicable in the Testing Center.

In cases of egregious or repeated violations, it may be determined by the faculty member, his/her department chair, or dean, that dismissal from the University is warranted. In

this case, the chair of the Scholastic Standards Committee and the student will be notified. The Scholastic Standards Committee will then conduct a hearing in which the student is granted due process. If the committee decides that dismissal from the university is warranted, the student will have five school days to appeal the decision to the Provost of the University. The Provost may either affirm the decision to dismiss, or reinstate the student and provide a rationale for doing so.

Credit by Examination

There are three examination processes you can take to earn credit for individual courses or general education requirements. They include:

1. Advanced placement
2. CLEP examinations — Inquire at the Registrar's Office, Testing Center or with the assistant to the provost for academic records for information on the CLEP examinations.
3. Departmental examinations — Inquire with the academic department whether an examination is available.

You must be admitted to a degree program and in attendance at Lake Superior State University to receive credit by examination. An examination grade of 2.00 is required to earn credit. There is a fee required for both CLEP examination and departmental examinations. The credits earned by examination appear as transfer credits on your transcript. Some universities may not accept this type of credit for transfer.

Auditing a Class

Audits are designed for someone who wishes to take a particular course for its content but not be graded for the course. An LSSU student may register for any course on an audit basis provided all prerequisites have been satisfied.

The coursework for auditing a course is determined in conjunction with the faculty member for the course.

Auditing courses does not count as part of a student's official class load for determining financial aid eligibility, veteran's benefits or any other enrollment certification requirements.

Students may change from an audit to credit status during the first week of classes and only with the concurrence of the faculty member for the course. This change must be processed through the Registrar's Office for grading purposes.

Transcripts

You may have an official copy of your permanent records sent to schools, companies and other places or persons of your choice. Send a written request with your student ID number, name during enrollment and dates of attendance to Lake Superior State University, Registrar's Office, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783. Your first official transcript is free; after, there is a \$5 charge for each transcript. Student copy transcripts are issued directly to you and can be requested free of charge at the Student Service Counter in the Fletcher Center. You must show a picture I.D. Any financial or other obligations to the University must be cleared before a transcript is released. You may also print an unofficial transcript on-line using Anchor Access.

Family Educational Rights and Privacy Act (FERPA)

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 U.S. Department of Education, 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 U.S. Department of Education 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 is the hearing officer for the Act and is responsible for implementing the notification requirements and the distribution of copies of the policies and procedures.

Section 3. Education Records Defined

"Education records" means those records which:

1. directly relate to a student or
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. It 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 a 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 enrolled at or has attended Lake Superior State University has the right to inspect and review his/her educational records 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 defined by availability of staff time and the records. Records will be provided no more than 45 days after the request is made.

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 written request for the inspection is required for review of educational records or release of 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. 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, and
4. the date the request is filed.

Section 6. Copies of Records: Fees for Copies

Copies of educational records will 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 attending the University or be within 30 miles of campus and is not physically incapacitated during the 45-day compliance period, copies shall not be provided but the right of inspection may be exercised.

Under this provision, a written request is required (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. Requests are reviewed 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 is not a charge for search, retrieval or inspection of the record. Copies of records provided under these provisions do 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; Hillside House

Career Advising and Placement; Academic, Personal, evaluations; Director; Library

Continuing Education; Academic; Director; Library

Human Resources; Work Evaluation, Employment; Director; Administration Building

Financial Aid; Financial, Academic, Personal evaluation, Employment; Director; Fletcher Center

Graduate Office; Academic, Financial; Coordinator; Crawford Hall

Registrar's Office; Academic (complete and official academic record), Personal, Veterans Affairs; Registrar; Fletcher Center

Residence Halls; Personal; Housing Manager; Cisler Center

Residence Halls and Student Life; Discipline; Director for Student Programs and Services; Cisler Center

Student Accounts; Financial; Director Business Operation; Fletcher Center

Academic Areas, Academic; School/Department Chairs.

Note: All academic records are partial records with the exception of the Registrar's Office 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 these procedures and policies, University officials are those individuals who have demonstrated a need for access to student records consistent with official University responsibilities and professional practices.

University officials include: Members of the faculty, professional, executive and administrative staff, including the Public Safety Department, departmental secretaries, student employees who manage student education record information, 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 concerning 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 their education records to third parties other than directory information. 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 also provide the student with a copy.

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 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 received; provided that the information may be disclosed only:
 - a. to determine the eligibility for financial aid,
 - b. to determine the amount of aid

- c. to determine the conditions that will be imposed regarding financial aid, or
 - d. to enforce the terms or conditions of the financial aid.
3. to organizations conducting studies on behalf of educational agencies or institutions for developing, validating, or administering predictive tests, administering student aid programs; and improving instruction; provided that the studies are conducted in a manner which does not permit personal identification of students by persons other than the representatives of the organization. The information must be destroyed when 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. to 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 time 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. Written requests to prohibit or restrict the use of directory information should be addressed by the last day to add classes to the Registrar's Office.

The University considers the following as directory information: name, address, telephone number, place of birth, e-mail address, enrollment status (e.g., undergraduate or graduate, full time or part time) major field of study, dates of attendance, degrees, honors and awards received, including scholarships, most recent previous educational agency or institution attended by student, participation in officially recognized activities and sports, and height and weight of members of the athletic teams.

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 disclosure of personally identifiable information from a student's education records maintain a register within that file of the education records which indicates:

1. the parties who have requested or obtained information.

2. the legitimate educational interests the parties have in obtaining the information.

A record is not required for disclosures to a student, disclosures pursuant to the student's written consent when consent is specific to the party or parties, disclosures to University officials as set forth in Section 9, or disclosures of directory information as provided in Section 11.

The record of disclosures may be inspected by: the student, University officials and assistants responsible for the custody of the records, and university officials authorized in Section 9 and 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. application for employment, or

- c. 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 information in the student's educational records is inaccurate, misleading or violates the privacy or other rights of the student may request the University amend such records.

The procedures regarding amendment to a student record are:

1. submission of a written request to amend the record in question to the University office responsible for the content of the record.
2. a written request specifying the information to be amended and the basis for requesting a change in the record.
3. The written request should also suggest the recommended corrective action.
4. The University official responsible for establishing the content of the record in question within 14 calendar days will inform, in writing, the student that the record will be amended or the request is denied. If additional time is required to make a decision, the student will be advised of that period required.
5. Amendments and corrections will be completed 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 to challenge the content of a student's educational record to insure that the record does not contain inaccurate or misleading information or violates the privacy or other rights of the student. This procedure can not be used to challenge grades. The following procedure defines the process after the decision of denial.

Procedure of Hearing

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

1. submit a written request for a hearing to the hearing officer and the registrar.
2. designate in the request: the student's name and identification number, date of request, 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 seven calendar days of receipt of the request for hearing, notify the student of the hearing date, time and location. At least 72 hours notice prior to the hearing will be provided to involved parties.

A full and fair opportunity is available 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 any individual and expense including an attorney.

The hearing officer will render a decision on the appeal within

seven calendar days of hearing's conclusion. The decision shall be in writing and 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 rules the information is inaccurate, misleading or in violation of any of the student's rights, the record in question will be amended within seven 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 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 applies to letters or statements only if it is in writing and designated by the student and if:

1. the applicant or student is notified of the names of those providing letters or statements.

2. the documents are used only for the purpose intended.
3. the 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 that action must be in writing and filed with the office in possession of the waiver.

Students have the right to file a complaint with the U.S. Department of Education concerning alleged failures by Lake Superior State University to comply with the requirements of FERPA. The name and the address of the office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-5901

Additional Information

Lake Superior State University complies with Section 113 of the Carl D. Perkins Vocational and Technical Education Act and Section 122 of the Workforce Investment Act of 1998. LSSU uses the student's SSN in order to compile required WIA and Perkins Act reports.

Equal Opportunity

Notice of Lake Superior State University's policy of compliance with federal and state law

Policy

The University is an equal opportunity employer and educator and prohibits discrimination, including harassment, on the basis of race, color, national origin or ancestry, gender, age, disability, religion, height, weight, sexual preference, marital status, or veteran status.

In carrying out this policy, the University complies with all federal and state laws and regulations prohibiting discrimination including:

Executive Order 11246, the Elliott-Larsen Civil Rights Act of 1976, Title VI of the Civil Rights Act of 1964, The Equal Pay Act of 1963, Title VII of the Civil Rights Act of 1964, as amended by the Equal Employment Opportunity Act of 1972, and the Pregnancy Discrimination Act of 1978, Title IX of the Education Amendments of 1972, Titles VII and VIII of the Public Health Service Act, Age Discrimination in Employment Act of 1967, Sections 503 and 504 of the Rehabilitation Act of 1973, Veteran's Assistance Act of 1972, and Title II of the Americans with Disabilities Act of 1990.

Sexual Harassment

The University is committed to a policy of nondiscrimination on the basis of gender. Discrimination because of gender includes sexual harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when:

- i. Submission to such conduct or communication is made a term or condition either explicitly or implicitly to obtain employment, public accommodations or public services, education, or housing;

- ii. Submission to or rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment, public accommodations or public services, education, or housing; or
- iii. Such conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or public services, education, or housing environment.

The University is committed to the protection of the rights of all individuals and to the elimination of barriers that would prevent individuals from realizing their highest potential of human excellence. Sexual harassment is a particularly noxious form of discrimination that interferes with these goals and commitments, and is difficult to combat due to the intimidation and destruction of self esteem of its victims.

Grievance Officer

The Equal Employment Opportunity Officer/Affirmative Action Officer (EEO Officer) is the designated grievance officer for discrimination complaints. If any person believes that he or she has been subjected to discrimination, including harassment by unlawful and unacceptable expressions, acts, attitudes and/or behaviors based on race, color, national origin or ancestry, gender, age, disability, religion, height, weight, sexual preference, marital status, or veteran status, he or she should contact Ms. Beverly White, EEO Officer, Lake Superior State University Administration Building, Sault Ste. Marie, Michigan 49783 (906-635-2697) within sixty (60) working days of the action of which the person complains.

Process

1. The University encourages all individuals to promptly report

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. With the Grievance Officer, individuals may discuss 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 individual for using the complaint procedure in this policy, will be subject to appropriate discipline up to and including immediate discharge. If an individual believes he or she has been retaliated against for exercising his or her rights under this policy, the individual should use this complaint procedure.
4. All matters discussed in this process will be kept as confidential as possible.
5. If an individual is dissatisfied with the University's investigation process or resolution, he or she may file complaints of illegal discrimination on the basis of gender (Title IX and Title VI) or disability (Section 504 and Title II of the ADA) with the Office for Civil Rights, U.S. Department of Education, Chicago, IL 60605. A Title IX, Title VI, Section 504, or Title II ADA complaint must be filed

in writing with the Office for Civil Rights no later than 180 days after the occurrence of the possible discrimination.

6. 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, U.S. Department of Education or by court action 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.

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 form 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 the complainant and to the respondent 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. and 6.

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

Admissions

Apply on-line at www.lssu.edu

Freshmen

You may apply to Lake Superior State University any time during your final year of high school. Applications are processed continuously. When all necessary materials have arrived you will be notified of a decision as soon as possible. To

complete your admission file you must submit an official high school transcript, application fee, and ACT scores (if you graduated from high school within 26 months of entering LSSU). Although ACT scores are preferred, we will also accept SAT scores.

The primary factors used to determine admission are cumulative grade point average (GPA), high school course curriculum, and ACT or SAT results. LSSU recommends that students follow a college preparatory curriculum mirroring the Michigan Merit Curriculum. The middle 50 percent of our entering freshmen class typically have high school GPAs ranging from 2.7 to 3.3 and ACT scores ranging from 18-24. Students should feel free to submit any additional materials which may aid the Admissions Office in reviewing unusual circumstances which may have impacted high school performance. ACT or SAT scores will not be used in the admissions process if you graduated from high school two or more years ago.

Your admission will be contingent upon satisfactory completion of current coursework and receipt of a final high school transcript with verification of graduation from an accredited school or passing on the GED. To be considered official, all transcripts and test score reports must be mailed from your high school guidance office or testing agency directly to Lake Superior State University.

LSSU assigns each student an individual student identification number. Your student number will be provided to you when you are admitted. While we do not use social security numbers as your student identification, we do use it to match your application record with your other permanent records. Financial aid applications will not be processed without your social security number. Social security numbers should be included on your application for admission. Canadian and foreign student applicants should not use their social insurance number. LSSU will use your assigned student identification number.



Students denied regular admission may reapply after attending another accredited college and earning at least 19 semester (29 quarter) hours of transferable credit. Evaluation is then based upon the college record.

Home Schooled students

Lake Superior State University does not have separate requirements for home schooled applicants. Like all applicants, home schooled students will need to provide a transcript of their high school coursework as well as ACT or SAT scores. Admission will be determined on the basis of your high school grade point average, coursework completed, and ACT or SAT scores.

ACT

The ACT is offered nationally five times a year at many locations including our campus. Registration forms are available in high school counseling offices, the LSSU Testing Services at 906-635- 2027 or at www.actstudent.org.

United States residents applying for academic scholarships must have their ACT scores sent prior to the March 1 scholarship deadline.

Transfer Students

Transfer students must possess a 2.0 cumulative college GPA and be eligible to return to your former college(s). If you have completed fewer than 19 semester (29 quarter) hours of credit, you must send an official high school transcript or GED scores in addition to your college transcript (and ACT scores if you graduated from high school within 26 months of the semester of entry).

Contact the college's Registrar's Office or high school guidance office to have an official transcript mailed to our Admissions Office. Transcripts sent via facsimile or hand delivered are not considered official. All transcripts become the property

of Lake Superior State University and are not returnable.

Your complete application should be submitted at least 30 days prior to the semester of entry. Transfer students denied admission may reapply after taking additional courses that raise their overall GPA to above a 2.0.

Credit Evaluations

Official evaluation of transfer credit is made as quickly as possible after you are admitted. The Admissions Office will help you with an unofficial transcript review at your request.

If a course taken at another institution is not offered at LSSU, elective credit may be granted for that course. Elective credits may be applied toward degree requirements but may not be used to satisfy any specific course requirement.

Courses with grades less than C- will not transfer.

The Admissions Office completes transfer credit evaluations. The decision on courses and transfer credit granted may be appealed first to the academic dean and then to the provost.

Provisional Credit

Credit earned at an institution not listed in the American Council of Education's publication, *Accredited Institutions of Post-Secondary Education* is granted provisionally. You must complete at least 15 semester hours of credit with a cumulative GPA of 2.00 at LSSU before provisional credits will become part of your permanent record.

MACRAO Agreement

Michigan community college students admitted to Lake Superior State University who have the MACRAO stamp on their transcript are recognized as having completed the general education requirements at Lake Superior State University.

Sault College Agreement

Sault College of Applied Arts and Technology students admitted to Lake Superior State University who have the GECERT stamp (liberal studies degree) on their transcript are recognized as having completed the general education requirements at Lake Superior State University.



Residency Requirement

There is no limit to the number of transfer credits allowed from other institutions. Bachelor's degree candidates must earn at least 32 credits and at least 50 percent of their departmental required 300/400-level credits in LSSU courses.

Regional center students must earn at least 32 credits and at least 50 percent of their departmental required 300/400-level credits in Lake State courses.

Associate degree and certificate candidates must earn 16 of their final 20 credits in Lake State courses.

Early Admission Policy

Students under the age of 18 that apply for early admission to LSSU who do not possess a high school diploma or GED will be counseled on an individual basis by a member of the Admissions staff.

Former Students

Former Lake Superior State University students who miss one or more semesters (not including summer) must submit an Application for Re-admission prior to the semester of re-entry. There is no application fee. If you have attended another college during the period of absence, you must submit official transcripts and meet our transfer student admissions requirements. Those students who were academically dismissed must meet the requirements for re-enrollment as defined by the Scholastic Standards Committee.

Guest Students

Students enrolled at another college or university may be admitted to LSSU for one semester as a guest student. An extension of one additional semester may be granted for extenuating circumstances. If you intend to enroll full time for more

than one semester, you must submit an Application for Admission as a transfer student. Guest students assume responsibility for determining if LSSU courses apply to their program at the college from which they intend to graduate.

Ontario Students

Ontario student applicants must satisfy entrance requirements comparable to those of United States students. Please refer to the "Freshmen" and "Transfer" sections of the catalog for details.

If you have completed grade 13 or OAC courses before September 1990, you will receive transfer credit at the University for each course in which your final mark was at least a 60 percent. Transfer credit is not given for any OAC courses taken after September 1990. However, completion of OAC courses prepares some students to earn credit through testing. See section titled "Credit by Examination".

Admitted Ontario students must provide verification of ability to pay in order to receive a Certificate of Eligibility for Non-Immigrant (F-1) Student Status (Form I-20) required to attend a university in the United States. This is not an admissions requirement for Ontario students; however, an I-20 form is required for you to cross into the U.S. to attend classes. Please refer to "Verification of Ability to Pay" section in the catalog for details.

If you are a Permanent Resident or able to be in the U.S. with another form of documentation, we will need a copy of this documentation for our records.

If you are a Canadian Aboriginal or Native American (excluding METIS) with at least 50% blood quantum and have J-treaty privileges (carry a tribal ID), you are exempt from needing an I-20 form. You must provide our office with a copy of your tribal ID and an official tribal-issued letter showing proof of blood quantum.

Ontario students planning to attend part-time (less than 12 credits) and commute to college, will be issued a new I-20 form each semester upon the verification of the payment of tuition and fees, or after submission of financial information as outlined above.

Ontario students are required to purchase a health and accident insurance policy unless they are covered under a policy of their own or a policy with their parents.

Foreign Students (Excluding Ontario Students)

We recommend foreign students submit all application material by July 15 for the fall semester and November 15 for the spring semester. You will be required to provide official transcripts evaluated by World Evaluation Service (WES) or Education Credential Evaluators (ECE) on a comprehensive course-by-course basis. Websites for WES and ECE are www.wes.org and www.ece.org. This applies to both first time in college students as well as transfer students. Transfer students who have earned less than 19 semester hours of college credit will also need to provide their high school transcripts.

Foreign applicants must also provide verification of ability to pay, prove English proficiency, and provide proof of health and accident insurance prior to acceptance. Please refer to those sections for specific information.

Applicants should not consider themselves admitted to LSSU until they have provided all required documents and have received an official letter of acceptance. Following the letter of acceptance, the I-20 form is sent, as required by the U.S. Immigration and Naturalization Services.

If you are a Permanent Resident or able to be in the U.S. with another form of documentation, we will

need a copy of this documentation for our records.

If you are a Canadian Aboriginal or Native American (excluding METIS) with at least 50% blood quantum and have J-treaty privileges (carry a tribal ID), you are exempt from needing an I-20 form. You must provide our office with a copy of your tribal ID and an official tribal-issued letter showing proof of blood quantum. Foreign students are required to purchase a health and accident insurance policy for each year in residence.

Verification of Ability to Pay — Ontario and Foreign Students

The U.S. Immigration and Naturalization Services (INS) requires that LSSU have verification of your ability to pay for tuition/books and expenses before we can issue a Certificate of Eligibility for Non-Immigrant (F-1) Student Status (I-20). This form is required for you to cross the border into the United States.

An acceptable financial document must have been submitted not more than nine (9) months before the term you intend to enroll at LSSU. The document also needs to be current within the last 90 days. Inclusion of false information in the financial statements is grounds for dismissal. Verification may be documented by the following: personal savings or verification of loans or scholarships received, a parent or sponsor, government or sponsoring agency, or by LSSU anticipated support.

As of September 1, 2004, the U.S. Department of Homeland Security (DHS) has implemented a rule requiring F-1 visa applicants to pay a one-time fee to supplement the administration and maintenance costs of the Student and Exchange Information System (SEVIS). Because we will be issuing you an initial I-20 form, you will be required to pay this SEVIS fee.

Information about payment of the fee and the processing of your I-20 form upon entry to the U.S. will be provided to you with your initial I-20 form. You may also check our website for additional information: www.lssu.edu/admissions/international.

Proof of English Proficiency

Proof of English proficiency is required for admission to LSSU as a foreign student. English proficiency can be proven in several ways:

1. Score 550 or above on the paper-based Test of English as a Foreign Language (TOEFL) or 213 on the computer-based TOEFL or a score of 79 on the internet-based TOEFL. Please use institutional code 1421 to report scores directly to LSSU. More information on TOEFL may be found at www.toefl.org or 609-771-7100.
2. Score of 80 on the Michigan English Language Assessment Battery (MELAB). Write: English Language Institute, MELAB Testing, 3020 North University Building, University of Michigan, Ann Arbor, Michigan 48109-1057, U.S.A.
3. Completion of Level 109 at any ELS Language Center located in the U.S. More information can be found at: www.studyUSA.com or at www.els.com, 1-609-750-3500 or info@els.com.
4. APIEL - Advanced Placement English Language Test with a score of 3 or higher.
5. SAT/ACT critical reading score of 480 or higher, minimum overall score of 965 or higher, ACT equivalent is 20.
6. Completion of two (2) years of study at a school, college or university located in an English-speaking country.
7. IELTS - International English Language Testing System with a score of 7 or higher.

Part-time Enrollment

You may enroll as a part-time student and take up to 11 credits per semester in courses for which you have sufficient academic background. United States students attending part-time who are not seeking financial aid or a degree or certificate do not have to formally apply for admission.

Canadian students wishing to attend part-time must apply for admission and be accepted into a degree program.

As a non-admitted part-time student, you are not assigned a faculty advisor. You are encouraged to seek assistance in selecting courses from the appropriate academic departments.

Current high school students should refer to the section regarding dual enrollment.

Tech Prep

The national tech prep movement is supported at LSSU. 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 post-secondary educational institutions, helps Lake State create a broader array of educational options for our students.

Lake Superior State University has articulation agreements with area high schools to enhance applied and career educational opportunities at the post-secondary level. In tandem with its regional secondary education partners, LSSU has created pathways to applied education for specified curricula in business and technology. University course credits count toward degree requirements for high school work if certain competencies are met. Check with your high school guidance counselor or an LSSU admissions advisor to verify whether a specific course may

apply. Additional information may also be found at: www.lssu.edu/equivalency/guide.

Dual Enrollment for High School Students

Eligible students are those who are in grade 11 or 12 who are enrolled in at least one high school course, and who have passed these four subject areas of the MME: mathematics, science, reading and writing. The student who did not pass in all areas is still eligible to take courses only

in the areas in which he/she has received endorsements.

Both 11th and 12th graders are eligible to take courses in subjects for which there are no endorsements, such as philosophy, religion, psychology, sociology, anthropology, computer science, fine arts, and/or foreign language courses not offered by the district, as long as the student has taken all sections of the MME and has met the course's prerequisite requirements. State endorsement is not required in any specific area

for this participation. Grade point average is not a determining factor in eligibility to enroll.

Registration will be coordinated by the Admissions Office in conjunction with the Registrar's Office, once a student has completed the required form and has been approved as a Dual Enrollee. Students may pick up the Dual Enrollment Form from their high school guidance office, the LSSU Admissions Office, or at www.lssu.edu/admissions/dualenrollment/.

Credit for CLEP General Exam

Test	Required Score	Course Equivalents	Credit Hours
Humanities	50	HUMN251, HUGE100	7
College Mathematics	50	MAGE100	3

Credit for CLEP Subject Exams

Test	Essay Required	Required Score	Course Equivalents	Credit Hours
American Government	No	50	POLI110	4
Financial Accounting	No	60	ACTG132, 133	8
Biology	No	50	BIOL131, 132	8
Calculus	No	50	MATH151	4
College Algebra	No	50	MATH111	3
French Language	No	46	FREN151	4
French Language	No	51	FREN151, FREN152	8
French Language	No	58	FREN151, FREN152, FREN251	12
French Language	No	66	FREN151, FREN152, FREN251, FREN252	16
German Language	No	50	GRMN141, GRMN142	8
History of U.S. I	No	50	HIST131	4
History of U.S. II	No	50	HIST132	4
Human Growth & Development	No	50	PSYC265	3
Introductory Psychology	No	50	PSYC101	4
Introductory Sociology	No	50	SOCY101	3
Information Systems & Computer Applications	No	50	CSCI101	3
Freshman College Composition	No	50	ENGL110	3
American Literature	No	50	ENGL231, ENGL232	6
English Literature	No	50	ENGL233, ENGL234	6
Pre-Calculus	No	50	MATH140	5
Principles of Marketing	No	50	MRKT281	3
Principles of Macroeconomics	No	50	ECON201	3
Principles of Microeconomics	No	50	ECON202	3
Spanish Language	No	46	SPAN161	4
Spanish Language	No	51	SPAN161, SPAN162	8
Spanish Language	No	58	SPAN261, SPAN262, SPAN261	11
Spanish Language	No	66	SPAN161, SPAN162, SPAN212, SPAN261	14
Western Civilization I	No	50	HIST101	4
Western Civilization II	No	50	HIST102	4

Attendance as a high school dual enrollee does not constitute admission to a four-year degree program. LSSU encourages students to apply for admission early in the senior year for a major of their choice.

Placement Testing

LSSU will use ACT and/or SAT to place students in courses required for their degree and matched to their level of academic preparation.

Occasionally, these test scores do not reflect a student's true preparedness or, depending on their admission status, ACT or SAT scores may not have been required. In that case, students will take English and math placement tests to determine which courses they should schedule. The table on page 64 shows the relationship between ACT/SAT scores and LSSU English or math courses.

Students with high ACT or place-

ment scores are invited to enroll in honors English. High scores in mathematics will also allow students to enroll in higher-level math courses.

Students with low scores in English, reading and mathematics will be required to take preparatory coursework that do not count towards degree requirements.

Transfer students without appropriate course work in English and mathematics (see degree requirements) are also required to take placement tests. Transfer students may meet placement requirements by their ACT scores if they submit ACT scores to LSSU.

Advanced Placement (AP) Credit Programs

Advanced Placement Exam	LSSU Course Equivalent	LSSU Credit Hours
American Government & Politics	POLI110	4
Art - History of Art	ARTS250, 251	8
Art - Studio Art - Drawing or General	ARTS110, 111	6
Biology	BIOL131, 132	8
Calculus AB	MATH112 or 151	4
Calculus BC	MATH151, 152	8
Chemistry - score of 3	CHEM115	5
Chemistry - score of 4 or 5	CHEM115, 116	9
Comparative Gov't. & Politics	POLI331	3
Computer Science A	CSCI319	3
Computer Science AB	CSCI121, 201	6
English - Language & Composition	ENGL110, 111	6
English - Literature & Composition	ENGL110, 111	6
Environmental Science (no lab)	NSCI103	3
Environmental Science (with lab)	NSCI103, 104	4
European History	HIST102	4
French Literature	FREN355, 356	6
French Language	FREN351, 352	6
German Language	GRMN241, 242	8
Human Geography	GEOG201	4
Latin	No Credit Given	0
Macroeconomics	ECON201	3
Microeconomics	ECON202	3
Music - Listening & Literature	MUSC220	4
Music - Theory	No Credit Given	0
Physics B	PHYS221, 222	8
Physics C	PHYS231, 232	8
Physics C: Mechanics	PHYS231	4
Physics C: Electricity & Magnetism	PHYS232	4
Psychology	PSYC101	4
Spanish Language	SPAN261, 262	6
Spanish Literature	SPAN380, 381	6
Statistics	MATH207	3
United States Government & Politics	POLI110	4
United States History	HIST131, 132	8
World History	HIST101, 102	8

Credit by Examination

You may earn university credit by examination. The University grants credit from Advanced Placement, International Baccalaureate (IB), College Level Examination Program (CLEP) and departmental exams. If you are already attending Lake State, you may earn credit through both CLEP and departmental exams.

You must meet the following criteria before credit by examination will be entered on your transcript:

1. be an admitted full-time student, and
2. be enrolled at Lake Superior State University.

Advanced Placement Program (AP)

Advanced Placement Exams are administered at high schools each May. LSSU grants credit in select AP exams passed with a score of three or higher. If an essay is part of an individual exam, it must be submitted to University Testing Services for evaluation. To receive credit, the essay must be satisfactory and you must have a minimum score of three on the test. Credit for AP is granted as shown on the table.

International Baccalaureate (IB)

Lake Superior State University offers college credit for students who complete IB coursework with strong results. LSSU will grant credit only for Higher Level exams and scores of 5 or above. Credit for IB is granted as shown on the table below.

College Level Examination Program (CLEP)

You may take CLEP exams at a computer testing center, including Lake Superior State University's Testing Services. LSSU offers CLEP exams every month except December. Credit for CLEP is granted as shown on the table.

You may receive credit toward specified courses that meet general education requirements.

CLEP general and subject 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 are recorded as credit without grade points.

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

Departmental Exams

Departments may provide their own examinations for certain courses.

You must have the written approval of the appropriate department chair to take the examination. An application form for credit by exam can be found with the department chair.

There is a fee charged per credit hour. An examination grade of 2.00 or better is required for credit to be earned. Credit earned by exam is recorded as transfer credit on the student's transcript. Some universities may not accept transfer credit earned by departmental exam.

Health Record

Everyone entering Lake Superior State University for the first time should complete an Immunization Record and Health History Questionnaire. The form is mailed to admitted students. These questionnaires are not considered for admission to the University. The information helps the University's Health Service better serve your needs.

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

Additional information may also be found online at: www.lssu.edu/admissions.

International Baccalaureate (IB) Equivalencies

I.B Subject	Level	I.B. Grade	LSSU Course Equivalent	Credit Hours
Biology	HL	5 or above	BIOL131	4
Business & Management	HL	5 or above	BUSN121	3
Chemistry	HL	5 or above	CHEM115	5
Computer Science	HL	5 or above	CSCI103	3
Economics	HL	5 or above	ECON201, 202	6
English A1	HL	5 or above	ENGL180 or ENGL general	3
Environmental Systems	HL	5 or above	EVRN general credit	3
French A or B	HL	5 or above	FREN151, 152	8
Geography	HL	5 or above	GEOG201	4
German A or B	HL	5 or above	GRMN141, 142	8
History	HL	5 or above	HIST general credit	4
Islamic History	HL	5 or above	HIST general credit	4
Decision Technology	HL	5 or above	EGNR general credit	4
Math	HL	5 or above	MATH151, 152	8
Music	HL	5 or above	MUSC120, 121	6
Philosophy	HL	5 or above	PHIL204	3
Physics	HL	5 or above	PHYS221, 222	10
Psychology	HL	5 or above	PSYC101	4
Social & Cultural Ant.	HL	5 or above	SOCY101	3
Spanish A or B	HL	5 or above	SPAN161, 162	8
Theatre Arts	HL	5 or above	FINE115	3
Visual Arts	HL	5 or above	ARTS general credit	4

NOTE: LSSU will grant credit only for Higher Level exams and scores of 5 or above.

An exact outline of University fees and assessments can be found in the Admissions Office. These costs are determined by the Lake Superior State University Board of Trustees.

A fee of \$25 for filing online or \$35 for paper filing (United States funds) must accompany each Application for Admission to Lake Superior State University. The fee is nonrefundable and does not apply toward tuition or other fees.

Definition of Michigan Residency for Tuition Purposes

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, may be eligible for paying resident tuition. He/she must provide evidence of Michigan residency, i.e. a valid State of Michigan drivers license **or** presenting a State of Michigan voter registration card **or** proving their motor vehicle is registered in the state of Michigan **or** other acceptable means.
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. A non-resident student can show that they qualify for resident tuition by presenting a valid State of Michigan drivers license **or** presenting a State of Michigan voter registration card **or** proving their motor vehicle is registered in the state of Michigan **or** other acceptable means.
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 Dean of Enrollment Services.
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 residence in the United States who have a permanent visa, may register as residents of this state provided they have met the other requirements herein for residency. Their spouse and minor children also qualify.
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.
10. Any dependent child of an alumni parent who has earned credit at Lake Superior State University prior to the fall quarter of 1968 or earned a certificate or degree from this University or completed a minimum of 24 semester hours of 36 quarter hours.
11. Any transfer student who was accepted as a Michigan resident at a Michigan community college with proof of the community college tuition rate and the student's tuition status.
12. Any foreign exchange student attending secondary schools in Michigan or Ontario.
13. An out-of-state *first time in college* freshman student who has at least a 3.0 grade point out of a possible 4.00 or a 24 composite on ACT or in the top one-fifth of their graduating class *will receive a scholarship for the difference of in-state and out-of-state tuition. If the student does not declare Michigan residency after the first year in attendance, the scholarship is renewable provided the student meets scholarship renewal requirements.*
14. Any transfer student who has earned at least 60 semester credits from a United States junior college or United States community college with at least a 3.00 overall grade point average.

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

Students requesting a change in their residence status must submit a Change of Residency Request and documentation to the Registrar prior to the first day of the semester.

Policy: Tuition/Fees

All tuition and fees are payable according to established due dates. Students delinquent in payment of a financial obligation are subject to enrollment cancellation and/or late fees until all amounts due the University are paid or satisfactory arrangements are made with the Business Office.

Anyone who is delinquent in any obligation to the University will not be allowed to register for classes. Additionally, University services will not be provided until financial obligations are met. Registration is not complete until fees are paid. A check or draft returned to the University and not honored by the bank constitutes nonpayment and may result in cancellation of registration.

Students auditing a class are assessed full tuition and fees for the course and an AU grade is recorded on the student's official transcript upon completion of the course.

Michigan residents who are 60 years of age or older may audit undergraduate courses with the approval of LSSU. No records are kept of their audits.

In addition to tuition, there are various fees assessed to students in specific situations.

Activity Course Fee: The activity course fee is an additional charge applied to one-credit courses in music and recreation. These courses are elective.

This activity fee is assessed on all students enrolling in one-credit music (one-credit activity and performance courses with an MUSC prefix, except MUSC210) or one-credit recreation

(one-credit activity courses with an RECA prefix) classes.

Administrative Fee: Administrative fees will be charged for PLATO software and departmental exams.

Enrollment Fee: The enrollment fee is a one-time fee established to partially cover the costs associated with the orientation of new students.

The enrollment fee is assessed on all new and transfer students when they are admitted to a degree program.

Program Fees: The program fee is an additional charge per credit for courses in engineering, nursing, chemistry, natural science and paramedic technology.

Distance Education Fees: These fees are charged for courses delivered to regional center students and other distance education students other than in a face-to-face format with instructors. There will be a fee for courses delivered via Interactive TV, via the Internet, and via CD/WebCT.

Regional Center Fee: The regional center fee is an additional charge per credit, charged for courses delivered by instructors at the regional centers.

The regional center fee is assessed on all students registering for a course at an LSSU Regional Center (Escanaba, Gaylord and Petoskey).

Special Course Fee: Special course fees are charged to cover costs of supplies, equipment, maintenance, and student transportation over and above the normal costs for all courses. These fees become part of the department supply and equipment budget.

Special course fees are assessed on students taking the course for which the fee is charged.

Credit by exam: Credit by departmental examination is available to full-time students. If a 2.00 or better is scored, the credit is recorded on your transcript. The fee charged is \$50 per credit hour.

Student Activity and Media Fee:

This fee was requested by the Student Government and approved by the Board of Trustees on June 30, 2003, to support Student Government, student activities, the student radio station WLSO, and the student newspaper, *The Compass*.

The student activity and media fee is a flat fee assessed on all enrolled students except those registered for internship classes, for classes at a regional center, or dually-enrolled at LSSU and a high school.

Vehicle Registration Fee: This fee entitles a student to register one student vehicle to be parked in a campus parking lot.

The fee is refunded only under certain conditions. Vehicle registration information is available at www.lssu.edu/parking.

Withdrawal/Refunds

If you decide to drop your classes, you, must complete the following:

1. Pick up a Withdrawal Form at the Student Service Counter or the Registrar's Office, located in the Fletcher Center for Student Services.
2. Gather the required signatures (shown on the form). Note: if you have received federal loans as financial aid, you will be required to complete an exit interview at the Financial Aid Office. You may also be required to speak with a financial aid officer. You will need to provide the complete addresses and phone numbers of two people (living at different addresses) as references for the exit interview process.
3. Deliver the completed form to the Student Service Counter and clear any outstanding charges or holds that may prevent your return at a later

date or prevent the release of your academic records. **Your withdrawal date will be determined by the date the completed form is submitted to the Student Service Counter.** Any refunds will be calculated as of that date.

All withdrawals should be done in person. If you are unable to complete the process in person, the Registrar is the only University authority that can authorize the process of your withdrawal over the phone. Please contact the Registrar’s Office at 906-635-2682 for assistance. If you are a federal recipient, you will need to complete your exit process with the Financial Aid Office.

After your completed Withdrawal Form is accepted, your University charges will be reduced according to the withdrawal and refund policy. If you have not received any form of financial aid and there is a credit balance on your account, you will be sent a refund check. If you have received aid, your aid may have to be returned to the appropriate source. You may then have a balance due to the University. A bill will be sent and is payable upon receipt.

Financial Aid Return Policy: Applies to students receiving federal and state financial aid including loans and scholarships, and institutional and private aid.

- First, your account will be credited according to Lake Superior State University’s Refund Policy (on or prior to the 38-day withdrawal period). The summer semester refund policy is shortened.
- Then, your financial aid will be reduced in direct proportion to the length of time you remained enrolled, up to 60 percent of the semester.
- **PLEASE NOTE:** If you have received a payment for excess

financial aid and you withdraw, you could owe the University and/or the federal government money.

- Any remaining refund due you, after all funding sources have received the appropriate credit, will be refunded directly to you.

For example: If there are 101 days in the semester and you withdraw on the 45th day, your federal aid would be reduced to 45% (45/101). If your total cost to attend was \$4,000 and it was paid with federal aid of \$2,400 and a personal payment of \$1,600, your federal aid would be reduced to \$1,080. You could owe the University \$1,320.

Attendance Policy for federal financial aid recipients: Regular class attendance is required for students receiving federal financial aid. If you are reported for non-attendance in any or all of your courses, your financial aid may be withdrawn.

If you fail to demonstrate attendance by earning credits for a semester while receiving federal aid, your aid may be returned and you may owe unearned funds back to the University.

Leaving school: For information about leaving the University see **Withdrawal**. Non-attendance of classes or checking out of campus housing does not constitute withdrawal, nor does academic

Withdrawal and Refund Policy for Fall and Spring Semesters

Courses Dropped	Time of Withdrawal	% of Refund
Any or all classes	Prior to class - 6th school day*	100%
Dropping all classes	7th-8th school day	90%
Dropping all classes	9th-19th school day	50%
Dropping all classes	20th-38th school day	25%

**There are no refunds for partial drops after the sixth day.*

dismissal. Students who leave but do not withdraw are responsible for full tuition and fees and will receive failing grades on their transcript unless an official Withdrawal Request Form is filed with the Registrar's Office.

Students who fail to earn credits for the semester while receiving financial aid are subject to Title IV refund requirements and may lose all or part of their financial aid.

Transcript fee: One official transcript is provided to all students, either before or after graduation. There is a \$5 fee for each additional transcript.

Delinquent accounts: Students with delinquent accounts may be removed from class, have their diploma withheld, and/or have transcript requests denied.

Room and Board Applications

Housing applications: Unmarried students enrolled for 12 or more credit hours and who are within 27 calendar months of their graduation from high school at the beginning of the academic year (for this purpose, high school graduation dates are assumed to be June 1st) must reside in a University residence hall.

The exceptions are:

1. if you live with parents within a 60-mile radius, or the three-county (Luce, Chippewa, and Mackinac) service area of the University campus. An exemption application, available in the Housing Office, must be approved by the Director of Campus Life and Housing.

2. if you are exempted in writing by the Director of Campus Life and Housing when residence hall space is filled.
3. if you face unusual financial or health problems and are exempted by the Director of Campus Life and Housing.

Applications for housing must be made to the Housing Office. Students indicating interest in on-campus accommodations on the University admissions application are sent housing information. Room assignments are made upon receipt of the first room and board payment. Applications are voided if first room and board payment is not received by June 1st. If application is canceled by notification to the Director of Campus Life and Housing by June 1st, all monies paid will be refunded. If cancellation is between June 1st and the opening of the residence halls, LSSU retains \$100. Cancellation after the halls open is subject to a \$500 penalty. You must be accepted for admission and be enrolled in and attending classes to live on campus.

Room and board: Students are billed for room and board and tuition each semester. A payment plan may be set up with the Business Office located in the Fletcher Center. A cost sheet is available from the Student Service Center.

Housing deposit: If you are living on campus, there is a \$150 damage deposit prior to checking into the hall. This deposit is refunded, less monies owed to the University, when you leave campus housing.

Regulations: Regulations and expectations of your conduct as a member of the LSSU community will be provided when you take residence.



Financial Aid

Rewarding the scholar and meeting the needs of those who apply for financial assistance is a high priority at Lake Superior State University. The doors of opportunity are seldom closed because of a financial condition.

You may qualify for a combination of University, state and federal programs—a financial aid package—which may include a combination of scholarship, grant, loan, and/or work assistance. Full-time undergraduates take priority in aid awards.

Carefully consider the full cost of your education, parental support, and savings—including summer employment—to determine your need for financial aid. If you possess excellent high school or community college grades, you are encouraged to apply for scholarships regardless of need. Those with need are considered for grants, loans and/or employment based on need established from the Free Application for Federal Student Aid (FAFSA).

You can obtain information on all financial aid programs online at www.lssu.edu/finaid. Staff are available to advise you and your parents about the cost of attending the University, availability of financial aid and application procedures.

Applying: You can apply for financial aid by filing a Free Application for Federal Student Aid (FAFSA) on-line at www.fafsa.ed.gov.

Once your FAFSA is received by LSSU and your admission is complete, you will receive an “Official Offer of Award” letter from the Financial Aid Office.

Scholarship recipients are usually selected based on competitive

examinations, scholastic records and/or financial need. The American College Test (ACT) serves as the University’s primary test for scholarship applicants. Test results must be on file by March 1.

Scholarship requirements: Incoming freshmen must have a minimum GPA of 3.3 and ACT of 21 to automatically qualify for a scholarship. The recipient of any award must be a full-time student carrying 12 academic hours or more each semester.

All freshmen who are Michigan residents are encouraged to complete the Michigan State Assessment Test to determine eligibility for additional state aid.

Satisfactory Academic Progress Requirements for the Retention of Financial Aid

If you are receiving any form of financial aid, you must meet these satisfactory academic progress requirements to retain your aid each semester.

Financial aid regulations require that a student must make satisfactory progress to remain eligible for financial aid. Financial aid programs affected by this policy are Federal Pell Grant, Federal Perkins Loan, Federal Work-Study, Federal Supplemental Educational Opportunity Grant, Federal Direct Loans, Federal PLUS Loans, State of Michigan and Institutional Scholarships, Grants, Loans and Work Programs.

The following policy is the **minimum requirement** for all types of financial aid; however, there are some types of aid with more stringent requirements (see scholarship requirements).

Students are automatically considered for Board of Trustees Scholarships upon completing application to LSSU by March 1st for the following fall semester.

Qualitative Standards

Every student must maintain a minimum grade point average (GPA) of 2.0 each semester to remain in good academic standing. Students not meeting the standard will be placed on academic probation for one semester. Students may be granted a second probationary semester, however, students with 19 credits or more will not be granted a second probationary semester if their cumulative GPA is 1.60 or less.

This standard is enforced by the University's Scholastic Standards Committee each semester. Students who do not meet the academic standard will not be eligible for aid after their probationary period. To petition the Scholastic Standards Committee for readmission, students must follow the guidelines listed at www.lssu.edu.

Students who are notified by the Scholastic Standards Committee about their academic standing should not assume that financial aid will automatically be reinstated if their petition is granted. Financial aid requirements are more stringent in some cases and include quantitative standards. Quantitative standard appeals must be sent separately to the Financial Aid Committee.

Quantitative Standards

Each student's progress in credits earned will be reviewed every semester. The following credits must be earned in relation to the number of credits enrolled at the end of the add period:

Undergraduate Students Fall/Spring/Summer Semester	
Enrolled Credits	Credits to be Earned
12+	9
11	8
10	7
9	6
8	6
7	5
6	4
5-1	100%

If a student does not satisfactorily meet the quantitative standard, he/she will be placed on financial aid probation for the next semester. Students may receive aid while on probation but if a student fails to meet the standard for the second consecutive semester enrolled, his/her financial aid will be suspended.

Part-time students enrolled for less than six credits must earn all credits attempted.

Once financial aid is suspended, both the GPA and credit hour completion criteria must be met in subsequent semesters of six credits or more 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 student before eligibility is reviewed.

Financial Aid Suspension: No aid will be granted once a student's eligibility is suspended, including but not limited to the Federal Direct Stafford Loan, Federal Perkins Loan, Federal Direct PLUS Loan, Federal Work-Study, Federal Supplemental Educational Opportunity Grant, Federal Pell Grant, Michigan Scholarships and Grants, and Institutional Scholarships and Grants.

Financial Aid Reinstatement: To remove financial aid suspension status for qualitative reasons, a student must have attained the minimum cumulative grade

point average and credit-earned requirements (minimum six credit hours) at Lake Superior State University, while not receiving financial aid. In addition, students who successfully complete 26 credits at a community college after being suspended at LSSU will be allowed one probationary semester upon readmission.

Successful students must advise the Financial Aid Office in writing that they have met the requirements for reinstatement of the qualitative standard.

Right to Appeal: A student whose aid is suspended for quantitative reasons 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. The quantitative appeal process is outlined at www.lssu.edu/finaid/appeals.php. Appeals should be in writing and be received immediately following the semester of the suspension.

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

Satisfactory Academic Progress Appeal Federal Completion Rule: Under the Federal Completion rule, students must complete their highest degree program within 150% of the number of attempted credits required for the degree, regardless of their receipt of aid during the period they attempted the credits:

- Certificate Program - Within 48 attempted credit hours
- LPN Certificate - Within 69 attempted credit hours
- Associate Degree - Within 93 attempted credit hours
- Bachelor Degree - Within 186 attempted credit hours

- Teaching Degree with one semester internship - Within 204 attempted hours
- Teacher's Certificate Year (after earning degree) - Within 222 attempted hours
- Master's - Within 54 attempted Master's credit hours

Students who will not graduate within the attempted hour limitation can appeal for an extension based on special circumstances that explain why they have not completed their degree within 150% of the credits required. A history of major changes and/or failed or incomplete classes will reduce the likelihood of an extension under this rule.

General Scholarship Renewal Requirements

For students offered an LSSU renewable scholarship, the

following criteria must be met when reviewed each spring:

1. You must earn a minimum of 24 credits each academic year while receiving a scholarship, unless otherwise noted in your award, and the minimum cumulative GPA as required by the award. (*See requirement chart for details.*)
2. You must maintain enrollment each semester (fall & spring) as a continuous full time student. Enrollment for summer semester is not included.
3. If you withdraw or leave LSSU for any reason, your scholarship automatically terminates. If you plan to leave for a study abroad program, internship or health reasons, you may request to have your scholarship reinstated by appealing to the Financial Aid Committee.
4. To receive the room and board component of any scholarship, you must be in the on-campus room and board program for the semester. If you leave on-campus housing, the room and board award will be terminated. If you return to campus housing (you must be on the room and board plan for the full semester), you can request reinstatement of the room and board component prior to the beginning of the semester you return.
5. Most scholarships offered to freshmen are renewable for up to four years.
6. Changing majors does not affect the Board of Trustees' Scholarships, but may affect departmental awards that require enrollment in certain majors.

Scholarship Renewal Requirements

Scholarships that are renewable require full-time attendance each fall and spring semester.

MINIMUM CUMULATIVE GPA REQUIREMENTS:

BOARD OF TRUSTEES*

DISTINGUISHED

3.00 or better after two semesters of study
3.10 or better after four semesters of study
3.20 or better after six semesters of study

BOARD OF TRUSTEES**

2.50 or better after two semesters of study
2.60 or better after four semesters of study
2.70 or better after six semesters of study

**Includes other renewable institutional scholarships with a value of the Distinguished Scholarship, full tuition or higher.*

***Includes other renewable institutional scholarships with a value of less than the Distinguished Scholarship.*

Note: Transfer credits are included when determining "semesters of study." Scholarships are reviewed annually and if lost, may not be reinstated.

7. **Scholarships are not reinstated on appeal**, except for students who have left school for reasons stated in #3.
8. The scholarship renewal policy is separate from the University's Academic Standards and Satisfactory Progress Standards for the retention of other forms of financial aid.
9. If you do not meet renewal requirements when your eligibility is reviewed each year but raise your GPA or credits earned to the minimum requirements prior to the start of the following fall semester, you must notify the Financial Aid Office in writing that your student record has been updated with new information warranting a review.

Requirements for New Scholarships for Current Students

Renewable scholarships are based on your grade level and number of credits transferred or earned at the time of your award. For example, if you are offered a renewable scholarship as a sophomore, you will generally be eligible for two additional years of scholarship. If an ending date is not stated in your offer of scholarship, please contact the Financial Aid Office if you have questions about the renewal features of your award. Except for students in their fifth year of a qualifying five-year program, scholarships are generally not available to students with more than four years of higher education or eight semesters of study.



Consumer Information

As an applicant and recipient of federal financial student aid, you have certain rights and responsibilities. Knowing your rights and responsibilities puts you in a better position to make decisions about your goals and how to best achieve them.

Student Rights:

You have the right to know:

1. the available financial aid programs. They are listed in the Financial Aid section of this Catalog and on the Web at www.lssu.edu/finaid.
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.
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 Official Offer of Award letter.)
5. what resources (such as parental contribution, other financial aid, your assets, etc.) were considered in the calculation of your need. (Contact the Financial Aid Office.)
6. how much of your financial need has been met, as determined by the institution. (See Official Offer of Award letter.)
7. request an explanation of the various programs in your student aid package. If you believe you have been treated unfairly, you may request reconsideration of your award. (Contact the Financial Aid Office.)
8. the school's refund policy. (See Costs section of this Catalog.)
9. what portion of the financial aid received must be repaid and what portion is grant aid. If the aid is a loan, you have the right to know the interest rate, the total amount that must be repaid, the payback procedure, the length of time you have to repay the loan, when repayment begins, the terms, and schedules for the repayment of student loans. (Contact the Financial Aid Office or see Promissory Note.)
10. how the school determines satisfactory progress, what happens if you are not meeting the requirements, and how to re-establish eligibility for financial aid. (See Satisfactory Progress Policy in this section of the Catalog.)
11. that LSSU programs are accessible to the handicapped. Further information is available from the Resource Center for Students with Disabilities (RCSD), Lake Superior State University, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783. The RCSD is located in room 149 of the Library.
12. how and when financial aid will be disbursed.
13. that you are entitled by law to examine records maintained in the Financial Aid Office that relate to your financial aid file.
14. the school's completion and graduation rates and crime statistics. (See LSSU Public Safety Website for report.)

And finally, you have the right to request:

15. the names of associations, agencies or governmental bodies that approve, accredit or license the

University programs. Copies of the accreditation documents are 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, misreporting information on financial aid application forms is a violation of law and may be considered a criminal offense that could result in indictment under the United States criminal code.
3. You must return all additional documentation, verification, corrections, and/or new information requested by either the Financial Aid Office or the agency to which you submitted your application on a timely basis.
4. You are responsible for reading and understanding all forms you are asked to sign and for keeping copies of them.
5. You must accept responsibility for all agreements you sign.
6. You must do the work agreed upon in accepting a work-study award.
7. You must be aware of and comply with deadlines for application or reapplication for aid.
8. You are responsible for reporting changes that might affect your eligibility for financial aid including:

- a. change in address or type of residency (e.g., dorm to commuter)
 - b. changes in enrollment status (e.g., dropping classes or withdrawing)
 - c. changes in marital status
 - d. all non-LSSU aid received.
9. If you have a loan, you are required to repay it and notify your lender of changes in name or address. You should also know the name and address of your lender.
10. Be aware of your school's refund procedures.
11. All schools must provide information to prospective students about the school's programs and performance. You should consider this information carefully before deciding to attend.



Scholarships and Grants

Scholarship criteria is reviewed each year and subject to change. Scholarships are described here as awarded for 2010-11.

Incoming Freshmen (In-State)

Eligibility is automatically evaluated by the Financial Aid Office for all students admitted by March 1st for the following academic year.

All recipients in this section are selected by the Financial Aid Committee and may choose any degree curriculum offered by the University. Students must be U.S. citizens and current graduates of an accredited Michigan high school.

Scholarships are awarded based on a point scale that is approved annually by the Financial Aid Committee. Fifty percent weight is given to the overall high school GPA and 50 percent is based on the highest ACT composite score received by March 1.

All renewable scholarships are based on the recipient meeting the University's scholarship renewal criteria.

Board of Trustees Distinguished Scholarship

Value: up to \$8000 per year (\$5000 + \$3000 if Room & Board) — renewable

Criteria: merit based; Michigan resident; minimum points 186 (example: 3.80 GPA and 28 ACT)

Board of Trustees Academic Excellence Scholarship

Value: up to \$5000 per year (\$3000 + \$2000 if Room & Board) — renewable

Criteria: merit based; Michigan resident; 176.5-185.99 points (example: 3.70 GPA and 26 ACT)

Board of Trustees Academic Honors Scholarship

Value: up to \$3000 per year (\$2000 + \$1000 if Room & Board) — renewable

Criteria: merit based; Michigan resident; 162.50-176.49 points (example: 3.50 GPA and 24 ACT)

Board of Trustees Academic Recognition Scholarship

Value: up to \$2500 per year (\$1500 + \$1000 if Room & Board) — renewable

Criteria: merit based; Michigan resident; 144.5-162.49 points (example: 3.30 GPA and 21 ACT)

Incoming Freshmen (Out-of-State and Foreign)

Eligibility is determined by the Financial Aid Office for all students admitted by March 1st for the following academic year.

All recipients in this section are selected by the Financial Aid Committee and may choose any degree curriculum offered by the University. Students must be current graduates of high schools outside of Michigan and Ontario.

All renewable scholarships are based on the recipient meeting the University's scholarship renewal criteria.

Board of Trustees' Laker USA Scholarship

Value: the difference between out-of-state and in-state tuition — renewable

Criteria: merit based; U.S. students scoring 24 or higher ACT or 3.0 GPA, or who graduate in the top 20% of their graduating class

Note: this scholarship may be combined with other LSSU scholarships.

Board of Trustees United States and Foreign Distinguished Scholarship

Value: up to \$4,000 per year (\$2000 + \$2000 if Room & Board) — renewable

Criteria: merit based; minimum 3.7 GPA and 28 ACT

Board of Trustees United States and Foreign Academic Scholarship

Value: up to \$2000 per year (\$1000 + \$1000 if Room & Board) — renewable

Criteria: merit based; minimum 3.5 GPA and 26 ACT

Incoming Freshmen (Ontario)

Board of Trustees Ontario Distinguished Scholarship

Value: up to \$4000 per year (\$2000 + \$2000 if Room & Board) — renewable

Criteria: merit based; Ontario resident; graduate of an Ontario high school; minimum 3.8 GPA (equated)

Board of Trustees Ontario Honors Scholarship

Value: up to \$2000 per year (\$1000 + \$1000 if Room & Board) — renewable

Criteria: merit based; Ontario resident; graduate of an Ontario high school; minimum 3.5 GPA (equated)

Board of Trustees Ontario Achievement Award

Value: \$1000 per year — renewable

Criteria: merit based; Ontario resident; graduate of an Ontario high school; minimum 3.3 GPA (equated)

Transfer Students

Eligibility is determined by the Financial Aid Office for all students admitted by April 15th for the following fall semester or December 1st for spring semester. All recipients in this section are selected by the Financial Aid Committee and may choose any degree curriculum offered by the University.

Transfer scholarships are normally renewable for a second year, provided the recipient meets the University's scholarship renewal criteria.

The eligible student must be entering LSSU for the first time directly from another college (students sitting out more than one semester are not eligible for scholarship consideration) as a full-time student. Awards are based on the cumulative GPA earned at all schools prior to start of the first LSSU semester, with a minimum of 24 **earned** college credits and a maximum of 90 attempted college credits at any combination of other accredited schools.

If the transfer student has less than 24 earned credits at time of admission (prior to April 15th), official transcripts are required by July 1st for scholarship consideration for the following academic year.

*Students who have taken LSSU classes prior to admission as a full-time student (such as transfer students from Sault College), must have earned a minimum LSSU cumulative GPA comparable to the minimum needed for the transfer scholarship.

For example, a student with a cumulative GPA of 3.5 from another college, must have earned a minimum cumulative GPA of 3.5 from LSSU for any credits taken as a dual-enrolled student to qualify for the Academic Excellence Transfer Scholarship.

Board of Trustees Distinguished Transfer Scholarship

Value: up to \$4,500 per year (\$3,000 + \$1,500 if Room & Board) — renewable for second year
Criteria: merit based; earned cumulative GPA of 3.8 or higher

Board of Trustees Academic Excellence Transfer Scholarship

Value: up to \$3,000 per year (\$2,000 + \$1,000 if Room & Board) — renewable for second year
Criteria: merit based; earned cumulative GPA of 3.5-3.79

Board of Trustees Academic Honors Transfer Scholarship

Value: up to \$1,500 per year (\$1,000 + \$500 if Room & Board) — renewable for second year

Criteria: merit based; earned cumulative GPA of 3.3-3.49

ΦΘΚ (Phi Theta Kappa) Scholarship

Value: \$1,000 per year — renewable for second year

Criteria: must be a certified member of Phi Theta Kappa; earned cumulative GPA of 3.5 or higher

*Student must submit proof of membership before beginning attendance at LSSU.

Additional Scholarships for Incoming Students

The Financial Aid Office may consider incoming students for these scholarships if they are admitted by March 1st for the following academic year. Some endowed and academic department awards may be made earlier and it is to the student's advantage to apply for admission earlier than March 1st. These scholarships may replace and/or upgrade other LSSU scholarships. Students may choose any degree program to be considered for these scholarships unless specifically listed in the scholarship description.

Students must meet the University's scholarship renewal criteria to maintain these scholarships.

449th Bombardment Wing Scholarship

Value: variable — renewable
Criteria: merit based; entering freshmen that have graduated from high schools in Chippewa, Luce or Mackinac County

Guy Adda Memorial Endowed Scholarship

Value: variable — renewable
Criteria: merit and need based; preference is given to applicants from Southeastern Lower Michigan; based on GPA and ACT scores

William Ayers Memorial Scholarship

Value: variable — renewable

Criteria: must be a Sault Area High School graduate
Selected by: Financial Aid Committee upon recommendation of the Sault Area High School Faculty Honor Committee

Richard Blankenbaker Memorial Award

Value: variable up to full tuition — renewable

Criteria: need based; preference is given to graduates of DeTour High School or a DeTour mailing address

Leah Marie Bollin Memorial Award

Value: variable — non-renewable

Criteria: This award is intended to help a student who has epilepsy and is making satisfactory progress toward his/her educational goals. A minimum cumulative 2.00 GPA is required. Preference will be given to a student with demonstrated financial need. Students with other seizure disorders will also be considered. Interested students must complete a questionnaire and provide three letters of recommendation.

Selected by: recommendation of a committee of representatives from the LSSU faculty, the Office of Student Accommodations and Support Services, the Counseling Center and the Bollin family

Kurt and Mary Brammer Scholarship

Value: full tuition — renewable
Criteria: merit and need based; high school seniors, transfer students or LSSU students who apply after earning 26 LSSU credits; awards to high school seniors are based on ACT and GPA scores

C. Eugene Chang International Studies Scholarship

Value: variable — non-renewable
Criteria: must be in good academic standing; minimum cumulative 2.50 GPA is required. Not

available to U.S. or Canadian citizens. Student must have graduated from a foreign high school and not be a recipient of an LSSU scholarship.

Sam Cohodas Endowed Scholarship

Value: variable — renewable

Criteria: merit and need based; awarded annually to Michigan Upper Peninsula high school seniors based on GPA and ACT scores, character and leadership.

Angela Coullard Memorial Scholarship

Value: variable — non-renewable

Criteria: merit and need based; graduating Sault Area High School senior who has participated in at least 2 seasons of an SAHS athletic program; minimum 3.0 GPA
Selected by: recommendation of the Sault Area High School Athletic Department

Michael Della-Moretta Memorial Scholarship

Value: variable — renewable

Criteria: merit and need based; preference given to Upper Peninsula residents

Curriculum: biological science

Elizabeth (Betsy) Demaray Business Scholarship

Value: variable — renewable

Criteria: merit and need based; first preference given to students who are residents of Michigan's Eastern Upper Peninsula, non-traditional students who have history of participation in community services

Curriculum: business

Selected by: recommendation of the School of Business

Sam Dubow Memorial Scholarship

Value: \$300 — renewable

Criteria: merit and need based; graduating Sault Area High School senior; leadership demonstration; community/school involvement

Selected by: recommendation by the

Sault Area High School Faculty Honors Committee

Frank Fazi Endowed Scholarship

Value: variable — non-renewable

Criteria: merit based; awarded to incoming freshman with a minimum 3.0 GPA and a graduate of an Eastern Upper Peninsula high school

Curriculum: business and/or economics

First National Bank of St. Ignace Endowed Scholarship

Value: variable — renewable

Criteria: merit based; preference is given to graduates of LaSalle High School of St. Ignace and selection is based on GPA and ACT scores

H. Thayer Fletcher Distinguished Scholarship

Value: full tuition — renewable

Criteria: merit and need based; Michigan or Canadian residents; meet distinguished scholarship criteria

Rosa Grout Scholarship

Value: variable — renewable

Criteria: merit based; selection based on high school GPA and ACT scores

Curriculum: engineering, engineering technology, mathematics, computer and mathematical science or lab science major

Dennis Hardt Memorial Scholarship

Value: variable — renewable

Criteria: merit based; student's high school GPA and ACT scores will be the prime selection criteria; current LSSU students must have earned at least 26 LSSU credits with a minimum 3.0 GPA

Curriculum: electrical engineering

Philip A. Hart Memorial Scholarship

Value: full tuition — renewable

Criteria: seniors of Michigan high schools or graduates of Michigan community colleges planning to attend LSSU for the first time; minimum 3.0

cumulative GPA. Candidates will be required to submit their applications with 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 published annually.

Frank and Gladys Hoholik Scholarship

Value: variable up to full tuition — renewable

Criteria: need based; may be entering freshmen, transfer students or currently enrolled students who have completed 26 credits at LSSU

David R. and Patricia L. Hubbard Award

Value: variable — non-renewable

Criteria: merit and need based; may be awarded to entering freshmen, transfer students or currently enrolled students who have completed 26 credits at LSSU

Roberts P. and Ella B. Hudson Foundation Scholarship

Value: variable — renewable

Criteria: merit based; new freshman or transfer student admitted by April 1 for the following academic year; minimum 3.0 GPA, must be a graduate from a Chippewa County high school

Hudson, Coates, Kline Scholarship

Value: variable - minimum \$2500 — renewable

Criteria: merit and need based; graduating Sault Area High School senior; based on high school GPA and ACT scores. If a graduating senior is not available, it may be awarded

to a current LSSU student with at least 26 earned LSSU credits and minimum 3.2 GPA that graduated from Sault Area High School.

Robert M. Hunt Memorial Scholarship

Value: up to one-half tuition and fees — renewable

Criteria: merit and need based; Sault Area High School graduate who is a well-rounded student and demonstrates leadership skills and dedication to his/her community; minimum 2.0 GPA

Note: If an eligible high school senior is not available, the scholarship may be awarded to an LSSU student that graduated from Sault Area High School with at least 26 earned LSSU credits and meets the eligibility requirements. This scholarship may not be awarded in conjunction with or in place of an athletic scholarship.

Selected by: recommendation of the Sault Area High School Faculty Honors Committee

Neil and Dolly Isham Scholarship

Value: variable — renewable

Criteria: merit and need based; must be a Michigan resident

Curriculum: any major in the College of Arts, Letters and Social Sciences

Lawrence Roy Jacobson and Dorothy M. Bell Engineering Scholarship

Value: variable — non-renewable

Criteria: need based; must be a Sault Area High School graduate

Curriculum: engineering

Selected by: recommendation of the School of Engineering and Technology

John Kalesky Memorial Endowed Scholarship

Value: variable — renewable

Criteria: merit and need based; based on high school GPA and ACT scores; may be granted to current LSSU students with at least 26 earned LSSU credits and a minimum 3.0 GPA

Curriculum: geology

C. Ernest Kemp Endowed Scholarship

Value: variable — minimum \$600 — renewable

Criteria: merit based; based on high school GPA and ACT scores; may be granted to current LSSU students with at least 26 earned LSSU credits and a minimum 3.0 GPA

Curriculum: geology

George and Virginia Lahodny Endowment Scholarship

Value: minimum \$500 — renewable

Criteria: merit based; based on high school GPA and ACT scores; may also be granted to current LSSU students or transfer students

Larson-Prohazka Scholarship

Value: variable — renewable

Criteria: merit and need based; based on GPA and ACT scores; preference will be given to students from the Upper Peninsula with a cumulative GPA of 2.8 or higher; graduate of an Upper Peninsula high school that the student attended for at least three years; may be awarded to current LSSU students with at least 26 earned LSSU credits if an eligible high school student is not available

LSSU Foundation Endowed Scholarship

Value: variable — renewable

Criteria: merit and need based; for Michigan resident or non-resident students; available to high school seniors, community college graduates and LSSU students who are enrolled full time with at least 26 earned LSSU credits; selection is based on GPA and ACT scores

LSSU Support Staff Award

Value: variable — non-renewable

Criteria: full-time student in good standing; minimum cumulative 2.00 GPA is required. Must be either the child or grandchild of a participating union employee or retiree or be sponsored by a participating employee.

Preference will be given to a student with demonstrated financial need. Interested students must submit a biographical essay

Selected by: recommendation by the LSSU Support Staff Award Committee

John Lehman Chemistry Scholarship

Value: variable — non-renewable

Criteria: merit based; preference given to student with demonstrated financial need if two or more applicants are judged to have equal potential; special application letter and essay required; if incoming freshman is not available, the award may be given to sophomores or juniors or to students who previously received the award

Curriculum: chemistry or environmental chemistry

Selected by: recommendation of the Department of Chemistry and Environmental Sciences

Lighthouse.Net Scholarship

Value: \$2500 — non-renewable

Criteria: merit based; financial need may be considered; student or parent must be a subscriber of Lighthouse.Net Internet or Cloverland Electric Cooperative (or both) for 12 consecutive months prior to scholarship application

Curriculum: preference given to computer science majors

Selected by: applications will be verified for subscription status and reviewed by the Financial Aid Committee

Department of Mathematics and Computer Science Scholarship

Value: variable — renewable

Criteria: merit based; based on high school GPA and ACT scores

Curriculum: computer and math science, or math secondary education

Bill Munsell Endowed Scholarship

Value: variable — renewable

Criteria: merit and need based;

graduate of a Chippewa, Luce or Mackinac County public high school; based on GPA and ACT scores

James C. and Melissa H. Myers Scholarship

Value: variable — renewable

Criteria: merit and need based; selection based on high school GPA and ACT scores; minimum 3.0 GPA

Leslie O’Polka Memorial Scholarship

Value: variable — renewable

Criteria: need based; graduate of DeTour High School; may be granted to current LSSU student with at least 26 earned LSSU credits if a high school senior is not eligible

Chase and Stella Osborn Endowed Scholarship

Value: variable — renewable

Criteria: merit and need based; based on GPA and ACT scores

John D. Peacock Award

Value: variable — renewable

Criteria: merit and need based; must have part-time employment while attending LSSU; minimum 2.0 GPA

Frank and Marion Pingatore Memorial Scholarship

Value: variable — renewable

Criteria: merit and need based; Sault Area High School graduate; based on GPA and ACT scores; may be granted to current LSSU students with at least 26 earned LSSU credits and a minimum 3.0 GPA, if a Sault Area High School graduate is not available.

Ross N. Roe Scholarship

Value: variable — renewable

Criteria: merit based; must be enrolled at least half time (six or more credits); incoming freshmen students must have a 2.5 or higher GPA; continuing students must have a cumulative GPA of 3.0 or higher; applicants must also be a volunteer in regard to the I-500 Snowmobile Race or

a member of the volunteer’s family

Selected by: recommendation of the I-500 Snowmobile Committee

C.G. “Sandy” Sanderson Endowed Scholarship

Value: variable — renewable

Criteria: merit based; graduates of an Upper Peninsula high school; based on GPA and ACT scores

Sault/Loretto High School Scholarship

Value: \$500 — renewable

Criteria: merit based; graduates of Sault Area High School; selection is based on GPA and ACT scores; if a graduating senior is not available, the scholarship may be awarded to a current LSSU student who is a Sault Area High School graduate.

Dr. Kenneth J. Shouldice Memorial Scholarship

Value: variable — renewable

Criteria: merit based; enrolled at least half-time at the main campus or regional location; incoming freshmen must have a 3.0 or higher high school GPA; currently enrolled LSSU students with at least 26 earned LSSU credits and minimum 3.0 GPA

Charles Snyder Engineering & Technology Memorial Scholarship

Value: variable — non-renewable

Criteria: merit based; minimum 3.0 GPA and 22 ACT for freshmen or transfer.

Curriculum: engineering or engineering technology

Selected by: recommendation of the School of Engineering and Technology

Judson “Bucky” Swart Soo Lions Club Memorial Scholarship

Value: variable — renewable

Criteria: merit based; graduate of a Chippewa, Luce or Mackinac County high school

Note: If there is not an eligible candidate from Chippewa, Luce or Mackinac County, a candidate from the Eastern

Upper Peninsula may be considered. In the event a graduating senior is not available for the scholarship, it may be awarded to a current LSSU student who is a graduate of a high school in Chippewa, Luce or Mackinac County
Curriculum: business and/or economics

Earl and Minnie Walker Endowment Scholarship

Value: variable — up to full tuition — renewable

Criteria: merit and need based

Izaak Walton League of America Lock City Chapter Endowed Scholarship

Value: variable — non-renewable

Criteria: merit and need based; graduate of Sault Area High School; minimum 3.0 GPA

Curriculum: fisheries and wildlife management

William “Bud” and Gretchen Weber Scholarship

Value: \$500 — non-renewable

Criteria: merit based; preference given to those with demonstrated volunteerism who graduated from Sault Area High School

Lottie, Florence and Dorothy Weinreich Memorial Scholarship

Value: \$1000 — renewable

Criteria: merit based; preference given to graduates of an EUP high school

Harold Weiss Memorial Scholarship

Value: variable — renewable

Criteria: merit and need based; minimum high school 3.0 GPA; Michigan resident

Curriculum: criminal justice

Eugene Welch Endowment Scholarship

Value: variable — up to full tuition and books; renewable

Criteria: merit and need based; must be a resident of Michigan

W. Gordon and Adela J. Wilman Scholarship

Value: \$1,000 — non-renewable

Criteria: merit based; must be a

graduate of Sault Area High School; if there are no eligible SAHS candidates, a student who is a graduate from a Chippewa County high school may be considered

Curriculum: education

Current Students

Students that did not receive a scholarship upon entering LSSU may compete for one of these scholarships. Scholarship “sign up” periods are held each year for available scholarships. Students can sign up for open scholarships in the Financial Aid Office or in the department making the selection.

All recipients in this section are selected by the Financial Aid Committee (unless otherwise stated) and may choose any degree curriculum offered by the University (unless otherwise stated).

All current student scholarships require a minimum cumulative 3.0 GPA and 26 earned LSSU credits (unless otherwise stated). Students who are selected must be making normal satisfactory progress toward a degree and should not exceed 124 earned credits, except for fifth-year teaching internships.

Scholarships selected by academic departments can usually be combined with other LSSU scholarships, provided the total award does not exceed the cost of tuition and fees. Academic department scholarships are typically awarded in the spring semester for the following academic year.

All renewable scholarships are based on the recipient meeting the University’s scholarship renewal criteria.

Any Curriculum

LSSU Achievement Scholarship

Value: variable — non-renewable

Criteria: merit based; must have earned at least 26 LSSU credits; preference will be given to students who are not current recipients of any

LSSU scholarship and who have demonstrated scholastic achievement and/or GPA improvement during their LSSU experience.

Mary R. Gray Memorial Scholarship

Value: variable — non-renewable

Criteria: merit based; must have earned at least 26 LSSU credits, preference will be given to non-traditional students (out of high school at least one year before college)

Laker Student Leader Scholarship

Value: \$1,000 — non-renewable

Criteria: merit based; must have earned at least 56 credits at LSSU

Selected by: nominations from LSSU faculty and staff with recommendation by the selection committee

Thomas J. O’Neil Memorial Scholarship

Value: \$1000 — renewable

Criteria: merit and need based; resident of Eastern Upper Peninsula of Michigan; earned at least 26 LSSU credits, minimum 3.0 GPA

Note: If there is not an eligible candidate from the EUP, Michigan residents may be considered

Curriculum: human services preferred, teaching may be considered

Selected by: Financial Aid Committee through scholarship sign-up

Sault Ste. Marie Business and Professional Scholarship

Value: variable — renewable

Criteria: student who has returned to college after at least a two-year interruption and who has established a college cumulative GPA of 3.0 after two semesters of study; restricted to applicants from Chippewa, Mackinac or Luce County

Edward C. and Hazel L. Stephenson Foundation Scholarship

Value: up to \$3000 per year, non-renewable;

Criteria: merit based; minimum 3.0 GPA; must be a full-time student; earned at least 26 LSSU credits; graduated from Michigan high school or the Great Lakes region; preference given to those who have overcome disabilities or other hardships in attaining his/her level of academic achievement

William “Bud” and Gretchen Weber Scholarship

Value: \$500 — non-renewable

Criteria: merit based; preference given to those with demonstrated volunteerism who graduated from Sault Area High School

Arts and Letters

Marion Strahl Boyer Scholarship

Value: variable — renewable up to two years

Criteria: merit and need based; first preference will be given to a student from the Upper Peninsula of Michigan; non-traditional student preferred or must be at least a junior (56 credits earned); minimum 3.0 GPA

Curriculum: English or pursuing a teaching degree with an English minor

Selected by: Financial Aid Committee through scholarship sign-up

Carl and Bernitta Burt Scholarship

Value: variable — renewable

Criteria: merit and need based; resident of Michigan; preference to residents of Eastern Upper Peninsula

Curriculum: arts and letters or social sciences

Selected by: recommendation of the College of Arts, Letters and Social Sciences

Fine and Performing Arts Scholarship

Value: variable

Criteria: merit based; incoming freshmen students or current students must have a minimum 3.0 GPA

Curriculum: any degree curriculum offered by the University with preference given to students majoring in one or more of the Fine and Performing Arts programs

Selected by: recommendation of the School of Communication Studies and the Fine and Performing Arts

Milton Scherer Memorial Endowed Scholarship

Value: variable — awarded annually

Criteria: merit based; awarded annually to a sophomore or higher; minimum 3.0 GPA

Curriculum: major in history with minor in geography

Selected by: recommendation of the College of Arts, Letters and Social Sciences

Athletics

Marian and Raymond Chelberg Outstanding Science Athlete Scholarship

Value: variable — renewable

Criteria: minimum 3.0 GPA, demonstrated leadership abilities and excel in at least one varsity sport; awarded at end of junior year; earned at least 30 LSSU credits

Curriculum: natural science or math

Selected by: recommendation of the Athletic Department

Ronald “Bud” Cooper Endowed Award

Value: variable — non-renewable

Criteria: One award will be given to student athletes participating in each of four Division II women’s sports including softball, tennis, track and cross country. Students must have earned a minimum 2.0 GPA. Awards will be given to juniors in the spring for their senior year. If there are no eligible juniors, the award may be given to a sophomore.

Selected by: recommendation of the Athletic Department

Jim Fallis Endowed Athletic Fund

Value: variable — non-renewable

Criteria: merit based; earned at least 26 LSSU credits; have been an All-American honoree the previous academic year; be an enrolled student athlete and eligible per NCAA rules covering participation in varsity sports at LSSU; minimum 2.5 GPA; due to NCAA rules, an individual who is receiving full equivalency grant-in-aid is not eligible; in the event that no student athletes meet these guidelines, the selection committee may select an individual who has excelled in his or her sport and in the classroom

Selected by: recommendation of the Athletic Department

LSSU 25K Challenge Scholarship

Value: up to \$1000 — non-renewable

Criteria: merit based; must be a member of the LSSU track and cross country teams; minimum 3.0 GPA, must be at least sophomore status.

Selected by: recommendation of the LSSU Track and Cross Country Coach and the LSSU Athletic Director

James R. Mason Memorial Scholarship

Value: \$1000 — non-renewable

Criteria: merit based; must be a member of the LSSU hockey team, preference given to residents of Chippewa, Luce or Mackinac County of Michigan, consideration will be given to candidates who have played hockey for at least one season in the Sault Amateur Hockey Association or for secondary institution in the listed counties of preference, freshmen or transfer students or current students with a minimum 3.0 GPA, financial need may be considered.

Selected by: recommendation of the LSSU Hockey Coach and LSSU Athletic Director

Ruth Norvell Endowment Fund

Value: variable — non-renewable

Criteria: merit and need based; must be a walk-on or partially-funded student athlete and have been accepted as a member of the LSSU NCAA Division I Laker ice hockey team; must maintain an academic standing equal to the NCAA requirements for participation; award may be renewed if all conditions are met following year

Selected by: recommendation of the LSSU Hockey Coach and LSSU Athletic Director

Dr. Harry Pike Award

Value: variable — non-renewable

Criteria: merit based; Michigan residents; preference given to students with financial need

Note: This annual scholarship will be awarded on a rotating basis, if allowable by NCAA regulations, to a sport not fully funded and not supplemented by the “Bud” Cooper Endowed Award in a given year. The sports will be listed by priority to determine the rotation basis. In the event there is no eligible recipient according to the rotation list, a student from the sport next in line will be selected. The displaced sport will revert to the next year’s top priority.

Selected by: recommendation of the Athletic Department

Gil Somes Endowed Award

Value: variable — non-renewable

Criteria: full-time student working as a student equipment manager or student athletic trainer for the LSSU Athletic Department; minimum cumulative 2.50 GPA; preference given to student with demonstrated financial need; if there is no eligible candidate, a student-athlete working with the Athletic Department may be considered

Selected by: recommendation of the Athletic Department

Chris Yanni Memorial Award

Value: variable — non-renewable

Criteria: merit based; recipient must

be one of the top-seven runners of the LSSU men's cross country team; made significant contributions to the success of the cross country program; minimum 2.0 GPA; be a citizen of Canada or the United States (preference will be given to those applicants from Northern Ontario or Michigan); must have run for the LSSU cross country team for at least one full season and be returning to LSSU and competing for the cross country team the following year; must be a strong advocate for athletics and the virtues of clean, healthy living
Selected by: recommendation of the Athletic Department

Biology, Chemistry, Fisheries and Wildlife

Dr. Kevin and Pamela Cooper Professional Scholarship

Value: \$500 — non-renewable
Criteria: merit based; preference given to graduates of an Upper Peninsula of Michigan high school
Curriculum: preference given to pre-dentistry majors, then pre-medicine, then biology
Selected by: recommendation of the faculty of the School of Biological Sciences

Dr. Arthur Duwe Memorial Scholarship

Value: variable — non-renewable
Criteria: merit based; may be a Michigan resident or non-resident, enrolled full time; minimum 3.0 GPA
Curriculum: awarded in the spring of his/her junior year to a 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
Selected by: recommendation of the School of Biological Sciences and Department of Chemistry and Environmental Sciences

Gilbert Gleason Fisheries and Wildlife Scholarship

Value: variable — renewable for senior year
Criteria: merit based; junior or senior status; students who do not qualify for federal grants; earned at least 56 LSSU credits; minimum 3.0 GPA prior to the fall of their junior year
Curriculum: fisheries and wildlife; biology major may be considered if there are no eligible fisheries and wildlife majors
Selected by: recommendation of the School of Biological Sciences

William R. Gregory Scholarship

Value: variable — renewable
Criteria: merit based; junior status, minimum 3.0 GPA
Curriculum: engineering, mathematics, business, biology or fisheries and wildlife management
Selected by: Financial Aid Committee through scholarship sign-up

Headwaters Chapter of Trout Unlimited Fisheries Scholarship

Value: \$500 — non-renewable
Criteria: merit based; senior status, resident of Michigan, preference given to students from the Headwaters Chapter of Trout Unlimited service area (Otsego, Cheboygan, Presque Isle, Alpena and Montmorency counties)
Curriculum: fisheries and wildlife with focus on fisheries
Selected by: recommendation of the School of Biological Sciences

Hiawatha Sportsman's Club Fisheries and Wildlife Scholarship

Value: \$1,000 — non-renewable
Criteria: merit based; at least sophomore status; preference given to graduates of Engadine or Newberry High School and those who have participated in the HSC fish and wildlife study trip
Curriculum: fisheries and wildlife management program
Selected by: recommendation of the School of Biological Sciences

John Lehman Chemistry Scholarship

Value: variable — non-renewable
Criteria: merit and need based; special application and letter required
Curriculum: chemistry or environmental chemistry
Selected by: recommendation of the Department of Chemistry and Environmental Sciences

Mary Lubs and Viggo Thomsen Endowed Scholarship

Value: \$1,000 per year — renewable
Criteria: merit and need based; must be at least sophomore status
Curriculum: biological sciences, pre-pharmacy, pre-medical or pre-dental
Selected by: Financial Aid Committee through scholarship sign-up

SMO Foundation Endowed Scholarship

Value: variable — renewable
Criteria: merit and need based; sophomore status; must be a resident of Chippewa, Mackinac or Luce County; minimum 3.5 GPA
Curriculum: pre-medicine or pre-pharmacy
Selected by: Financial Aid Committee through scholarship sign-up

Izaak Walton League of America Lock City Chapter Endowed Scholarship

Value: variable — non-renewable
Criteria: merit and need based; graduate of Sault Area High School with 26 earned LSSU credits, minimum 3.0 GPA
Curriculum: fisheries and wildlife management
Selected by: Financial Aid Committee through scholarship sign-up

Business and Economics

Bollin Family Marketing Award

Value: up to \$1000 — non-renewable
Criteria: merit based, minimum 2.0 GPA, must complete application and submit appropriate marketing course of SIFE project with application
Curriculum: marketing
Selected by: recommendation of the School of Business

Central Savings Bank Scholarship

Value: variable up to tuition and books — renewable

Criteria: minimum 3.0 GPA after two or more semesters of study; applicants must submit a resumé and a transcript of grades; 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. This scholarship provides assistance to a student who intends on pursuing a career in banking in the EUP. The bank also provides part-time employment during the school year.

Curriculum: finance and economics

School of Business/Lambda Scholarship

Value: \$500 per semester — non-renewable

Criteria: merit based; junior or senior status; earned at least 26 LSSU credits; minimum 3.0 GPA; demonstrated campus/community leadership and dedication to working in the business profession

Curriculum: business

Selected by: recommendation of the Lambda/School of Business Scholarship Committee

William R. Gregory Scholarship

Value: variable — renewable

Criteria: merit based; junior status, minimum 3.0 GPA

Curriculum: engineering, mathematics, business, biology or fisheries and wildlife management

Selected by: Financial Aid Committee through scholarship sign-up

Warren Parker Family Scholarship

Value: variable — renewable

Criteria: need based; full-time student, earned at least 25 LSSU credits in business administration major, must have graduated from a high

school in Chippewa, Mackinac or Luce county

Curriculum: business administration

Selected by: Financial Aid

Committee through scholarship sign-up

Judson “Bucky” Swart Soo Lions Club Memorial Scholarship

Value: variable — renewable

Criteria: merit based; graduate of a Chippewa, Luce or Mackinac county high school with 26 earned LSSU credits

Curriculum: business and/or economics

Selected by: Financial Aid

Committee through scholarship sign-up

Daune Weiss Memorial Scholarship

Value: variable — non-renewable

Criteria: merit based; preference given to students from Otsego and Mackinac counties

Curriculum: elementary/secondary education or business

Selected by: Financial Aid

Committee through scholarship sign-up

Criminal Justice**Stephen Bell Memorial Scholarship**

Value: variable — renewable

Criteria: merit based; Michigan resident; must have earned 26 LSSU credits, minimum 3.0 GPA; preference given to students with financial need and residents from the Eastern Upper Peninsula

Curriculum: fire justice; if not available, a student majoring in criminal justice may be considered

Selected by: recommendation of the School of Criminal Justice, Fire Science, and EMS

Harold Weiss Memorial Scholarship

Value: variable — renewable

Criteria: merit and need based; minimum 3.0 GPA, Michigan resident

Curriculum: criminal justice

Selected by: Financial Aid

Committee through scholarship sign-up

Education**Marion Strahl Boyer Scholarship**

Value: variable — renewable up to two years

Criteria: merit and need based; first preference will be given to a student from the Upper Peninsula of Michigan; non-traditional student preferred or must be at least a junior (56 credits earned); minimum 3.0 GPA

Curriculum: English or pursuing a teaching degree with an English minor

Selected by: Financial Aid

Committee through scholarship sign-up

Thomas J. O’Neil Memorial Scholarship

Value: \$1000 — non-renewable

Criteria: merit and need based; resident of Eastern Upper Peninsula of Michigan; earned at least 26 LSSU credits, minimum 3.0 GPA

Note: If there is not an eligible candidate from the EUP, Michigan residents may be considered

Selected by: Financial Aid Committee through scholarship sign-up

Daune Weiss Memorial Scholarship

Value: variable — non-renewable

Criteria: merit based; preference given to students from Otsego and Mackinac counties

Curriculum: elementary/secondary education or business

Selected by: Financial Aid

Committee through scholarship sign-up

Engineering**Andersen Family Engineering Scholarship**

Value: \$1200 — non-renewable

Curriculum: engineering

Selected by: recommendation of the School of Engineering and Technology

William R. Gregory Scholarship

Value: variable — renewable

Criteria: merit based; junior status, minimum 3.0 GPA

Curriculum: engineering, mathematics, business, biology or fisheries and wildlife management

Selected by: Financial Aid Committee through scholarship sign-up

Dennis Hardt Memorial Scholarship

Value: variable — renewable

Criteria: merit based; must have earned 26 LSSU credits, minimum 3.0 GPA

Curriculum: electrical engineering

Selected by: Financial Aid Committee through scholarship sign-up

Sven V. Heikkinen Engineering Scholarship

Value: \$500 — non-renewable

Criteria: merit based; minimum 3.0 GPA

Curriculum: engineering

Selected by: recommendation of the School of Engineering and Technology

John and Jan Madl Manufacturing Engineering Technology Award

Value: \$500 — non-renewable

Criteria: minimum 2.0 GPA; need based

Curriculum: manufacturing engineering technology

Selected by: recommendation of the School of Engineering and Technology

Floyd W. Starks Memorial Scholarship

Value: \$1,200 — non-renewable

Criteria: merit based; U.S. citizen, resident of Michigan, Indiana, Ohio or Wisconsin; minimum GPA of 3.25; sophomore status

Curriculum: electrical or computer engineering

Selected by: recommendation of the School of Engineering and Technology

Fire Science**Stephen Bell Memorial Scholarship**

Value: variable — renewable

Criteria: merit based; Michigan resident; must have earned 26 LSSU credits, minimum 3.0 GPA; preference given to students with financial need and residents from the Eastern Upper Peninsula

Curriculum: fire science; if not available, a student majoring in criminal justice may be considered

Selected by: recommendation of the School of Criminal Justice, Fire Science, and EMS

Geology**Geology Club Scholarship**

Value: variable — non-renewable

Criteria: merit based; junior or senior status; active membership in the Geology Club; exceptionally good academic record in geology; earned at least 26 LSSU credits

Curriculum: geology

Selected by: recommendation of the Department of Geology and Physics

John Kalesky Memorial Endowed Scholarship

Value: variable — renewable

Criteria: merit and need based; earned at least 26 LSSU credits, minimum 3.0 GPA

Curriculum: geology

Selected by: Financial Aid Committee through scholarship sign-up

C. Ernest Kemp Endowed Scholarship

Value: variable — renewable

Criteria: merit based; earned at least 26 LSSU credits, minimum 3.0 GPA

Curriculum: geology

Selected by: Financial Aid Committee through scholarship sign-up

Math and Computer Science**Marian and Raymond Chelberg Outstanding Science Athlete Scholarship**

Value: variable — renewable

Criteria: minimum 3.0 GPA,

demonstrated leadership abilities and excel in at least one varsity sport; awarded at end of junior year; earned at least 30 LSSU credits

Curriculum: natural science or math

Selected by: recommendation of the Athletic Department

Faculty of Mathematics and Computer Science Scholarship

Value: variable — non-renewable

Criteria: merit based; minimum GPA 3.0

Curriculum: mathematics or computer science or math education

Selected by: recommendation of the School of Mathematics and Computer Science

William R. Gregory Scholarship

Value: variable — renewable

Criteria: merit based; junior status, minimum 3.0 GPA

Curriculum: engineering, mathematics, business, biology or fisheries and wildlife management

Selected by: Financial Aid Committee through scholarship sign-up

Franklin F. and Wanda L. Otis Award

Value: variable — non-renewable

Criteria: earned at least 26 LSSU credits; minimum 2.5 GPA overall and minimum 3.0 GPA in computer science and mathematics courses; must be a resident of Michigan, Wisconsin or Ontario at time of application. Applicants should send letter of application addressing their qualifications to the designated mathematics faculty member the first week of October.

Curriculum: computer science or math

Selected by: recommendation of the School of Mathematics and Computer Science

Gerald Samson Mathematics Scholarship

Value: Variable — non-renewable

Criteria: merit based

Curriculum: computer and mathematical sciences
Selected by: recommendation of the School of Mathematics and Computer Science

Natural Resource Technology

Christopher W. Reinke Endowment Award

Value: up to half tuition — non-renewable
Criteria: merit and preference to needy students; sophomore status only; GPA between 2.0 and 3.0; sincere interest and dedication in the natural resources technology field
Curriculum: natural resources technology
Selected by: recommendation of the School of Biological Sciences

Nursing

Cunningham Nursing Scholarship

Value: \$1000 per year — non-renewable
Criteria: full-time nursing student; sophomore or junior status; minimum 3.00 GPA; preference to student with demonstrated financial need; essay required
Selected by: recommendation of the School of Nursing

Vivian M. Day Endowed Nursing Scholarship

Value: variable — non-renewable
Criteria: merit based; earned at least 26 LSSU credits; demonstrated leadership and dedication to the profession; graduated from an Upper Peninsula high school; be enrolled as a full-time nursing student; minimum 3.0 GPA
Selected by: recommendation of the School of Nursing

Tempie Dubow Memorial Scholarship

Value: variable — non-renewable
Criteria: merit based; at least sophomore status; minimum 2.75 GPA; demonstrated ability to relate to others, including patients; local applicants receive top consideration
Curriculum: nursing
Selected by: recommendation of the School of Nursing

Alana Eitrem Memorial Endowment Award

Value: variable — renewable
Criteria: merit and need based; admitted to the nursing program; graduated from a Chippewa County high school; minimum 2.0 GPA
Curriculum: nursing
Selected by: recommendation of the School of Nursing

Donald and Catherine Finlayson Nursing Scholarship

Value: variable — non-renewable
Criteria: merit based; preference given to student with Upper Peninsula of Michigan ties, demonstrated empathy with patients and financial need
Curriculum: nursing
Selected by: recommendation of the School of Nursing

Hospice of Chippewa County Scholarship

Value: up to \$1000 — non-renewable
Criteria: merit based; minimum GPA of 3.0; junior or senior status in the nursing program; at least six credits per semester; must submit an essay indicating interest in Hospice
Curriculum: nursing
Selected by: recommendation of the School of Nursing

I-500 Parking Committee LPN Award

Value: \$500 — non-renewable
Criteria: minimum 2.0 GPA; must be a graduate of a Chippewa, Mackinac or Luce County high school or GED program; preference given to those with financial need
Curriculum: LPN program
Selected by: recommendation of the School of Nursing

Dixie Stanley Light and Morton Light Nursing Growth Scholarship

Value: variable up to \$1,500 — renewable
Criteria: merit and need based; registered nurse of Michigan or Ontario admitted to the LSSU baccalaureate nursing post-licensure track; enrolled in a minimum of one LSSU nursing or support course each semester during the academic year; minimum 3.0 GPA; must submit a 500-word essay to explain their valuing of nursing as a service and a career
Curriculum: nursing post-licensure track
Selected by: recommendation of the School of Nursing

Memorials

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

Milton Bays	Linda Pike
David Blair	Orlando Pingatore
Beverly Brennen Booth	Dr. Thomas Robinson Sr.
John E. Brown	Minnie Etta Shobbrook
Matthew Howie	Bernard M. Smith
Maurice Hunt	E.J. "Shine" Sundstrom
Donald Lenick	Lynn Steppig
Howard and Hollis MacDonald	Viggo J. Thomsen
Arvid Norlin	Christopher Yanni
Mary Lou Peacock	Prof. Stephen P. Youngs

May Mitchell Royal Foundation Nursing Scholarship

Value: full tuition up to \$7,000 — non-renewable

Criteria: merit based; must have earned at least 26 credit hours at LSSU; preference given to those with financial need

Curriculum: nursing

Selected by: recommendation of the School of Nursing

Nancy Mongene and Russell J. Pattison Nursing Scholarship

Value: \$1,000 — non-renewable

Criteria: merit based; preference given to students pursuing a career in the public health care sector; must be a graduate of a Michigan Upper Peninsula high school

Curriculum: nursing

Selected by: recommendation of the School of Nursing

Patrick and MaryAnne Shannon Nursing Scholarship

Value: variable — non-renewable

Criteria: merit based; junior status, preference given for students interested in gerontological nursing, minimum 3.0 GPA

Curriculum: nursing

Selected by: recommendation of the School of Nursing

TenEyck-Guilliver Scholarship

Value: variable — renewable

Criteria: merit based; sophomore status or higher; Michigan resident preference given to those with financial need.

Curriculum: nursing

Selected by: recommendation of the School of Nursing

War Memorial Hospital Auxiliary Nursing Scholarship

Value: \$500 — non-renewable

Criteria: merit based; full-time nursing student; sophomore or junior status; minimum 3.0 GPA; graduated from a Chippewa County high school

Note: If there is no qualifying candidate, a graduate from an EUP high school may be considered

Curriculum: nursing

Selected by: recommendation of the School of Nursing

War Memorial Hospital Medical Staff Nursing Scholarship

Value: variable — renewable

Criteria: merit and need based;

must be college sophomores or juniors in the BSN or BSN completion program as full- or part-time students; must be from the tri-county area; minimum 3.0 GPA

Curriculum: nursing

Selected by: recommendation of the School of Nursing and a member of the War Memorial Hospital staff

War Memorial Hospital Nursing Intern Scholarship

Value: up to \$4,000 — non-renewable

Criteria: merit based; must be a nursing student with junior or senior status; must have completed a nursing internship at War Memorial Hospital

Curriculum: nursing

Selected by: recommendation of the School of Nursing

Waybrant Family Licensed Practical Nurses (LPN) Scholarship

Value: variable — non-renewable

Criteria: merit based; must be a graduate of a Chippewa, Mackinac or Luce County high school or GED program; preference given to students with financial need.

Curriculum: LPN program

Selected by: recommendation of the School of Nursing

Political Science

Patrick M. Gagliardi Scholarship

Value: variable — renewable

Criteria: merit based; must be a permanent resident of Emmet, Mackinac, Chippewa, Luce, Schoolcraft or Alger Counties; preference given to student with demonstrated financial need; may be incoming freshman or student with 26 LSSU earned credits

Curriculum: political science

Selected by: recommendation of the Political Science faculty

Psychology

Donald Hastings Memorial Scholarship

Value: variable — non-renewable

Criteria: merit based; may be

Michigan residents or non-residents; enrolled full time; minimum 3.0 GPA

Curriculum: junior majoring in psychology

Selected by: recommendation of the Psychology faculty

Recreation

Russell D. Bruce Recreation Department Scholarship

Value: variable — non-renewable

Criteria: minimum 3.0 GPA; based on leadership and service contributions to the Recreation Club and Lake Superior State University; awarded at the conclusion of the spring semester of the junior year

Curriculum: recreation

Selected by: recommendation of the School of Recreation Studies and Exercise Science

Social Sciences and Human Services

Carl and Bernitta Burt Scholarship

Value: variable — renewable

Criteria: merit and need based; resident of Michigan; preference to residents of Eastern Upper Peninsula

Curriculum: arts and letters or social sciences

Selected by: recommendation of the College of Arts, Letters, and Social Sciences

Osborn Scholarship in Political Science & History

Value: variable — non-renewable

Criteria: merit and need based; resident of Michigan; minimum of sophomore status; academic performance and potential for leadership in his or her chosen field

Curriculum: political science or history

Selected by: recommendation of a committee of political science

and historians appointed by the Dean of the College of Arts, Letters, and Social Sciences

Tendercare Endowment

Value: variable — renewable

Criteria: merit and need based;
minimum 3.0 GPA, earned at
least 26 LSSU credits

Curriculum: health and human
services

Selected by: Financial Aid
Committee through
scholarship sign-up

*The following scholarships may
be awarded to current students
based on availability:*

**Kurt and Mary Brammer
Scholarship**

**C. Eugene Chang International
Studies Scholarship**

**Fine & Performing Arts
Scholarship**

**H. Fletcher Distinguished
Scholarship**

Philip Hart Memorial Scholarship

**Frank & Gladys Hoholik
Scholarship**

**David R. & Patricia L. Hubbard
Award**

**Hudson, Coates, Kline
Scholarship**

**Robert M. Hunt Memorial
Scholarship**

**George & Virginia Lahodny
Endowment Scholarship**

Larson/Prohazka Scholarship

**LSSU Foundation Endowed
Scholarship**

LSSU Support Staff Award

Bill Munsell Scholarship

**Leslie O'Polka Memorial
Scholarship**

**Frank & Marion Pingatore
Memorial Scholarship**

Ross N. Roe Scholarship

**Sault/Loretto High School
Scholarship**

**Dr. Kenneth J. Shouldice
Memorial Scholarship**

*LSSU scholarship information is
available at www.lssu.edu. Visit the
website for details on new scholarships.*

Other Scholarships

Federal Academic Competitiveness Grant (ACG)

Established in 2006, this program
provides additional grant funds for
students that meet the following
requirements:

1. be a U.S. citizen.
2. be a Federal Pell Grant recipient.
3. be enrolled full-time in a degree program.
4. be enrolled in first or second year of an associate or baccalaureate program.
5. have completed a rigorous program of study in high school.

Federal ACG recipients will receive up to \$750 for their first year and \$1,300 for their second year provided they maintain eligibility and earn a minimum GPA of 3.0 after one year.

Federal Science & Mathematics Access to Retain Talent Eligibility Grant (SMART)

Established in 2006, this program
provides additional funds to
Pell recipients who meet certain
conditions in their third and fourth
academic years. Students must meet
the following requirements:

1. major in physical, life, or computer science, engineering, mathematics, technology, or a critical foreign language.
2. have at least a cumulative GPA of 3.0 or higher each semester in their major.
3. be enrolled in at least one course with their major each semester.

Students qualifying for the SMART grant will receive up to \$4,000 per year for their third and fourth academic years provided their award does not exceed their financial need.

Michigan Programs

The State of Michigan programs that are available to LSSU students can be reviewed on the state's web site at www.michigan.gov/mistudent.



Grant Programs

The Lake Superior State Board of Trustees' Grant Program

This program provides assistance to incoming and currently enrolled students based on financial need. The grant is considered a form of "priority aid", requiring the on-time filing of the FAFSA each year. Recipients must be Michigan residents and enrolled full time in Lake Superior State University classes.

Federal Pell Grant

All students filing the FAFSA are automatically reviewed for Pell Grant eligibility. Pell Grants provide assistance to which other forms of aid may be added.

Pell Grant amounts vary according to the year (\$609-\$5350 for 2009/10).

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 and meet satisfactory progress standards.
3. be U.S. citizens or permanent residents or qualified Jay Treaty students.
4. not be in default on a Direct Stafford or Perkins Loan, and not owe a refund for a Pell Grant or other federal aid.
5. not be disqualified due to prior drug offense convictions.

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

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

aid offices or online at www.fafsa.ed.gov.

Federal Supplemental Educational Opportunity Grant (FSEOG)

The Higher Education Act of 1965 created this program of financial assistance to help college students with the greatest financial need. Supplemental Educational Opportunity Grants may be used to meet all or part of student financial need (up to \$4000 in any one year).

Financial need is the primary consideration in the selection of grant recipients. Priority is given to the neediest Pell Grant recipients. Recipients are selected from those applying for all forms of financial aid by using the FAFSA.

FSEOG is a priority fund that is distributed first to students who file their FAFSA by March 1st.

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

Federal Occupational Education Program

The Perkins Grant Program provides funding for students with demonstrated financial need, as determined by filing the Free Application for Federal Student Aid (FAFSA), and who are enrolled in certain associate's degree programs. Students who qualify for the Federal Pell Grant and have earned less than 72 credits will automatically be considered if enrolled in one of the following associate's degrees:

- manufacturing engineering technology
- early childhood education
- legal assistant studies
- substance abuse prevention and treatment
- natural resource technology
- corrections (criminal justice)
- law enforcement (criminal justice)

- fire science
- technical accounting
- office administration
- business administration
- personal computer specialist
- practical nursing

This grant provides supplemental funding for qualified students and may be pro-rated for less than full-time attendance.

Michigan Tuition Incentive Program (TIP)

The TIP Program pays tuition and fees for students of lower-income families. Eligible students must be Michigan residents; be graduates from high school or have obtained a GED after May 1, 1988 but before reaching age 20; be accepted for admission into an associate's degree program; and accept TIP by submitting certification while in high school. Acceptance must be filed before high school graduation, but no later than August 15th.

Vocational Rehabilitation

The Michigan Jobs Commission Rehabilitation Services provides services and financial assistance to persons with 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 contacting your nearest Michigan Rehabilitation Services Office of Michigan Jobs Commission.

Loans

Michigan Nursing Loan

The Michigan Nursing Loan is a limited award available to Michigan residents enrolled at least half-time at an eligible institution in a program leading to a Licensed Practical Nurse (LPN) certification, Associate Degree in Nursing (A DN), or Bachelor of Science in Nursing (BSN).

Students may borrow up to \$4000 per academic year for full-time attendance, not to exceed the cost of attendance minus other grants and scholarships. To qualify for forgiveness of this loan, students must work as direct care-givers in Michigan for one year for each year of assistance.

Awards are \$4000 per year for full-time students, \$3000 per year for three-quarter time students and \$2000 for half-time attendance, for up to four years.

General eligibility requirements include:

- at least half-time enrollment
- Michigan resident for one year prior to beginning a nursing program
- U.S. Citizen or permanent resident
- agreement to gain nursing licensure and work in direct care in Michigan within one year of completing an academic program

- agreement to repay the loan if the work requirement or other program provisions are not met
- maintain satisfactory academic progress standards
- have not been convicted of a violent felony crime

Recommendation of candidates for the award is made by the Nursing Department and the Financial Aid Office when funds are available. Funding for this program are dependent on the State of Michigan.

Federal Perkins Loan

The Federal Carl Perkins Loan program is for students enrolled at least half time in an eligible program who need a loan to meet educational expenses.

Students may borrow up to \$4,000 for each year of undergraduate study. The lifetime loan limit for undergraduates is \$20,000. The amount awarded by the University is generally less due to limited funds.

Repayment begins nine months after students graduate or drop below half-time enrollment. There is a 10-year pay back period, at five percent interest on the unpaid balance of the loan principal.

The amount of the repayment depends on the size of the debt and ability to pay. In most cases, students must pay at least \$40 a month. Any agreement for a lesser amount must be attributable 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. In cases of bankruptcy, total or permanent disability or death, loan obligations are canceled.

Deferment of payment is available if:

1. you are enrolled and attending as at least a half-time student at an institution of higher education.



2. for any period not to exceed three (3) years you :
 - A. are unable to find full-time employment.
 - B. are experiencing economic hardship.
 - C. are active in certain military service.

Cancellation: Loans may be canceled for:

1. certain types of teaching,
2. full-time qualified provider of early intervention services for the disabled,
3. full-time nurse or medical technician,
4. full-time law enforcement or corrections officer,
5. death or disability of the student,
6. full-time staff of Head Start Educational Program,
7. full-time provider of services to high-risk children at a child or family service agency.
8. certain military service.

Federal Direct Stafford Loan (Student)

Qualified applicants must be a United States citizen or eligible alien. Students may borrow up to \$5,500 the first year of undergraduate study, \$6,500 as a sophomore and \$7,500 as a junior or senior. The lifetime maximum amount is \$31,000 for dependent students and \$57,000 for independent undergraduate students.

The student loan program is administered through the Financial Aid Office under the Direct Loan Program. A loan fee is charged on all loans, under federal law. Loans are disbursed in two equal disbursements (one-half in the fall semester; one-half in the spring semester).

Subsidized loans are eligible for federal interest benefits. For subsidized loans, the federal government does not charge interest

while attending school at least half-time, during the six-month grace period, and during deferments (postponements of repayments). Financial need must be shown to receive this type of loan.

For students without financial need, the Direct Loan Program offers Direct Unsubsidized Loans. The federal government charges interest on these loans while attending school, in the grace period, and in deferment.

Once enrolled at Lake Superior State University, students must meet the satisfactory progress standards to be eligible for additional loans. Students must file a Free Application for Federal Student Aid (FAFSA) each year to qualify for a student loan.

Repayment begins six months after graduation or the date the student attends school less than half-time. Interest rates are set each June for the following academic year.

Federal Direct PLUS Loan (Parent)

Parents may borrow up to the difference between the cost of education and other financial aid for which the student is eligible. The interest rate is adjusted annually for new loans; the 2010/11 fixed interest rate is 7.9%.

Students must meet the satisfactory progress standards to be eligible and must file a Free Application for Federal Student Aid (FAFSA) each year to obtain a Federal Direct PLUS loan.

An origination fee is deducted from each of two disbursements made in a school year. Repayment begins within 60 days of disbursements. Interest rates are set each June for the following academic year.

Federal Nursing Student Loan

The Nursing Education Loan Program provides loans of up to \$4000 a year for bachelor's degree or completion nursing

programs. Eligibility requirements include United States citizenship, enrollment of at least half-time and demonstrated financial need.

Federal TEACH Loan Forgiveness Program

The TEACH Grant is a Loan Forgiveness Program for students who plan to become teachers in certain fields and for teachers who are seeking a graduate degree.

Qualified students may borrow up to \$4,000 per year if full time, prorated for part time.

Maximum of \$16,000 for undergraduate student.

Maximum of \$8,000 for Masters with lifetime limit of \$24,000.

Award becomes an unsubsidized federal student loan with interest accruing from initial point of disbursement if student does not meet forgiveness criteria within eight years.

Qualifications:

1. Student must be admitted into an approved major- see list on website @ www.lssu.edu/finaid/teachlist.php.
2. Student must have scored above 75th percentile on admissions test or Graduate Records Exam (GRE). Submit a copy of your original ACT results clearly showing your score above the 75th percentile.
3. Student who did not meet the test criteria must have a cumulative GPA of 3.25 or higher.
4. If qualified by GPA, must meet that minimum each semester.
5. Student must complete Entrance Counseling, Interim and Exit Counseling.
6. Student must complete Agreement to Serve each year.

Criteria for forgiveness of loan for students:

1. Must complete four years of teaching within eight years of finishing program.

2. Must perform teach service as a highly-qualified teacher.
3. Must teach in a high-need subject area for at least four years at a school serving low-income students.
4. Must be a full-time teacher with majority of time spent teaching one of the high need subjects:
 - Bilingual Education and English Language Acquisition
 - Foreign Language
 - Mathematics
 - Reading Specialist
 - Science
 - Special Education
 - Other teacher shortage areas documented as high need by Federal, State or local education agency and listed in Department of Education Annual Teacher Shortage Area Nationwide at the time the student begins teaching.

Canada Student Loan

Canadian students who need financial help to earn a degree at Lake Superior State University may apply for aid through the Ontario Student Assistance Program (OSAP).

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 taking at least 60 percent course load (eight credits);
6. complete an application for OSAP at osap.gov.on.ca;
7. bring Program Information Form to the LSSU Registrar's Office to be completed and mailed by LSSU.

The loans are interest free for full-time students and until six months after graduation or termination of full-time studies. After the interest-free period has expired, students are responsible for the repayment of principal and the interest on the outstanding balance at a loan rate in effect when repayment begins.

Application forms are available online at www.osap.gov.on.ca.

Short-Term Educational Loan

Several short-term loan funds are available. These funds provide cash with a small loan to meet immediate, temporary financial problems.

Generally, loans up to \$300 are allowed for 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 service charge is assessed on all loans.

Student Emergency Fund

Established in 2000 through the Bud Mansfield Endowment, this fund is used to assist students in crisis. Application for funds is made at the Financial Aid Office. Students with insufficient resources to meet textbook needs or other obligations may apply for one-time assistance through this fund.

Campus Employment

Federal Work-Study

If you have demonstrated financial need, you may be eligible for employment by Lake Superior State University under the federally supported Work-Study Program. You must file a FAFSA to be considered for this program and have financial need.

Students may work up to 19 hours weekly while attending classes more than half-time. During the

summer or other vacation periods when you do not have classes, you may work full-time (40 hours per week) under this program.

The basic starting rate tends to be commensurate with the current minimum wage. Higher rates are paid for highly specialized work.

America Reads Program at Lake Superior State University is another work study opportunity for students. Students work as reading tutors in the local elementary schools and are paid through the Federal Work-Study Program. Interested students should request this unique employment experience when submitting their applications for employment at the Office of Human Resources.

Other Campus Work Opportunity

If you are interested in working on campus, but do not qualify for work study, you may apply at the Office of Human Resources. There are more than 300 positions open on campus for full-time students.

Every effort is made to employ students in areas of study providing a "learn while you earn" situation. On-campus jobs include work in laboratories, libraries, maintenance, offices, switchboard and food service areas. You can earn approximately \$2,000 during the school year and up to \$4,600 in the summer with an on-campus job.

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

Programs for Native Americans

Bureau of Indian Affairs Scholarship Grant: Members or those eligible for membership in a federally recognized tribe showing need, may apply for Bureau of Indian Affairs Scholarship Grants by contacting

their tribal education office for an application. It is possible to receive 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:

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

Awards are based on financial need. Applicants must complete a Free Application for Federal Student Aid (FAFSA). Applications may be obtained by contacting the Tribal Education Office.

Native American Tuition Waiver

Qualified North American Indian students who have been legal residents of Michigan 12 months prior to enrollment may apply for the Native American Tuition Waiver.

Applicants must submit a certification of one-quarter blood quantum to their tribal chairperson or tribal certification officer. The Intertribal Council will attach a certification letter to the tribal

certification and forward it to the Financial Aid Office at the University. The University will verify current Michigan residency and then issue a credit for the tuition for eligible students each semester. Students must be accepted for admission into an eligible program and submit their certification of eligibility and proof of Michigan residency prior to starting classes.

Veterans Educational Benefits

Lake Superior State University's VA Certifying Official acts as a liaison between the Department of Veteran Affairs and eligible students. Student eligibility for veterans educational benefits is determined by the United States Department of Veterans Affairs. Students who believe they are eligible for veterans educational benefits are encouraged to contact the U.S. Department of Veterans Affairs and the Michigan Department of Military and Veterans Affairs for educational assistance programs. Additional information is available at LSSU's Veterans Benefits website at www.lssu.edu/registrar/va.

A Veterans Educational Benefits recipient must be admitted into

a degree program or as a guest student. The student is required to provide the University's VA Certifying Official with a degree audit form from their department. All transfer credit is evaluated and recorded as "credit for previous training". Classes may not be repeated if passing grades were received. Each semester the student must provide a completed certification form of scheduled classes within their declared major to the University's VA Certifying Official. The student must also notify the University's VA Certifying Official of any change to their scheduled classes, academic program, or withdrawal from the University. These activities along with attendance are monitored and reported to the U.S. Department of Veterans Affairs.

Standards of Progress requirements for recipients of Veterans educational benefits follow the University's "Academic Probation and Dismissal Policy" as stated. If a student fails to meet these standards, the University's VA Certifying Official must notify the U.S. Department of Veterans Affairs and the student's benefits will be terminated for unsatisfactory progress.

Division of Academic Services

The Division of Academic Services exists to support the educational experience and academic endeavors of students and faculty at LSSU. The Division of Academic Services is home to the following programs, offices, and services located within the KJS Library:

- Audio-Visual Center
- Blackboard User Support Services
- Continuing Education
- Career Services
- IPASS
- Learning Center
- Liberal Arts — Undeclared/Undecided Student Program
- Library (Kenneth J. Shouldice)
- ALEKS
- Testing Services

- University Seminar Courses
- Video Conferencing and Coursecast Support

Audio-Visual Center

Located on the main floor of the library, the Audio-Visual Center maintains a diverse collection of games, kits, slides, video tapes and other media. Faculty may check out materials from the collection, pick up AV equipment, or arrange to have equipment brought to a classroom. Reservations can be made by calling extension 2400. Students and other library patrons may use Audio-Visual materials in the library.

Other services offered by the Audio-Visual Center include making black and white, and color transparencies,



slides, scanning material, and duplicating audio and video tapes, CDs and DVDs. Students may purchase Scantron sheets and blue books for tests and a limited array of AV and computer-related supplies.

The Audio-Visual Center is open Monday-Thursday from 7:30 a.m. to 10 p.m., and Friday from 7:30 a.m. to 5 p.m. during the academic year. Call the library for summer and holiday hours at 906-635-2815. For the most recent information, visit the following URL: <http://www.lssu.edu/library/lib03/libserv.html>.

Video Conferencing/Interactive Television: Video conferencing or interactive television is a technology that allows the university to provide for two-way interactive instruction, seminars, conferences, meetings, and many other interactive options to those who want to use this technology.

The university has two rooms fully equipped for video conferencing as well as specialized equipment set up for online conferencing or instruction. These rooms are also available for public/private use. A fee is charged for the use of the rooms, equipment and technical support. University need takes precedence on room availability. For more information, call (906) 635-2629.

Blackboard User Support Services

Blackboard is a Web-based course management system that allows faculty to create Web sites for courses that enhance or deliver course instruction. Students enrolled in courses supported with Blackboard have access to support materials posted by the instructor (using syllabi and assignments), links to Web-based materials, discussion boards and chat rooms, and online quizzing. Each instructor customizes Blackboard for his or her course, using a variety of "tools" as mentioned above.

Blackboard is the most frequently used Web-based course management system at LSSU, and gives LSSU the potential to develop complete online courses and other academic services. Over 40 faculty use Blackboard for more than 100 courses. For more information on Blackboard at LSSU, call 906-635-2651, or visit the Website at: <http://www.lssu.edu/webct/Blackboard-mainpage.php>

Career Services

Career Services is dedicated to promoting academic, personal, and occupational success of students by assisting them in the process of career development. Career Services encourages the discovery of students' work values, interests and skills, and their relationship to academic and career planning. With Career Services' counseling and resources, students become responsible for more productive academic endeavors and make informed decisions about occupational choices.

Students are encouraged to visit Career Services often and early in their academic career. The office is located in the lower level of the KJS Library. Professional counselors assist students with career choices that suit their skills and interests. Career Services also assists students with the skills needed to locate suitable and desirable employment as a student and as a graduate.

Services include:

- Career counseling
- Vocational assessments
- Career Fairs
- DISCOVER Web-based career exploration program
- Career resource library
- Workshops on resume writing, interviewing skills, business etiquette, and career planning
- e-Recruiting
- On-campus recruiting through online and e-mail job postings and setting up interviews with companies visiting campus

For more information, contact Career Services at 906-635-2733, 906-635-2189 or visit <http://www.lssu.edu/careerservices>.

Continuing Education

Continuing Education provides educational opportunities to meet the needs of non-traditional students and the public through degree programs, professional development, and community outreach. In cooperation with academic departments, Continuing Education creates educational opportunities to meet these needs through alternative delivery options, distance learning, flexible schedules, evening classes and similar educational options. Continuing Education also provides support and assistance to non-traditional and part-time students enrolled at LSSU. It is currently located on the first floor of the library. For more information visit us at <http://www.lssu.edu/conted>.

Counseling Services

You are encouraged to take advantage of our counseling services. Licensed professional counselors are available at the Counseling Center to help with personal issues and problems.

The Center's services are free to students and strict standards of confidentiality are maintained. For more information, contact the Counseling Center at 906-635-2752 or extension 2752 on campus.

IPASS and Student First

The IPASS and Student First programs are designed to help students gain control over their learning through pro-active communication, and goal-setting, the development of intentional learning skills and study habits, and personal accountability.

Student First is designed specifically to assist incoming freshmen in the transition from

high school to college; IPASS (Individual Plan for Academic Support and Success) is designed for students in later semesters. When you enroll in the programs, a Learning Specialist will work with you to develop a plan for success that may include tutoring, supplemental instruction, time management, studying and test taking strategies that work best for you, and working with a peer mentor to “learn the ropes” in your field of study.

Both the IPASS and Student First programs are free to all LSSU students. For more information, call 906-635-2887 or visit us at: www.lssu.edu/ipass.

Learning Center

The Learning Center (LC), located in the KJS Library Building, offers free academic support services to all enrolled students at LSSU, at all levels of learning (freshman through senior).

- Peer tutoring and supplemental instruction (also known as organized study groups) are available for many preparatory, 100- and 200-level courses across the disciplines.
- The LC’s Writing Center staff can assist you with all types of writing at all levels for all disciplines.
- The Math Center can assist students with math homework for preparatory, 100- and 200-level math courses; no appointment is necessary.
- You can enhance your academic performance by using our state-of-the-art computers equipped with tutorial and instructional software for many LSSU courses. We also offer wireless connection and office software relevant to your academic courses.
- Our student success seminars (on topics such as study skills, test preparation, test anxiety and time management) are

available weekly each semester and are free to all students.

- Study space, tutorial DVDs and audio libraries, and a book-lending library are also available.

Our friendly staff will be happy to assist you in reaching your academic goals. Please contact us at 906-635-2849 or visit our Website at: <http://www.lssu.edu/lc> for the latest information on hours and services provided.

Liberal Arts— Undeclared Student Program

The liberal arts-undeclared program at LSSU is designed to guide “undecided” or “undeclared” students through exploration of academic and personal interests and potential majors and careers, while allowing them to work toward degree requirements. Through personalized advising and career counseling with a licensed professional counselor, self-guided research and assessment, development of a career planning portfolio, and conversations with faculty, staff, students and employers in fields of interest, students will gain a better understanding of the academic and career planning process.

The following programs, services and activities are available to students beginning their careers and majors exploration:

- First-year seminars (USEM101) assist students with the transition to higher education as well as with career exploration.
- Liberal arts advisors assist liberal arts-undeclared students with the selection of general education (liberal arts) courses and introductory courses that will meet degree requirements while encouraging students to explore the academic programs offered at LSSU.
- Guided self-assessment allows

students to explore interest, ability, achievement, aptitude, work values, and personality traits through completion of assessments that are reviewed by a licensed professional career counselor.

- Introductory freshman-level courses can provide students with an overview of the major or field of study and some disciplines offer a career explorations course within the discipline.
- Faculty, staff, students and alumni at LSSU are great resources as students develop their network of friends and contacts.
- Involvement in student organizations and out-of-class activities at LSSU allow students to gain “real world” experience while enjoying student life at LSSU.
- Career exploration resources via the Web are available as well for students wishing to independently research and learn about career planning and academic majors at LSSU.

Indecision and uncertainty about a major or career choice is normal and in many ways advantageous for students. For more information on the Liberal Arts-Undeclared program, contact Career Services at 906-635-2733, 906-635-2189, or visit the Website at: http://www.lssu.edu/programs_of_study/LiberalArts.

Library (Kenneth J. Shouldice)

The Kenneth J. Shouldice Library is an instructional resources center open to all: students, faculty, and staff of LSSU, and members of the community and region. A highly-trained staff is available to help you meet diverse informational and computing needs.

The collection consists of over 130,000 volumes and 850 periodical subscriptions, as well as 75,000

microforms and nearly 1,000 items in various formats. In addition, over 100 databases and thousands of journals are available via internet. The on-line catalog, Voyager, provides access to our collection. The library provides wireless access throughout its three floors, and ample computer stations to access the Internet or one of the many databases available. Ample room to study comfortably with seating for over 350 is available as well as individual and group study rooms. For the latest information, visit our Website at: <http://www.lssu.edu/library>.

The circulation desk is the service point for a number of activities, including checking out library materials, class reserves, picking up Interlibrary Loan orders, and obtaining printouts from printing requests sent from library computers. Circulation staff can answer questions and offer assistance in using the library computers and equipment when a reference librarian is unavailable. Community members are welcome to use both the library and check-out materials.

For additional information on various policies and services listed below, see our Website at: <http://www.lssu.edu/library/lib03/policies.html>

- Circulation
- Interlibrary Loan
- Special purpose programs
- Computer use
- Video tapes
- Gifts
- Reserves
- Overdues
- Donations

The Gallery: The library maintains an exceptional gallery at the entrance to the facility and is open for viewing during regular library hours. Exhibits for the Gallery, located on the main floor, must be approved by the Gallery Committee and comply with the exhibit policies for "The Gallery."

Library services for regional center students: The KJS Library

offers support services for regional students through its Interlibrary Loan (ILL) and Reference departments. The ILL department provides document delivery of books, government documents, and periodical articles sent directly to the student's address. Reference assistance is available by e-mail: reference@lssu.edu, by telephone: 906-635-2167 or via fax at: 906-635-2193.

Reference librarians are available from 8 a.m.-5 p.m., Monday-Friday, and from 7-9 p.m. Monday-Thursday during the academic year. Summer and semester break hours are from 8 a.m.-5 p.m., Monday-Friday. For further information, visit our Website at: <http://www.lssu.edu/library/lib03/regional.html>.

ALEKS® Learning System for Math

LSSU provides self-paced, computer-based learning options for motivated students who place into preparatory coursework in English and mathematics, or for students who need a refresher in various content areas. ALEKS® is a Web-accessible software program that allows students to review or learn new material at their own pace, on their own schedules, at any location where they have Internet access. ALEKS® provides customizable modules for learning in reading, mathematics, writing, science and technology, and other areas.

LSSU has developed a program that give students a low-cost instructional alternative to taking preparatory coursework in mathematics and reading. The ALEKS® math program provides students with the course content equivalent to our MATH081 through MATH086 math modules, preparing them for the departmental math modules tests.

Faculty at LSSU use ALEKS® to create review modules for students who require "spot" review for math and science courses, and to

create assignments for their classes. Teacher Education students use the MTTC-aligned review module in ALEKS® to prepare for testing.

Students who are interested in using ALEKS® to independently review materials, and faculty who are interested in reviewing ALEKS® content for use within their programs, are encouraged to contact the ALEKS® coordinator at 906-635-2355 or ext. 2355 on campus, or visit: <http://www.lssu.edu/asc/plato> for more information.




Testing Services

LSSU's Testing Services, located in the KJS Library building, provides national testing services, employment and civil service testing, LSSU placement testing and LSSU make-up testing for students with faculty- or athletics-approved absences. For more information on any of the tests and services listed below, contact the Director of Testing at 906-635-2452 or visit the Testing Services Website at: <http://www.lssu.edu/testing-services>.







National Testing Services: LSSU's Testing Services provides national testing services to the public and LSSU students. LSSU provides the following tests:

- FE Exam (Fundamentals of Engineering Exam)
- LSAT (Law School)
- MCAT (Medical School)
- GRE Subject Tests
- SAT (College Entrance Exam)
- ACT (College Entrance Exam)
- Miller Analogies Test (MAT)
- College Level Examination Program (CLEP tests)
- PCAT (Pharmacy College Admissions Test)
- PRAXIS
- MTTC (Michigan Test for Teacher Certification)
- (DANB) Dental Assisting National Board
- WorkKeys

ENGLISH COURSE PLACEMENT

ENGLISH COURSE PLACEMENT		*If you wish to challenge your English placement, you will need:			
if your ACT/SAT is:	Your Current English Course Placement is:	COMPASS® test:	COMPASS® score of:	e-Write® score of:	Your NEW English Placement will be:
NO ACT/SAT Scores	ENGL091	 Writing Skills A	0-100	2-5	ENGL091
			0-69	6-7	ENGL091
			70-100	6-7	ENGL091
ACT: 0-17 SAT: 0-430			0-69	8	ENGL091
			70-95	8	ENGL110
			96 or higher	8	Honors English
ACT: 18-25 SAT: 440-570	ENGL110	 Writing Skills B	0-95	2-8	ENGL110
			96 or higher	8	Honors English
ACT 26 or higher SAT: 580 or higher	Honors English		Can Not Challenge Placement		Honors English

MATH COURSE PLACEMENT

MATH COURSE PLACEMENT		*If you wish to challenge your Math placement, you will need:		
if your ACT/SAT is:	Your Current Math Course Placement is:	COMPASS® test:	COMPASS® score of:	Your NEW Math Placement will be:
ACT: 0-17 SAT: 0-430	MATH 081	 Pre-Algebra	0-46 47-99	MATH081 MATH084
ACT: 18-20 SAT: 440-490	MATH084	 Algebra A For those WITHOUT ACT/SAT scores	0-45 46-65 66-99	MATH084 MATH102/110/207 MATH103-104/111/140
ACT: 21-22 SAT: 500-530	MATH102/110/207	 Algebra B For those WITH ACT/SAT scores	0-65 66-99	MATH102/110/207 MATH103-104/111/140
ACT: 23-27 SAT: 540-630	MATH103-104/111	 College Algebra	0-45 46-99	MATH103-104/111 MATH112
	MATH140	 Trigonometry	0-45 46-99	MATH140 MATH151
ACT: 28 or higher SAT: 640 or higher	MATH112/151	 Can Not Challenge Placement		MATH112/151

- ACT Center computer-based high stakes testing

Public Testing: Employment and Civil Service Testing — Lake Superior State University is one of Michigan's Civil Service test sites. Testing Services also provides employment testing as needed for LSSU's Human Resources Office.

LSSU Course Placement Testing: LSSU's Testing Services provides

placement testing for admitted LSSU students in English and mathematics. Students must contact Testing Services to arrange a test date. For information on LSSU's placement testing requirements, visit our Website at: <http://www.lssu.edu/testing/services/placementchart.php>.

LSSU Make-up Testing: Testing Services provides make-up testing to students with an approved

absence. At least two business days' notice in advance is required for scheduling tests.

Students who take their tests in the area provided by Testing Services will be required to sign an Informed Consent Form indicating that no unauthorized materials or information may be taken into or out of the testing area. A picture ID is required to test.

Student Life

Student life is an important part of your Lake Superior State University experience. There are countless opportunities to enhance your educational experience. We encourage you to participate in student activities and to get involved with the campus. It is a great way to meet people and gain invaluable experiences and insights that will help when you graduate.

There are more than 60 different clubs and organizations at LSSU. There is always something going on so you can be a part of the campus scene.

We have 11 sports at Lake State: basketball, cross country, track and tennis for men and women; ice hockey for men; and volleyball and softball for women. In addition, the University has an extensive intramurals program including sports such as broomball, basketball, hockey and more.

Beyond the programs and services on campus, you have the natural splendor of the Upper Peninsula and Canada. Good hunting and excellent fishing are found within a few miles of campus. Favorite

winter sports are skating, hockey, snowshoeing, tobogganing, ice fishing and skiing.

Student Government

Student Government is the governing arm of the LSSU student body. All students are eligible for election to Student Government membership and are encouraged to participate.

Recognized Organizations

Recreation: Cheerleading Club, Dutch Dance, Kuk Sool Won Club, Men's Club Hockey, Yoga Club.

Academic/Professional: American Society of Mechanical Engineers (ASME), Laker Leadership Honor Society (Academic/Prof.) Chemistry Club, Criminal Justice Fire Science Alliance (CJFSA), English and Communication Club, Exercise Science, Fisheries and Wildlife, Geology Club, Institute of Electrical and Electronics Engineers (IEEE), Lake State Student Nurses Association, LSSU Investment Club, LSSU Student Honors Organization, Pre-Professional Society, Psychology Club, Society of Automotive Engineers (SAE), Society of Manufacturing Engineers (SME), Society of Women Engineers (SWE), Sociology Club, Student Athletic Training Association (SATA), Students in Free Enterprise (SIFE), Political Science Club, Professional Student Recreation Association.

Religious: Anchor House, Catholic Newman Center, His House Christian Fellowship.

Greek Letter: Alpha Kappa Chi Sorority, Alpha Phi Omega Service Fraternity, Alpha Theta Omega Sorority, Lambda Sigma Beta Fraternity, Sigma Lambda Sigma Sorority, Tau Kappa Epsilon Fraternity, Theta Xi Fraternity.



Special Interest: Anime Club, Chess Club, College Republicans, Gamers Club, LSSU College Democrats of America, Native American Student Association, Student Alumni Involved for Lake State (SAILS), Student Organization for Diversity (SOFD), Ducks Unlimited, Gay, Lesbian, or whatever (GLOW) Students Enhancing Environmental Knowledge (SEEK), Taking Education Abroad (TEA)

Music/Theatre: Lake State Theatre and Drama Club, Pep Band.

Student Assembly: Activities Board, *The Compass* (student newspaper), Inter-Greek Council, Judiciary Board, Presidents Council, Student Government, WLSO (student radio station).

Housing

A variety of housing facilities are available. If you are enrolled at LSSU for 12 credit hours or more, there are mandatory policies that apply.

If you are unmarried and/or a nonveteran enrolled in 12 hours or more and are within 27 calendar months of your high school graduation, you must reside in a University residence hall.

High school graduation dates are assumed to be June 1 for this purpose. The exceptions are:

1. If you live with your parents within a 60-mile radius or the three-county (Chippewa, Luce and Mackinac) service area of the University. An exception application is available in the Housing Office and must be approved by the Housing director.
2. If you are exempted in writing by the Director of Campus Life and Housing when residence hall space is filled.
3. If you have unusual financial or health problems. Permission must be granted by the Director of campus life and housing.

The University reserves the right to assign all students within the residence halls. Housing preferences are considered according to the dates of receipt of application and first room and board payments. Freshmen are usually accorded priority in residence hall assignments and upperclassmen hold priority in apartment assignments.

The University recognizes that exceptions to these policies may arise. Requests for permission to live off-campus will be considered by the Director of Campus Life and Housing, who shall apply the following criteria to a request to live off campus for financial reasons:

“Financial hardship” is a situation in which the total resources of the student and family added to the total financial aid available from the University does not equal the dollar amount budgeted by the Financial Aid Office as the minimum required for on-campus residency. In such a situation, there are two alternatives: a) withdrawal from the residence hall or b) withdrawal from the University. An example is a student 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.

Dining Services

The Quarterdeck Dining Hall (on the upper level of the Walker Cisler Center Students and Conference Center) is an all-you-can-eat cafeteria.

The Galley and Grill 155 (on the lower level of the Cisler Center) features grilled items, many snack foods and beverages.

Cappuccino Corner (located in the Kenneth Shouldice Library) has a deli-style menu, breakfast items, and a variety of beverages.

Café a la Cart (located on the main floor of Crawford Hall) features a convenience-style menu, breakfast items and a variety of beverages.

Norris Snack Shack (in the Taffy Abel Ice Arena) features a concession-style menu.

Athletics

Lake Superior State University sponsors varsity intercollegiate athletics at the NCAA Division II level in 10 sports; men's and women's basketball, tennis, cross country and track, and women's volleyball and softball. Ice hockey is a Division I sport for men.

The University is a member of the Great Lakes Intercollegiate Athletic Conference (GLIAC) in Division II sports, and competes in the Central Collegiate Hockey Association (CCHA) in hockey.

Initial approval by the NCAA Clearinghouse is required of all freshman athletes. Contact your high school guidance counselor for that information.

If you are interested in competing as a Laker, contact the athletic department. Student-athletes must maintain a minimum grade point average, carry a required number of courses, and make satisfactory progress toward a baccalaureate degree.

Health Service

Health care services are available on campus at the LSSU Health CARE Center. The Health CARE Center offers a wide range of services to our students including treatment of illness, injury, annual physical examinations, immunizations, and allergy injections.

The Health CARE Center is staffed by a certified nurse practitioner, physician assistant, and a consulting physician. Our providers have prescriptive authority to order a wide range of prescriptions.

Services are available Monday-Friday from 8 a.m.-4:30 p.m. Hours of operation are reduced during the summer semester and University breaks. Appointments are appreci-

ated but walk-ins are accepted as time permits. For an appointment, call 906-635-2110 or on campus, ext. 2110.

The Health CARE Center does bill and accepts most insurance plans for services rendered at the the Health CARE Center. We do ask that **students present an insurance card** at the time of service. *(Please note that any service rendered off-campus is the sole responsibility of the student or parent.)*

Lake Superior State University has created a student plan for all students who maintain three or more credit hours. This student health plan covers co-pays, deductibles, and non-covered services of an insurance company. **Well physicals and immunizations are excluded from this plan, but are offered at a reduced rate to the student.** The student health plan has been established so students do not have an out-of-pocket expense. To utilize the student health plan, services must be rendered at the Health CARE Center.

Students who do not have health insurance should contact the Health CARE Center to discuss services available under the LSSU student health plan and/or plans that are available for purchase. An insurance plan is available for the uninsured student which may be purchased; this is separate from the on-campus student health plan. LSSU does not endorse this plan but simply makes it available to the student. Information regarding this plan is available at the Health CARE Center or by going on-line to: www.sas-mn.com.

All students from countries other than the United States and Canada are required to carry health insurance as a condition of enrollment. These students must furnish proof they have purchased an equivalent insurance plan that will cover their health care while in the United States.

Upward Bound

Upward Bound is a federally funded TRIO program which LSSU has successfully hosted since 1965. This is a free college-preparatory program for low income students and/or students whose parents do not have college degrees. The program provides academic support, career exploration and advising, and cultural growth experiences designed to enhance educational success. Upward Bound works with these students year-round throughout high school to prepare them to enter and succeed in post-secondary education. The program serves about 70 students each year from area high schools within an hour's drive from LSSU's campus.

Upward Bound hires at least 25 college students each year as tutors and office workers during the academic year and for residential jobs during the summer. The program is one of the few sites offering paid summer internships for college students in human services, psychology, sociology, teacher education and criminal justice.

Child Development Center

The campus Child Development Center provides full- or part-time care for children 3 years of age on the first day of enrollment, completely toilet-trained. The maximum age is kindergarden-enrolled during fall and spring semesters. We accept children through early elementary during the summer session, and if needed, during school breaks during fall and spring semesters.

The Center is open fall, spring and summer semesters, and follows the university calendar.

Children of LSSU students and employees are given priority in admission; however, children from the community are admitted as space allows. Children must be completely toilet-trained. The center, licensed

by the State of Michigan, provides developmentally appropriate experiences for the child and emphasizes social, emotional, creative, physical and cognitive growth. Each morning and afternoon, under the guidance of experienced staff, students enrolled in the early childhood education program plan and supervise large and small group activities including art, language arts, gross motor, fine motor, and outdoor play. A significant portion of each day is devoted to exploratory play where children move through the various learning areas electing to participate in any one of a wide variety of activities interacting with developmentally appropriate learning materials. The Child Development Center is located at the southeast end of campus.

Student-Faculty Relations Committee (Appeals)

Function. The Student-Faculty Relations Committee provides a forum for resolving conflicts between students and faculty members which may arise with classroom or course-related activities, policies or procedures. The committee will not consider cases involving ADA compliance or any other matter it deems inappropriate. This committee is strictly an informal mediation body which will forward recommendations for resolution to the parties involved (with a copy to the Vice President for Academic Affairs and Provost).

Membership. The University president appoints the committee membership to two-year terms. There are four faculty representatives and four student representatives. The chair is chosen by the committee membership.

Procedures

1. If a student (or group of students) wishes to raise an issue related to a course which he/she is taking or has taken

(normally within one semester), the student should attempt to resolve the issue at the student/faculty, department chair or appropriate dean level. If the matter cannot be resolved at the lowest possible levels, the student may appeal to the Student-Faculty Relations committee informing them of the problem. In exceptional cases, the student may approach the Student-Faculty Relations Committee directly.

2. To bring an issue before the Student-Faculty Relations committee, the student must notify the Student-Faculty Relations Committee in **writing**. This document must clearly explain the situation and include the student's name, current address, a message telephone number and times when the student is available to meet with the committee. Supporting documentation may be included as well. The written appeal should be submitted directly to the committee chair. The Vice President for Academic Affairs and Provost's Office will know the name of the committee chair.
3. Once the committee members have had an opportunity to review the student's concern, they will conduct an informal fact-finding process. As a part of the process, the student will be invited to meet with the committee for further clarification. This meeting will be 20 minutes in length with 10 minutes of question and answer by the committee. The other party will also be invited to meet with the committee following the same format. Both parties will then be asked to meet together with the committee in an effort to foster communication, clarification and resolution. The most desirable arrangement would be for this step to occur at one setting. The committee will strive to be as expeditious as possible. There may be

extenuating circumstances such as semester break or summer recess.

4. If there is no resolution after this joint meeting of the parties involved, or if the outcome of this process is not acceptable to the student or the faculty member, he/she may appeal to the Vice President for Academic Affairs and Provost of the University.
5. The committee will keep no permanent records.

Disability Services and the Ability Center for Exceptional Students (ACES)

Disability Services and the Ability Center for Exceptional Students (ACES) are located in Library

103 and 149. Together, they are responsible for providing disability related services, and ensuring that appropriate accommodations for students are met in the academic and university environment.

In order for students to receive appropriate accommodations, they must voluntarily provide current documentation that verifies their disabling condition, as well as register and meet with the disability services coordinator. The types of accommodations vary depending upon the disability and are determined on a case-by-case basis.

If you have a disabling condition (learning, mental or physical) or think you may have a disabling condition, please contact Disability Services at 906-635-2355 or ext. 2355 on campus, or ACES at 906-635-2454 or ext. 2454 on campus. For more information, visit the Website at: <http://www.lssu.edu/disability>.



Computer Services

LSSU Information Technology offers a variety of services and programs for students. Classroom laboratories provide for instruction that involves computers and/or software. During non-class hours, general access labs provide copies of the software used in classes, open Internet access to students, as well as word processing software. Help for students utilizing software in the classroom or labs is available in the Learning Center. PCs enhance the research ability of the KJS Library with access to the Internet and many databases. The University maintains a student-to-computer ratio of 10-1 whenever possible.

Upon enrollment, a student will receive an e-mail account which can be used to access the university messaging system as well as

communicating with friends and family. This account is free to any enrolled student. Instructions and help for using the e-mail account are available at the Information Technology HelpDesk in the Administration Building. Internet access is also available in student residences and many locations across campus.

The Information Technology HelpDesk is located in the Administration Building, room 107. The HelpDesk assists students with general computing problems related to any of the above services.

Current information regarding Information Technology and Computer Services can also be obtained from our Web Site at: <http://www.lssu.edu/it>.



Enrollment Services

Advising, Retention and Orientation

The office of Advising, Retention and Orientation works with faculty, staff and students to create and provide programs and initiatives that enhance student success:

- Academic advising resources for students and faculty advisors
- Early warning system (to identify students at risk)
- New student academic orientation programs.

Contact the office of Advising, Retention and Orientation at 906-635-2874, or ext. 2874 for more information.

Advising resources for faculty and academic staff: The office maintains an advisor's handbook, an advising Website, and runs advisor development programs for new faculty. To access advisor resources on-line, visit our Website at: <http://www.lssu.edu/advising>.

Advising resources for students: The office assists all students with understanding the role of academic advising at LSSU.

The purpose of academic advising at LSSU — Academic advising helps all students:

- identify and clarify their academic, career and life goals;
- assess the role that higher education can play in achieving those goals;
- develop educational plans consistent with those goals and with their interests and abilities;
- select appropriate courses and other educational experiences;
- evaluate their progress toward earning a degree and reaching their goals;

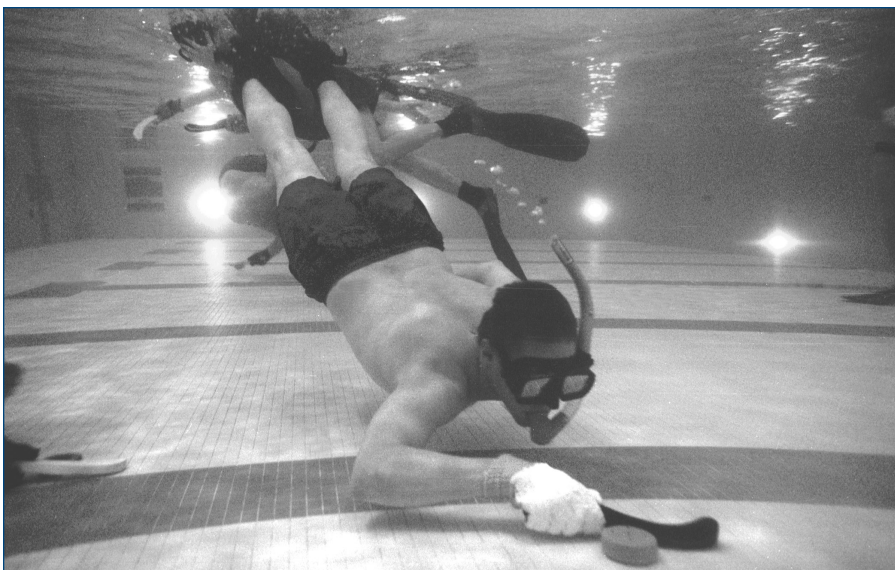
- adapt to the demands of college life and become active members of the university community;
- identify and utilize university and community support services;
- interpret institutional rules, policies, and procedures; and
- develop the skills necessary for independent decision-making.

The roles and responsibilities of the student in academic advising at LSSU — The student should:

- explain to the advisor his or her personal values, abilities, interests, and goals;
- maintain frequent contact with his or her advisor in order to keep abreast of current academic information;
- be prepared with accurate information and relevant materials when contacting and meeting with the advisor;
- be honest and ethical in interactions with the advisor;
- become knowledgeable about, and adhere to, the relevant policies, procedures, and rules of the university, college, and academic program;

- seek relevant information about career options and how they are related to the educational program;
- follow through on action plans identified during each advising session;
- acquire the information needed to assume final responsibility for course registration, program planning, and the successful completion of all graduation requirements;
- consult with his or her advisor at least once a semester to decide on courses, review progress toward degree requirements, and discuss the suitability of other educational opportunities provided by the university.

All students at LSSU are assigned to an academic advisor within their disciplines. The advisor assignment is listed in the student's Anchor Access account. If no advisor is listed, the student should contact the academic department secretary for his/her major or the Office of Advising, Retention and Orientation at 906-635-2874 (or ext. 2874 on campus).



International Studies

Are you interested in...

- Studying culture, language, business or other subjects in China?
- Studying in France?
- Studying language, environmental science or participating in internships in Japan?
- Studying in a Spanish-speaking country?

Study Abroad Opportunities

LSSU students may participate in LSSU study abroad programs to meet their individual study objectives. The Office of International Education will provide upon request information about current LSSU-sponsored study abroad programs. LSSU students may also participate in study abroad programs sponsored by other institutions of higher learning. Credits earned overseas may be transferred back to LSSU provided that the student has the pre-approval before departure. Federal financial aid may be applied to the cost of the abroad programs. For more options and information, contact the Office of International Education in Room 114 of the Arts Center or via e-mail: internationaledu@lssu.edu.

International Studies Certificate or Minor

The international studies certificate or minor can be earned concurrently with a B.S. or B.A. degree program or as a post-baccalaureate program. Refer to the Certificate or Minors section of this catalog.

Foreign Student Services

The Registrar's Office maintains up-to-date information regarding regulations and procedures for foreign students wishing to pursue a full course of study in institutions such as colleges and universities in the United States. Information is available for current foreign students regarding maintaining F-1 status and authorized employment (full-time students).

Foreign students wishing to apply for admission to Lake Superior State University may contact the Admissions Office.



The International University College Division

of Lake Superior State University and Sault College

Lake Superior State University, in Sault Ste. Marie, Michigan, and Sault College, in Sault Ste. Marie, Ontario, are just a 15-minute car ride apart. In spite of being located in different countries, our cities are closer to each other than they are to municipalities in their home state or province. So, community leaders encourage initiatives that strengthen the ties between us and take advantage of shared resources. The belief is we have more to offer by working together.

Lake Superior State University and Sault College have enjoyed a good working relationship for many years. In 2001, some articulations were revitalized, new ones were struck and it was decided to establish the International University College Division. The division allows full-time students in some program areas to be dual-enrolled. In computer science/studies, criminal justice, liberal studies/teacher education or occupational/physical therapy assistant and athletic training or exercise science, agreements have been signed which encourage students to take advantage of the diverse faculty and resources available at both schools as they pursue their degrees and/or diplomas.

Getting involved in the International Division is straightforward — consult with the academic department, fill in a Dual Enrollment Form and submit it to the Registrar's Office. As a dual-enrolled student, you are permitted to take one course per semester at the other school. Through the extra advising available to you, you can fit these courses into your overall academic plan and semester timetables. You register for all

courses through your home school registrar and your academic information is transferred automatically at the conclusion of each semester. As long as you meet the required academic standards, you will continue to enjoy these advantages of attending both schools:

- the combination of applied, "hands-on" training and theoretical understanding
- more course choices
- access to many of the student services and academic resources (e.g. wider selection of equipment, libraries, student centers, peer tutoring, etc.) available at both institutions
- accessible professors through small classes, labs and office hours
- interaction with fellow students from another country — a good basis for a network of contacts that can assist you in your life's work ahead
- greater employment options and advancement opportunities

Dual-enrolled students pursuing the bachelor of science in computer science or computer networking gain these particular benefits:

- professors with a wide variety of computer-based qualifications and areas of expertise
- exposure to, and opportunity to work with, more types of hardware and software than would be available at either institution on its own
- plenty of equipment available for hands-on experience

- more than 70% of the major courses with a lab component
- opportunity to earn world-recognized CISCO CCNA and Microsoft MCSE certifications
- Innovative, relevant programs which adjust quickly to both changing technology and employers' needs

Note: As of June 2009, anyone — including American citizens — entering the United States will be required to have a current passport or enhanced drivers license or NEXUS identification card. Therefore, all dual-enrolled students will need to carry their passports as they travel back and forth across the border to attend classes.

For more specific information regarding computer-based degrees and participation in the International University College Division, please refer to page 120 of this catalog.

Dual-enrolled students in the criminal justice degree programs benefit from the continuing education opportunities developed by both schools for people currently working in public safety. LSSU does this through its academy, providing MCOLES (Michigan Commission on Law Enforcement Standards) and Michigan Firefighter Training Council certification. Sault College offers advanced training and certification for Ontario Provincial Police and municipal police officers at its Law Enforcement Training Centre.

Degree Requirements

Lake Superior State University offers bachelor (also called baccalaureate) degrees, associate degrees and certificates, as well as a master of arts degree in curriculum and instruction. 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. However, some requirements are of a general nature, applying to all such degrees. These are discussed below.

Bachelor degree: A minimum of 124 credits is required for a bachelor degree. Some programs require more than this number of credits. Requirement categories are: general education, bachelor of arts or bachelor of science and departmental. Some programs require support courses and/or a minor, and free electives.

Associate degrees and certificates: A minimum of 62 credits is required for an associate degree. ENGL110, ENGL111, COMM101, MATH110 (or higher) or PHIL205, plus six other general education credits, are required. 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. A minimum of six credits from LSSU is required. There is a minors section in this catalog.

Electives

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

BA and BS Requirements (8 credits)

Bachelor of arts degree: One year of a modern language other than English (if taken at LSSU, this would be CHIN151-2 or 251-252; FREN151-2 or 251-2; GRMN141-2 or 241-2; NATV141-2 or 201-2; or SPAN161-2. One-half year of two different languages 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, mathematics or computer science.

Residency Requirements: On-campus and regional centers

Bachelor degree candidates must earn at least 32 credits and at least 50 percent of their departmental required 300/400 level credits in courses offered by Lake Superior State University. Associate degree and certificate candidates must earn 16 of their final 20 credits in such courses. For a minor, you must earn at least six of the required credits in such courses.

Departmental residency requirements may exceed the residency of the University for certain degree programs.

Multiple Majors

You may earn more than one major by completing all requirements of each desired major program. Before graduation, you must file a Degree Audit approved by the school chair for each major. The double major must be granted as one combined degree such as: bachelor of science

in accounting and business administration.

Multiple Degrees: If you desire to earn more than one baccalaureate degree, you must complete all program requirements for the additional degree(s) as certified by the school chair, comprising a minimum of 32 additional LSSU credits for each additional baccalaureate degree from Lake Superior State University.

Those earning a baccalaureate degree from LSSU and who desire an associate degree, must complete all requirements for the associate degree program before or at the time they are completing the baccalaureate degree requirements.

Students earning an associate from LSSU 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 hold a baccalaureate degree at another U.S. accredited institution, and who desire a baccalaureate degree from LSSU, must complete all requirements of an approved degree schedule including at least 32 additional credits in courses offered by LSSU. The degree schedule must be approved by the major school chair and sent to the assistant to the provost for academic records. Transfer credits from other universities will be evaluated for those classes used for the new degree. You should initiate the approval process with the school chair 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 school chair, be required even though the total may exceed 32 credits. Lake Superior State University general education requirements are considered complete if you earned a bachelor's degree at any United States accredited university or an honors bachelor's degree from an accredited Canadian university.

If you earned a bachelor's degree or associate's degree at another accredited institution and desire an associate's degree from Lake Superior State University, you must complete all requirements of an approved degree schedule including at least 16 additional credits in courses offered by LSSU. 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 school and college, be required even though the total may exceed 16 credits.

Additional Minor

Students who hold a baccalaureate degree from either LSSU or another accredited institution may obtain an approved minor from LSSU. All but six credits required for the minor must be LSSU credits.

Failed Classes

If you fail a class required for your degree program, you must repeat the class and receive a passing grade. If the failed class is no longer offered because of program changes and/or course deletions, the dean may approve a substitution or waiver recommended by the academic chair. The chair must provide reasons for the recommendation on the substitution/waiver form which is sent to the dean's office.

Exceptions to Graduation Requirements

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 assistant to the provost for academic records.

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

Normally, you will graduate under the program degree requirements in effect and published in the Catalog at the time you are admitted into the given degree program, provided enrollment at the Univer-

sity is continuous. If enrollment is interrupted, or if you select a new major, you must satisfy program requirements in effect at the time you reenter or officially change to the new major. If program requirements are revised during your enrollment, you will be allowed to graduate under the new requirements providing you 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 the benefit of the new educational program without imposing undue hardship.



General Education Mission Statement

In a diverse and changing world, college graduates must be prepared for a lifetime of learning in a variety of fields. In order to meet this challenge, general education requirements foster the development of general skills and knowledge that are further developed throughout the curriculum. LSSU graduates will be able to:

- Analyze, develop, and produce rhetorically complex texts
- Communicate competently in a variety of contexts (Communication Outcomes)
- Analyze, evaluate, and explain human aesthetics and its historical development (Humanities Outcomes)
- View the world from cultural perspectives other than their own (Diversity Outcomes)
- Incorporate empirical evidence in the analysis of the causes and consequences of natural phenomena (Natural Science Outcomes)
- Think critically and analytically about the causes and consequences of human behavior (Social Science Outcomes)
- Analyze situations symbolically and quantitatively in order to make decisions and solve problems (Mathematics Outcomes)

QUICK REFERENCE TABLE General Education Course Requirements

Communication Skills (9 credits)

ENGL110, ENGL111,
COMM101

Humanities (7-8 credits)

HUMN251

One class from:

ARTS250, ARTS251,
HUGE100, HUMN203, HUMN240, HUMN252, HUMN255,
MUSC220, MUSC221,
NATV240,
PHIL302, PHIL305

or six to eight credits from second year of foreign language.

Mathematics (3-5 credits)

MATH110 or higher
or PHIL205

Natural Science (8 credits)

Complete two natural science courses from:

BIOL105, BIOL131, BIOL122, BIOL204, CHEM105, CHEM108
and CHEM109, CHEM115, CHEM116, GEOL115, GEOL121, GEOL122,
GEOG106, GEOG108, NSGE100, NSCI101, NSCI102, NSCI103 and NSCI104,
NSCI110, NSCI116, NSCI119, PHYS221, PHYS231.

Social Science (6-8 credits)

Choose two courses from different disciplines:

ECGE100, ECON201, ECON202, ECON208, ECON209, ECON302,
GGGE100, GEOG201, GEOG302,
HIST101, HIST102, HIST131, HIST132, HSGE100,
POLI110, POLI160, POLI241, PSGE100
PSYC101, PSYC155, PYGE100,
SOCY101, SOCY102, SOCY113, SOGE100.

Diversity (3-4 credits)

Select one course from:

BUSN308, EDUC250, GEOG306, HIST203, HLTH328, NATV225, POLI333,
POLI334, SDGE100, SOCY103, SOCY213, SOCY225, SOCY226, SOCY321

Graduation Procedures

Degree candidacy procedure: Two semesters before students plan to complete degree requirements and graduate, they must submit an appropriate departmental degree audit for each major and minor, and a Declaration of Candidacy for Degree to the assistant to the provost for Academic Records. The necessary forms are available at the student's major departmental office.

The departmental Degree Audit for a student's major or minor specifies all required courses that have been or must be completed. The audit

must be signed by the chair of the school or department offering the major or minor program. Course substitutions and waivers of departmental degree program requirements may be granted only by the chair and approved by the dean of the college offering the major or minor program. Course substitutions and waivers for education majors or minors must also have approval from the chair of the School of Education.

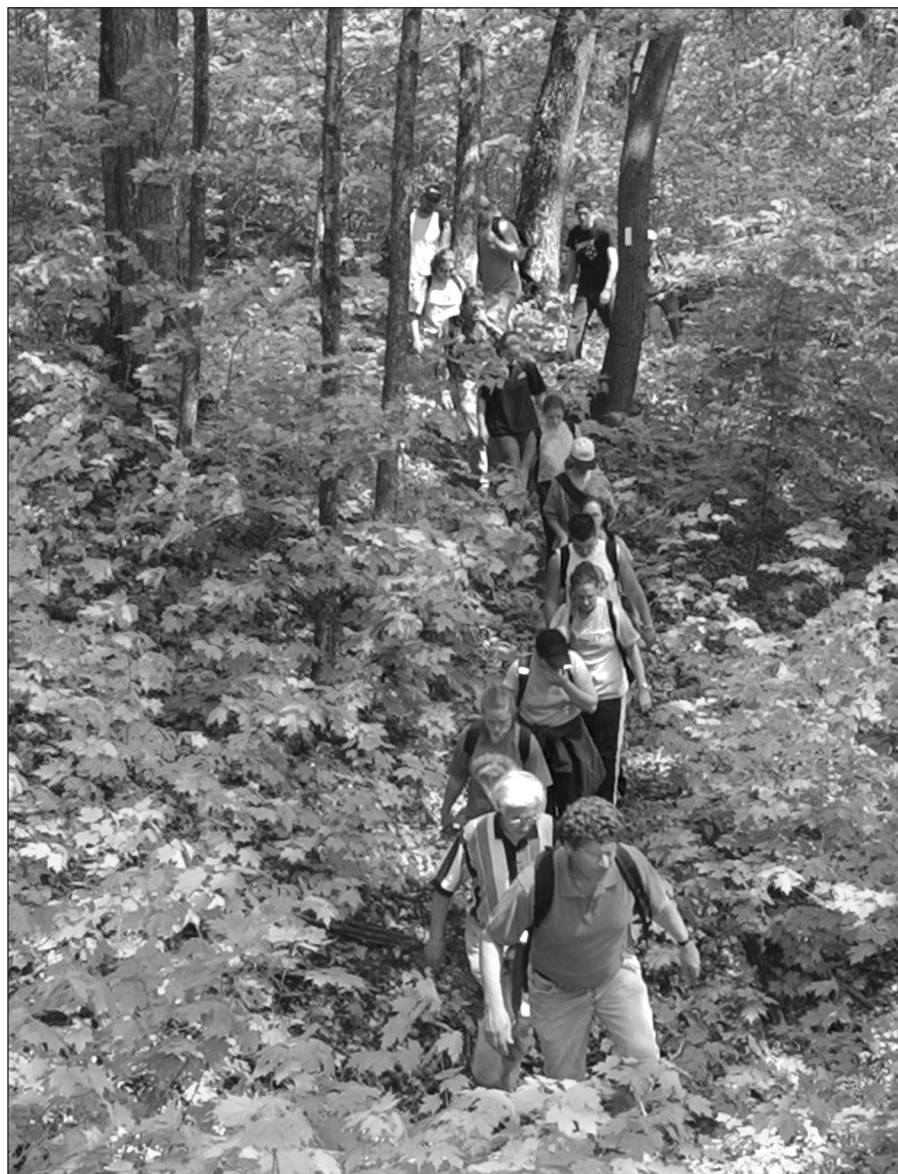
Exceptions to specific general education requirements may be

granted only by the Scholastic Standards Committee. Such exceptions are infrequently made. A petition for exceptions to general education requirements is initiated with the assistant to the provost for academic records.

The assistant to the provost checks students' Degree Audits, after which a preliminary verification of the Degree Audit is sent to each student and respective school or department chair. Students are responsible for examining this verification and requesting clarification of anything that is not consistent with their records or understanding.

From the Declaration of Candidacy for Degree forms submitted by students, a potential graduate list is created for each semester. Names for the commencement program and diploma will be the official, legal name as listed in the records of the University. The names of students who are listed in the annual commencement program are also compiled from Declaration of Candidacy for Degree forms. Students may not be listed in the commencement program unless their Degree Candidacy Form is filed with the assistant to the provost six weeks prior to commencement. Students are expected to attend commencement exercises unless excused by the assistant to the provost. 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 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 college dean and/or school



chair and assistant to the provost give a final approval. Names of these graduates are then sent to the president for approval by the Board of Trustees. Subsequently, a diploma is provided to each student.

Diploma charge: There is no charge for the first diploma from the 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, may request a letter 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.

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.

Graduation diplomas with honors will be awarded to baccalaureate, associate, and certificate recipients. Honors medallions will be awarded to baccalaureate, associate and certificate recipients who graduate summa cum laude.

Delinquent Accounts

Students with delinquent accounts may be removed from class, have their diploma withheld, and/or have transcript requests denied.

Honors Degree

The University Honors Program offers highly motivated students the opportunity to develop their abilities and skills in exciting and innovative ways. The central goal of the University honors program is to create a community of scholars characterized by strong student-faculty interaction around the world of ideas. The honors program fosters an approach to education that incorporates the qualities of active participation, intellectual curiosity and an interdisciplinary focus.

Selection is based upon a number of factors, including: ACT scores, high school grade point average, application essay, personal interview and Lake State faculty nomination. Students invited to participate in the program enroll in courses designated for honors credit. The courses are distributed among the requirements for general education, the student's major, and the University honors program and may include small seminars or independent research projects.

To graduate with an honors degree in a program of study, the honors student must have formal acceptance into the University honors program

and have successfully completed 21 honors credit hours with an overall grade point average of 3.5* or better at graduation. The 21 honors credit hours are to be distributed among the University's requirements for general education, the student's major and the University honors program.

Upon graduation from the honors program, the student will receive an honors degree in his/her program of study. The honors degree designation is indicated on the student's diploma and is distinct from graduating with honors (see Graduation with Honors).

**Students who entered LSSU prior to Fall 2005 will be allowed to continue in the Honors Program with a cumulative gpa of 3.3 (i.e. the previous requirement is "grandfathered" in).*



College of Arts, Letters and Social Sciences

Dean, Dr. Gary L. Balfantz

School of Communication Studies and the Fine & Performing Arts

Chair, Dr. Gary L. Balfantz
Ms. Glynis Moran, Secretary
Ms. Krista Belanger, Instructor
Ms. Deborah Choszczyk, Instructor
Dr. George H. Denger, Associate Professor
Dr. Thomas E. Schirer, Professor
Dr. Jason K. Swedene, Associate Professor

Majors:

Baccalaureate

Communication
Fine Arts Studies
Interdisciplinary Studies
Individualized Studies
Liberal Studies

Associate of Arts

Liberal Arts

Minors:

Art
Communication
Dance
Humanities
Philosophy
Professional Communication
Public Relations
Theatre

School of Education

Associate Dean, Dr. Barbara Searight
Ms. Vicki Miller, Secretary
Dr. Paulette M. Attie, Associate Professor
Dr. James V. Kerfoot, Field Placement Director
Ms. Shirley A. Schoenemann, Associate Professor
Dr. Cecile Somme, Associate Professor
Dr. Guidi Yang, Associate Professor

Majors:

Master of Arts

Curriculum and Instruction

Post-Baccalaureate

Bachelor of Education

Baccalaureate

Early Childhood Education
Education–Elementary
Education–Elementary:
Special Education–Learning Disabilities
Education–Secondary–Degree is in Major
Individualized Studies

Associate of Arts

Liberal Arts

Associate

Early Childhood Education

Minors:

Child Development
Early Childhood Education–Teaching
Teaching–Elementary
Teaching–Secondary

College of Arts, Letters and Social Sciences

School of English and Language Studies

Chair, Dr. Eric Gadzinski, Associate Professor
Ms. Glynis Moran, Secretary
Ms. Julie B. Barbour, Instructor
Dr. Chad A. Barbour, Assistant Professor
Ms. Jillena Rose, Instructor
Dr. Mary D. Been, Associate Professor
Dr. Louann Disney, Associate Professor
Dr. Polly S. Fields, Professor
Dr. Marcel E. Pichot, Professor
Ms. Shirley A. Smart, Assistant Professor
Dr. Susanne S. Thomas, Associate Professor
Dr. James Zukowski, Associate Professor

Majors:

Baccalaureate

English Language and Literature
English Language and Literature—Elementary Teaching
English Language and Literature—Secondary Teaching
French Studies
French Studies—Elementary Teaching
French Studies—Secondary Teaching
Individualized Studies
Spanish
Spanish—Elementary Teaching
Spanish—Secondary Teaching

Associate of Arts

Liberal Arts

Minors:

Anishnaabemowin/Ojibwe Language and Literature
English Language and Literature
English Teaching—Elementary
English Teaching—Secondary
Business French
Francophone Cultures
French Language and Literature
French—Teaching
Japanese Study
Native Studies of the Americas
Spanish Language, Literature, and Culture
Spanish Language—Teaching

School of Social Sciences

Chair, Dr. Leslie A. Dobbertin, Professor
Ms. Sheri Garee, Secretary
Dr. Richard T. Conboy, Professor
Dr. Richard C. Crandall, Professor
Dr. Daniel T. Dorrity, Professor
Dr. Gary R. Johnson, Professor
Dr. R. Kirk Mauldin, Associate Professor
Mr. Robert M. Money, Professor
Mr. James W. Moody, Professor
Dr. Susan H. Ratwik, Professor
Dr. H. Russell Searight, Associate Professor
Dr. Kristina J. Hook, Assistant Professor

Majors:

Baccalaureate

History
History—Secondary Teaching
Individualized Studies
Political Science
Tracks in General, Prelaw and Public Administration
Political Science—Secondary Teaching
Psychology
Social Science
Social Studies—Elementary Teaching
Social Studies—Secondary Teaching
Sociology—General
Sociology—Secondary Teaching
Sociology—Social Services

Associate of Arts

Liberal Arts

Associate

Social Work
Substance Abuse Prevention and Treatment

Certificate

International Studies

Minors:

Counseling
Geography
Geography—Teaching
History
History—Elementary Teaching
History—Secondary Teaching
Human Services Administration
International Studies
Political Science
Political Science—Teaching
Psychology
Psychology—Secondary Teaching
Public Administration
Social Studies—Elementary Teaching
Social Work
Sociology—General
Sociology—Teaching
Substance Abuse Counseling

College of Engineering, Technology and Economic Development

Dean and Director of Intellectual Property and Economic Development
Mr. Morrie Walworth

Ms. Cheri Skinner, Secretary
Ms. Jeanne Shibley, Administrative Assistant

School of Engineering and Technology

Dr. David C. Baumann, Professor
Mr. Jon M. Coullard, Laboratory Engineer
Dr. Ronald A. DeLap, Assistant Professor
Mr. James Devaprasad, Professor
Mr. Pal R. Duesing, Associate Professor
Dr. Robert L. Hildebrand, Assistant Professor
Dr. Muhammad Mansoor Janjua, Assistant Professor
Dr. Andrew H. Jones, Assistant Professor
Mr. Jeffrey H. King, Laboratory Engineer
Mr. David M. McDonald, Professor
Dr. Sai Chaitanya Nudurupati, Assistant Professor
Dr. Paul J. Weber, Assistant Professor

Majors:

Baccalaureate

Computer Engineering
Options in: General, Robotics and Automation,
Control Systems
Electrical Engineering
Options in: Digital Systems, Electrical/Mechanical,
Robotics and Automation
Electrical Engineering Technology
Engineering Management
Individualized Studies
Industrial Technology
Manufacturing Engineering Technology
Mechanical Engineering
Options in: Vehicle Systems, Robotics & Automation,
General Mechanical

Associate of Arts

Liberal Arts

Associate

Electrical Engineering Technology
General Engineering
General Engineering Technology
Manufacturing Engineering Technology

Minors:

Electrical Engineering
Mechanical Engineering
Robotics Technology

Prototype Development Center

Mr. Eric Becks, Engineering Projects Manager
Mr. David Leach, Engineering Projects Engineer

Sault Ste. Marie SmartZone

Mr. Eric Becks, President & CEO
Mr. Morrie Walworth
Ms. Valerie C. Filek

College of Natural, Mathematical and Health Sciences

Dean, Dr. Barbara J. Keller

School of Biological Sciences

Chair, Dr. Nancy S. Kirkpatrick, Associate Professor
Ms. Donna White, Secretary
Dr. Thomas A. Allan, Associate Professor
Dr. Kristin K. Arend, Assistant Professor
Dr. Barbara I. Evans, Professor
Dr. Jason M. Garvon, Assistant Professor
Dr. Dennis M. Merkel, Associate Professor
Dr. Ashley H. Moerke, Assistant Professor
Dr. Britton D. Ranson Olson, Assistant Professor
Dr. John H. Roese, Professor
Dr. Deborah K. Stai, Professor
Dr. Geoffrey B. Steinhart, Assistant Professor
Dr. Gregory M. Zimmerman, Professor

Majors:

Baccalaureate

Biology
Biology—Secondary Teaching
Clinical Laboratory Science
Conservation Biology
Conservation Leadership
Fisheries and Wildlife Management
Fisheries Management—Wildlife Management
Fish Health
Individualized Studies

Associate of Arts

Liberal Arts

Associate

Natural Resources Technology

Minors:

Biology
Biology—Secondary Teaching
Society and Environment

School of Mathematics and Computer Science

Chair, Mr. Thomas M. Boger, Associate Professor
Ms. Colleen Barr, Secretary
Dr. Collette Coullard, Professor
Ms. Sherilyn R. Duesing, Assistant Professor
Dr. H. Lorraine Gregory, Assistant Professor
Dr. Raymond W. Jensen, Assistant Professor (temp)
Ms. Kathleen M. Kalata, Assistant Professor
Dr. Kimberly O. Muller, Assistant Professor
Dr. Evan L. Schemm, Assistant Professor
Dr. Brian A. Snyder, Assistant Professor
Mr. Randall G. Suggitt, Assistant Professor
Dr. Mark G. Terwilliger, Professor
Dr. George Voutsadakis, Assistant Professor (on leave)

Majors:

Baccalaureate

Computer and Mathematical Sciences
Computer Information Systems
Computer Networking
Computer Networking—Web Development
Computer Science
Computer Science—Secondary Teaching
Individualized Studies
Mathematics
Mathematics—Actuarial and Business Applications
Mathematics—Elementary Teaching
Mathematics—Secondary Teaching

Associate

Computer Science
Internet/Network Specialist

Associate of Arts

Liberal Arts

Minors:

Computer Science
Computer Science—Teaching
Mathematics
Mathematics—Elementary Teaching
Mathematics—Secondary Teaching
Web Development

College of Natural, Mathematical and Health Sciences

School of Nursing

Associate Dean, Dr. Mary Anne Shannon, Professor
Ms. Laura Bofinger, Secretary
Ms. Angel Barbisan, Instructor
Ms. Adrienne Beckham, Instructor
Ms. Kathy Berchem, Assistant Professor
Mr. Mark E. Carlson, Learning Center Supervisor
Ms. Melissa Copenhaver, Instructor
Ms. Rosemary H. Duggan, Assistant Professor
Ms. Chantelle Evans, Assistant Professor
Mr. Ronald S. Hutchins, Assistant Professor
Ms. Lynn Kabke, Assistant Professor
Ms. Nicole Kerr, Assistant Professor
Ms. Reinette Murray, Assistant Professor
Ms. Maureen J. O'Shea, Assistant Professor
Ms. Jodi Orm, Instructor
Ms. Erayna M. Paquet, Assistant Professor
Ms. Paula Jo Shingler, Instructor

Majors:

Baccalaureate

Individualized Studies
Nursing

Associate of Arts

Liberal Arts

Associate of Applied Science

Health Care Provider

Certificate

Practical Nursing

Minor:

Gerontology
Human Nutrition

School of Physical Sciences

Chair, Dr. Barbara J. Keller, Professor
Donna White, Secretary
Dr. Bijaya Aryal, Assistant Professor
Dr. Roger D. Blanchard, Assistant Professor
Dr. Lewis M. Brown, Professor
Mr. Manfred O. Engel, Assistant Professor
Dr. Alexi V. Iretski, Associate Professor (Sabbatical 09-10)
Dr. Paul R. Kelso, Professor
Dr. David M. Myton, Professor
Dr. Jennifer M. Schmeisser, Assistant Professor
Mr. Ben Southwell, Environmental Lab Technician
Dr. Matthew K. Spencer, Assistant Professor
Dr. David C. Szlag, Associate Professor
Dr. Pariwate Varnakovid, Assistant Professor
Dr. R. Marshall Werner, Associate Professor
Dr. Judy A. Westrick, Associate Professor
Dr. Derek D. Wright, Assistant Professor

Majors:

Baccalaureate

Applied Geographic Information Science
Chemistry
Chemistry (Pre-Professional)
Chemistry—Secondary Teaching
Environmental Chemistry
Environmental Health
Environmental Management
Environmental Science
Forensic Chemistry
Geology
Geology—Environmental Geology
Geology—Secondary Teaching for Earth/Space Science
Individualized Studies
Integrated Science—Elementary Teaching
Integrated Science—Secondary Teaching
Physical Science—Secondary Teaching

Associate

Chemistry

Associate of Arts

Liberal Arts

Associate of Applied Science

Chemical Technology

Minors:

Chemistry
Chemistry—Secondary Teaching
Earth Space Science—Secondary Teaching
Environmental Science
Geographic Information Systems
Geology
Integrated Science—Elementary Teaching
Society and Environment

College of Natural, Mathematical and Health Sciences

School of Recreation Studies and Exercise Science

Chair, Ms. Debra K. McPherson, Assistant Professor
Ms. Colleen BarR, Secretary
Dr. Sally A. Childs, Professor
Ms. Amy J. Molenaar, Instructor/Exercise Physiology Lab Coordinator
Ms. Sarah L. Ouimette, Instructor/Certified Athletic Trainer
Ms. Jody A. Susi, Instructor
Mr. Joseph D. Susi II, Associate Professor/Certified Athletic Trainer

Majors:

Baccalaureate

Athletic Training
Exercise Science
Individualized Studies
Parks and Recreation
Sport and Recreation Management

Associate of Arts

Liberal Arts

Associate

Health Fitness Specialist

Minors:

Gerontology
Recreation Studies

College of Professional Studies

Dean, Dr. Paige H. Gordier

School of Business

Chair, Ms. Valerie C. Filek, Assistant Professor
Ms. Tracey MacQuarrie, Secretary
Ms. Carol Andary, Professor
Ms. Susan E. Beckon, Assistant Professor, Escanaba
Dr. Christopher S. Brunt, Assistant Professor
Mr. Thomas R. England, Assistant Professor, Escanaba
Mr. Ronald J. Jastrzebski, Assistant Professor
Dr. Ann B. Marinoni, Professor
Ms. Donna M. Payment, Assistant Professor
Ms. Mindy S. Poliski, Instructor
Mr. Gerald R. Root, Assistant Professor
Dr. Madan Saluja, Professor
Ms. Linda Schmitigal, Associate Professor
Dr. Ralf Wilhelms, Assistant Professor
Mr. Brian A. Zinser, Assistant Professor

Majors:

Post-Baccalaureate—Certificate

Legal Studies

Baccalaureate

Accounting
Business Administration—Business Education
Business Administration—International Business
Business Administration—Legal Management
Business Administration—Management
Business Administration—Marketing
Finance and Economics
Individualized Studies
Legal Studies
Specialites in: Legal Administration, Client Advocacy,
Criminal Law, Environmental Law and Policy,
Legal Technology, Personal Injury, Labor Law,
Legislative/Constitutional Law

Minors:

Accounting—Finance
Economics
Economics—Finance
Economics—Teaching
General Business
Health Care Administration
Human Resource Management
International Studies
Legal Studies
Marketing
Office Administration
Personal Computer Specialist
Prelaw
Society and Environment

MISSION STATEMENT

The faculty of the School of Business at LSSU will serve our students by helping them to achieve their goals. We will do this by offering a full range of introductory and advanced courses, by making ourselves available for individual advising, and through the faculty's dedication to excellence in teaching, commitment to scholarship and determination to bring new learning to the classroom.

Associate of Arts

Liberal Arts

Associate

Business Administration
Legal Studies
Office Administration
Personal Computer Specialist
Technical Accounting

Certificate

Information Processing
International Studies
Personal Computer Specialist

Pre-Business Core Courses:

Required for students entering the School of Business who wish to obtain a 4-year baccalaureate business degree

ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	3
BUSN121	Introduction to Business	3
BUSN231	Business Communication	3
COMM101	Fundamentals of Speech Communication	3
DATA235	Spreadsheets	3
ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH111	College Algebra	3
OFFC112	Keyboarding	1
General Education (8 credits):		
1 lab science, 1 humanities, or 1 social science		

College of Professional Studies

School of Criminal Justice, Fire Science and EMS

Dr. Page H. Gordier, Professor
Ms. Janine Murray, Secretary
Mr. David Duncan, Instructor
Mr. Herbert D. Henderson, Instructor
Dr. Terry L. Heyns, Professor
Mr. Roger J. Land, Assistant Professor
Mr. James P. Madden, Professor
Mr. William D. McLaurine, Jr., Assistant Professor
Dr. James J. Schaefer, Assistant Professor
Dr. Aaron J. Westrick, Associate Professor

Majors:

Baccalaureate

Criminal Justice
Emphasis in: Corrections, Criminalistics, Generalist,
Law Enforcement, Law Enforcement Certification,
Loss Control, Public Safety
Fire Science
Emphasis in: Engineering Technology, Generalist,
Hazardous Materials
Individualized Studies

Associate of Arts

Liberal Arts

Associate

Criminal Justice
Emphasis in: Corrections, Law Enforcement
Fire Science
Paramedic Technology

Certificate

Paramedic Training

Minors:

Corrections
Fire Science
Homeland Security
Institutional Loss Control
Law Enforcement
Loss Control
Paramedic Technology

Pre-Criminal Justice Core (PJC) Courses:

Required for students entering the School of Criminal Justice, Fire Science and EMS who wish to obtain a 4-year Criminal Justice baccalaureate degree:

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110 or higher		3
	One (1) Lab Science	4
All 100-level CJUS courses required in the emphasis excluding CJUS197		

Division of Academic Services

Dean, Dr. Fredrick A. Michels

Librarians

Ms. Beth C. Hronek, Assistant Professor
Ms. Mary M. June, Assistant Professor/Librarian
Ms. Ruth A. Neveu, Assistant Professor/Librarian

Audio Visual

Continuing Education

Career Services

Learning Center

On-Line Services

Testing Services

Academic Administration

Vice President for Academic Affairs and Provost

Dr. Anthony Blose

Ms. Suzette Olson, Executive Secretary
Ms. Stella DePlonty, Academic Records
Dr. Bruce Harger, Public School Academy Operations & Compliance

Honors Program

Coordinator, Dr. Jason Swedene, Associate Professor

Regional Centers

Ms. Kristen Kendrick, Escanaba
Ms. Sheila Simpson, Gaylord
Mr. Joseph Balinski, Petoskey

Sponsored Programs

Programs

Master of Arts

Curriculum and Instruction

Post-Baccalaureate Bachelor

Education

Post-Baccalaureate Certificate

Legal Studies

Bachelor Degrees (four-year programs)

Accounting
Applied Geographic Information Science
Athletic Training
Biology
Business Administration—Business Education
Business Administration—International Business
Business Administration—Legal Management
Business Administration—Management
Business Administration—Marketing
Chemistry
 Pre-professional
Clinical Laboratory Science
Communication
Computer and Mathematical Science
Computer Engineering
 Robotics and Automation, Control Systems
Computer Information Systems
Computer Networking
 Web Development
Computer Science
Conservation Biology
Conservation Leadership
Criminal Justice
 Corrections • Criminalistics (MCOLES certified)
 Generalist • Law Enforcement (MCOLES certified)
 Loss Control • Public Safety (MCOLES certified)
Early Childhood Education
Electrical Engineering
 Digital Systems • Robotics and Automation • Electrical-Mechanical
 Vehicle Systems
Electrical Engineering Technology
Elementary Teaching*
 English Language and Literature • French Studies
 Integrated Science • Mathematics • Social Studies • Spanish
Elementary Education: Special Education—Learning Disabilities
Engineering Management
English Language and Literature
Environmental Chemistry
Environmental Health
Environmental Management
Environmental Science
Exercise Science
Finance and Economics
Fine Arts Studies
Fire Science
 Engineering Technology • Generalist • Hazardous Materials
Fish Health
Fisheries and Wildlife Management
 Fisheries Management • Wildlife Management
Forensic Chemistry
French Studies
Geology
 Environmental Geology
History
Individualized Studies
Industrial Technology
Integrated Science

Legal Studies

Legal Administration • Criminal Law • Personal Injury
Labor Law • Legislative/Constitutional Law • Environmental
Law and Policy • Legal Technology • Client Advocacy

Liberal Studies

Manufacturing Engineering Technology
 General • Minor in Robotics Technology

Mathematics

Actuarial and Business Applications

Mechanical Engineering

Vehicle Systems • Robotics and Automation
General Mechanical

Nursing

Pre-licensure Program • Post-licensure Completion
Program

Parks and Recreation

Physical Science—Secondary Teaching

Political Science

General • Pre-Law • Public Administration

Psychology

Secondary Teaching*

Biology • Business Administration-Business Education
Chemistry • Computer Science • Physical Science
English Language and Literature • French Studies
Geology-Earth/Space Science • History
Integrated Sciences • Mathematics • Political Science
Social Studies • Sociology • Spanish

Social Science

Social Studies

Sociology-General

Sociology-Social Services

Spanish

Sport and Recreation Management

Associate Degrees

(two-year programs)

Business Administration
Chemical Technology
Chemistry
Computer Science
Criminal Justice
 Corrections • Law Enforcement
Early Childhood Education
Electrical Engineering Technology
Fire Science
General Engineering
General Engineering Technology
Health Care Provider
Health/Fitness Specialist
Internet/Network Specialist
Legal Studies
Liberal Arts
Manufacturing Engineering Technology
Natural Resources Technology
Office Administration
Paramedic Technology
Personal Computer Specialist
Social Work
Substance Abuse Prevention and Treatment
Technical Accounting

**Students in these programs complete an LSSU*
academic major, requisite teacher education courses
and teaching internship.

Certificates

(one-year programs)

Information Processing
International Studies
Paramedic Training
Personal Computer Specialist
Practical Nursing

Minors

Accounting—Finance
Anishnaabemowin/Ojibwe Language
and Literature
Art
Biology
Biology—Secondary Teaching
Business French
Chemistry
Chemistry—Secondary Teaching
Child Development
Communication
Computer Science
Computer Science—Teaching
Corrections
Counseling
Dance
Early Childhood Education—Teaching
Earth/Space Science—Secondary Teaching
Economics
Economics—Finance
Economics—Teaching
Electrical Engineering
English Language and Literature
English Teaching—Elementary
English Teaching—Secondary
Environmental Science
Fire Science
Francophone Cultures
French Language and Literature
French—Teaching
General Business
Geographic Information Systems
Geography
Geography—Teaching
Geology
Gerontology
Health Care Administration
History
History—Elementary Teaching
History—Secondary Teaching
Homeland Security
Human Nutrition
Human Resource Management
Human Services Administration
Humanities
Institutional Loss Control
Integrated Science—Elementary Education
International Studies
Japanese Study
Law Enforcement
Legal Studies

Loss Control
Marketing
Mathematics
Mathematics—Elementary Teaching
Mathematics—Secondary Teaching
Mechanical Engineering
Native Studies of the Americas
Office Administration
Paramedic Technology
Personal Computer Specialist
Philosophy
Political Science
Political Science—Teaching
Prelaw
Professional Communication
Psychology
Psychology—Secondary Teaching
Public Administration
Public Relations
Recreation Studies
Robotics Technology
Social Work
Social Studies—Elementary Teaching
Society and Environment
Sociology—General
Sociology—Teaching
Spanish Language, Literature and Culture
Spanish Language—Teaching
Speech and Drama
Substance Abuse Counseling
Teaching—Elementary
Teaching—Secondary
Theatre
Web Development

Curriculum and Instruction

Master of Arts

Career Choices:

Teacher
School Administrator
Curriculum Director
Educational Consultant
Educational or Curriculum
Specialist for Intermediate School
District or Regional Educational
Service Area

Student Profile:

Do you...

seek professional advancement as a teacher or other educational professional?
seek advancement within your school, district or place of employment?
enjoy applying new knowledge and skills to grow as an educator?
want to qualify for pay and merit increases with your school or district?
want to combine required professional development requirements with earning an advanced degree in your field?

Program Description:

The Master of Arts in Curriculum and Instruction degree program provides an essential opportunity for practicing teachers and other educational professionals in Northern and Upper Michigan as well as in Northern Ontario to enrich their understanding of, and to improve their skills in, pedagogy, curriculum design, and assessment within the context of their discipline-specific content knowledge.

The degree provides a framework for securing a rigorous plan of study focused on the professional development needs of practicing teachers and other educators. The degree program allows both elementary and secondary masters degree candidates the opportunity to develop a graduate plan of study that strengthens their professional practices and address student learning in their classrooms.

Candidates in this program complete core requirements aligned with the professional competencies of accomplished teachers as identified by the National Board for Professional Teaching Standards (NBPTS), and electives from the fields of their academic disciplines and/or educational foundations. Candidates demonstrate competencies in the design, implementation, and assessment of student learning through a culminating curricular project. Graduates may qualify for an additional endorsement when the plan of study incorporates the required coursework of an approved major/minor.

School of Education advisors will work closely with each candidate to develop individualized plans of study designed to address specific

professional development needs. The program requires a total of 36 hours of graduate credit (a limited number of undergraduate credits may qualify when part of an approved plan of study).

Admission Requirements:

The minimum requirements for admission into the MA-C&I program:

- Baccalaureate degree or equivalent from a regionally accredited university **and** any **one** of the following:
 - a grade-point average (GPA) of 3.0 or higher on a 4.0 scale for the last 60 semester hours attempted accruing to the undergraduate degree; **or**
 - a combined score of 1000 or higher on the quantitative and verbal sections of the GRE exam; **or**
 - a 50 or higher on the Miller Analogy Test; **or**
 - a graduate degree from a regionally accredited institution.

Admission of Ontario Three-Year Baccalaureate degree

holders: Many Ontario teachers have completed the three-year baccalaureate degree, rather than the four-year honors degree or B.S. degree. Graduates of a three-year baccalaureate program are admissible to the Master of Arts in curriculum and instruction if they have 1) completed a fourth year of teacher's college and 2) are recommended for admission by the Admissions Committee.

The Admissions Committee shall be appointed by the Vice

Curriculum and Instruction

President for Academic Affairs with representatives from 1) the School of Education, 2) the Admissions Office, and 3) the Registrar or Assistant to the Provost for Academic Records. The Admissions Committee shall consider recommendations, teaching experience, grade point average and test scores, other qualifications, and potential for successful completion of the program in making its recommendation for admission of the applicant.

Graduate Program Advising:

Candidates seeking information and advising on the Master of Arts in Curriculum and Instruction should contact the Graduate Program Coordinator through the School of Education at 906-635-2811. Additional information and announcements may be found on the education Web site at: <http://lssu.edu/education>

Curriculum and Instruction Master of Arts degree

Academic Core (12 credits)		Electives (12 credits)	
EDUC602	Reflection and Inquiry into Teaching Practices I	EDUC621	Educational Leadership
	3	EDUC622	Integrating Technology into Curriculum and Instruction
EDUC604	Reflection and Inquiry into Teaching Practices II		4
	3	EDUC623	Foundations of Special Education
EDUC605	Integrated Approaches in Curricular Design and Implementation	EDUC624	Reading: Research and Methodologies
	3		4
EDUC695	Capstone Research Project I	EDUC625	Multimedia Production in Instruction and Assessment
EDUC696	Capstone Research Project II		3
	1	EDUC626	Educational Assessment and Measuring
			3
Foundations (8 credits minimum)		EDUC627	Models of Teaching
EDUC611	Psychological Foundations of Education		2
	4	EDUC628	Supervision of Instruction
EDUC612	Philosophical Foundations of Education		3
	4	EDUC629	Issues in Special Education
EDUC613	Sociological Foundations of Education		3
	4	EDUC631	Teaching Language Arts
			1-4
		EDUC632	Teaching Mathematics
			1-4
		EDUC633	Teaching Science
			1-4
		EDUC634	Teaching Social Studies
			1-4
		EDUC635	Applying: [specify course title by section]
			1
		EDUC690	Special Topics (8 hrs. max)
			1-3
		With Approved Sections of	
		EDUC900	2

Total Credits: 32

Notes:

Candidates may apply to the program at any time, formal admission is not required for enrollment, but limits do apply to the number of credits earned prior to admission. All applicants must submit GPA and graduate admission (GRE or MAT) test scores regardless of which criteria are met for admissions. Candidates may be required to take specific undergraduate course(s) if they do not have the necessary prerequisites for the graduate level of course or program.

The MA-C&I program limits the transfer of graduate coursework to 9 semester credits. To be considered for transfer, courses must have been completed with a minimum grade of B and no more than seven years prior to the date of entry into the graduate program and no more than 10 years prior to graduation from the graduate program. Decisions concerning transfer of coursework are made at the time of admission.

An approved plan of study will be developed with the Graduate Program Coordinator and the graduate faculty. If the number of applicants to a program exceeds the capacity, preference will be given to the candidates who, after review of the entire graduate application, demonstrate the strongest potential for success in the chosen field. Candidates who have not achieved minimum test scores or the minimum GPA, but who meet all other requirements, may, under special circumstances, be considered for admission into the program.

No more than a total of 12 credits earned prior to admission to the program may be used in fulfillment of the requirements of the program. Submission of an electronic portfolio, comprised in part of satisfactory teaching units, research projects, or papers developed by each teacher in his/her content classes, is required for graduation.

Education

Post-Baccalaureate Bachelor of Education

Career Choices:

Teacher

Educator

Curriculum Specialist

Educational Technologist

Student Profile:

Are you...

an LSSU graduate with a degree in a non-teaching program who desires to complete the teacher certification program?

Program Description:

The Bachelor of Education degree is a post-baccalaureate program specifically targeted to degree-holding individuals who complete a program leading to Michigan Teacher Certification through LSSU. A recommendation for Michigan teacher certification requires the candidate to hold 1) and earned bachelor's degree, 2) approved majors/minor (approved by the Michigan Department of Education as appropriate to K-12 educators and authorized by this institution), 3) professional education courses, and 4) courses considered as general/liberal education.

Individuals who completed non-teaching field majors (e.g. fisheries and wildlife management or forensic chemistry) may later seek to gain Michigan teacher certification (e.g. as teachers of biology or chemistry, respectively). These candidates may complete a substantial quantity of education-specific courses, including 32 credits of 400-level and above courses, after completion of their bachelor's degree.

The bachelor of education degree is available to recognize the additional training and experience associated with these post-baccalaureate courses in education.

Plan of Study:

Courses required in the B.Ed. degree include the required courses leading to Michigan teacher certification. Generally, with the exception of the student teaching internship courses, these are completed prior to graduation with the initial bachelor's degree.

Candidates must complete 32 credits of 400-level EDUC coursework after graduation. Student teaching requires 24 credits, the balance are earned in association with the teacher certification requirements, or selected from among the graduate courses offered on rotation in association with the Master of Arts in Curriculum and Instruction

Admission requirements to B.Ed. program include:

- An earned 4-year bachelor's degree with a minimum 2.70 (out of 4.00) grade point average
- Earned GPA in major/minor fields at least 2.70 (out of 4.00)
- No grade below C in major/minor, no EDUC course grade below B- (2.70)
- Completion of approved teaching majors and/or minors. Secondary candidates are required to hold an approved teachable major and minor. Elementary candidates are required to hold approved teachable major or two teachable minors. See the undergraduate teacher handbook for additional guidelines.
- Satisfactory field experiences totaling more than 150 hours with appropriate evaluations
- Satisfactory professional dispositions based on references and evaluation.

Education Post-Baccalaureate Bachelor

Professional Educational Requirements (46-49 credits)

EDUC150	Reflections of Teaching and Learning	3
EDUC250	Student Diversity & Schools	3
EDUC301	Learning Theory Teaching Practice	4
EDUC480	Internship Teaching: Seminar	1
EDUC480	Internship Teaching: Seminar	1
EDUC491	Internship/Advanced Methods: [Subject]	8
EDUC492	Internship/Advanced Methods: [Subject]	8
EDUC602	Reflection Inquiry Teaching Practice I	3
EDUC605	Integrated Approach to Curriculum Design Implementation	3
EDUC	Electives 400-level or higher	8

Complete one of the following two sequences:

Elementary candidates complete —

EDUC330	Reading in the Elementary Classroom	3
EDUC410	Corrective Reading	3
EDUC411	Elementary Language Arts Methods	3
EDUC420	Elementary Math Methods	2
EDUC421	Elementary Science Methods	2
EDUC422	Elementary Social Studies Methods	2

Secondary candidates complete —

EDUC430	General Methods for Secondary Teachers	3
EDUC431	The Secondary Learner	3
EDUC440	Reading Content Area	3

Select at least one from the following list based on academic major/minor or the respective independent study methods course by subject:

EDUC441	Language Arts Methods for Secondary Teachers	
or		
EDUC451	Directed Study in Language Arts Methods	
or		
EDUC442	Math Methods for Secondary Teachers	
or		
EDUC452	Directed Study in Mathematics Methods	

EDUC443	Science Methods for Secondary Teachers	
or		
EDUC453	Directed Study in Science Methods	
EDUC444	Social Studies Methods for Secondary Teachers	
or		
EDUC454	Directed Study in Social Studies Methods	
EDUC445	Teaching Computer Science in the Secondary Classroom	
or		
EDUC455	Directed Study in Computer Science Methods	
EDUC446	Business Education Methods for Secondary Teachers	
or		
EDUC456	Directed Study in Business/Economics Methods	

Education Cognates (4 credits)

MATH207	Principles of Statistical Methods	3
<i>One credit from courses in:</i>		
ARTS, DANC, MUSC, THEA, or NATV240		1

Graduation Requirements:

- 32 credits in EDUC courses earned after initial bachelor's degree
- B- (2.70/4.00) in all EDUC courses
- 2.70/4.00 GPA in major, minor and overall
- Satisfactory completion of student teaching internship

Michigan Certification Requirements:

- Passing score on applicable MTTC examinations
- Satisfactory Professional Dispositions
- Valid AHA/ARC First Aid/CPR certification
- Criminal Disclosure documentation

Legal Studies

Post-Baccalaureate Certificate

(students must already possess a bachelor's degree; see admission requirements on the following page)

Career Choices*:

Litigation Legal Assistant
Corporate Legal Assistant
Criminal Law Legal Assistant
Governmental Legal Assistant
Real Estate Legal Assistant

Student Profile:

Do you have ...

an interest in the law?
a desire and commitment to help others?
a good work ethic?
good verbal and written communication skills?
detail orientation and good organizational skills?
a well-established set of ethics?
self-motivation, initiative and a positive outlook?
good human relation skills?
an ability to think logically?
a willingness to learn new skills and to be challenged?

Program Description:

The legal assistant profession is one of the occupations projected to grow the fastest through the year 2014 according to the U.S. Department of Labor. A legal assistant (or paralegal) is a valued member of the legal team and works under the supervision of attorneys.

This program is *approved by the American Bar Association* and is designed to train qualified legal assistants capable of working in a variety of areas of the law and in a variety of work environments. Consequently, the role and job duties of a legal assistant vary depending on the areas of law and work environment in which a legal assistant is employed. Such diversity, varied challenges, and employment possibilities are what makes the legal assistant profession so interesting and rewarding.

There are four different degrees or offerings in legal studies. They are as follows: (1) a four-year baccalaureate degree in legal studies with an emphasis in legal administration, criminal law, personal injury, labor law, legislative/constitutional law, environmental law and policy, legal technology or client advocacy or a selected minor as approved by the legal studies coordinator; (2) a two-year associate's degree in legal studies; (3) a post-baccalaureate (one-year) certificate in legal studies (which is available to students who already have a bachelor's degree in some other discipline and wish to make a career change or advancement); or (4) a minor in legal assistant studies which can complement various majors (and may also be helpful to students who are planning on attending law school).

Career Description*:

Litigation Legal Assistant — Conducts research; drafts legal pleadings and documents; interviews clients and witnesses; investigates, gathers and organizes case information; assists at trial.

Corporate Legal Assistant — Drafts and/or analyzes various legal documents; attends meetings, negotiations or closings; performs legal and factual research; monitors compliance with applicable industry regulations; assists attorneys with preparation for collective bargaining, contract negotiations, administrative hearings or trials.

Criminal Law Legal Assistant — Conducts comprehensive interviews of defendants, law enforcement, victims, and/or witnesses; performs case and field investigations; locates and coordinates usage of applicable experts; prepares motions, briefs or other legal documents; acts as a litigation assistant during trial and any appeal.

Governmental Legal Assistant — Works as an immigration specialist; civil rights analyst; environmental protection specialist; mediation specialist; legislative analyst; workers compensation claims examiner, etc. (even the White House has employed legal assistants).

Real Estate Legal Assistant — Conducts title searches; drafts real estate closing documents; monitors compliance with title, survey, disclosure and/or regulatory requirements; schedules and participates in real estate closings.

**Note: The above career descriptions are only a sampling of the numerous avenues available to legal assistants. See next page for additional employment listings.*

Legal Studies Post-Baccalaureate Certificate

Required courses *(39-41 credits)

LAWS102	Legal Research and Case Analysis	3
LAWS125	Civil Litigation and Procedure	4
LAWS140	Personal Injury Litigation and Investigative Techniques	3
LAWS150	Legal Professionals and Ethical Considerations	3
LAWS202	Legal Writing and Analysis	
	or	
LAWS450	Advanced Legal Writing and Interviewing Seminar	3
LAWS250	Law Office Management, Systems and Technology	3
LAWS320	Real Estate Law	3
LAWS321	Family Law	2
LAWS322	Probate Law and Procedure	3
LAWS299	Legal Studies Internship and Professional Development Seminar	6-8
BUSN350	Business Law I	3
CJUS319	Substantive Criminal Law	3

***Note:** Other courses may be substituted for one or more of the required courses listed above depending upon the student's undergraduate courses/curriculum, work experience and/or career goals. However, any such course substitution must be done in consultation with the legal studies advisor and must be in writing; also, any such course substitution shall be limited to a maximum of two courses. Such other law courses include but are not limited to the following:

LAWS300	Seminar in Legal Studies	1-4
LAWS301	Alternative Dispute Resolution and Conflict Management	3
LAWS305	Tribal Law and Government	3
LAWS401	Evidence and Trial Practice	3
LAWS405	No-Fault Automobile Law	3
LAWS406	Worker's Disability Compensation Law	2
BUSN355	Business Law II	3
MGMT451	Labor Law	4
MGMT469	Collective Bargaining	3
CJUS409	Procedural Criminal Law	3
POLI467	Constitutional Law and Civil Liberties	4
EVRN311	Environmental Law	3

Admission Requirements:

Admission to the legal studies post-baccalaureate certificate is based on the following:

- Completion of the legal studies post-baccalaureate certificate program application form (along with submission of appropriate admission fee);
- Completion of a baccalaureate degree, comprising a minimum of 120 semester credits from an accredited college or university;
- Submission of official transcripts of all previous post-secondary work (to be considered official, the transcript(s) must be sent directly from the undergraduate's institution(s) to the LSSU Admissions Office);
- Submission of two letters of recommendation from people familiar with the applicant's academic and/or professional abilities and background; and
- Submission of a writing sample setting forth career goals and reasons seeking the post-baccalaureate certificate in legal studies. The writing sample questionnaire is available from the LSSU Admissions Office. (The writing sample shall be reviewed by the the coordinator for the Legal Studies Program).

Employment:

Legal assistants are employed with ...

private law firms
corporations
financial institutions
government
(federal, tribal, state or local)
courts and mediation systems
real estate offices and title
companies
insurance companies
special interest groups
prosecutor and public defender
offices
educational institutions
financial service organizations
credit and collection agencies
service, consulting
or publishing companies

The completion of the Legal Studies Program
DOES NOT AUTHORIZE graduates to
practice law as an attorney.

Accounting

Bachelor of Science

Career Choices:

Public Accountant (CPA)

Auditor

Management Accountant (CMA)

Tax Accountant

Government Accountant

Budget Analyst

Student Profile:

Do you ...

feel comfortable with numbers and enjoy data analysis?

like working with people and solving problems?

have good communication skills?

Program Description:

The discipline of accounting provides financial and other information essential to the efficient conduct and evaluation of the activities of any organization.

Accounting includes the development and analysis of data, the testing of its validity and relevance, and the interpretation and communication of the resulting information to intended users. Students completing the degree will be eligible to sit for various professional certification examinations. The program complies with current educational requirements for the CPA certification.

Pre-Business Core

Students will apply for admission to 300/400-level courses after completing the Pre-Business Core (PBC). See page 83 under School of Business for course listing.

Career Descriptions:

Public Accountant — Works for a variety of clients providing services in the areas of financial statement preparation, auditing services, income tax planning and preparation, estate planning and financial forecasting, along with a variety of other management advisory services.

Auditor — Checks accounting documents and financial statements within corporations and government. This area of accounting, like all others, is becoming increasingly computerized.

Management Accountant — Works for one company and participates in a variety of accounting activities such as financial statement preparation, product cost accumulation and analysis, budgeting and forecasting, asset acquisition analysis, payroll accounting and general ledger maintenance, and financial planning for the company.

Tax Accountant — Focus is on tax planning and tax return preparation on the federal, state and local levels. A tax specialist may work for either a public accounting firm or an individual company and will aim to minimize the tax on the employer while being in compliance with all applicable tax laws. A thorough knowledge of the tax laws is required.

Government Accountant — Works for one of many government agencies at the federal, state or local level, or may work for government enforcement agencies such as the FBI or the IRS.

Budget Analyst — Responsible for developing and managing an organization's financial plans, will need extensive people skills because of the constant negotiating work involved.

Accounting Bachelor of Science

Major Department Requirements 87 credits

Common Professional Cognate

ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	4
ACTG232	Intermediate Accounting I	4
ACTG233	Intermediate Accounting II	4
ACTG332	Cost Management I	4
ACTG333	Cost Management II	4
ACTG334	Accounting Information Systems	3
ACTG421	Federal Taxation Accounting I	3
ACTG422	Federal Taxation Accounting II	3
ACTG427	Auditing	4
ACTG432	Advanced Accounting I	
	Consolidations	3
ACTG433	Advanced Accounting II	
	Governmental	3
BUSN121	Introduction to Business	3
BUSN211	Business Statistics	3
BUSN231	Business Communications	3
BUSN350	Business Law I	3
BUSN355	Business Law II	3
BUSN403	Business, Government and Society	3
BUSN466	Business Policy	3
DATA235	Spreadsheets	3
ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
FINC341	Managerial Finance	4
MATH111	College Algebra	3
MRKT281	Marketing Principles and Strategy	3
MGMT365	Human Resource Management	3
OFFC112	Keyboard Skillbuilding	1

General Education (30-31 credits)

BUSN308	Managing Cultural Differences	3
COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
HUMN251	Humanities I	4
	Humanities Elective	3-4
	Natural Science Laboratory Courses	8
	Social Science Elective	3

B.S. Degree requirement (5 credits)

Electives (6-9 credits)

Total Credits: 128

ALL STUDENTS WHO WISH TO SIT FOR THE CPA EXAM must complete the 128-hour accounting degree AND take 22 additional hours of course work. Students will work with an advisor to select 22 additional hours which could be in the form of minors, selected courses in legal studies, CIS, law enforcement, internships, etc. An articulated advanced business degree may also be an option. (MICPA Requirement)

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Applied Geographic Information Science

Bachelor of Science

Career Choices:

Environmental Science
Marketing
Geology
Emergency Preparedness
Public Administration

Student Profile:

Do you...

like the sciences and medicine?
value a physically active lifestyle?
have good communication skills?
like helping people?
possess critical thinking skills?

Program Description:

The Applied Geographic Information Science program is an applied program where students complete 62 credits in core courses in geographical information science (GIS), natural and social science, and computer science and also complete 15 credits in an area of concentration where they choose to focus the application of their GIS skills. Areas of concentration include geography, ecology, emergency preparedness, marketing, geology, environmental science, loss control, natural resources, public administration, recreation management, social science, programming development, and operations research. All students in this program are also required to complete a senior thesis research project where they apply their GIS skills to solve real world problems.

Career Descriptions:

Graduates from this program can work in both the private sector and the government sectors. Examples of careers might include:

GIS Specialist (Environmental Science emphasis): — Might work with scientists and engineers to map environmental parameters such as chemical data and biological data to help visualize the ecological impacts of humans.

GIS Specialist (Marketing Emphasis): — Might work with business and marketing experts to map customer demographics, market potential, and local or national economic trends.

GIS Specialist (Geology Emphasis):— Might work with geologists and geological engineers to prepare maps of geological importance, including such things as rock/ore formations, groundwater flow, oil formations, and topographical features.

GIS Specialist (Emergency Preparedness Emphasis):— Might work with Public Health Departments and Federal and State Agencies to map locations where contaminated food may have been shipped or areas where people are sick from a contagious disease or areas at high risk for a terrorist attack.

GIS Specialist (Public Administration Emphasis):— Might work with planners and engineers from local governments or industries to map roads, city infrastructure (buildings, sewers, water mains, etc.), or proposed construction projects.

Applied Geographic Information Science

Applied Geographic Information Science Bachelor of Science

Geographic Information Science Core: (21 Hrs)

EVRN126	Interpretation of Maps and Aerial Photography	2
EVRN131	Introduction to GIS and GPS	2
EVRN231	Intermediate GIS	2
EVRN325	Geospatial Analysis III	3
EVRN345	Advanced Spatial Analysis and Statistics	4
EVRN355	GIS Programming: VBA and Applications	4
EVRN465	Geographic Databases and Web Based GIS	4

Natural and Social Science Core: (35 Hrs Min)

ECON202	Microeconomics	3
GEOG106	Physical Geography: Landforms	4
GEOG201	World Regional Geography	4
GEOG306	Cultural Geography	4
NSCI103	Environmental Science	3
NSCI104	Environmental Science Laboratory	1
RECS362	Land Management	3
SOCY102	Social Problems	3

Select one from the following: (3-5)

BIOL107	Field Biology	3
BIOL132	General Biology	4
CHEM108	Applied Chemistry and CHEM109 Applied Chemistry Lab	4
CHEM115	General Chemistry I	5
GEOL115	Field Geology	4
GEOL121	Physical and Historical Geology I	4

Computer Science Cognate

CSCI105	Introduction to Computer Programming	3
CSCI211	Database Applications	3

Junior and Senior Thesis and Internships: 6

EVRN395	Junior Seminar or equivalent	1
EVRN499	Senior Seminar or equivalent	1
INTD399	Internship in Department	4

Select one concentration Min 15

Ecology Concentration*

BIOL240	Natural History of Vertebrates	4
BIOL280	Biometrics	3
BIOL337	General Ecology	3
BIOL339	Wildlife Ecology	3
BIOL345	Limnology	3

*Would require the student to take BIOL132

Emergency Preparedness Concentration

CJUS102	Police Process	3
FIRE101	Introduction to Fire Science	3
FIRE111	Hazardous Materials	3
FIRE211	Tactics and Strategy	3
FIRE312	Hazardous Materials Management	4
FIRE315	Company Level Supervision and Management	3

Environmental Science Concentration

BIOL337	General Ecology	3
ECON307	Environmental Economics	3
EVRN285	Principles of Epidemiology	3
EVRN311	Environmental Law	3
EVRN313	Solid and Hazardous Waste	3

Geography Concentration

GEOG108	Physical Geology: Meteorology and Climatology	4
GEOG302	Economic Geography	4
GEOG Electives (200 level or above)		7

Geology Concentration

GEOL122	Physical and Historical Geology II	4
GEOL218	Structural Geology and Tectonics	5
GEOL223	Mineralogy and Petrology	5
GEOL280	Introduction to Field Geology	3

Less Control Concentration

CJUS212	Loss Control	3
CJUS306	Security Systems	3
Select six hours from:		6
CJUS202	Canadian Criminal Law	3
CJUS319	Substantive Criminal Law	3
CJUS406	Advanced Canadian Jurisprudence	3
CJUS409	Procedural Criminal Law	3
Select nine hours from:		9

CSCI101	Introduction to Microcomputer Applications	3
MGMT360	Management Concepts and Applications	3
MGMT365	Human Resource Management	3
MGMT451	Labor Law	4
MRKT281	Marketing Principles and Strategy	3

Marketing Concentration

MGMT375	Introduction to Supply Chain Management	3
MRKT281	Marketing Principles and Strategy	3
MRKT480	Marketing Research	3
MRKT300	Level or higher elective	3
MRKT300	Level or higher elective	3

Natural Resources Concentration

BIOL230	Introduction to Soil Science	4
BIOL284	Principles of Forest Conservation	4
BIOL286	Principles of Watersheds	3
ECON307	Environmental Economics	3

Operations Research Concentration

MATH215	Fundamental Concepts of Mathematics	3
MATH351	Graph Theory	3
MATH401	Mathematical Modeling	3
MGMT375	Introduction to Supply Chain Management	3

Plus one course at the 200 level or higher selected from:

ECON, MGMT, FINC, MATH, OR CSCI

Programming and Development Concentration

CSCI106	Web Page Design and Development	3
CSCI121	Principles of Programming	3
CSCI221	Computer Networks	3
CSCI312	File and Database Management	3
CSCI333	Systems Programming	

Public Administration Concentration

ECON305	Public Finance	3
ECON307	Environmental Economics	3
POLI201	Introduction to Public Administration	3
POLI301	Policy Analysis and Evaluation	4
POLI401	Principles of Public Administration	4

Recreation Management Concentration

RECS101	Introduction to Recreation and Leisure Services	3
RECS262	Outdoor Recreation	3
RECS295	Practicum	2
RECS365	Expedition Management	3
RECS300	Level or higher elective	4

Social Science Concentration

SOCY101	Introduction to Sociology	3
SOCY202	Social Research Methods	3
SOCY227	Population and Ecology	3
SOCY311	Contemporary Sociological Theory	3
SOCY314	Social Change	3

Support Courses

ENGL306	Technical Writing	3
MATH111	College Algebra	3
MATH112	Calculus for Business and Life Science	4

Statistics select one course from: depending on concentration 3

MATH207	Principles of Statistical Methods	3
or		
BUSN211	Business Statistics	3
or		
PSYC210	Statistics	3
or		
CJUS345	Statistics and Design for Public Safety	3

General Education 16-17

COMM101	Fundamentals of Speech Communication	3
ENGL110	First Year Composition I	3
ENGL111	First Year Composition II	3
HUMN251	Humanities I	4
HUMN Elective		3-4

Free Electives to total 124

Athletic Training

Bachelor of Science

Career Choices:

University/College Athletics

Professional Teams

Sports Medicine Clinics

Secondary School Athletics

Health/Fitness Facilities

Industrial Fitness and Rehabilitation

Athletic Training Education

Student Profile:

Do you...

like the sciences and medicine?

value a physically active lifestyle?

have good communication skills?

like helping people?

possess critical thinking skills?

For a copy of the ATEP Student Manual or if you have further questions, please contact:

Joseph D. Susi II, MS, ATC
Athletic Training Education
Program Director
(906) 635-2161
jsusi@lssu.edu

Program Description:

LSSU's Athletic Training major is accredited by the Commission on Accreditation of Athletic Training Education (CAATE). Upon successful completion of the Athletic Training Education Program (ATEP) at LSSU students are eligible to begin the application process to sit for the national certification exam through the board of certification.

The ATEP at LSSU is comprised of two phases, the pre-professional phase and the professional phase. The pre-professional phase consists of the students' first two years in which the student completes University core curriculum courses and pre-requisite coursework within the athletic training curriculum to enable the student to become eligible to apply for admission into the professional phase of the program. Students then make a formal application to the ATEP.

The number of clinical sites available to the LSSU ATEP limits the number of students that can be admitted to the program on an annual basis. Students accepted into the professional phase of the ATEP will take advanced coursework and engage in supervised clinical experiences at private and university medical practices as well as LSSU athletics. Senior ATEP students are assigned to a staff ATC as they work with one of the athletic teams, and conclude their training with a 15-week internship selected in consultation with their academic advisor.

A detailed program description, competitive admission requirements and Technical Standards for Admission are provided in the Athletic Training Education Program Student Manual and on the Recreation Studies/Exercise Science Web site.

Career Descriptions:

Colleges and Universities — ATCs in this setting may provide health care services to student-athletes, teach in an ATEP or a combination of these duties.

Professional Sports — In this setting, ATCs provide athletic health care services for professional athletes involved with one sports organization.

Sports Medicine Clinics — This growing setting provides ATCs the opportunity to work with a number of different health care professionals and a diverse patient population. In addition to athletic injury rehabilitation, many clinics provide athletic training services for secondary schools.

Secondary Schools — Private and public secondary schools offer special job opportunities for ATCs. Many ATCs teach classes as well as provide health care services to the student-athletes.

Other possible athletic training employment opportunities include: corporate health programs, health clubs, clinical and industrial health care programs and athletic training education programs

Other Information

Students interested in athletic training should investigate the following websites.

www.nata.org

www.bocatc.org

www.caate.net

www.nataec.org

Athletic Training Bachelor of Science

Departmental Requirements: (52 credits)

EXER141	Introduction to Movement	3
EXER230	Athletic Injury/Illness Prevention	3
EXER232	Athletic Injury/Illness Recognition	3
EXER234	Preventative Taping Techniques	1
EXER262	Exercise Physiology I	3
EXER268	Fitness Evaluation I	2
EXER275	Nutrition for Sport	2
EXER301	A.T. Clinical Experience I	2
EXER302	A.T. Clinical Experience II	2
EXER340	Therapeutic Modalities	3
EXER344	Kinesiology	3
EXER346	Therapeutic Exercise	3
EXER349	Orthopedic Assessment	3
EXER358	Research Methods	3
EXER401	A.T. Clinical Experience III	2
EXER402	A.T. Clinical Experience IV	2
EXER428	Psychological Aspects of Exercise and Athletic Rehabilitation	3
EXER452	Allied Health Administration	3
EXER492	Exercise Science Internship	6

Cognate Requirements: (31 credits)

HLTH189	Medical First Responder	3
MATH207	Statistics	3
BIOL121	Anatomy & Physiology I	4
BIOL122	Anatomy & Physiology II	4
CHEM104	Life Chemistry I	4
CHEM105	Life Chemistry II	4
HLTH209	Pharmacology	3
HLTH232	Pathophysiology	3
NURS212	Health Appraisal	4

Support Electives: (9 credits)

EXER140	Health & Fitness	3
EXER248	Psychology of Sport and Performance and Coaching	3
EXER265	Essentials of Strength Training and Conditioning	3
EXER348	Fitness Evaluation II	3
EXER362	Exercise Physiology II	3
EXER442	Electrocardiology	2
EXER444	Exercise Prescription	2
EXER450	Philosophy of Human Performance and Leisure	3
PHYS221	Elements of Physics I	4
HLTH328	Multicultural Approaches to Health Care	3

General Electives (7 credits)

General Education (25 credits)

Total Credits: 124

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Biology

Bachelor of Arts

Bachelor of Science

Career Choices:

Research Biologist

Field Biologist

Health Professional

Zoo, Nature Center Staff

Consultant

Sales Representative

Tech Writer or Illustrator

Teacher - Secondary Education

Teacher - Elementary Education

Student Profile:

Do you have ...

good math and science skills?

a curious mind?

attention to detail?

self-motivation?

an interest in the social application of life sciences?

an enjoyment of the learning process?

Program Description:

The bachelor of science degree in biology combines theory and concepts of biology with intensive, hands-on experiences in our state-of-the-art laboratories and a wealth of close-by field sites. The program is flexible. Students build on a core of biology classes by selecting the physiology and taxonomy classes and other electives that best fit their interests.

The program is an excellent preparation for biology or related careers. Our graduates are currently employed as doctors, dentists, veterinarians, biological researchers, consultants and teachers. Many careers in biology require education beyond the baccalaureate degree and LSSU's biology program has a proven record of excellent preparation for professional and graduate school.

Pre-professional studies are an important part of the biology program at LSSU. This program prepares students for entrance into medical, dental, veterinary, optometry, chiropractic, and podiatry schools. Students work with a pre-professional advisor to select biology courses and electives best suited for their particular needs. Our program has an excellent reputation with the health professional schools in Michigan, Ontario, and beyond.

Field Biologist — Studies organisms, landscapes and ecosystems in the field to help protect our natural heritage for future generations.

Health Professional — Doctors, dentists, physician's assistants, public health officers and other health professionals safeguard the health of our communities.

Zoo, Nature Center Staff — Cares for animals in captive or natural settings, educates the public about endangered species or other aspects of our natural heritage.

Consultant — Solves environmental problems, provides expertise in land use planning or other situations.

Sales Representative — Biologists with marketing skills are in demand.

Tech Writer or Illustrator — Combines expertise in biology with talents in writing or art to transmit complex biological concepts to others.

Teacher - Secondary Education — Teaches a wide range of science courses in high school.

Teacher - Elementary Education — Contact LSSU's Education Department for information about program requirements and career options in elementary education.

Career Descriptions:

Research Biologist — Conducts applied or basic research in biomedical sciences, ecology or conservation biology, animal sciences, plant sciences, cellular or molecular biology for private companies, state or federal laboratories, and university research centers.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Biology Bachelor of Arts

Students wishing to combine a strong biology curriculum with a minor in another discipline should consider this career track.

The following courses must be successfully completed to obtain this degree:

Biology Core (23-26 credits)

BIOL131	General Biology: Cells	4
BIOL132	General Biology: Organisms	4
BIOL199	Freshman Seminar	1
BIOL220	Genetics	4
BIOL250	Quantitative Biology	3
BIOL280	Biometrics	3
BIOL299	Sophomore Seminar	1
BIOL337	General Ecology	3
BIOL399	Junior Seminar	1
BIOL495	Senior Project	1
BIOL499	Senior Seminar	1

Physiology (select one) (4 credits)

BIOL315	Plant Physiology	4
BIOL330	Animal Physiology	4
BIOL421	Cell Biology	4

Taxonomy (select one) (3-4 credits)

BIOL202	Field Botany	3
BIOL204	General Microbiology	4
BIOL302	Invertebrate Zoology	3
BIOL303	General Entomology	4
BIOL310	Ichthyology	3
BIOL311	Mammalogy	3
BIOL312	Ornithology	3
BIOL422	Parasitology	3
BIOL475	Aquatic Entomology	3

Biology Electives (17 credits)

A minimum of 12 hours must be from 300 or 400 level courses. At least one physiology, taxonomy, or biology elective must be at the 400 level.

Support Courses (35 credits)

CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM225	Organic Chemistry I	4
CHEM226	Organic Chemistry II	4
MATH111	College Algebra	3
MATH112	Calculus for Business & Life Science	4
MATH207	Principles of Statistical Methods	3
	Foreign Language*	8

*All eight credits must be in one language.

General Education (25-29 credits)

Free Electives (8-15 credits)

Total Credits: 125

Biology Bachelor of Science

Biology Core (23-26 credits)

BIOL131	General Biology: Cells	4
BIOL132	General Biology: Organisms	4
BIOL199	Freshman Seminar	1
BIOL220	Genetics	4
BIOL250	Quantitative Biology	3
BIOL280	Biometrics	3
BIOL299	Sophomore Seminar	1
BIOL337	General Ecology	3
BIOL399	Junior Seminar	1
BIOL495	Senior Project	1
BIOL499	Senior Seminar	1

Physiology (select one) (4 credits)

BIOL315	Plant Physiology	4
BIOL330	Animal Physiology	4
BIOL421	Cell Biology	4

Taxonomy (select one) (3-4 credits)

BIOL202	Field Botany	3
BIOL204	General Microbiology	4
BIOL302	Invertebrate Zoology	3
BIOL303	General Entomology	4
BIOL310	Ichthyology	3
BIOL311	Mammalogy	3
BIOL312	Ornithology	3
BIOL422	Parasitology	3
BIOL475	Aquatic Entomology	3

Biology Electives (17 credits)

A minimum of 12 hours must be from 300 or 400 level courses. At least one physiology, taxonomy, or biology elective must be at the 400 level.

Support Courses (23-27 credits)

CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM220	Survey of Organic Chemistry	4
CHEM225	Organic Chemistry I	4
	or	
CHEM226	Organic Chemistry II	4
MATH111	College Algebra	3
MATH112	Calculus for Business & Life Science	4
MA207	Principles of Statistical Methods	3

Minor (8 credits)

A University-approved minor is required. Students selecting a minor in chemistry must complete an additional 8 hours from the following:

CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4
CHEM341	Environmental Chemistry I	4
CHEM342	Environmental Chemistry II	4
CHEM451	Introductory Biochemistry	4
CHEM452	Biochemistry II	4
GEOL121	Physical & Historical Geology I	4
GEOL122	Physical & Historical Geology II	4
PHYS221	Elements of Physics I	4
PHYS222	Elements of Physics II	4

General Education (25-29 credits)

Free Electives (4-11 credits)

Total Credits: 125

Biology Secondary Education Bachelor of Science

This program includes a strong biology core curriculum, a broad-field science minor and a teaching minor. You will obtain a grounding in the concepts and technical skills of modern biology as well as develop an understanding of the teaching/learning process and the role of science in education.

Application to the teaching program requires:

- 45 earned credits
- GPA of 2.70
- MTTC basic skills test

Graduate school/research — The strong biology curriculum allows you the flexibility to pursue most of the opportunities that are available to graduates with either a B.S. or a B.A. in biology.

Secondary Education — The secondary education program leads to a DX science endorsement which certifies the graduate to teach a wide range of science courses in Michigan high schools.

BS Biology Secondary Education Program Requirements (39 credits)

BIOL122	Anatomy and Physiology II	4
BIOL131	General Biology I	4
BIOL132	General Biology II	4
BIOL204	General Microbiology	4
BIOL220	Genetics	4
BIOL240	Natural History of the Vertebrates	3
BIOL280	Biometrics	3
BIOL330	Animal Physiology	4
BIOL337	General Ecology	3
BIOL420	Evolutionary Analysis	3

Complete one course from the following two:

EDUC443	Secondary Methods in Science	3
EDUC453	Ind. Study: Science Methods	3

Biology Departmental Requirements (17 credits)

BIOL199	Freshman Seminar	1
BIOL250	Quantitative Biology	3
BIOL299	Sophomore Seminar	1
BIOL399	Junior Seminar	1
BIOL495	Senior Project	1
BIOL499	Senior Seminar	1
BIOLxxx	Biology Electives	9

Biology Cognates & Support Courses (23 credits)

CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM220	Survey of Organic Chemistry I	4
MATH111	College Algebra	3
MATH112	Calculus for Business & Life Science	4
MATH207	Principles of Statistical Methods	3

General Education (25-29 credits)

Approved Teaching Minor (20 credits min.)

Professional Education Requirements and Education Cognates— see Secondary Teaching.

Total Credits: 161-166

Business Administration — Business Education

Bachelor of Science

Career Choices:

Secondary Teacher
Business careers in:
Management
Accounting
Marketing

Student Profile:

Do you ...
like working with people?
want to make a difference?
seek a satisfying lifelong career?
desire responsibility and leadership?
seek flexibility, variety and creativity in your job?

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Program Description:

The bachelor of science in business administration - business education prepares students for Michigan certification to teach business and office education courses at the secondary level. The degree makes students eligible for a secondary provisional certificate. Students who successfully complete this program will receive a GQ endorsement which qualifies business teachers to teach high school accounting, marketing, general business and computer software courses.

Career Descriptions:

Business Teacher — Helps students develop business and technology skills that will make them more marketable.

Teaching is the profession that shapes America's future. As a teacher, you:

- Make a positive difference in the lives of young people.
- Make an impact on the future of America's business leaders and workers.

Preparing students for tomorrow's work force is important to improve and maintain America as an economic leader. The business teaching profession needs committed, enthusiastic, well-prepared teachers to:

- Help students develop the qualities and skills required for the workplace.
- Prepare students for post-secondary business programs.

Business Administration - Business Education Bachelor of Science

Department Requirements

ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	4
BUSN121	Introduction to Business	3
BUSN211	Business Statistics	3
BUSN231	Business Communication	3
BUSN350	Business Law I	3
BUSN355	Business Law II	3
CSCI101	Introduction to Microcomputer Applications	3
ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
FINC242	Personal Finance	3
MGMT360	Management Concepts and Apps.	3
MGMT365	Human Resource Management	3
MRKT281	Marketing Principles and Strategy	3
MRKT383	E-Marketing	3
MRKT388	Retail Management	3

Students will apply for admission to 300/400-level courses after completing the Pre-Business Core (PBC). See page 84 under the School of Business, Economics and Legal Studies for course listing.

Software Options

DATA250	Desktop Publishing and	3
DATA261	Web Page Design	3
CSCI163	Troubleshooting and Repair of Personal Computers	3
CSCI263	Storage Protection and Recovery of Personal Computeres	3

Departmental Cognates

OFFC112	Keyboarding	1
DATA235	Spreadsheets	3

General Education

ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
COMM101	Fund. of Speech Communication	3
HUMN251	Humanities I	4
HUMN	Elective	3-4

Social Science

ECON201	Principles of Macroeconomics	3
	Elective	3-4
EDUC250	Student Diversity and Schools	3

Natural Science with Lab

	Electives	8
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Mathematics

MATH111	College Algebra	3
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BS Degree Requirement

	Credits from mathematics, natural science or social science not used in general education	5
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Professional Education Requirements and Education Cognates- see Secondary Teaching.

Business Administration — International Business

Program Description:

This degree requires successful completion of a curriculum with a minimum of 128 semester hours as prescribed on the following page.

A major in international business is intended to develop a student's ability to meet the challenges of the global business environment. In addition to providing the fundamental foundations of all business functional areas, the major teaches the student to identify and develop appropriate solutions to situations that are unique to conducting business in the global environment. The international business major provides the student with an understanding of international business by providing

upper-level courses in international economics, international marketing, cultural differences, politics and foreign languages. Students will also participate in an approved international experience which will involve either study abroad, work experiences, or internships.

Career Description:

Large and small companies in the United States and around the world are seeking employees who understand global business and can successfully operate in the international marketplace. International careers are available in the business areas of management, marketing, economics, accounting and finance.

Bachelor of Science

Career Choices:

Manager of International Division(s)

CEO/CFO of International Subsidiary Companies

Marketing Manager - International Sales

Public Relations Manager for International Operations

Distribution Manager - International Product Divisions

Business Administration - International Business Bachelor of Science

General Education (31 Credits)

BUSN308	Managing Cultural Differences	3
COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
HUMN251	Humanities I	4
	Humanities Elective	4
	Natural Science laboratory courses	8
	Social Science Elective	3

BS Degree Requirements (8 credits)

Natural science, social science or mathematics electives

Common Professional Component (60 credits)

ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	4
BUSN121	Introduction to Business3	
BUSN211	Business Statistics	3
BUSN231	Business Communications	3
BUSN350	Business Law I	3
BUSN355	Business Law II	3
BUSN403	Business, Government & Society	3
BUSN466	Business Policy	3
DATA235	Spreadsheets	3
ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
ECON408	International Economics#	3
FINC341	Managerial Finance	4
MATH111	College Algebra	3

MGMT360	Principles of Management	3
MGMT365	Human Resource Management	3
MGMT375	Intro. to Supply Chain Management	3
MGMT464	Organizational Behavior	3
MRKT281	Marketing Principles and Strategy	3
MRKT486	International Marketing	3
OFFC112	Keyboard Skillbuilding	1
	Modern foreign language	8
	Approved international experience†	3
	Three courses from List A	9

Free Electives (6 credits)

#May be used toward BS degree requirement.
†Examples of approved international experiences include study abroad, work experiences or internships.

List A Electives

FREN353	Business French I
FREN354	Business French II
FREN360	French Cultural Perspectives
GEOG302	Economic Geography
GEOG306	Cultural Geography
HIST310	Russia
HIST316	Europe in the 20th Century
HIST361	Latin America
HIST371	Far East Civilization
HIST442	Diplomatic History of the U.S.
HUMN261	World Literature I
HUMN262	World Literature II
JAPN201	Culture and Society of Japan I
JAPN202	Culture and Society of Japan II
JAPN301	Japanese Art and Culture I
JAPN302	Japanese Art and Culture II
POLI331	Comparative Politics of Western Europe and Russia
POLI334	Middle East Politics
POLI411	U.S. Foreign Policy
POLI420	Politics of the World Economy

Student Profile:

Are you ...

a people person?

enthusiastic, flexible and decisive?

self-motivated, analytical and like to see things get done?

a person who likes to travel, see new places and diversified cultural experiences?

Business Administration — Legal Management

Bachelor of Science

Career Choices:

Legal Administrator
Paralegal/Legal Assistant
Chief Executive Officer
Legal Assistant (Paralegal) Manager
Human Resources Manager
Labor Relations Manager
EEO Officer
Compensation Benefits and Job Analysis Specialist
Affirmative Action Coordinator
Insurance Claim Adjuster, Examiner or Investigator
Operations Manager

Student Profile:

Do you have ...

good human relations skills?
self-motivation, initiative and a positive outlook?

a willingness to learn new skills and to be challenged?

An interest in business and the law?

good verbal and written communication skills?

a desire and commitment to help others?

a good work ethic?

good organizational skills?

an ability to think logically?

NOTE: The completion of this program does not authorize graduates to practice law as an attorney; one must complete a law degree following an undergraduate program.

Program Description:

This program is unique as it serves as least five (5) different constituencies or career tracks. These include:

- Paralegal/Legal Assistant
- Legal Administration Management
- Business Management – Legal Emphasis
- Paralegal/Legal Assistant Management
- Business Management – Law School Bound

Further, students who major in Legal Management can expand their employment possibilities in varied work environments (in both the legal and the business arenas). Certainly, the law is well integrated within the business world. Whether you are addressing issues in the areas of human resources, employer benefits, safety, worker's compensation, contracts, insurance, compliance, technology, labor relations, or any specific area of the law, business majors with a legal background will enhance their employment flexibility since they can work in any business setting or in law firms or other legal work environments. This program also serves as an excellent prelaw or graduate school foundation for those who are planning to go on to law school or graduate studies.

Essentially, this major is designed to provide students with a broad background in business by presenting courses covering the functional areas of business. In addition, the law courses prepare students for various positions in legal, business, governmental and non-profit organizations. Likewise, this program will provide the business student who intends to go on to pursue a law degree or other professional studies with a good foundation in the areas of business as well as law.

Students will apply for admission to 300/400-level courses after completing the Pre-Business Core (PBC). See page 84 under the School of Business, Economics and Legal Studies for course listing.

Career Description:

Legal Management graduates are able to pursue a wide variety of career options because of the knowledge and skills that

they acquire in business, law, writing, leadership, critical thinking, analysis, and oral communication.

Typical professions include:

Paralegal/Legal Assistant — Works within varied environments such as law firms, corporations, governmental agencies, courts, insurance companies, prosecutor offices, financial institutions, etc. The role and job duties of a legal assistant vary depending on the areas of law and the work environment in which one is employed. Legal assistants are valued members of the legal team and work under the supervision of attorneys. *See Legal Studies bachelor's degree for additional career information and consult the Coordinator of Legal Studies.*

Legal Administrator — Manages the planning and business functions, as well as the overall operations of a law office, or legal department in a corporation, insurance company or other legal or governmental agency; responsibilities include such areas as financial planning and controls; human resources management; client services and marketing; and information technology.

Business Executive — Works as a human resources manager; employment and placement manager; EEO officer; affirmative action coordinator; compensation, benefits and job analysis specialist; labor relations manager; contract administrator; insurance claim adjuster/investigator; or other business areas.

Paralegal/Legal Assistant Manager — Supervises, trains and evaluates legal assistants (paralegals). Legal assistant managers are found in all the same environments that employ legal assistants (see above).

Lawyer — Practices law within private law practices; public interest groups; governmental agencies (federal, state, tribal or local); courts (as judges or court administrators); business and industry (e.g., insurance companies; financial institutions; corporations; hospitals; public relation firms; political campaigns; labor unions; and trade associations); academics (as a law professor, law librarian or administrator); or in various "nonlegal" careers such as in the media, law enforcement, public relations, foreign service, or in politics. *Must complete juris doctorate degree - see note at right.*

Business Administration - Legal Management

Business Administration - Legal Management Bachelor of Science

General Education (30-31 credits)

BUSN308	Managing Cultural Differences	3
COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
HUMN251	Humanities I	4
	Humanities Elective	3-4
	Social Science Elective	3
	Natural Science Laboratory courses	8

Common Professional Component (64-65 credits)

ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	4
BUSN121	Introduction to Business	3
BUSN211	Business Statistics	3
BUSN231	Business Communications	3
BUSN350	Business Law I	3
BUSN355	Business Law II	3
BUSN403	Business, Government & Society	3
BUSN466	Business Policy	3
DATA235	Spreadsheets	3
<i>Select one (1) course from:</i>		3
DATA225	Word Processing	
DATA231	Database	
DATA250	Desktop Publishing	
DATA261	Multimedia Applications	
ECON201	Principles of Macroeconomics**	3
ECON202	Principles of Microeconomics*	3
FINC341	Managerial Finance	4
MATH111	College Algebra*	3
MRKT281	Marketing Principles and Strategy	3
MGMT360	Management Concepts and Applications	3
MGMT365	Human Resource Management	3
<i>Select one (1) course from:</i>		3-4
MRKT385	Services Marketing	
MRKT387	Advertising Theory and Practice	
MRKT380	Principles of Leadership	
MRKT476	Employee Training & Development	
MGMT464	Organizational Behavior	3
OFFC112	Keyboard Skillbuilding	1

Major Requirement – Legal Management

		(28-31 credits)
LAWS102	Legal Research and Case Analysis	3
LAWS125	Civil Litigation and Procedure	4
LAWS150	Legal Professionals and Ethical Considerations	3
LAWS202	Legal Writing and Analysis	3
LAWS250	Law Office Management, Systems and Technology	3
LAWS299	Legal Studies Internship and Professional Development Seminar	4
LAWS301	Alternative Dispute Resolution and Conflict Management	3
<i>Select three (3) law courses from:</i>		
EVRN311	Environmental Law	3
	Any Law (LAWS) courses	2-4
MGMT451	Labor Law	4
POLI467	Constitutional Law & Civil Liberties	4
CJUS319	Substantive Criminal Law	3
	<i>or</i>	
CJUS406	Procedural Criminal Law	3

BS Degree requirements (5 credits)

Natural science, social science, or mathematics electives

Total Credits: 128

*May also be used for General Education

** May also be used for BS Degree requirement

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Business Administration — Management

Bachelor of Science

Career Choices:

- Manager
- Chief Executive Officer
- President
- Human Resources Manager
- Small Business Creation and Management
- Operations Management
- Customer Service Directors
- Departmental Managers
- Account Managers

Student Profile:

- Are you ...
- a people person?
 - enthusiastic, flexible and decisive?
 - self-motivated, analytical and like to see things get done?

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Program Description:

This degree requires successful completion of a curriculum with a minimum of 128 semester hours as prescribed in the next column.

The management major is designed to provide students with a broad background in business by presenting courses covering the functional areas of business. This management degree program prepares students for leadership positions in business and non-profit organizations.

Students will apply for admission to 300/400-level courses after completing the Pre-Business Core (PBC). See page 84 under the School of Business, Economics and Legal Studies for course listing.

Career Description:

Managers guide and direct the organization. Managers set goals and determine methods to achieve those goals. Since managers must achieve the organization's goals through the efforts of other individuals, the practice of management is concerned with human behavior. Managers are involved with designing effective organization structures, controlling operations, making effective decisions, and communicating, motivating and leading personnel. Additionally, an effective manager must design programs to develop people's abilities and talents, understand the role and impact of technology on the organization and be aware of and respond to social challenges both domestically and internationally. A career in management is both challenging and rewarding.

Business Administration - Management Bachelor of Science

General Education		(31 Credits)
BUSN308	Managing Cultural Differences	3
COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
HUMN251	Humanities I	4
	Humanities Elective	4
	Natural Science laboratory courses	8
	Social Science Elective	3

BS Degree Requirements		(5 credits)
Natural science, social science or mathematics electives		

Common Professional Component		(79-80 credits)
ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	4
BUSN121	Introduction to Business	3
BUSN211	Business Statistics	3
BUSN231	Business Communications	3
BUSN350	Business Law I	3
BUSN355	Business Law II	3
BUSN403	Business, Government & Society	3
BUSN466	Business Policy	3
DATA235	Spreadsheets	3
ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
FINC341	Managerial Finance	4
MATH111	College Algebra	3
MGMT360	Management Concepts and Applications	3
MGMT365	Human Resource Management	3
MGMT375	Intro. to Supply Chain Management	3
MGMT464	Organizational Behavior	3
MRKT281	Marketing Principles and Strategy	3
OFFC112	Keyboard Skillbuilding	1

Major Management Electives		(16-17 credits)
MGMT380	Principles of Leadership	3
MGMT471	Production/Operations Management	3
MGMT476	Employee Training Development	4
Choose two of the following three courses:		
LAWS301	Alternate Dispute Resolution and Conflict Management	3
MGMT451	Labor Law	4
MGMT469	Collective Bargaining	3

Free Electives		(12-13 credits)
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Business Administration — Marketing

Program Description:

This degree requires successful completion of a curriculum with a minimum of 128 semester hours as prescribed in the next column.

The marketing major is designed to prepare students for the many opportunities in the field of marketing. The study of marketing includes marketing principles, principles of selling, retail management, consumer behavior, advertising theory and practice, marketing management, sales force management, marketing research and international marketing. These courses, along with the common professional business core courses, are designed to provide our students with the appropriate knowledge and skills to understand the function of marketing in the firm and in society and to be effective decision makers.

Students will apply for admission to 300/400-level courses after completing the Pre-Business Core (PBC). See page 84 under the School of Business, Economics and Legal Studies for course listing.

Career Description:

Today, more than 20 million people have careers in marketing. Few other professional careers offer as many career possibilities as the field of marketing. Marketing, with its varied career options and considerable responsibilities within the organization, is an excellent preparation for management positions in all types of organizations. Salaries for entry-level positions are rising in excess of the rate of inflation.

Nearly one-third of the civilian work force in the United States is employed in marketing-related jobs. Marketing career opportunities include product development, product management, distribution management, advertising, public

relations, industrial buying, retail management, sales, marketing research and direct marketing. Each area encompasses hundreds of marketing jobs.

Business Administration - Marketing Bachelor of Science

General Education (31 Credits)

BUSN308	Managing Cultural Differences	3
COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
HUMN251	Humanities I	4
	Humanities Elective	4
	Natural Science laboratory courses	8
	Social Science Elective	3

BS Degree Requirements (5 credits)

Natural science, social science or mathematics electives

Common Professional Component (82 credits)

ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	4
BUSN121	Introduction to Business	3
BUSN211	Business Statistics	3
BUSN231	Business Communications	3
BUSN350	Business Law I	3
BUSN355	Business Law II	3
BUSN403	Business, Government & Society	3
BUSN466	Business Policy	3
DATA235	Spreadsheets	3
ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
FINC341	Managerial Finance	4
MATH111	College Algebra	3
MGMT360	Management Concepts and Applications	3
MGMT365	Human Resource Management	3
MGMT375	Intro. to Supply Chain Management	3
MGMT464	Organizational Behavior	3
MRKT281	Marketing Principles and Strategy	3
MRKT381	Consumer Behavior	3
MRKT480	Marketing Research	3
MRKT481	Marketing Management	3
	Four Marketing Electives	12
OFFC112	Keyboard Skillbuilding	1

Free Electives (10 credits)

Total Credits: 128

Bachelor of Science

Career Choices:

Account Executive/Manager
Professional Selling-Business to Business
Sales Management
Marketing Research
Product Analyst
Retailing
Buyer
Logistics Analyst
E-Commerce

Student Profile:

Are you ...
intrigued by human behavior?
a people person?
enthusiastic, flexible and decisive?
self-motivated, analytical and like to see things get done?

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Chemistry

Bachelor of Arts Pre-Professional Secondary Teaching Bachelor of Science Secondary Teaching

Career Choices:

Chemist
Lawyer
Patent Specialist
Environmental Scientist
Physician
Junior/Senior High School
Science Teacher

Student Profile:

Do you ...

enjoy chemistry?
have an aptitude for problem
solving and team work?
enjoy courses in math and science?
possess strong writing, listening
and speaking skills?
enjoy helping others learn and
apply what they learn?

Program Description:

According to the 2006 *National Occupational Employment and Wage Estimator*, more people are employed as chemists and chemical technicians than in any other job classification in the life and physical science occupations (<http://stats.bls.gov>). With many free electives and a common general education core, a chemistry degree can also be used in combination with other majors or minors such as pre-law, engineering, literature, business, biology, etc. to match student interest and career plans.

Graduates with a bachelor of arts in chemistry work in many disciplines and industries, and many proceed on to graduate school in natural sciences, law, engineering and medicine. Internships in chemistry are encouraged where students can gain valuable real-world work experience while gaining college credit. In addition, each student participates in an applied research project in close collaboration with faculty members to address meaningful chemical-based problems. These projects, through the excellent preparation they provide our students, are often cited as important factors in successful job searches and entry into graduate programs.

Career Descriptions:

Chemist — Works in business and industry, and environmental and commercial laboratories conducting basic and applied chemical analysis, research and product development.

Lawyer — Applies basic chemical knowledge to the practice of law related to scientific and natural resource issues.

Patent Specialist — Works with patent applications related to the chemical industry, and the application of chemistry to new and novel problems.

Environmental Scientist — Combines knowledge of chemistry and biology to address significant issues from the perspective of each discipline, particularly the chemical foundations of biological processes.

Physician — Uses chemistry as a foundation for the practice of medicine. A degree in chemistry is a useful precursor to medical school, the study of pharmacology, and the development of drugs to promote health and quality of life.

Science Teacher — Responsible for developing and implementing science curriculum in grades 6-12; daily classroom operations; and developing professional relationships with students, parents, district faculty and staff.

Chemistry Bachelor of Science

Chemistry Degree Requirements (55-57 credits)

CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM225	Organic Chemistry I	4
CHEM226	Organic Chemistry II	4
CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4
CHEM361	Physical Chemistry I	4
CHEM362	Physical Chemistry II	4
CHEM395	Junior Seminar	1
CHEM451	Introductory Biochemistry	4
CHEM461	Advanced Inorganic Chemistry	3
CHEM462	Advanced Inorganic and Physical Chemistry Lab	1
CHEM495	Senior Project	1-3
CHEM499	Senior Seminar	1
CHEM	Electives 300 level or higher	12

Support Courses (19 credits)

BUSN211	Business Statistics	3
MATH151	Calculus I	4
MATH152	Calculus II	4
PHYS231	Applied Physics I	4
PHYS232	Applied Physics II	4

General Electives (25 credits)

Other General Education (25-28 credits)

COMM101	Fund. of Speech Communication	3
ENGL110	Freshman Composition I	3
ENGL111	First-Year Composition II	3
HUMN251	Humanities I	4
	Approved Humanities*	3
	Approved Social Science*	6-8
	Approved Soc. Sci. Diversity*	3-4

*consult list for approved courses

Free elective credits must be completed for a minimum of 124 total credits.

Chemistry Secondary Teaching Bachelor of Science

Chemistry Requirements (40 credits)

CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM225	Organic Chemistry I	4
CHEM226	Organic Chemistry II	4
CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4
CHEM361	Physical Chemistry I	4
CHEM362	Physical Chemistry II	4
CHEM451	Introduction to Biochemistry	4
CHEM462	Advanced Inorganic and Physical Chemistry Lab	1

Complete one methods course from the following:

EDUC443	Science Methods for Secondary Teachers	3
EDUC453	Directed Study in Science Methods	

Chemistry Cognates (37 credits)

CHEM395	Junior Seminar	1
CHEM461	Advanced Inorganic Chemistry	3
CHEM495	Senior Project	1-3
CHEM499	Senior Seminar	1
CHEM	Chemistry Electives	12
MATH151	Calculus I	4
MATH152	Calculus II	4
MATH207	Principles of Statistics	3
PHYS231	Applied Physics I	4
PHYS232	Applied Physics II	4

Other General Education (25-28 credits)

COMM101	Fund. of Speech Communication	3
ENGL110	Freshman Composition I	3
ENGL111	First-Year Composition II	3
HUMN251	Humanities I	4
	Approved Humanities*	3
	Approved Social Science*	6-8
	Approved Soc. Sci. Diversity*	3-4

*consult list for approved courses

Free elective credits must be completed for a minimum of 124 total credits.

**Professional Education Requirements and
Education Cognates- see Secondary Teaching.**

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Chemistry

Chemistry Bachelor of Arts

Chemistry Degree Requirements (39 credits)	
CHEM115 General Chemistry I	5
CHEM116 General Chemistry II	4
CHEM225 Organic Chemistry I	4
CHEM226 Organic Chemistry II	4
CHEM231 Quantitative Analysis	4
CHEM332 Instrumental Analysis	4
CHEM353 Introductory Toxicology	3
CHEM451 Introduction to Biochemistry	4
CHEM361 Physical Chemistry	4
CHEM395 Junior Seminar	1
CHEM495 Senior Project	1-3
CHEM499 Senior Seminar	1

Directed Electives (8 credits)	
<i>Choose eight credits from the following:</i>	
INTD399 Internship in Chemistry	2-4
CHEM Electives (300-level or higher beyond courses listed above)	

Other Departments (27 credits)	
BUSN211 Business Statistics	3
MATH151 Calculus I	4
MATH152 Calculus II	4
PHYS231 Applied Physics I	4
PHYS232 Applied Physics II	4
Foreign Language I	4
Foreign Language II	4

Other General Education (25-28 credits)	
ENGL110 Freshman Composition I	3
ENGL111 First-Year Composition II	3
HUMN251 Humanities I	4
COMM101 Fund. of Speech Communication	3
Approved Humanities*	3
Approved Social Science*	6-8
Approved Soc. Sci. Diversity*	3-4

*consult list for approved courses

Free elective credits must be completed for a minimum of 124 total credits.

Chemistry Secondary Teaching Bachelor of Arts

Chemistry Requirements (40 credits)	
CHEM115 General Chemistry I	5
CHEM116 General Chemistry II	4
CHEM225 Organic Chemistry I	4
CHEM226 Organic Chemistry II	4
CHEM231 Quantitative Analysis	4
CHEM332 Instrumental Analysis	4
CHEM361 Physical Chemistry I	4
CHEM362 Physical Chemistry II	4
CHEM451 Introduction to Biochemistry	4
CHEM462 Advanced Inorganic and Physical Chemistry Lab	1

Complete one methods course from the following:

EDUC443 Science Methods for Secondary Teachers	3
EDUC453 Directed Study in Science Methods	

Chemistry Cognates (25 credits)	
CHEM353 Introductory Toxicology	3
CHEM395 Junior Seminar	1
CHEM495 Senior Project	1-3
CHEM499 Senior Seminar	1
MATH151 Calculus I	4
MATH152 Calculus II	4
MATH207 Principles of Statistics	3
PHYS231 Applied Physics I	4
PHYS232 Applied Physics II	4

Other General Education (25-28 credits)	
COMM101 Fund. of Speech Communication	3
ENGL110 Freshman Composition I	3
ENGL111 First-Year Composition II	3
HUMN251 Humanities I	4
Approved Humanities*	3
Approved Social Science*	6-8
Approved Soc. Sci. Diversity*	3-4

*consult list for approved courses

Directed Electives (8 credits)	
INTD399 Internship in Chemistry	
CHEM Electives (300-level or higher beyond courses listed above)	

Secondary Teaching Certification

To be recommended for secondary teacher certification, students must complete an approved minor in a second teachable subject.

Professional Education Requirements and Education Cognates- see Secondary Teaching.

Chemistry Pre-Professional- Bachelor of Arts

Chemistry Degree Requirements (39 credits)	
CHEM115 General Chemistry I	5
CHEM116 General Chemistry II	4
CHEM225 Organic Chemistry I	4
CHEM226 Organic Chemistry II	4
CHEM231 Quantitative Analysis	4
CHEM332 Instrumental Analysis	4
CHEM353 Introductory Toxicology	3
CHEM451 Introduction to Biochemistry	4
CHEM361 Physical Chemistry	4
CHEM395 Junior Seminar	1
CHEM495 Senior Project	1-3
CHEM499 Senior Seminar	1

Directed Electives (8 credits)	
<i>Choose eight credits from the following:</i>	
INTD399 Internship in Chemistry	2-4
CHEM electives (300-level or higher beyond courses listed above)	

Pre-Professional Courses (16 credits)	
BIOL131 General Biology: Cells	4
BIOL132 General Biology: Organisms	4
BIOL220 Genetics	4
BIOL421 Cell Biology	4

Support Courses (27 credits)	
BUSN211 Business Statistics	3
MATH151 Calculus I	4
MATH152 Calculus II	4
PHYS231 Applied Physics I	4
PHYS232 Applied Physics II	4
Foreign Language I	4
Foreign Language II	4

Other General Education (25-28 credits)	
COMM101 Fund. of Speech Communication	3
ENGL110 Freshman Composition I	3
ENGL111 First-Year Composition II	3
HUMN251 Humanities I	4
Approved Humanities*	3
Approved Social Science*	6-8
Approved Soc. Sci. Diversity*	3-4

*consult list for approved courses

Free elective credits must be completed for a minimum of 124 total credits.

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Clinical Laboratory Science

Program Description:

Clinical laboratory scientists perform most of the clinical tests conducted in hospital, veterinary, state, and health laboratories. You may obtain the bachelor of science degree in this area by completing the specified three-year sequence at the University followed by 12 months training at an NAACLS-accredited hospital. The University is affiliated with five such hospitals, but you may elect any accredited hospital whose program is approved as satisfactory by the University. Additionally, you may choose to obtain a bachelor of science in biology and then participate in the 12-month hospital training. Lake Superior State University does not assume responsibility for obtaining an affiliation at an approved hospital. Graduates of this program are eligible to take national examinations for certification as registered clinical laboratory scientists and/or medical technologists.

Career Descriptions:

Clinical Laboratory Scientist —
Performs analytical tests on human body substances to detect evidence of, or prevent disease or impairment, and to promote and monitor good health.

Laboratory Supervisor —
Manages and supervises clinical laboratory procedures, determines usage of lab space, equipment and budgetary resources.

Specialty Research Scientist —
Clinical expertise in research areas such as biochemical genetics, cytogenetics, cell marker testing, toxicology, epidemiology.

Clinical Laboratory Science Bachelor of Science

The degree in clinical laboratory science includes the following courses in order to qualify to take the national registry examinations.

BIOL131	General Biology: Cells	4
BIOL132	General Biology: Organisms	4
BIOL204	General Microbiology	4
BIOL220	Genetics	4
BIOL330	Animal Physiology	4
BIOL380	Hematology	4
BIOL422	Parasitology	3
BIOL423	Immunology	4
BIOL460	Clinical Internship	30
BIOL480	Advanced Clinical Microbiology	3
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM225	Organic Chemistry I	4
CHEM226	Organic Chemistry II	4
CHEM231	Quantitative Analysis	4
CHEM232	Instrumental Analysis	4
CHEM451	Biochemistry	3
MATH111	College Algebra	3
MATH112	Calculus for Business & Life Science	4
MATH207	Principles of Statistical Methods	3

Additionally, a student is required to satisfy general education requirements so that 128 semester credits are earned.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Bachelor of Science

Career Choices:

Clinical Laboratory Scientist

Laboratory Supervisor

Specialty Research Scientist

Student Profile:

Do you have...

a sharp, inquisitive mind?

excellent hand-eye coordination?

an ability to perform many tasks simultaneously without error?

Communication

Bachelor of Arts

Career Choices:

- Public Relations Specialist
- Nonprofit Organization Director
- Human Resource Manager
- Sales Manager
- Entertainer
- Arts Administrator

Student Profile:

- Do you...
- enjoy working with other people?
 - like writing and talking?
 - want a position with authority?
 - enjoy performing for a crowd?
 - think critically?
 - analyze people and situations?

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:
CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Program Description:

The communication and theatre program offers versatility, nationally award-winning faculty, and excellent preparation for a career or graduate education.

The variety of elective choices allows for program adaptability to better meet future career goals. Culminating in a capstone experience of a communication internship or independent research project, the program provides a blend of theoretical and practical knowledge and experience necessary for success in the communication arts.

Career Descriptions:

- Employers consistently rate competent communication skills as fundamental for employment and promotion. The versatility of a degree in communication and theatre provides preparation for a wide variety of possible careers. Possible careers in the communication field include:
- Public Relations Specialist** — Manages communication between a business or organization and its customers and employees.
 - Nonprofit Organization Director** — Oversees the employees and volunteers within a service organization.
 - Human Resources Manager** — Oversees the hiring and training of an organization’s employees.

- Sales Manager** — Directs the sales business within an organization.
- Entertainer** — Performs in stage, television, or film.
- Arts Administrator** — Directs the business operations of an arts organization.

Communication Bachelor of Arts

Requirements: Students must complete, in addition to the general education requirements, one year (8 credits) of a foreign language other than English, 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 communication must complete one minor in an area to be approved by the chair of the department.

Required Courses		(24-25 credits)
COMM101	Fundamentals of Speech Communication (required as prerequisite for most of the following courses)	3
COMM201	Small Group Communication	3
COMM225	Interpersonal Communication	3
COMM251	History of Drama and Theatre I*	3
	or	
COMM252	History of Drama and Theatre II*	3
COMM280	Understanding Mass Media	3
COMM307	Classical/Contemporary Rhetoric	3
COMM308	Communication Theory	3
INTD399	Internship in Communication**	3
	or	
INTD490	Senior Directed Study**	3-4
Select Additional Elective Courses		(39 credits)
ENGL306	Technical Writing	3
HUMN256	Introduction to Film: Images of Our Culture	3
INTD399	Internship in Communication**	3
	or	
INTD490	Senior Directed Study**	3-4
THEA161	Problems in Speech/Drama	1-3
COMM210	Business and Professional Speaking	3
THEA251	History of Drama and Theatre I*	3
	or	
THEA252	History of Drama and Theatre II*	3
COMM302	Argumentation and Advocacy	3
THEA309	Speech and Drama Productions	3
COMM320	Public Relations	3
COMM325	Organizational Communication	3
THEA333	Studies in the Drama: the Genre and Theatre in Context	3
COMM416	Communication in Leadership	3

A minimum of 12 hours must be from 300 or 400 level courses.

Total Credits: 124

*may select one class for required class and one for elective.

**may select one class for required class and one for elective.

Computer and Mathematical Sciences

Program Description:

This degree provides a solid background in both mathematics and computer science. Many graduates from this program who work in the computer industry have stressed that the mathematics foundation gained from this degree gave them a distinct advantage in the work place.

Modeling and Simulation of Real Systems — creates computer models of environments and processes in order to understand how they work and how to improve or alter them.

Graduate School — The background gained by this degree provides a good preparation for graduate study in computer science, mathematics and other related fields.

Career Descriptions:

Senior Programmer — Designs, writes and supervises the development of large-scale software projects.

Systems Analyst — Works with customers to analyze organizations' needs; sets up systems for company.

Database Administrator — Analyzes, designs and implements the database needs of an organization.

Computer and Mathematical Sciences

Bachelor of Science

Departmental Requirements (76 credits)

Departmental GPA must be 2.50 or higher

CSCI103	Survey of computer Science	3
CSCI105	Intro. to Computer Programming	3
CSCI121	Principles of Programming	3
CSCI122	Programming Tools and Techniques	3
CSCI201	Data Structures and Algorithms	3
CSCI211	Database Applications	3
CSCI221	Computer Networks	3
CSCI291	Computer Science Project	4
CSCI312	File and Database Management	3
CSCI315	Computer Organization and Architecture	3
CSCI321	Computer Graphics	3
CSCI333	Systems Programming	3
CSCI334	Operating Systems Concepts	3
CSCI418	Senior Project I	3
	and	
CSCI419	Senior Project II	3
	or	
CSCI428	Computer Science Co-operative Education I	3
	and	
CSCI429	Computer Science Co-operative Education II	3
	or	
CSCI438	Computer Science Research Project I	3
	and	
CSCI439	Computer Science Research Project II	3
MATH151	Calculus I	4
MATH152	Calculus II	4
MATH215	Fundamental Concepts of Mathematics	3
MATH216	Discrete Mathematics and Problem Solving	3
MATH261	Intro. to Numerical Methods	3
MATH305	Linear Algebra	3
MATH308	Probability and Mathematical Statistics	3
MATH309	Applied Statistics	4
MATH351	Graph Theory	3

General Education (33-37 credits)

Free Electives (12-16 credits)

Total Credits 124

Elective credits and general education requirements must be completed so that at least 124 semester credits have been earned.

Bachelor of Science

Career Choices:

Senior Programmer

Systems Analyst

Database Administrator

Do you ...

feel comfortable with numerical problems?

like working with computers?

enjoy the challenge of problem-solving?

Bachelor Degrees

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Computer Engineering

Bachelor of Science

Options in:

Control Systems

Robotics

and Automation

Career Titles:

Software Design Engineer

Hardware Design Engineer

Robotics Engineer

Controls Engineer

Systems Engineer

Project Engineer

Applications Engineer

Student Profile:

Do you ...

like problem solving?

like working with computer hardware and software?

wonder how computers control and interact with hardware?

want to embed micro-electronics into electrical and mechanical systems?

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Program Description:

LSSU's Computer Engineering program has been designed to put you in the high-demand computer market with the potential for good career growth. This accredited* program blends practical computer science courses in computer organization, databases, operating systems, and networks with traditionally hands-on electrical engineering courses in digital circuits, digital system, microcontrollers, computer programming, and digital signal processing. This combination gives you a broad-based education that ties software to hardware and theory to application. Some of the program highlights are:

- The program provides an excellent mix of theory and practical laboratory experiences, preparing you to solve real-world problems.
- For your senior year experience, choose from opportunities in cooperative education, industry-based projects or research projects.
- Engineering courses begin in your freshman year.
- Opportunities exist for you to work with faculty on current undergraduate research projects.
- You will study assembly language programming, computer architecture, microcontroller hardware and software, databases, digital signals and systems, and networking.
- Options available in control systems and robotics and automation.

Career Description:

Computer engineering graduates will have many career choices. You may choose engineering positions in computer systems design, software development, hardware design, microcontroller systems design, robotics, research and development, applications, or sales.

Cooperative Education:

Opportunities are available as part of this program for students who are academically qualified. A certificate that documents this practical training is available.

**Engineering Accreditation Commission (EAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Phone: 410-347-7700*

Computer Engineering Bachelor of Science

Degree Requirements 129 credits

Departmental Requirements (105 credits)

Mathematics

MATH151	Calculus I	4
MATH152	Calculus II	4
MATH251	Calculus III	4
MATH308	Probability and Mathematical Statistics	3
MATH310	Differential Equations	3

Sciences

CHEM115	General Chemistry I	5
PHYS231	Applied Physics for Engineers and Scientists I	4
PHYS232	Applied Physics for Engineers and Scientists II	4

Computer Science

CSCI105	Intro. to Computer Programming	3
CSCI121	Principles of Programming	3
CSCI122	Programming Tools and Techniques	3
CSCI201	Data Structures and Algorithms or	3
CSCI221	Computer Networks	3
CSCI341	Discrete Structures for Computer Science	4

Engineering

EGNR101	Introduction to Engineering	2
EGEE125	Digital Fundamentals	4
EGEE210	Circuit Analysis	4
EGEE250	Microcontroller Fundamentals	5
EGEE280	Introduction to Signal Processing	4
EGEE320	Digital Design	4
EGEE345	Fundamentals of Engineering Electromagnetics	3
EGEE355	Microcontroller Systems	4
EGEE370	Electronic Devices	4
EGEE425	Digital Signal Processing	3
EGNR140	Linear Algebra and Numerical Methods for Engineers	2
EGNR340	Advanced Numerical Methods for Engineers	1
EGNR346	Probability and Statistics Lab for Engineers	1

General Education Requirements

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
HUMN251	Humanities I	4
	Humanities	3
	Social Science	6
	Social Science Diversity	3

Select an option:

Control Systems

EGEM220	Statics	3
EGRS460	Control Systems	4
EGRS461	Design of Control Systems	4

Robotics and Automation

EGRS385	Programmable Logic Controllers	3
EGRS430	Systems Integration and Machine Vision	4
EGRS435	Automated Manufacturing Systems	4

Technical Electives

(11 credits)

Select from the following:

CSCI271	or higher	3
EGEE310	or higher	4
EGEM220	or higher	3
EGME275	or higher	
EGRS385	Robotics Engineering	3
EGRS430	Systems Integration and Machine Vision	4
EGRS435	Automated Manufacturing Systems	4
EGRS460	Control Systems	4
EGRS461	Design of Control Systems	4
MATH215	or higher	3

Select one of the Senior Sequence options listed below to complete the Computer Engineering degree:

Industrial Project

EGNR491	Engineering Design Project I	3
EGNR495	Engineering Design Project II	3

Cooperative Project

EGNR250	Cooperative Education	2
EGNR450	Cooperative Education Project I	2
EGNR451	Cooperative Education Project II	2
EGNR491	Engineering Design Project I	3

Research Project

EGNR260	Engineering Research Methods	2
EGNR460	Engineering Research Project I	4
EGNR461	Engineering Research Project II	2

Computer Information Systems

Bachelor of Science

Career Titles:

Systems Analyst
Database Administrator

Student Profile:

Do you ...
enjoy working with computers?
like the challenge of problem-solving?
have an interest in business and management?
have proficiency in written and oral communication?

Program Description:

The Computer Information Systems degree program is designed to guide students to an understanding of the role of modern computer systems in a business environment, with an emphasis on the use of technology in the solution of business problems.

The program incorporates the Common Professional Component of the Business Administration degree programs with a strong subset of the Computer Science program, and then adds some carefully chosen courses that specifically focus on computer applications unique to traditional business environments.

Career Description:

Systems Analyst — Designs new computer information systems, analyzes existing systems with an eye toward improving their performance, and studies ways to expand the use of existing systems to serve new purposes. Systems analysts serve as a communications link between corporate management and the technical support specialists.

Database Administrator — Works with a company's database management software to design and manage the organization and storage of corporate data. The database administrator is responsible for maintaining the performance, integrity, and security of the database system.

Computer Information Systems Bachelor of Science

Departmental Requirements

Business		
ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	4
BUSN211	Business Statics	3
BUSN231	Business Communications	3
BUSN350	Business Law I	3
BUSN355	Business Law II	3
BUSN466	Business Policy	3
ECON302	Managerial Economics*	4
FINC341	Managerial Finance	4
MRKT281	Marketing Principles and Strategy	3
MGMT360	Principles of Management	3
Computer Science		
CSCI103	Survey of Computer Science	3
CSCI105	Intro. to Computer Programming	3
CSCI121	Principles of Computer Programming	3
CSCI211	Database Applications	3
CSCI221	Computer Networks	3
CSCI312	File and Database Management	3
CSCI313	Distributed Database Systems	3
CSCI341	Discrete Structures for Computer Science	4
CSCI361	Systems Analysis & Design	3
CSCI461	Decision Support & Expert Systems	3
CSCI481	Senior Project I	3
	and	
CSCI491	Senior Projects in Computer Science	3
	or	
CSCI428	Computer Science Co-operative Education I	3
	and	
CSCI429	Computer Science Co-operative Education II	3
	or	
CSCI438	Computer Science Research Project I	3
	and	
CSCI439	Computer Science Research Project II	3
Mathematics		
MATH111	College Algebra*	3
MATH112	Calculus for Business & Life Science**	4
Additional General Education		(29-32 credits)
BS Degree Requirement		(8 credits)
Free Electives		(6-7 credits)
Total Credits:		124

*Counts for General Education

**Counts for 4 credits of the BS Degree Requirement.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Computer Networking

Program Description:

This degree gives students the knowledge and tools necessary to be successful in the field of computer networking. Courses cover a range of networking topics, including network operating systems, hardware, web page design, and system administration.

Through our International University College Division, two of the courses required for the program are taught at Sault College in Sault Ste. Marie, Ontario. This collaboration between LSSU and Sault College exposes students to a broader range of hardware, software and networking topics. They will have hands-on experience with Linux, Novell and Windows platforms, as well as networking hardware and operating system installation. By taking advantage of the resources, as well as the faculty expertise, from two schools, students will benefit from an enriched educational experience — all within LSSU's regular tuition structure.

Some of the highlights of the program are:

- Students get hands-on training in networking hardware and software, and receive the necessary concepts of hardware, software and network operating systems.
- Students are prepared to take industry-standard examinations, such as those established by Cisco, Novell and Microsoft.
- Students can choose software design, research, or co-operative education as their senior capstone experience.

Career Descriptions:

Network Administrator — Designs, installs and maintains networks; sets up and manages accounts for users and resources.

Web Analyst/Designer/Programmer — Manages a web site; designs web pages, graphics and program scripts to be implemented on the World Wide Web.

System Administrator — Sets up and manages multi-user computer systems; manages users, resources, and handles security issues.

Bachelor of Science Concentration in: Web Development

Career Titles:

Network Administrators

Web Analyst/Designer/
Programmer

System Administrator

Student Profile:

Do you ...

like working with computers?

become intrigued when dealing
with networking and Internet issues?

enjoy the challenge of problem
solving?

Bachelor Degrees

(SC) denotes course offered at Sault College.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Computer Networking

Computer Networking Bachelor of Science

Departmental Requirements (64 credits)
Department GPA must be 2.50 or higher

CSCI103	Survey of Computer Science	3
CSCI105	Intro. to Computer Programming	3
CSCI106	Web Page Design and Development	3
CSCI121	Principles of Programming	3
CSCI163	Troubleshooting & Repair of Personal Computers	3
CSCI211	Database Applications	3
CSCI221	Computer Networks	3
CSCI223	Advanced Networking I	3
CSCI225	Advanced Networking II	3
CSCI263	Managing Computer Security	3
CSCI271	Network Hardware and Software	3
CSCI281	Intro. to UNIX and Networking	3
CSCI292	Computer Networking Project	4
CSCI303	Network Operating Systems I (SC)	3
CSCI305	Network Operating Systems II (SC)	3
CSCI319	Network Programming Using Java	3
CSCI333	Systems Programming	3
CSCI412	UNIX System Administration	3
CSCI422	Network and Computer Security	3
CSCI418	Senior Project I	3
CSCI419	Senior Project II	3
CSCI428	Computer Science Co-operative Education I	3
CSCI429	Computer Science Co-operative Education II	3
CSCI438	Computer Science Research Project I	3
CSCI439	Computer Science Research Project II	3

Support Courses		(6 credits)
BUSN121	Introduction to Business	3
BUSN231	Business Communications	3
MATH111	College Algebra	3
MATH207	Princ. of Statistical Methods	3

BS degree requirement 5
from Social Science, Natural Science or Math not used in general education.

General Education (33-37)

Free Electives (6-10)

Total Credits in Program: 124

Elective credits and general education requirements must be completed so that at least 124 semester credits have been earned.

Computer Networking Web Development Concentration Bachelor of Science

Departmental Requirements (64 credits)
GPA must be 2.50 or higher

CSCI103	Survey of Computer Science	3
CSCI105	Intro. to Computer Programming	3
CSCI106	Web Page Design and Development	3
CSCI107	Web Graphic Design and Development	3
CSCI121	Principles of Programming	3
CSCI207	Developing Multimedia and Rich Interactive Web Sites	3
CSCI211	Database Applications	3
CSCI221	Computer Networks	3
CSCI263	Managing Computer Security	3
CSCI275	Web Server Administration	3
CSCI281	Intro. to UNIX and Networking	3
CSCI292	Computer Networking Project	4
CSCI303	Network Operating Systems I (SC)	3
CSCI319	Network Programming Using Java	3
CSCI325	Developing Web Applications with JavaScript and PHP	3
CSCI326	Developing Web Applications with ASP.NET	3
CSCI333	Systems Programming	3
CSCI412	UNIX Network Administration	3
CSCI422	Network and Computer Security	3
CSCI418	Senior Project I	3
CSCI419	Senior Project II	3
CSCI428	Computer Science Co-operative Education I	3
CSCI429	Computer Science Co-operative Education II	3
CSCI438	Computer Science Research Project I	3
CSCI439	Computer Science Research Project II	3

Support Courses		(6 credits)
BUSN121	Introduction to Business	3
BUSN231	Business Communications	3
MATH111	College Algebra	3
MATH207	Princ. of Statistical Methods	3

BS degree requirement 5
from Social Science, Natural Science or Math not used in general education.

General Education (33-37)

Free Electives (6-10)

Total Credits in Program: 124

Elective credits and general education requirements must be completed so that at least 124 semester credits have been earned.

Computer Science

Computer Science Bachelor of Science

Departmental Requirements (65 credits)

Department GPA must be 2.50 or higher

CSCI103	Survey of Computer Science	3
CSCI105	Intro. to Computer Programming	3
CSCI121	Principles of Programming	3
CSCI122	Programming Tools and Techniques	3
CSCI201	Data Structures and Algorithms	3
CSCI211	Database Applications	3
CSCI221	Computer Networks	3
CSCI291	Computer Science Project	4
CSCI312	File and Database Management	3
CSCI315	Computer Organization and Architecture	3
CSCI321	Computer Graphics	3
CSCI333	Systems Programming	3
CSCI334	Operating Systems Concepts	3
CSCI341	Discrete Structures for Computer Science	4
CSCI342	Advanced Programming Techniques	3
CSCI418	Senior Project I	3
CSCI419	Senior Project II	3
CSCI428	Computer Science Co-operative Education I	3
CSCI429	Computer Science Co-operative Education II	3
CSCI438	Computer Science Research Project I	3
CSCI439	Computer Science Research Project II	3
MA140	Precalculus Mathematics	5
MA112	Calculus for Business and Life Science	4
MA151	Calculus I	3
MA207	Prin. of Statistical Methods	3

Other Requirements (11 credits)

AC132	Principles of Accounting I	4
AC133	Principles of Accounting II	4
BA121	Introduction to Business	3

General Education (33-37 credits)

Free Electives (or minor) (12-17 credits)

Total Credits: 124

Elective credits and general education requirements must be completed so that at least 124 semester credits have been earned.

Computer Science Bachelor of Science Secondary Teaching

Departmental Requirements (53 credits)

Department GPA must be 2.70 or higher

CSCI103	Survey of Computer Science	3
CSCI105	Intro. to Computer Programming	3
CSCI106	Web Page Design and Development	3
CSCI121	Principles of Programming	3
CSCI122	Programming Tools and Techniques	3
CSCI163	Troubleshooting and Repair of Personal Computers	3
CSCI201	Data Structures and Algorithms	3
CSCI211	Database Applications	3
CSCI221	Computer Networks	3
CSCI271	Network Hardware and Software	3
CSCI281	Network Design and Implementation	3
CSCI312	File and Database Management	3
CSCI341	Discrete Structures of Computer Science	4
CSCI418	Senior Project I	3
CSCI419	Senior Project II	3
CSCI428	Computer Science Co-operative Education I	3
CSCI429	Computer Science Co-operative Education II	3
CSCI438	Computer Science Research Project I	3
CSCI439	Computer Science Research Project II	3
MATH151	Calculus I	4
MATH207	Prin. of Statistical Methods	3

Professional Educational Requirements and Education Cognates- see Secondary Teaching.

Teaching Minor (20 credits)

General Education (30-33 credits)

Total credits in program: 124

Bachelor of Science Computer Science Secondary Teaching

Career Choices:

Computer Programmer

Systems Analyst

Information Technology Specialist

Student Profile:

Do you...

like working with computers?

enjoy the challenge of problem-solving?

Program Description:

This degree provides a solid background in computer science with supporting coursework in applied mathematics and business. Adding an appropriate minor field of study can complement the program, as well as give the graduate a competitive edge in the work force.

Career Descriptions:

Computer Programmer —

Designs, writes and tests computer programs; supervises large software projects.

Systems Analyst — Works with customers to analyze organizations' needs; sets up systems for the company.

Information Technology

Specialist — Manages IT group at a large company, research institute or school.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Conservation Biology

Bachelor of Science

Career Choices:

Conservation Biologist
 Natural Resource Specialist
 Environmental Protection Specialist
 Restoration Ecologist
 Invasive Species Specialist
 Biologist
 Naturalist
 Watershed Coordinator

Student Profile:

Do you have...

a passion for conservation of your biological heritage?
 a desire to protect and restore biodiversity?
 willingness to implement sustainable solutions to environmental challenges?
 a curiosity about the natural world?
 science and communication skills?

Program Description:

The BS in Conservation Biology prepares students for careers where they can make a contribution to mitigating wide-ranging challenges such as invasive species, altered landscapes, species extinctions, or the restoration of degraded aquatic and terrestrial ecosystems. Our selection of rigorous field based courses in watersheds, soils, forestry, ecology (general, fish, wildlife or plant), and organisms (mammalogy, ornithology, ichthyology, or entomology) offers an unparalleled set of foundational courses in the natural sciences. Combining this coursework with interdisciplinary courses in social dimensions, political science, sociology, business/economics, communication and GIS technology adds the breadth needed to integrate biological, economic, and policy issues in the formulation of sustainable solutions. Electives allow students to tailor the program to their interests and sustainable solutions. Electives allow students to tailor the program to their interests and career goals. Students may choose as a capstone experience a summer semester internship working in a professional capacity in conservation biology, or a senior thesis research project. Students will be prepared for careers or for graduate work in conservation biology or a broad range of related areas.

Career Descriptions:

Students graduating in this program are qualified for a wide range of positions in public, private, and non-profit organizations. Students will be well prepared to pursue graduate work in conservation biology and ecology.

These positions include:

Conservation Biologist: Implements conservation projects to enhance habitat value of public and private lands and protect and restore biodiversity

Natural Resource Specialist or Environmental Protection Specialist: Designs and implements natural resource projects addressing threatened and endangered species, invasive species, and water and land management issues

Restoration Ecologist: Assesses habitat limitations, designs restoration projects, monitors completed projects

Invasive Species Specialist: Carries out field inventories, scientific analyses, and provides information for natural resource planning to reduce threat if invasive species to native ecosystems

Biologist: Conducts biological field surveys for special status species

Naturalist: Combines conservation education programming with scientific field studies

Watershed Coordinator: Oversees activities related to watershed management and restoration, works with multiple stakeholders to develop and implement recommendations in watershed management plans

Conservation Biology Bachelor of Science

Major Requirements	(89-94 credits)	Select Track 1	(3)
Science and Math core	43	BIOL399 Junior Seminar	1
BIOL131 General Biology: Cells	4	BIOL495 Senior Project	1
BIOL132 General Biology: Organisms	4	BIOL499 Senior Seminar	1
BIOL220 Genetics	4	or	
BIOL250 Quantitative Biology	3	Select Track 2	(7)
BIOL280 Biometrics	3	INTD398 Planning an Experiential Learning Project	1
BIOL337 General Ecology	3	BIOL497 Internship in Conservation Biology	6
BIOL420 Evolutionary Analysis	3	General Education	22
CHEM115 General Chemistry I	5	ENGL110 First-year Composition I	3
CHEM116 General Chemistry II	4	ENGL111 First-year Composition II	3
MATH111 College Algebra	3	COMM101 Fundamentals of Speech Communication	3
MATH112 Calculus for Business and Life Sciences	4	HUMN251 Humanities I	4
MATH207 Principles of Statistical Methods	3	HUMN Elective	3-4
Investigating Ecosystems	17	Diversity Elective	3
BIOL230 Introduction to Soil Science	4	Social Science Elective*	3-4
BIOL284 Principles of Forest Conservation	4		
BIOL286 Principles of Watersheds	3		
BIOL287 Conservation Biology	3		
BIOL470 Restoration Ecology	3		
Ecology Specialization- Select one	3	Free Electives to total 124	8-13
BIOL333 Fish Ecology	3	Total Credits: 124	
BIOL339 Wildlife Ecology	3	*SOCY102 Social Problems	
BIOL437 Plant Ecology	3		
BIOL345 Limnology	3		
GIS	6		
EVRN126 Interpretation of Maps and Aerial Photographs	2		
EVRN131 Fundamentals of GIS/GPS	2		
EVRN231 Intermediate GIS	2		
Systematic- Select one	3-4 credits		
BIOL202 Field Botany	3		
BIOL243 Vertebrate Anatomy	4		
BIOL302 Invertebrate Zoology	3		
BIOL303 General Entomology	4		
BIOL310 Ichthyology	3		
BIOL311 Mammalogy	3		
BIOL312 Ornithology	3		
BIOL475 Aquatic Entomology	3		
Social Dimensions	12		
BIOL203 Fundamentals of Natural Resources	3		
ECON202 Principles of Microeconomics	3		
ECON307 Environmental Economics	3		
INTD300 The Human Environment	3		
Thesis Project	5-9		
BIOL199 Freshman Seminar	1		
BIOL299 Sophomore Seminar	1		

Conservation Leadership

Bachelor of Arts Conservation Leadership

Career Choices:

- Outreach Specialist
- Project Staff
- Stewardship Staff
- Developmental Staff
- Writer/Media Specialist
- Field Coordinator
- Government Liaison
- Director

Student Profile:

Do you have...

- a broad-based interest in environmental issues?
- an interest in promoting environmental conservation?
- science skills?
- communication skills?
- organization skills?

Program Description:

The BA in conservation Leadership prepares students for careers in global, national and community environmental conservation and advocacy programs. This multi-disciplinary program combines a strong core in the biological sciences with classes in geographic information systems, communications, business and economics, and political science. Students also take a year of foreign language, and students are encouraged to gain international experiences. The program is flexible, allowing students to select classes that best match their educational and career goals. Students conclude their program by completing an environmentally related service learning project for an environmental organization, unit of government, or business.

Career Descriptions:

Students graduating from this program are qualified for positions in conservancies, land trusts, community based environmental planning and advocacy organizations, government agencies, and environmental/sustainability programs within businesses. The program also prepares students to pursue advanced degrees in areas such as environmental policy and sustainability.

These positions include:

Outreach specialist: Educates members of the public about specific environmental issues

Project staff: Works in the field on specific conservation projects

Stewardship staff: Manages specific conservation sites, such as land conservancies or watershed associations

Development staff: Builds financial resources for conservation work through grant-writing and fund raising

Writer/Media specialist: Provides environmental information via print or electronic media

Field Coordinator: Builds networks of volunteers to carry out environmental projects and outreach

Government Liaison: Keeps politicians informed about environmental issues

Director: Manages projects of offices focusing on environmental issues and/or sustainability

Conservation Leadership Bachelor of Arts

Science and Math Core (40 credits)	
BIOL131	General Biology: Cells 4
BIOL132	General Biology: Organisms 4
BIOL199	Freshman Seminar 1
BIOL203	Fundamentals of Natural Resources 3
BIOL220	Genetics 4
BIOL250	Quantitative Biology 3
BIOL287	Conservation Biology 3
BIOL299	Sophomore Seminar 1
BIOL337	General Ecology 3
BIOL495	Senior Project 1
BIOL499	Senior Seminar 1
CHEM108	Applied Chemistry 3
CHEM109	Applied Chemistry Lab 1
EVRN126	Interpretation of Maps and Aerial Photographs 2
EVRN131	Introduction to GPS and GIS 2
INTD398	Designing and Experiential Learning Project 1
MATH111	College Algebra 3
Ecological Management Directed Electives- Select two 7-8 credits	
BIOL230	Introduction to Soil Science 4
BIOL284	Principles of Forest Conservation 4
BIOL286	Principles of Watersheds 3
Systematics Directed Electives- Select two 6-7 credits	
BIOL202	Field Botany 3
BIOL303	General Entomology 4
BIOL310	Ichthyology 3
BIOL311	Mammalogy 3
BIOL312	Ornithology 3
BIOL475	Aquatic Entomology 3
Statistics- Select one 3-4 credits	
BIOL280	Biometrics 3
BUSN211	Business Statistics 3
SOCY302	Statistics for Social Science 4
Environment and Society	
INTD300	The Human Environment 3
Business and Economics	
ECON202	Microeconomics 3
Business and Economics Directed Elective- Select one	
MGMT360	Management Concepts and Applications 3
MRKT281	Marketing Principles and Strategies 3
MRKT385	Services Marketing 3
Political Science Directed Elective- Select one	
POLI130	Introduction State and Local Government 4
POLI201	Public Administration 3
Legal Perspective	
EVRN311	Environmental Law 3

Communications	
COMM101	Fundamentals Speech Communications 3
Communications Directed Electives- Select two 6-7 credits	
COMM280	Understanding the Mass Media 3
COMM302	Argumentation and Advocacy 3
COMM320	Public Relations 4
COMM416	Communications in Leadership 3
Global Perspective- Select one	
ECON307	Environmental Economics 3
POLI342	International Environmental Policy 3
SOCY227	Population and Ecology 3
Foreign Language- Select one year 8	
CHIN151 and 152	First Year Chinese I and II 8
FREN151 and 152	First Year French I and II 8
SPAN161 and 162	First Year Spanish I and II 8
General Education 20	
Free Electives at the 400 level 6	
Free Electives to total 124 2-7	
Total Credits: 124	

Criminal Justice

Bachelor of Science

Emphasis in:

Corrections

Criminalistics

Generalist

Law Enforcement

**Law Enforcement
Certification**

**3-year Plan for a BS
following NRT degree**

Loss Control

Public Safety

Career Choices:

Police Officer

Corrections Officer

Probation Officer

Parole Officer

Conservation Officer

Private Security Officer

Public Safety Officer

Criminal Investigator

Evidence Technician

Student Profile:

Are you...

interested in people?

interested in the law?

curious about human behavior?

able to work without supervision?

Program Description:

The bachelor of science degree in criminal justice offers you the opportunity to specialize in one of six areas of concentration. This integrated

program requires students to complete an internship as well as a senior project. Students selecting the law enforcement, criminalistics or public safety options may also be eligible for police certification under the Michigan Commission on Law Enforcement Standards (MCOLES). Students completing the associate's or bachelor's degree in corrections will also be eligible for certification by the Michigan Corrections Officer Training Council (MCOTC).

The bachelor's degree option in public safety may include MCOLES certification as well as Michigan Firefighter Training Council certification.

Students entering LSSU's School of Criminal Justice, Fire Science and EMS who wish to obtain a 4-year (baccalaureate) Criminal Justice Degree will enter into their regular degree program. Students will, however, be placed into Pre-Criminal Justice core courses that will introduce them to the basic concepts for the degree. Students will apply for admission to 300/400-level courses after completing the Pre-Criminal Justice Core (PJC).

Pre-Criminal Justice Core (PJC) courses include the following:

COMM101 Fund. of Speech Communication
ENGL110 First-Year Composition I
ENGL111 First-Year Composition II
MATH110 or higher
One (1) Lab Science
All 100-level CJUS courses required in the emphasis excluding CJUS197.

Students will apply using an application form obtained from the School of Criminal Justice and Fire Science during the semester they will complete the above requirements.

Career Descriptions:

Police Officer — Works for local, state or federal agencies; works as a conservation officer; has broad arrest powers; is responsible for the safety of his/her respective communities; investigates crimes; provides a variety of related services.

Probation/Parole Officer — Manages caseloads of offenders; assures that clients follow the requirements of their probation; helps clients in their transition back to society.

Corrections Officer — Works in secure correctional facilities; performs custodial services; acts as resident unit manager; assists prisoners with their transition back to society.

Loss Control Officer — Provides many of the same services that the police do only in the private sector; maintains perimeter security in industrial settings; manages loss control programs in industrial and retail organizations; performs private investigative work.

Criminalist — Works in a crime laboratory; performs analysis of materials and other lab functions; works as a crime scene evidence technician.

Public Safety Officer — Works in a public safety department as a law enforcement officer and firefighter; works as a private consultant in industry.

Criminal Justice

Criminal Justice Corrections Emphasis Bachelor of Science

General Education Requirements (27-28 credits)

Major Requirements (46 credits)

CJUS101	Intro. to Criminal Justice	3
CJUS102	Police Process	3
CJUS110	Introduction to Corrections	3
CJUS130	Client Relations in Corrections	3
CJUS140	Correctional Client Growth and Development	3
CJUS220	Institutional Corrections	3
CJUS240	Community Based Corrections	3
CJUS250	Correctional Law	3
CJUS319	Substantive Criminal Law	3
CJUS321	Ethical Issues in Public Safety	3
CJUS330	Correctional Casework	3
CJUS355	Juvenile Justice	3
CJUS401	Senior Seminar	3
CJUS402	Criminal Justice Internship	3-9
<i>Statistics: Choose one of the following:</i>		
BUSN211	Business Statistics	3
CJUS345	Statistics and Design for Public Safety	4
MATH207	Principles of Statistical Methods	3
POLI211	Political Science Research and Statistics	4
PSYC210	Statistics	3
SOCY302	Statistics for Social Science	4

Support Courses (20 credits)

POLI110	Intro. to American Government & Politics	4
POLI120	Intro. to Legal Processes	3
PSYC101	Introduction to Psychology	4
PSYC259	Abnormal Psychology	3
SOCY214	Criminology	3
	Approved Diversity Course	3

Minor/Concentration (20 credits)

Students may complete an approved minor. This may be an approved minor other than Corrections, *or*, you may develop an approved concentration in one or more disciplines with the approval of your academic advisor.

Electives (10 credits)

Canadian students may substitute CJUS202 for CJUS319 and POLI160 for POLI110.

Criminal Justice Criminalistics Emphasis Bachelor of Science

General Education Requirements (17 credits)

Major Requirements (38 credits)

CJUS101	Intro. to Criminal Justice	3
CJUS102	Police Process	3
CJUS197	Physical Fitness for Public Safety*	2
CJUS201	Firearms Training	1
CJUS243	Investigation	3
CJUS313	Crisis Intervention and Deviant Behavior**	3
CJUS319	Substantive Criminal Law	3
CJUS321	Ethical Issues in Public Safety	3
CJUS401	Senior Seminar	3
CJUS402	Criminal Justice Internship	3-9
CJUS409	Procedural Criminal Law	3
CJUS444	Criminalistics	4
<i>Statistics: Choose one of the following:</i>		
BUSN211	Business Statistics	3
CJUS345	Statistics and Design for Public Safety	4
MATH207	Principles of Statistical Methods	3
POLI211	Political Science Research and Statistics	4
PSYC210	Statistics	3
SOCY302	Statistics for Social Science	4

Support Courses (72 credits)

BIOL131	General Biology: Cells	4
BIOL132	General Biology: Organisms	4
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM225	Organic Chemistry I	4
CHEM226	Organic Chemistry II	4
CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4
CHEM451	Introductory Biochemistry	4
EMED190	Prehospital Emergency Care & Crisis Intervention I	4
EMED191	Prehospital Emergency Care & Crisis Intervention II	4
MATH111	College Algebra	3
MATH112	Calculus for Business & Life Sciences***	4
NSCI101	Conceptual Physics	3
POLI110	Intro. to American Government and Politics	4
PSYC101	Intro. to Psychology	4
PSYC259	Abnormal Psychology	3
SOCY214	Criminology	3
	Approved Diversity Course	3

**Repeated twice*

***MCOLES students must take CJUS411 Police Operations (5) instead of CJUS313 (3).*

****or MATH151*

Canadian students may substitute POLI160 for POLI110.

Canadian students do not take CJUS197, HLTH190 or HLTH191. These are replaced by advisor-approved electives. Canadian students may substitute CJUS202 and CJUS406 for CJUS319 and CJUS409.

Generalist Emphasis Bachelor of Science

General Education Requirements (25 credits)

Major requirements (45 credits)

CJUS101	Intro. to Criminal Justice	3
CJUS102	Police Process	3
CJUS110	Introduction to Corrections	3
CJUS321	Ethical Issues in Public Safety	3
CJUS401	Senior Seminar	3
	Other CJUS Classes	26
<i>Statistics: Choose one of the following:</i>		
BUSN211	Business Statistics	3
CJUS345	Statistics and Design for Public Safety	4
MATH207	Principles of Statistical Methods	3
POLI211	Political Science Research and Statistics	4
PSYC210	Statistics	3
SOCY302	Statistics for Social Science	4

Support courses (20 credits)

POLI110	Intro. to American Government and Politics	4
POLI120	Legal Processes	3
PSYC101	Intro. to Psychology	4
PSYC259	Abnormal Psychology	3
SOCY214	Criminology	3
	Approved Diversity Course	3

Electives (31 credits)

Criminal Justice Coursework at the 300/400 level (19 credits)

Canadian students may substitute POLI160 for POLI110.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Criminal Justice

Criminal Justice Law Enforcement Emphasis Bachelor of Science

General Education Requirements (27 credits)		
Major Requirements (48 credits)		
CJUS101	Intro. to Criminal Justice	3
CJUS102	Police Process	3
CJUS110	Introduction to Corrections	3
CJUS201	Firearms Training	1
CJUS206	Law Enforcement/Loss Control Internship	3
CJUS212	Loss Control	3
CJUS243	Investigation	3
CJUS313	Crisis Intervention and Deviant Behavior	3
CJUS319	Substantive Criminal Law	3
CJUS321	Ethical Issues in Public Safety	3
CJUS401	Senior Seminar	3
CJUS402	Criminal Justice Internship	3-9
CJUS409	Procedural Criminal Law	3
CJUS444	Criminalistics	4
FIRE101	Introduction to Fire Science	3
<i>Statistics: Choose one of the following:</i>		
BUSN211	Business Statistics	3
CJUS345	Statistics and Design for Public Safety	4
MATH207	Principles of Statistical Methods	3
POLI211	Political Science Research and Statistics	4
PSYC210	Statistics	3
SOCY302	Statistics for Social Science	4
Support Courses (20 credits)		
POLI110	Introduction to American Government and Politics	4
POLI120	Introduction to Legal Processes	3
PSYC101	Introduction to Psychology	4
PSYC259	Abnormal Psychology	3
SOCY214	Criminology	3
	Approved Diversity Course	3
Electives (29 credits)		

Canadian students may substitute CJUS202 and CJUS406 for CJUS319 and CJUS409 and POLI160 for POLI110.

Certification Criminal Justice Law Enforcement Emphasis Bachelor of Science

General Education Requirements (27 credits)		
Major Requirements (51 credits)		
CJUS101	Intro. to Criminal Justice	3
CJUS102	Police Process	3
CJUS110	Introduction to Corrections	3
CJUS197	Physical Fitness for Public Safety**	1
CJUS201	Firearms Training	1
CJUS206	Law Enforcement/Loss Control Internship	3
CJUS212	Loss Control	3
CJUS243	Investigation	3
CJUS319	Substantive Criminal Law	3
CJUS321	Ethical Issues in Public Safety	3
CJUS401	Senior Seminar	3
CJUS402	Criminal Justice Internship	3
CJUS409	Procedural Criminal Law*	3
CJUS411	Police Operations*	5
CJUS444	Criminalistics*	4
FIRE101	Introduction to Fire Science	3
<i>Statistics: Choose one of the following:</i>		
BUSN211	Business Statistics	3
CJUS345	Statistics and Design for Public Safety	4
MATH207	Principles of Statistical Methods	3
POLI211	Political Science Research and Statistics	4
PSYC210	Statistics	3
SOCY302	Statistics for Social Science	4
Support Courses (23 credits)		
HLTH189	Medical First Responder*	3
POLI110	Intro. to American Government and Politics	4
POLI120	Intro. to Legal Processes	3
PSYC101	Introduction to Psychology	4
PSYC259	Abnormal Psychology	3
SOCY214	Criminology	3
	Approved Diversity Course	3
Electives (22 credits)		

*MCOLES courses
**Repeated twice

Criminal Justice Three-Year Degree for a BS in CJ following the NRT Degree Bachelor of Science 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's degree in natural resources technology (two years) and a bachelor of science degree in criminal justice (three 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 officers 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's degree, students would complete the certification Criminal Justice Law Enforcement emphasis. This plan assumes MCOLES certification and 92 additional hours following the NRT degree.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Criminal Justice Loss Control Emphasis Bachelor of Science

General Education Requirements (25 credits)

Major Requirements (64 credits)

CJUS101	Intro. to Criminal Justice	3
CJUS102	Police Process	3
CJUS110	Introduction to Corrections	3
CJUS201	Firearms Training	1
CJUS206	Law Enforcement/Loss Control Internship	3
CJUS212	Loss Control	3
CJUS243	Investigation	3
CJUS306	Security Systems	3
CJUS319	Substantive Criminal Law	3
CJUS321	Ethical Issues in Public Safety	3
CJUS341	Fire Cause & Arson Investigation	3
CJUS401	Senior Seminar	3
CJUS402	Criminal Justice Internship	3
CJUS409	Procedural Criminal Law	3
CJUS444	Criminalistics	4
FIRE101	Introduction to Fire Science	3
FIRE111	Hazardous Materials	3
FIRE206	Fire Protection Systems Equipment and Industrial Fire Protection	3
FIRE301	Code Enforcement Inspection and Fire Prevention	3
FIRE312	Hazardous Materials Management	4
<i>Statistics: Choose one of the following:</i>		
BUSN211	Business Statistics	3
CJUS345	Statistics and Design for Public Safety	4
MATH207	Principles of Statistical Methods	3
POLI211	Political Science Research and Statistics	4
PSYC210	Statistics	3
SOCY302	Statistics for Social Science	4

Support Courses (30 credits)

CSCI101	Intro. to Microcomputer Applications	3
MGMT365	Human Resource Management	3
MGMT451	Labor Law	4
POLI110	Intro. to American Government and Politics	4
POLI120	Intro. to Legal Processes	3
PSYC101	Introduction to Psychology	4
PSYC259	Abnormal Psychology	3
SOCY214	Criminology	3
	Approved Diversity Course	3

Canadian students may substitute CJUS202 and CJUS406 for CJUS319 and CJUS409, and POLI160 for POLI110.

Bachelor of Science Degree:

At least eight (8) semester credits in addition to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Criminal Justice Public Safety Emphasis Bachelor of Science

General Education Requirements (25 credits)

Major Requirements (58 credits)

CJUS101	Intro. to Criminal Justice	3
CJUS102	Police Process	3
CJUS197	Physical Fitness for Public Safety*	1
CJUS201	Firearms Training	1
CJUS206	Law Enforcement/Loss Control Internship	3
CJUS243	Investigation	3
CJUS313	Crisis Intervention and Deviant Behavior***	3
CJUS319	Substantive Criminal Law	3
CJUS321	Ethical Issues in Public Safety	3
CJUS401	Criminal Justice Senior Seminar	3
	or	
FIRE401	Fire Science Senior Seminar	3
CJUS402	CJUS Internship	3
	or	
FIRE403	Fire Science Internship	3
CJUS409	Procedural Criminal Law**	3
CJUS444	Criminalistics**	4
FIRE101	Introduction to Fire Science	3
FIRE111	Hazardous Materials	3
FIRE204	Fire Protection Hydraulics and Pumps	3
FIRE206	Fire Protection Systems Equipment and Industrial Protection	3
FIRE211	Tactics & Strategy	3
FIRE315	Company Level Supervision and Management	3
<i>Statistics: Choose one of the following:</i>		
BUSN211	Business Statistics	3
CJUS345	Statistics and Design for Public Safety	4
MATH207	Principles of Statistical Methods	3
POLI211	Political Science Research and Statistics	4
PSYC210	Statistics	3
SOCY302	Statistics for Social Science	4

Support Courses (28 credits)

EMED190	Prehospital Emergency Care & Crisis Intervention I**	4
EMED191	Prehospital Emergency Care & Crisis Intervention II**	4
POLI110	Intro. to American Government and Politics	4
POLI120	Intro. to Legal Processes	3
PSYC101	Introduction to Psychology	4
PSYC259	Abnormal Psychology	3
SOCY214	Criminology	3
	Approved Diversity Course	3

Electives (14 credits)

*Repeated twice

**MCOLES courses

***MCOLES students must take CJUS411 Police Operations (5) instead of CJUS313 (3)

FIRE197 and FIRE220 are required if firefighter certification is desired.

Early Childhood Education

Bachelor of Arts Bachelor of Science

Career Choices:

Pre-school Administrative position

Pre-school Teaching position

Student Profile:

Are you ...

interested in the care and development of children from birth to age 8?

Program Description:

This four-year program leads to a bachelor of arts or bachelor of science degree in early childhood education. It is for students interested in working with young children from birth to age eight. Students are expected to acquire an understanding of the developmental pattern of the young 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.

A total of 124 credits is required.

Career Descriptions:

Graduates of this program normally seek administrative or teaching positions with day care centers (private, public, and military base centers), head start programs, and in non-certified public and private school programs, and other facilities designed for the care and development of young children.

Pre-school Administrative Position — Acts as a center's director or assistant director.

Pre-school Teaching Position — Acts as lead teacher, assistant teacher or Head Start teacher.

Early Childhood Education Bachelor of Science or Bachelor of Arts

Departmental Requirements

CHLD101	Foundations of Early Childhood Education	3
CHLD105	Child Guidance & Welfare	3
CHLD110	Curriculum Development and Teaching Practices	3
CHLD111	Infants & Toddlers: Developmentally Appropriate Practices	3
CHLD220	Early Childhood Literature	3
CHLD260	Practicum I	4
CHLD261	Practicum II	4
CHLD270	Administration of Early Childhood Programs	3
CHLD340	Practicum III: Field Experiences	4
CHLD420	Emergent Literacy	3
CHLD430	Directed Studies in Early Childhood Education	4

Support Courses

ARTS212	Art for Elementary Teachers	3
BIOL105	Function of the Human Body	4
HLTH104	Nutrition for Early Childhood	3
HLTH181	First Aid	1
MUSC235	Music for Elementary Teachers	3
PSYC155	Lifespan Development	3
	<i>or</i>	
PSYC265	Child & Adolescent Development	3
PSYC301	Exceptional Child & Adolescent	3
SOCY113	Sociology of the American Family	3

General Education Requirements

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
HUMN251	Humanities I	4
HUMN	Elective	3-4
NSCI	Elective	4
	Social Science	6-8
	Social Science Diversity	3-4
MATH110	(or higher) Explorations in Mathematics	3
	<i>or</i>	
PHIL205	Logic	

Approved Minor (20-24)

BA Requirement	- one year of foreign language	8
	<i>or</i>	
BS Requirement	- eight credits from natural science, social science or mathematics not used for general education	

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Electrical Engineering

Program Description:

The electrical engineering program, which is accredited by EAC of ABET*, combines topics from science, math and engineering in order to study and develop solutions to electrical and computer problems. The program contains a strong laboratory emphasis with plenty of opportunities to work on real electrical systems. Some of the program highlights are:

- The teaching emphasis is on preparing you to solve real-world problems.
- You have three choices for fulfillment of your senior year experience. You may pursue opportunities in cooperative education, industry-based projects or research projects.
- You will study assembly language, circuit design, microcontroller hardware and software, digital electronics, and networks.
- Engineering courses begin in your freshman year.
- The program provides an excellent mix of theory and practical laboratory experiences.

Your Degree Options — You may choose to follow one of the following degree options while studying electrical engineering at LSSU. They are *digital systems*, *robotics and automation*, or *electrical/mechanical*. The *digital systems option* will give you additional knowledge in digital design, digital signal processing and microcontroller systems. The *robotics and automation option* provides you with a strong background in robotics, machine vision, sensors, communications and automation. If you plan to pursue graduate study, then the broader *electrical/mechanical option* is designed for you.

Career Description:

Once you graduate from LSSU, you will have many electrical engineering career choices. Typical graduates have obtained engineering positions in electrical systems design, microcontroller systems design, robotics, automation, product or process development, research and development, applications, maintenance, or sales.

Cooperative Education:

Opportunities are available as part of this program for students who are qualified. A certificate that documents this practical training is available.

**Engineering Accreditation Commission (EAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Phone: 410-347-7700*

Bachelor of Science

Options in:

Digital Systems

Robotics and Automation

Electrical/Mechanical

Vehicle Systems

Career Choices:

Design Engineer

Robotics Engineer

Systems Engineer

Project Engineer

Software Engineer

Manufacturing Engineer

Sales Engineering

Applications Engineer

Controls Engineer

Student Profile:

Do you ...

like problem solving?

like applying theories in laboratories?

like working with electrical circuitry?

want to design electrical systems to meet societal needs?

Bachelor Degrees

Electrical Engineering

Electrical Engineering Bachelor of Science

Minimum of 128 credits			
Departmental Requirements		(104 Credits)	
Mathematics			
MATH151	Calculus I	4	
MATH152	Calculus II	4	
MATH251	Calculus III	4	
MATH308	Probability and Mathematical Statistics	3	
MATH310	Differential Equations	3	
Sciences			
CHEM115	General Chemistry I	5	
PHYS231	Applied Physics for Engineers and Scientists I	4	
PHYS232	Applied Physics for Engineers and Scientists II	4	
Engineering			
EGEE125	Digital Fundamentals	4	
EGEE210	Circuit Analysis	4	
EGEE250	Microcontroller Fundamentals	4	
EGEE280	Introductory Signal Processing	4	
EGEE310	Network Analysis	4	
EGEE330	Electro-Mechanical Systems	4	
EGEE345	Fundamentals of Engineering Electromagnetics	3	
EGEE370	Electronic Devices	4	
EGEE375	Electronic Circuits	4	
EGNR101	Introduction to Engineering	2	
EGNR140	Linear Algebra and Numerical Methods for Engineers	2	
EGNR265	"C" Programming	3	
EGNR340	Advanced Numerical Methods for Engineers	1	
EGNR346	Probability and Statistics Lab for Engineers	1	
EGEM220	Statics	3	
EGRS460	Control Systems	4	
EGRS461	Design of Control Systems	4	
General Education Requirements			
COMM101	Fund. of Speech Communication	3	
ENGL110	First-Year Composition I	3	
ENGL111	First-Year Composition II	3	
HUMN251	Humanities I	4	
	Humanities	3	
	Social Science	6	
	Social Science Diversity	3	
			Technical Electives (11 credits)
			EGEE320 or higher 4
			EGEM320 Dynamics 3
			EGME225 or higher 3
			EGRS385 Robotics Engineering 3
			EGRS430 Systems Integration & Machine Vision 4
			EGRS435 Automated Manufacturing Systems 4
			EGRS461 Design of Control Systems 4
			MATH215 or higher 3
			Select one of the following options to complete the Electrical Engineering degree:
			Digital Systems Option
			EGEE320 Digital Design 4
			EGEE355 Microcontroller Systems 4
			EGEE425 Digital Signal Processing 3
			Robotics and Automation Option
			EGRS385 Robotics Engineering 3
			EGRS430 Systems Integration & Machine Vision 4
			EGRS435 Automated Manufacturing Systems 4
			Electrical/Mechanical Option
			EGEM320 Dynamics 3
			EGME225 Strength of Materials I 3
			EGME337 Thermodynamics 4
			Vehicle Systems Option
			EGEE365 Vehicle Instrumentation 4
			EGEM320 Dynamics 3
			EGME310 Vehicle Development & Testing 2
			EGME415 Vehicle Dynamics 2
			Select one of the following Senior Sequence options to complete the Electrical Engineering degree:
			Industrial Project
			EGNR491 Engineering Design Project I 3
			EGNR495 Engineering Design Project II 3
			Cooperative Project
			EGNR250 Cooperative Education 2
			EGNR450 Cooperative Education Project I 2
			EGNR451 Cooperative Education Project II 2
			EGNR491 Engineering Design Project I 3
			Research Project
			EGNR260 Engineering Research Methods 2
			EGNR460 Engineering Research Project I 4
			EGNR461 Engineering Research Project II 2

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Electrical Engineering Technology

Program Description:

LSSU's Electrical Engineering Technology (EET) program integrates knowledge from areas of study such as science, math, computers, electrical engineering, management and economics in order to prepare you for an engineering technology career with the potential for growth into management. The EET program includes topics such as C programming, robotics, programmable logic controllers (PLC's), digital system design, embedded microprocessor systems, and circuit board layout and population. Most technical classes in the curriculum include a laboratory along with the lecture.

Students pursuing the BS degree in EET have the option to minor in Robotics Technology. LSSU is one of a few universities in the U.S. to offer an extensive Robotics Technology minor as part of the BS degree in EET and is home to one of the best robotics educational facilities in North America. The minor in Robotics Technology will be indicated on your transcripts.

Some of the program highlights are:

- The program provides an excellent mix of theory and practical laboratory experiences, preparing you to solve real-world problems.
- Engineering courses begin in the freshman year.
- Technical electives may be selected to obtain a minor in Robotics Technology.
- Less mathematics than the Electrical Engineering program.

Career Description:

Once you graduate from LSSU with a BS degree in EET, you will have many career choices. Electrical engineering technologists are employed in many industries including: aerospace, robotics, chemical, medical, industrial electronics, automotive, and automated manufacturing.

Positions within these industries are varied and include: design of electrical systems, circuit board layout, robotic workspace design, PLC programming, technical sales, and programming of robots. The BS degree in EET should provide the groundwork to eventually take on a leadership or managerial role.

Cooperative Education:

Opportunities are available as part of this program for students who are academically qualified. A certificate that documents this practical training is available.

Bachelor of Science

Option:
General

Minor:
Robotics Technology

Career Choices:

Electronic Technician
Robotics System Design
Robotics Programming
Electronic Manufacturing
Electrical Circuit Board Layout
PLC Programming
Technical Sales

Student Profile:

Do you want to...
work with electronic circuitry?
apply theories in the laboratory?
program machines?
work with industrial robots?

Electrical Engineering Technology

Electrical Engineering Technology Bachelor of Science

Departmental Requirements			Technical Electives		10
CHEM108	Applied Chemistry	3	CSCI163	Troubleshooting and Repair of Personal Computers	3
CHEM109	Applied Chemistry Lab	1	EGEE305	Analog and Digital Electronics	3
EGEE125	Digital Fundamentals	4	EGEE365	Vehicle Instrumentation	4
	<i>C or better required</i>		EGME141	Solid Modeling	3
EGEE250	Microcontroller Fundamentals	4	EGME240	Assembly Modeling and GD&T	3
EGEE320	Digital Design	4	EGME275	Engineering Materials	3
EGEE355	Microcontroller Systems	4	EGME276	Strength of Materials Lab	1
EGET110	Applied Electronics	4	EGME338	Fluid Mechanics	2
	<i>C or better required</i>		EGME310	Vehicle Development and Testing	2
EGET175	Applied Electronics	4	EGMT225	Statics and Strength of Materials	4
	<i>C or better required</i>		EGMT310	CNC Manufacturing Processes	4
EGET310	Electronic Manufacturing Processes	4	EGMT332	Thermodynamics and Heath Transfer for Technologists	4
EGME141	Solid Modeling	3	EGRS430	Systems Integration and Machine Vision	4
EGNR101	Introduction to Engineering	2	EGRS480	Control Systems and Automation	3
EGRN140	Linear Algebra and Numerical Methods for Engineers	2	EGRS481	Control Systems and Automation Lab	1
EGRN245	Calculus Applications for Technology	3	MATH215	or higher Fundamental Concepts of Math	3
EGRN265	C programming	3	Students wishing to complete the Robotics Technology minor should take the following as technical or free electives:		
EGRN310	Advanced Quality Engineering	4	EGRS430	Systems Integration and Machine Vision	
EGRS215	Robotics Technology I	2	EGRS480	Control Systems and Automation	
EGRS365	Programmable Logic Controllers	3	EGRS481	Control Systems and Automation Lab	
EGRS380	Robotics Technology II	2			
EGRS381	Robotics Technology II Lab	1			
MATH111	College Algebra	3			
	<i>C or better required</i>				
MATH112	Calculus for Business and Life Science	4			
MATH131	College Trigonometry	3			
MATH207	Principles of Statistical Methods	3			
MGMT375	Introduction to Supply Chain Management	3			
PHYS221	Elements of Physics I	4			
	<i>C or better required</i>				
PHYS222	Elements of Physics II	4			
			Free Electives		3
			General Education		22
			Total Credits		126

Select on of the following Senior Sequence options to complete the Electrical Engineering Technology Degree:

Industrial Project	
EGNR491	Engineering Design Project I
EGNR495	Engineering Design Project II
<i>or</i>	
Cooperative Project	
EGNR250	Cooperative Education
EGNR450	Cooperative Education Project I
ENGR451	Cooperative Education Project II
ENGR491	Engineering Design Project I

Elementary Teaching

Program Description:

The program is highlighted by in-depth study in a subject major (or dual minors for some elementary candidates), extended teaching communities of diverse learners and scholarly inquiry.

While working toward completion of a major, students take the first two teacher education courses and then apply for formal admission to the program during their sophomore year.

Details of current teaching certificates, program requirements, policies and procedures are available via the School website: <http://lssu.edu/education>

Program Completer

The Michigan Department of Education identifies a “program completer” as one who has accomplished both (a) all institutional academic and other requirements such as to establish eligibility for recommendation for certification and (b) taken/passed the minimum number of state certification tests for the field of teaching desired.

Career Descriptions:

Elementary Teacher — Completion of internship and graduate course work qualifies students for elementary teacher certification in Michigan, as well as reciprocity with Ontario and many other states in the U.S.

School Administrator or School Counselor — A valid teaching certificate and teaching experience are recommended prerequisites to becoming either a school administrator or counselor. Further course work and separate certification are also required.

Educational Consultant or Trainer — Trains personnel in industry on new procedures and/or equipment as needed. Also develops curriculum for textbooks and/or special programs for educational institutions.

Bachelor of Science

Bachelor of Arts

Career Choices:

Elementary Teacher

School Administrator

School Counselor

Educational Consultant or Trainer

Student Profile:

Do you ...

like working with children and adults from diverse backgrounds?

have self-confidence, flexibility, enthusiasm and intellectual curiosity?

have proficiency in spoken and written communication, reading, mathematics, science and liberal arts?

Elementary Teaching

Bachelor of Arts Bachelor of Science

Elementary Teaching

Candidates for Michigan Teacher certification must complete an approved program including preparation to teach the subjects identified in the Michigan Curriculum Framework. These subjects include Language Arts, Mathematics, Natural Science, and Social Studies.

Elementary-level teacher certification in Michigan permits individuals to teach in self-contained classrooms grades K-8, and all subjects K-5. Individuals may also qualify to teach the subjects of their academic major and/or minor(s) in grades 6-8.

All program completers meet the requirements of the No Child Left Behind Act and are considered "Highly Qualified" in the areas indicated on their Michigan teaching certificates.

Option I: A bachelor of arts or a bachelor of science degree in an approved major.

1. One academic major from the following list
2. All courses in the Elementary Planned Program where that course content is not otherwise included in the major or minor
3. Child and Adolescent Development (PSYC 265) (EDUC 150 meets prerequisite)
4. Professional Education requirements and cognates
5. General education requirements not met through the planned program
6. Prior to the student teaching internship students must receive a passing score on the Michigan Test for Teacher Certification-Elementary Education.

All academic majors and minors used for teacher certification undergo periodic review, evaluation and alignment with state standards. Since program approval and renewal cycles vary, individuals should contact the School of Education and/or the academic department to confirm the availability of each major or minor.

Major: See requirements in this catalog for each teaching option major.

- a. English Language and Literature
- b. French Studies
- c. Integrated Science
- d. Mathematics
- e. Social Studies
- f. Spanish

All individuals placed into the student teaching internship MUST meet ALL of the following criteria prior to placement in a K-12 classroom:

- a. Completion of all required EDUC courses with a grade of B- (2.70) or higher.
- b. Completion of all required courses in the education cognates, teaching major and/or teaching minor(s) with a GPA of 2.70 or higher and no grade below a C (2.0).
- c. Completion of elementary planned program requirements with GPA of 2.70 or higher and no grade below a C (2.0) - elementary candidates only.
- d. A candidate rating of 1, 2 or 3 on LSSU Form F365 the Pre-Internship Exit Interview.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Elementary Teaching

Option II: A bachelor of science degree in elementary education.

1. Two approved minors in fields outside education.*
2. All courses in the Elementary Planned Program where that course content is not otherwise included in the minors.
 - a. Language Arts
 - b. Mathematics
 - c. Natural Science
 - d. Social Studies
3. Child and Adolescent Psychology (PSYC 265) (EDUC 150 meets prerequisite)
4. Professional Education requirements and cognates
5. General education requirements not met through planned program
6. Prior to the internship year the Michigan Test for Teacher Certification Elementary Education Test and any subject area tests need to be satisfactorily completed.

All academic majors and minors used for teacher certification undergo periodic review, evaluation and alignment with state standards. Since program approval and renewal cycles vary, individuals should contact the School of Education and/or the academic department to confirm the availability of each major or minor.

Minors: See requirements in this catalog for each minor***

- a. Early Childhood Education**
- b. English
- c. French Language and Literature
- d. Integrated Science
- e. Mathematics
- f. Social Studies
- g. Spanish Language and Literature

Planned Program for Elementary Teachers

Depending upon which option is selected, students take all courses in the Elementary Planned Program where that course content is not otherwise included in the major or minor.

Language Arts:

ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
ENGL222	English Grammar	3
ENGL335	Children's Literature in the Classroom	3

Choose one literature class from the following:

ENGL180	Introduction to Literary Studies	3
ENGL235	Survey of Native Literature of North America	3
ENGL236	Literature and Culture	3

Mathematics:

MATH103	Number Systems & Problem Solving	4
MATH104	Geometry & Measurement	4
MATH207	Principles of Statistical Methods (or equivalent)	3

Natural Sciences:

NSCI110	Chemistry in Society	4
NSCI101	Conceptual Physics	4
BIOL107	Field Biology	3
NSCI102	Introduction to Geology	4

Social Studies:

HIST101	World Civilization I and	8
HIST102	World Civilization II or	
HIST131	United States History I and	8
HIST132	United States History II	
GEOG201	World Regional Geography	4
POL110	American Government	4

All Students:

PSYC265	Child and Adolescent Psychology	3
EDUC330	Reading in the Elementary Classroom	3

Professional Education Requirements

EDUC150	Reflections on Learning and Teaching	3
EDUC250	Student Diversity & Schools	3
EDUC301	Learning Theory and Teaching Practice	4
EDUC330	Reading in the Elementary Classroom	3
EDUC410	Corrective Reading in the Classroom	3
EDUC411	Elementary Language Arts and Methods Across the Curriculum	3
EDUC420	Math Methods for Elementary Teachers	2
EDUC421	Science Methods for Elementary Teachers	2
EDUC422	Social Studies Methods for Elementary Teachers	2
EDUC423	Arts Methods for Classroom Teachers	2
EDUC424	Health/Physical Education Methods for Classroom Teachers	2
EDUC480	Internship in Teaching: Seminar	1
EDUC492	Internship/Advanced Methods: (subject)	8
EDUC602	Reflection and Inquiry in Teaching Practice I	3
EDUC605	Integrated Approach in Curricular Design and Implementation	3

Education Cognates

MATH207	Principles of Statistical Methods	3
One credit from courses in ARTS, DANC, MUSC, THEA, or NATV240		1

*Note: Students are advised to carefully consider the selection of major and minors to optimize the overlap of content between the major/minors and the requirements of the Elementary Planned Program. Credits used to obtain one major/minor cannot be used to obtain another major/minor, certain restrictions apply.

**Early Childhood Education may only be used as a third/additional minor leading to the ZA teaching endorsement. Early Childhood Education may not be one of the two academic minor used to qualify for initial certification.

***The Michigan Department of Education was about to issue new standards for the preparation of elementary teachers at the time this catalog was being finalized. Check with the school office, or our website, for current information about available programs. <http://lssu.edu/education>

Elementary Education: Special Education-Learning Disabilities

Bachelor of Science

Career Choices:

- Special Education Teacher
- Regular Education Elementary Teacher
- Special Education Coordinator

Student Profile:

- Are you ...*
- Willing to work with students having special needs?
- A good communicator?
- Able to work with others?
- Well organized and able to handle challenging tasks?
- A lifelong learner willing to help others learn?

Program Description:

Teachers for students with learning disabilities are in high demand both in Michigan and across the country. Combining this specialty with an elementary certificate will prepare our graduates for a wide variety of teaching assignments working with students who will really benefit from the quality education experiences you can provide.

The major in Elementary Education:

Special Education- Learning Disabilities offers you the opportunity to become a certified special education teacher in a public or charter school. As an elementary teacher, the graduate will be a Highly Qualified teacher under No Child Left Behind when they are teaching in self contained classrooms grades K-8. Based on completing an academic minor in a teaching field the graduate will be qualified to teach that field in grades 6-8. As an elementary teacher with a special education endorsement to work with students who have learning disabilities the graduate will be qualified to work as a special education teacher. The program requires the same training as an elementary teacher with an academic major in learning disabilities. A teaching minor is required.

Career Descriptions:

Special Education Teacher — teach in a resource room for students with learning disabilities, or teach academic subjects in classes containing students with special needs.

Elementary Teacher — teach in self-contained classrooms (one teacher with one group of students for the majority of the instruction day) with students in grades K-8, or any subjects grades K-5.

Middle School Teacher — teach in grades 6-8 the fields indicated by your academic teaching minor (e.g. math, science, language arts, social studies).

Elementary Education: Special Education-Learning Disabilities

Elementary Education: Special Education-Learning Disabilities Bachelor of Science

Special Education Major		42	EDUC422	Social Studies Methods for Elementary Teachers	2
EDSE301	Introduction to Special Education	3	EDUC423	Arts Methods for Classroom Teachers	2
EDSE320	Introduction to Learning Disabilities	3	EDUC424	Health/Physical Education Methods for Classroom Teachers	2
EDSE330	Introduction to Cognitive Impairments	3	EDUC480	Internship in Teaching: Seminar	1
EDSE340	Introduction to Emotional/Behavioral Behavioral Impairments	3	EDUC492	Internship/Advanced Methods: (subject)	8
EDSE350	Assistive Technologies & Learning Disabilities	3	EDUC602	Reflection and Inquiry in Teaching Practice I	3
EDSE401	Curriculum Design & Learning Disabilities	3	Elementary Planned Program		
EDSE402	Assessment & Learning Disabilities	3	MATH103	Number Systems & Problem Solving	4
EDSE410	Records, Regulations and Requirements	3	MATH104	Geometry & Measurement	4
EDSE420	Communication and Community	3	BIOL107	Field Biology	3
EDSE430	Diagnosis, Development and Delivery	3	NSCI110	Chemistry in Society	4
EDSE480	Student Teaching Seminar: Special Education	1	NSCI101	Conceptual Physics	4
EDSE492	Internship/Supervised Student Teaching: Learning Disabilities	8	NSCI102	Introduction to Geology	4
PSYC301	Exceptional Child and Adolescent	3	PSCI110	American Government	4
Professional Education Requirements		41	GEOG201	World Regional Geography	4
EDUC150	Reflections on Learning and Teaching	3	PSYC265	Child Adolescent Psychology	3
EDUC250	Student Diversity & Schools	3	<i>Select one history sequence</i>		
EDUC301	Learning Theory and Teaching Practice	4	HIST101	World Civilization I and	8
EDUC330	Reading in the Elementary Classroom	3	HIST102	World Civilization II or	
EDUC410	Corrective Reading in the Classroom	3	HIST131	United States History I and	8
EDUC411	Elementary Language Arts and Methods Across the Curriculum	3	HIST132	United States History II	
EDUC420	Math Methods for Elementary Teachers	2	ENGL222	English Grammar	3
EDUC421	Science Methods for Elementary Teachers	2	ENGL335	Children's Literature Classroom	3
			<i>Choose one literature class from the following:</i>		
			ENGL180	Introduction to Literary Studies	3
			ENGL235	Survey of Native Literature of North America	3
			ENGL236	Literature and Culture	3
			Education Cognates		
			MATH207	Principles of Statistical Methods	3
			One credit from courses in ARTS, DANC, MUSC, THEA, or NATV240		
			General Education Requirements		
			COMM101	Fund. of Speech Communication	3
			ENGL110	First-Year Composition I	3
			ENGL111	First-Year Composition II	3
			HUMN251	Humanities I	4
			HUMN	Elective	3-4
			Natural Science Elective [met in elementary planned program]		
			Natural Science Elective [met in elementary planned program]		
			Social Science Elective [met in elementary planned program]		
			Social Science Elective [met in elementary planned program]		
			MATH110 Elective [met by MATH207 in education cognates]		
			Diversity Elective [met by EDUC250 in professional education sequence]		

Engineering Management

Bachelor of Science

Career Choices:

Engineering Supervisor

Operations Manager

Production Manager

Program Description:

The Engineering Management program is designed for students who already have a technical associate's degree to complete a management-oriented bachelor's degree in two additional years. The program will expand your technical education in robotics and automation. It will also provide you with valuable business skills that could qualify you for advancement in industry.

Technical associate's degree transfer credits are accepted for a wide range of technical programs. Technical courses provide a focus in modern robotics and automated manufacturing methods.

Program Focus — Engineering management combines technical and business classes. Typical business classes include accounting, finance and management. The technical classes have a manufacturing flavor. Typical technical classes include calculus, robotics technology, advanced quality methods, programmable logic controllers and automated manufacturing systems.

Career Description:

Once you graduate from LSSU, you will be prepared for many middle- to upper-management positions within your technical field.

Engineering Management Bachelor of Science

School of Business, Economics and Legal Studies (28 Credits)

ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	4
BUSN	300/400-Level Electives*	6
ECON302	Managerial Economics	4
FINC341	Managerial Finance	4
MGMT360	Management Concepts and Applications	3
MGMT471	Production Management	3

School of Engineering and Technology (21-22 Credits)

EGNR310	Advanced Quality Engineering	3
EGMT225	Statics & Strength of Materials I	4
EGET110	Applied Electricity	4
EGRS365	Programmable Logic Controllers (on campus)	
	or	3-4
EGRS366	Programmable Logic Controllers (off campus)	
EGRS380	Robotics Technology II	2
EGRS382	Intro. to Robotics Programming	1
EGRS480	Control Systems and Automation	3
EGRS482	Automation and Simulation Lab	1

Technical Electives (34-37 credits)

Support Courses (11 credits)

MATH112	Calculus for Business and Life Sciences	4
MATH207	Principles of Statistical Methods	3
PHYS221	Principles of Physics	4

General Education (34-37 Credits)

Students must satisfy all University general education requirements to total 124 credits.

Total Credits: 124

**BUSN Electives: Complete at least six credits of 300-400 level (LSSU equivalent) courses in ACTG, BUSN, ECON, MGMT or MRKT.*

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

English Language and Literature

Program Description:

Featuring small classes, lots of reading, many opportunities for writing and research, and supervision by faculty who know their students, the English programs emphasize the humane letters and language study.

Every year, the English Department holds the Osborn Poetry Contest and the Fiction Short Story Contest. Submissions are due at the beginning of February, with the winners announced in March.

Career Descriptions:

A sound liberal arts education is a satisfactory and sought-after preparation for many vocational and professional areas: communication, industry, government and teaching.

Editor — Develops original fiction and nonfiction for books, magazines and trade journals, newspapers, technical reports, company newsletters, radio and television broadcasts, movies and advertisements.

Technical Writer — Puts scientific and technical information into readily understandable language. Prepares operating and maintenance manuals, catalogs, parts lists, assembly instructions, sales promotion materials and project proposals. Plans and edits technical reports and oversees preparation of illustrations, photographs, diagrams and charts.

Public Relations Director — Handles media, community, consumer and government relations; political campaigns; interest-group representation; conflict mediation; or employee and investor relations.

Elementary or Secondary Teacher — Teaches subject matter relevant to the English language and literature to diverse learners, grades K-12.

Bachelor of Arts Elementary Teaching Certification, BA Secondary Teaching Certification, BA

Career Choices:

Editor

Technical Writer

Public Relations Director

Elementary or Secondary Teacher

Graduate Study

Student Profile:

Do you ...

like language with all its richness
and nuances?

often help others with interpreting
a passage or writing a paragraph?

enjoy a rich, imaginative sense?

like writing and reading?

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252,
GRMN141-142 or 241-242, NATV141-142 or
201-202, or SPAN161-162.

*One-half year of two different languages will
not meet this requirement.*

English Language and Literature

English Language and Literature Bachelor of Arts

Requirements: Students must complete, in addition to the general education requirements, two years of foreign language, 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.

Required Courses:

ENGL180	Introduction to Literary Studies	3
ENGL231	American Literature I	3
ENGL232	American Literature II	3
ENGL233	English Literature I	3
ENGL234	English Literature II	3
ENGL310	Advanced Writing	3
ENGL420	History of the English Language	3
ENGL421	History of Literary Criticism	3
ENGL490	Senior Thesis	3
	Second-Year Foreign Language	8

One course must be selected from:

THEA309	Speech and Drama Productions	3
THEA333	Studies in the Drama: the Genre and Theater in Context	3

ENGL235	Survey of Native Literature of North America	3
ENGL236	Literature and Culture	3
ENGL340	Genre Studies	3
HUMN255	World Mythology	4
HUMN256	Introduction to Film: Images of our Culture	3
HUMN261	World Literature I	3
HUMN262	World Literature II	3

One course must be selected from:

ENGL401	Medieval Literature	3
ENGL402	Renaissance Literature	3
ENGL403	Restoration Literature	3

One course must be selected from:

ENGL405	Romantic Literature	3
ENGL406	Nineteenth Century Literature	3
ENGL407	Twentieth Century Literature	3

One additional course must be selected from

ENGL401, 402, 403, 405, 406, 407		
----------------------------------	--	--

One course must be selected from:

COMM307	Classical/Contemporary Rhetoric	3
ENGL221	Creative Writing	3
ENGL222	Basic Grammar	3
ENGL306	Technical Writing	3
ENGL320	Responding to Writing	3
ENGL410	The Children's Literary Tradition	3
ENGL433	Topics in Literature and Composition	3
ENGL450	Directed Independent Study	3

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

English Language and Literature — Elementary Teaching Certification Bachelor of Arts

English Requirements (42 credits)

ENGL180	Introduction to Literary Studies	3
ENGL221	Creative Writing	3
ENGL222	English Grammar	3
ENGL231	American Literature I	3
ENGL232	American Literature II	3
ENGL233	English Literature I	3
ENGL234	English Literature II	3
ENGL310	Advanced Writing	3
ENGL335	Children's Literature in the Classroom	3
ENGL410	The Children's Literary Tradition	3
ENGL421	History of Literary Criticism	3
ENGL490	Senior Thesis	3
EDUC411	Elementary Language Arts Methods	3

Select one of the following three:

ENGL235	Survey of Native Literature of North America	3
ENGL236	Literature and Culture	3
ENGL340	Genre Studies	3

English Departmental Requirements

(up to 16 credits)

Year two of a foreign language

Elementary Planned Program (45 credits)

MATH103	Number Systems and Problem Solving	4
MATH104	Geometry and Measurement	4
BIOL107	Field Biology	3
NSCI101	Conceptual Physics	4
NSCI110	Chemistry in Society	4
NSCI102	Introduction to Geology	4
POL110	American Government	4
GEOG201	World Regional Geography	4
PSYC265	Child and Adolescent Psychology	3

Select one history sequence:

HIST101	World Civilization History I	4
HIST102	World Civil History	4
or		
HIST131	U.S. History I	4
HIST132	U.S. History II	4

Choose one literature class from the following:

ENGL180	Introduction to Literary Studies	3
ENGL235	Survey of Native Literature of North America	3
ENGL236	Literature and Culture	3

General Education Requirements (36-42 credits)

ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
COMM101	Fundamentals of Speech	3
HUMN251	Humanities I	4
HUMN	Electives	3-4
	Social Science Electives	6-8
	Natural Science Electives	8
	Math Elective	3-5
	Diversity Elective	3-4

Professional Education Requirements and

Education Cognates - see Elementary Teaching.

English Language and Literature — Secondary Teaching Certification Bachelor of Arts

English Requirements (42 credits)

ENGL180	Introduction to Literary Studies	3
ENGL231	American Literature I	3
ENGL232	American Literature II	3
ENGL233	English Literature I	3
ENGL234	English Literature II	3
ENGL310	Advanced Writing	3
ENGL320	Responding to Writing	3
ENGL410	The Children's Literary Tradition	3
ENGL420	History of the English Language	3
ENGL421	History of Literary Criticism	3
ENGL490	Senior Thesis	3

Select one of the following three:

ENGL235	Survey of Native Literature of North America	3
ENGL236	Literature and Culture	3
ENGL340	Genre Studies	3

Complete one of the followings methods courses:

EDUC441	Secondary Language Arts Methods	3
EDUC451	Directed Study: Language Arts Methods	3

Period Elective

(6 credits)

Select two courses from:

ENGL401	Medieval Literature	3
ENGL402	Renaissance Literature	3
ENGL403	Restoration Literature	3
ENGL405	Romantic Literature	3
ENGL406	19th Century Literature	3
ENGL407	20th Century Literature	3

English Cognate

(up to 19 credits)

Year two of a foreign language		
ENGL222	English Grammar	3

General Education Requirements (36-42 credits)

ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
COMM101	Fundamentals of Speech	3
HUMN251	Humanities I	4
HUMN	Electives	3-4
	Social Science Electives	6-8
	Natural Science Electives	8
	Math Elective	3-5
	Diversity Elective	3-4

An Approved Teaching minor is required

Professional Education Requirements and Education Cognates- see Secondary Teaching.

Electives to total at least 124

Environmental Chemistry

Program Description:

Environmental chemists seek to understand and address environmental problems within the context of chemical systems. While environmental chemistry is truly an interdisciplinary field, the particular emphasis on examining natural systems through chemistry and chemical analysis focuses the graduate more firmly within the physical sciences. Key features of this program include course work on environmental impact assessment, air and water chemistry. By seeking solutions for such chemically based environmental problems as water pollution, hazardous wastes, and acid rain, environmental chemists help ensure a safe, healthful environment for all living things.

Career Descriptions:

Environmental Chemist — Collects and analyzes samples; develops remediation programs, changing production processes to reduce environmental impact; advises on safety and emergency response.

Environmental Field Technician — Responsible for groundwater sampling, soil sampling and other field efforts.

Field Chemist — Supervises field technicians; packages chemicals for transportation and disposal; loads and unloads supply trucks. Customer relation skills are essential.

Physical Science Technician — Performs technical procedures related to chemical analyses of plant and animal tissues, soils, sediments and waters for environmental contaminants, including sample receipt, storage, homogenization, extraction, cleanup, digestion analysis, and reporting.

Physical or Biological Scientist (Research) — Assists policy development/coordination with other bureaus/government agencies; coordinates research activities and development of solutions to extremely complex, obscure and critical problems.

Laboratory Chemist — Has knowledge of EPA methods for volatile, semi-volatile analysis and metals; instrument proficiency, with instrument troubleshooting a plus; good organizational skills, attention to detail, and a will to succeed.

Bachelor of Science

Career Choices:

Environmental Chemist
Environmental Field Technician
Field Chemist
Environmental Specialist
Physical Science Technician
Physical or Biological Scientist
Pollution Control Specialist
Laboratory Chemist

Student Profile:

Do you have an ...

interest in the environment and environmental protection?

aptitude in natural sciences, particularly chemistry and mathematics?

skills in planning, organization and problem solving?

ability to communicate effectively in writing?

ability to effectively organize and present information verbally?

ability to communicate and work with a broad array of people?

Environmental Chemistry

Environmental Chemistry Bachelor of Science

Degree Requirements

Biology	(15 credits)
BIOL131 General Biology: Cells	4
BIOL132 General Biology: Organisms	4
BIOL204 General Microbiology	4
BIOL337 General Ecology	3

Chemistry	(44 credits)
CHEM115 General Chemistry I	5
CHEM116 General Chemistry II	4
CHEM225 Organic Chemistry I	4
CHEM226 Organic Chemistry II	4
CHEM231 Quantitative Analysis	4
CHEM332 Instrumental Analysis	4
CHEM341 Environmental Chemistry I: Water and Water Pollution Control	4
CHEM342 Environmental Chemistry II: Air and Solid Wastes	4
CHEM353 Introductory Toxicology	3
CHEM361 Physical Chemistry	4
CHEM451 Introductory Biochemistry	4

Environmental Science	(15-17 credits)
EVRN311 Environmental Law	3
EVRN313 Solid & Hazardous Waste	3
EVRN395 Junior Seminar	1
EVRN425 Environmental Systems Analysis	3
EVRN495 Senior Project	1-3
EVRN499 Senior Seminar	1
NSCI103 Environmental Science	3

Other Departments	(26-27 credits)
BUSN211 Business Statistics	3
MATH151 Calculus I	4
MATH152 Calculus II	4
PHYS221 Elements of Physics I	4
PHYS222 Elements of Physics II	4
Directed Elective	3-4
Directed Elective	3-4

Directed Electives

(included Other Departments requirements)

BIOL230 Introduction to Soils	4
BIOL345 Limnology	3
EVRN126 Interpretation of Maps and Aerial Photography	2
EVRN131 Introduction to GIS and GPS	2
EVRN231 Intermediate GIS	2
EVRN285 Epidemiology	3
EVRN325 Geospatial Analysis III	3
EVRN490 Independent Study in Environmental Science	3-4
FIRE312 Hazardous Material Management	4
GEOL121 Physical and Historical Geology I	4
GEOL122 Physical and Historical Geology II	4
GEOL411 Hydrologic Systems: Surface and Groundwater	4
INTD399 Internship in Environmental Chemistry	3-4

Students are required to satisfy general education requirements (natural science requirements are met by directed electives courses) and free electives so that 124 semester credits are earned.

General Education

COMM101 Fundamentals of Speech Communication	3
ENGL110 First-Year Composition I	3
ENGL111 First-Year Composition II	3
HUMN251 Humanities	4
HUMN Approved Humanities Elective	3-4
SOCY Approved Social Science Electives	6-8
Approved Social Science Diversity	3-4

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Environmental Health

Program Description:

The B.S. environmental health program is accredited by the National Environmental Health Science and Protection Accreditation Council.

The B.S. in environmental health is offered in response to strong student, state and local government demand for an academic program to prepare students for careers in public health, environmental health and related fields. Graduates of this program will be prepared to seek employment in jobs with titles like public health officer, environmental technician, and scientist, as well as many others. After working in the field for a period of time, graduates may sit for the Registered Sanitarian (RS) examination and achieve state certification, or for the Registered Environmental Health Specialist (REHS) examination and achieve national certification.

This program is similar to the successful environmental science degree, but includes many required elements that are specifically directed to public health. These include courses in Geographic Information Systems and Global Positioning Systems, Hydrology and Groundwater, Toxicology and Epidemiology, Public Health Care and Public Administration. Students participate in an applied research project in close collaboration with faculty members to address meaningful environmental health problems. These projects, through the excellent preparation they provide our students, are often cited as important factors in successful job searches and entry into graduate programs.

Career Descriptions:

Public Health Officer —

Works with local public health offices to protect citizens and the environment; develops and implements public health initiatives and enforces existing environmental regulations.

Environmental Technician —

Responsible for groundwater sampling, soil sampling and other field-based efforts; develops reports.

Registered Sanitarian — Through experience and expertise, you can sit for professional certification, which provides enhanced employment and advancement opportunities for individuals working within public health venues.

Environmental Scientist —

Develops schedules and budgets; plans and implements activities including field work, documentation, data analysis, public involvement and environmental analysis.

Bachelor of Science

Career Choices:

Public Health Officer

Environmental Technician

Registered Sanitarian

Environmental Scientist

Student Profile:

Do you ...

have an interest and concern for the environment?

want to work to protect the environment and people?

enjoy working outdoors and with others?

have strong writing, listening and speaking skills?

Environmental Health

Environmental Health Bachelor of Science

Degree Requirements (92 credits)			Other Departments (10 credits)		
BIOL131	General Biology: Cells	4	MATH112	Calculus for Business & Life Sciences	4
BIOL132	General Biology: Organisms	4		or	
BIOL204	General Microbiology	4	MATH151	Calculus I	4
BIOL280	Biometrics	3	MATH207	Principles of Statistical Methods	3
CHEM115	General Chemistry I	5	POLI201	Intro. to Public Administration	3
CHEM116	General Chemistry II	4			
CHEM220	Survey of Organic Chemistry	4	Directed Electives (9 credits)		
	or		<i>Select from the following:</i>		
CHEM225	Organic Chemistry and	4	BIOL220	Genetics	4
CHEM226	Organic Chemistry II	4	BIOL230	Introduction to Soil Science	4
CHEM231	Quantitative Analysis	4	BIOL422	Parasitology	3
CHEM332	Instrumental Analysis	4	CHEM342	Environmental Chemistry II: Air and Solid Wastes	4
CHEM353	Introductory Toxicology	3	CHEM451	Introductory Biochemistry	4
ECON202	Principles of Microeconomics	3	EVRN231	Intermediate GIS	2
ECON307	Environmental Economics	3	INTD300	The Human Environment	3
EVRN126	Interpretation of Maps and Aerial Photography	2	POLI342	International Environmental Policy	3
EVRN131	Introduction to GPS and GIS	2	Other General Education (25 credits)		
EVRN285	Principles of Epidemiology	3	COMM101	Fund. of Speech Communication	3
EVRN311	Environmental Law	3	ENGL110	First-Year Composition I	3
EVRN313	Solid & Hazardous Waste	3	ENGL111	First-Year Composition II	3
EVRN341	Environmental Chemistry I: Water and Water Pollution Control	4		Approved Social Science*	3
EVRN395	Junior Seminar	1		Approved Social Science*	3
EVRN425	Environmental Systems Analysis	3		Social Science Diversity*	3
EVRN495	Senior Project	1	HUMN251	Humanities I	4
EVRN499	Senior Seminar	1		Approved Humanities*	3
GEOL411	Hydrological Systems: Surface and Groundwater	4	<i>*Consult list for approved courses</i>		
HLTH210	Intro. to Health Care Concepts	3	A minimum of 124 credits must be earned for graduation with a 2.50 cumulative grade point average and a 2.50 major grade point average.		
HLTH328	Multicultural Approach to Health Care	3			
INTD399	Internship in Environmental Health	4			
NCSI103	Environmental Science	3			
PHYS221	Principles of Physics I	4			

**Consult list for approved courses*

A minimum of 124 credits must be earned for graduation with a 2.50 cumulative grade point average and a 2.50 major grade point average.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Environmental Management

Program Description:

This degree combines elements of business and management with a strong background in science and environmental issues. The degree is offered in response to strong student, state and local government demand for an academic program to prepare students for management careers in the drinking water and wastewater industries and other related environmental careers.

In some cases, the first two years of the program may be delivered by technical associate degree programs already in existence at LSSU and other regional community colleges, creating an opportunity for people with a technical associate's degree to obtain a bachelor's degree.

The B.S. in Environmental Management will expand the technical education of the individual and provide management skills that could qualify the individual for advancement in industry.

Career Descriptions:

Drinking Water Treatment Plant Supervisor/Manager —

Supervises the daily operations of a drinking water facility including the management of budgetary processes; the oversight of drinking water operators; working with engineers to implement chemical/biological water treatment processes in the facility.

Wastewater Treatment Plant Supervisor/Manager — Manages the daily operation of a wastewater treatment facility including supervision of the waste treatment technicians; oversight of the budget; interacting with engineers to incorporate treatment processes at the facility.

Environmental Manager in an industrial plant — Works to manage industrial waste streams generated by industry; checks for

environmental compliance with state and federal laws; works with engineers to find ways to remediate environmental waste streams that are fiscally prudent; oversees environmental technicians.

Environmental Management Bachelor of Science

Major Requirements (87 credits)

Management Courses (24 credits)

ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	4
BUSN211	Business Statistics	3

or		
MATH207	Principles of Statistical Methods	3
BUSN403	Business, Government and Society	3
ECON202	Principles of Microeconomics	3
FINC341	Managerial Finance	4
MGMT360	Principles of Management	3

Environmental Courses (52 credits)

BIOL204	General Microbiology	4
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM220	Survey of Organic Chemistry	4

or		
CHEM225	Org. Chem I and	4

CHEM226	Org. Chem II	4
CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4

CHEM341	Environmental Chemistry I: Water and Water Pollution Control	4
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or		
CHEM342	Environmental Chemistry II: Air and Solid Wastes	4

EVRN126	Interpretation of Maps and Aerial Photography	2
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EVRN131	Introduction to GIS and GPS	2
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EVRN311	Environmental Law	3
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EVRN313	Solid & Hazardous Waste	3
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EVRN395	Junior Seminar	1
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EVRN425	Geospatial Analysis III	3
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EVRN495	Senior Project	1-3
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EVRN499	Senior Seminar	1
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INTD399	Internship in Environmental Management	4
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MATH151	Calculus I	4
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NSCI103	Intro to Environmental Science	3
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Directed Electives from (11 credits)

BIOL131	General Biology: Cells	4
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BIOL230	Introduction to Soil Science	4
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BIOL286	Principles of Watersheds	3
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BIOL345	Limnology	3
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ECON307	Environmental Economics	3
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Any 200 level or higher EVRN not listed above		
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GEOL411	Hydrologic Systems: Surface and Groundwater	3
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PHYS221	Elements of Physics I	4
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General Education (not used above) (22 credits)

Free Electives to total 125

Bachelor of Science

Career Choices:

Drinking water treatment plant manager

Wastewater treatment plant manager

Environmental Manager

Student Profile:

Do you ...

have an interest and concern for the management of the environment?

want to manage the daily operations of a drinking water or wastewater treatment facility?

enjoy working in a disciplinary field that utilizes both business and science skills?

have the ability to communicate and work with a broad array of people?

have skills in managing budgets?

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Environmental Science

Bachelor of Science

Career Choices:

Biological Science Technician
Physical Science Technician
Physical or Biological Scientist
Natural Resource Specialist
Pollution Control Specialist
Laboratory Chemist
Environmental Field Technician
Environmental Specialist

Student Profile:

Do you have an ...

- interest in the environment and environmental protection?
- aptitude in natural sciences?
- skills in planning, organization and problem solving?
- ability to communicate effectively in writing?
- ability to effectively organize and present information verbally?
- ability to communicate and work with a broad array of people?

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Program Description:

Environmental science is the study of human interaction with the environment. By seeking solutions for such environmental problems as water pollution, hazardous wastes and acid rain, environmental scientists help ensure a safe, healthful environment for all living things.

Career Descriptions:

Biological Science Technician — Surveys, maps, and documents a variety of environmental factors including wildlife/fishery population assessment, aquatic and terrestrial habitat condition.

Physical Science Technician — Performs the chemical analyses of plant and animal tissues, soils, sediments, and waters for environmental contaminants, including sample receipt, storage, homogenization, extraction, cleanup and digestion analysis.

Physical or Biological Scientist (Research) — Coordinates necessary research activities and the development of solutions to extremely complex, obscure and critical problems.

Natural Resource Specialist — Develops, schedules, budgets and implements planning activities including field work, document preparation, data analysis, public involvement and appropriate public legal notices.

Laboratory Chemist — Has knowledge of EPA methods for volatile and semi-volatile analysis. A.A.S. (Flame/Graphite a plus) and/or I.C.P., instrument maintenance.

Environmental Field Technician — Responsible for groundwater sampling, soil sampling, and other field efforts.

Field Chemist — Supervises field technicians; packages chemicals for transportation and disposal, loads and unloads supply trucks; customer relation skills are essential.

Environmental Science Bachelor of Science

Total Credits (125 credits)

Biology (19 credits)

BIOIL131	General Biology: Cells	4
BIOIL132	General Biology: Organisms	4
BIOIL230	Introduction to Soils	4
BIOIL337	General Ecology	3
BIOIL204	General Microbiology	4

Chemistry (25 credits)

CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM225	Organic Chemistry I	4
CHEM226	Organic Chemistry II	4
CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4

Environmental Science (23 credits)

NSCI103	Environmental Science	3
EVRN311	Environmental Law	3
EVRN313	Solid & Hazardous Waste	3
EVRN341	Environmental Chemistry I: Water	4
CHEM342	Environmental Chemistry II: Air	4
EVRN395	Junior Seminar	1
EVRN495	Senior Project	1-3
EVRN499	Senior Seminar	1
EVRN425	Environmental Systems Analysis	3

Other Departments (28 credits)

BUSN211	Business Statistics	3
	<i>or</i>	
MATH207	Principles of Statistics	4
GEOL121	Physical & Historical Geology I	4
GEOL411	Hydrologic Systems: Surface and Groundwater	4
	<i>or</i>	
BIOIL286	Principles of Watersheds	3
MATH112	Calculus for Business and Life Sciences	4
	<i>or</i>	
MATH151	Calculus I	4
PHYS221	Elements of Physics I	4
PHYS222	Elements of Physics II	4

Directed Electives

(select from the following: minimum 8-9 credits)

Any EVRN not listed above		
Any 300-level or higher BIOL not listed above		
Any 300-level or higher CHEM not listed above		
ECON307	Environmental Economics	3
FIRE312	Hazardous Materials Management	4
GEOG108	Physical Geography: Meteorology & Climatology	4
GEOL122	Physical and Historical Geology II	4
INTD399	Intern. in Environmental Science	3-4

Other General Electives (25-28 credits)

COMM101	Fundamentals of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
	Approved Social Science	6-8
HUMN251	Humanities I	4
	Approved Humanities	3
	Approved Social Science Diversity	3-4

Additionally, a student is required to satisfy general education requirements (natural science requirements are met by above classes) and free electives so that 124 semester credits are earned.

Exercise Science

Career Descriptions:

A wide variety of entry level career opportunities exist for the student prepared in exercise science.

Corporate Fitness/Worksite

Wellness Manager — Employed at any facility that wishes to offer fitness/wellness opportunities to their employees or a company specializing in Worksite Wellness/Corporate Fitness. Responsibilities may include fitness testing of employees, setting up fitness and health challenges, basic health testing and nutritional analysis.

Rehabilitation Specialist — Works in conjunction with other medical personnel to provide rehabilitation services for cardiac patients, pulmonary patients and other clinical populations suffering from life-style related illnesses.

Stress Test Technologist —

Employed in hospital, clinical and university settings to administer fitness testing activities with a variety of populations and testing conditions.

Sport/Fitness Program Director—

Manages in fitness club settings, either private or public.

Sport/Fitness Business Specialist

— Markets and demonstrates new sport and exercise equipment within a commercial context.

Strength and Conditioning

Specialist — Employed at universities, colleges, high schools and other athlete training centers to design and implement strength training and conditioning programs for athletes.

Personal Fitness Trainer — Develops and provides individualized exercise programs, either privately or in fitness club settings.

Exercise Science Bachelor of Science

Departments Requirements (51 credits)

EXER105	Leadership Programming	3
EXER140	Health Fitness	3
EXER141	Introduction to Movement	3
EXER230	Athletic Injury and Illness Prevention	3
EXER262	Exercise Physiology I	3
EXER265	Essentials of Strength Training and Conditioning	3
EXER268	Fitness Evaluation I: Field Tests	3
EXER275	Nutrition for Sport and Exercise Performance	2
EXER295	Practicum	1
EXER344	Kinesiology	3
EXER348	Fitness Evaluation II: Laboratory Procedures	3
EXER358	Research Methods in Exercise Science	3
EXER362	Exercise Physiology II	3
EXER390	Recreation Leadership Apprenticeship	1
EXER444	Exercise Prescription	2
EXER452	Allied Health Administration	3
EXER481	Professional Development Seminar	1
EXER492	Internship	6
EXER496	Selected Research Topics	3

Cognate Requirements (27 credits)

BIOL121	Anatomy & Physiology I	4
BIOL122	Anatomy & Physiology II	4
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
MATH207	Principles of Statistical Methods or	3
PSYC210	Statistics	
PSYC101	Introduction to Psychology	4
PSYC385	Health Psychology	3

Department Electives (10 credits)

EXER232	Athletic Injury & Illness Recognition and Evaluation	3
EXER234	Preventative Taping Techniques	1
EXER248	Psychology of Sport and Performance and Coaching	3
EXER295	Practicum	3
EXER340	Therapeutic Modalities in Athletic Training	3
EXER346	Therapeutic Exercise in Athletic Training	3
EXER349	Orthopedic Assessment in Sports Medicine	3
EXER390	Recreation Leadership Apprenticeship	1
EXER428	Psychological Aspects of Exercise and Athletic Rehabilitation	3
EXER434	Neurological Basics of Motor Learning	3
EXER440	Exercise Physiology Seminar	2
EXER442	Electrocardiography in Exercise Science	2
EXER450	Philosophy of Human Performance and Leisure	3
RECA	Elective	2

Cognate Electives (12 credits)

Select with your advisor

Elective credits (approximately 3) and general education requirements must be completed so that at least 125 semester credits have been earned.

Bachelor of Science

Career Choices:

Corporate Fitness/Worksite

Wellness

Rehabilitation Specialist

Stress Test Technologist

Sport/Fitness Program Director

Sport/Fitness Business Specialist

Strength and Conditioning

Specialist

Personal Fitness Trainer

Student Profile:

Do you ...

like working with people?

value a physically active life-style?

have good communication skills?

possess critical thinking skills?

Program Description:

A bachelor of science degree in exercise science prepares you to work in a variety of professional settings, ranging from corporate fitness to hospital clinical to educator and trainer.

Upon graduation, students are prepared and qualify to sit for both American College of Sports Medicine (ACSM) and National Strength and Conditioning Association (NSCA) certifications.

Graduate School Preparations:

Students progress to graduate programs in exercise science, sport psychology, physical therapy, chiropractic medicine and other allied health fields.

Finance and Economics

Bachelor of Science

Career Choices:

Economist
Marketing Researcher
Statistician
Financial Manager
Financial Services Professional
Portfolio Manager

Student Profile:

Do you ...

consider yourself analytical and curious?
like to work with numbers, charts and graphs?
like to work with abstractions?
like people?
enjoy travel?
have an interest in working for an international organization?
have an interest in public policy?
have an interest in developing your worldview?
find yourself attracted to the world of finance?

Program Description:

This degree requires successful completion of a minimum of 124 semester credits as prescribed on the following page. The study of finance and economics develops the capacity for analytical reasoning and critical thinking, the most important decision making tools in business, government, education, and in your personal life. Organizations need planners and problem-solvers, people who are logical thinkers. Economists and financiers learn to develop accurate information upon which to make decisions from the vast quantities of complex and often conflicting data generated in today's global economy. Employers hire these professionals because of their abilities for careful analysis, planning and decision making.

Graduate, Professional and Continuing Education

This degree program is an excellent preparation for graduate and professional education in such fields as finance, economics, accounting, business administration and law. Graduates may seek professional certification in related professions such as Certified Financial Planner (CFP), Chartered Financial Analyst (CFA), Chartered Financial Consultant (ChFC), Chartered Life Underwriter (CLU) and Certified Management Accountant (CMA).

Career Descriptions:

Economist — Develops forecasts of the economy, industry and sales of the firm. Monitors and assesses economic events. Assesses the effect of market developments and government policy on the firm. Conducts research such as estimates of market demand and costs.

Marketing Researcher — Identifies and analyzes potential markets. Researches current markets. Determines market potential among current customers. Develops share analysis. Evaluates sales promotion. Forecasts market shares.

Statistician — Develops ways to measure organizational activity. Uses statistical techniques to determine if current operations deviate from established standards. Constructs tables and graphs to communicate information effectively.

Financial Manager — Prepares budgets and financial forecasts. Manages cash and credit. Evaluates projects. Procures funds. Develops strategic plans.

Financial Services Professional — Manages banks and other financial institutions. Prepares financial plans. Works in investments, real estate, insurance and tax and estate planning.

Portfolio Manager — Construct stock and/or bond portfolios to help clients meet their risk return objectives.

These are just a few of the available career choices.

Finance and Economics Bachelor of Science

Finance & Economics Core (70 credits)

ACTG132	Principles of Accounting I*	4
ACTG133	Principles of Accounting II •	4
BUSN121	Introduction to Business	3
BUSN211	Business Statistics*	3
BUSN231	Business Communications*	3
BUSN350	Business Law I	3
BUSN355	Business Law II	3
BUSN403	Business, Government & Society*	3
BUSN466	Business Policy*^	3
DATA235	Spreadsheets	3
ECON201	Principles of Macroeconomics*	3
ECON202	Principles of Microeconomics*	3
ECON308	Intermediate Microeconomics	3
ECON309	Intermediate Macroeconomics	3
FINC341	Managerial Finance•	4
FINC**	400-Level Electives	8
MATH111	College Algebra*	3
MATH112	Calculus for Business	4
MGMT365	Human Resource Management•	3
MRKT281	Marketing Principles & Strategy•	3
OFFC112	Keyboard Skillbuilding	1

*May count toward general education requirement.

•Part of the business core which must be taken prior to taking BUSN466.

^Capstone course — take after completion of the business core.

Field requirements (18-20 credits)

<i>Economics option</i>		
ECON304	Money, Banking & Monetary Policy	3
ECON305	Public Finance	3
ECON407	Introductory Econometrics	3
ECON408	International Economics	3
	Economics, finance, or mathematics electives	6

Finance option

FINC**	400-level elective	4
	Finance, economics or accounting electives	14

Minor option

Any approved minor of 20 or more credits

**FINC 400-level courses include FINC446, Financial Analysis & Policy; FINC448, Investment Strategy; and FINC443, Insurance. Two courses from this group must be completed for all options; all three courses must be completed for the finance option.

General Education Requirements

ENGL110	First Year Composition I	3
ENGL111	First Year Composition II	3
COMM101	Fund. of Speech Communication	3
HUMN251	Humanities I	4
HUMN	Elective	3-4

Social Science

ECON201	Principles of Macroeconomics	3
	Elective	3-4
	Diversity Elective	3-4

Natural Science with Lab

	Elective	4
	Elective	4

Mathematics

MATH111	College Algebra	3
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BS Degree Requirement

	Credits from mathematics, natural science or social science not used in general education	5
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Total Credits: 124

Fine Arts Studies

Bachelor of Arts

Concentrations in

Graphic Design

Music

Native Arts & Culture

Theater

Visual Arts

Writing

Arts Management

Dance

Career Choices:

Fine Arts Professional — Graphic Designer, Visual Artist, Musician, Actor, Writer

Teacher of Fine Arts

Arts Entrepreneur

Arts Organization Staff

Marketing/Design

Student Profile:

Are you...

interested in art?

interested in performing?

interested in people?

Program Description:

This Fine Arts Studies program is an integrated, bi-national program offered by a three-member consortium situated in Sault Ste. Marie: Algoma University, Lake Superior State University, and Sault College of Applied Arts and Technology. The program is designed and administered in such a way as to serve the region as a whole, to reflect the uniqueness of our northern heritage, to be international in scope and to integrate courses of study at both the college and university levels.

The fine arts degree is for students who have wide-ranging interests in fine arts, and who wish to explore and express their potential through following a personalized course of study. While students will invariably participate in a broad range of courses, they must select two main areas of focus (*concentrations*) from the following six: graphic design, music, native arts and culture, theater, visual arts and writing.

Fine arts have been an important aspect of the human experience since first recorded history; from African cave paintings to Greek dramas, from Beethoven symphonies to the writings of Canadian playwrights. From the study of fine arts we can gain an understanding of various cultures through their own indigenous means of expression. Furthermore, we can deepen our understanding of our own culture by participation in various contemporary art forms (drama, music, painting, writing etc.). Most important, by exploring our own creative potential, we can develop a better understanding of ourselves.

Career Descriptions:

This degree will prepare you for further studies in professional schools specializing in fine arts training; for employment in the rapidly expanding arts, entertainment and communication industries; or to apply your enhanced talents as working artists.

Fine Arts Professional — Prepares you for working as a managing director of a department of music, arts, theater or performance.

Teacher of Fine Arts — Develops courses, maintains studios and supplies, teaches in elementary or secondary education fields or community theaters.

Arts Entrepreneur — Performs as a musician; is active in the performing arts and theater; and creates and sells crafts and paintings.

Arts Organization Staff — Plans, designs and implements programs and services; assists with administering programs, cultural events and art galleries.

Marketing/Design — Works on publications, displays, annual exhibitions, educational programs, craft fairs, galleries, museums and sales.

Fine Arts Studies Bachelor of Arts

Degree Requirements

Degree requirements, as defined below, are subject to amendment. Changes in program, courses, prerequisites, scheduling and availability at the partner institutions are beyond the control of Lake Superior State University. The program is multi-disciplinary in nature and flexible enough to permit you to develop interests in particular areas. The degree will be of interest to those who wish to prepare for teaching, writing/journalism, and librarianship in the arts, as well as to those who wish to develop their interests and experiences in various areas of the fine arts.

Registration Procedures

At present, students of Lake Superior State University (the home institution) who wish to take one or more courses from either Algoma University College or Sault College of Applied Arts and Technology must request permission to do so through the assistant to the provost for academic records at Lake State. All courses will be registered at Lake State but a supplementary registration form will be required for courses to be taken at a host institution (Algoma or Sault College). LSSU will record the course equivalency on the student's registration form and student record after contacting the host school to verify room and enrollment in class(es). All fees will be assessed by LSSU. Credit and grades will be granted only when the host institution provides evidence that the course has been successfully completed.

Bachelor of Arts in Fine Arts Studies

To graduate with a B.A. in fine arts studies, a student must:

1. satisfy all stated requirements for a bachelor of arts degree;
2. complete 124 credits with an overall grade point average of at least 2.00;
3. complete at least 78 credits from at least three fine arts disciplines (minimum nine credits in third discipline) as defined below, with an average GPA of at least 2.00;
4. complete two concentrations in different fine arts disciplines. A concentration is a sequence of at least 21 credits and no more than 36 credits, beyond the first-year prerequisite, in which related subject matter is studied to develop a knowledge of a particular discipline;
5. complete no more than 30 credits in studio and/or performance courses with no more than 15 in any one discipline;
6. complete all general education requirements;
7. complete a student project, which is intended to allow you, with the approval of the supervising professor, the opportunity to integrate or synthesize some aspects of the fine arts into a single project.

Concentrations/Specializations

Your concentration or specialization in fine arts studies consists of concentrations in two different fine arts disciplines defined below, as well as the required credits in a third fine arts discipline.

Arts Management
Dance
Graphic Design
Music
Native Arts and Culture
Theater
Visual Arts
Writing

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Fine Arts Studies

Classes at LSSU enclosed in [] are assigned numbers for classes at Sault College or Algoma University.
 As classes are chosen from Sault College or Algoma University, numbers will be assigned at LSSU.

Final Project: FA405

Course	LSSU	Sault College	Algoma
Graphic Design Concentration			
Typography I	[FINE100]	ADV126	AAGD1006
Design I	[FINE112]	ADV125	AAGD1046
Design II	[FINE113]	ADV135	AAGD2137
Typography III	[FINE136]	ADV236	AAGD2306
Production Design II	[FINE143]	ADV143	
Design III	[FINE137]	ADV238	AAGD2357
Design IV	[FINE138]	ADV248	AAGD3406
Motion Graphics I	[FINE264]	ADV264	
Typeography IV	[FINE252]	ADV251	
Music Concentration			
<i>Required Courses</i>			
Introduction to Music I	MUSC120		MUSC1101
Introduction to Music II	MUSC121 or [FINE102]		MUSC1102
History & Appreciation of Music	[FINE220] MUSC220 & 221 [FINE221]		MUSC1015
<i>Select 21 additional credits in Music - no more than 12 credits at the first-year level including six credits from Group I and six credits from Group II and/or III.</i>			
Group I: History/Theory/Appreciation — at least six credits from Group I			
<i>History</i>			
Music of the Baroque Period			MUSC2006
Music of the Classical Period	[FINE208]		MUSC2007
Music in Popular Culture I	[FINE209]		MUSC2056
Music in Popular Culture II	[FINE210]		MUSC2057
History & Appreciation of Jazz	MUSC260		MUSC2606
History of the Opera	[FINE305]		MUSC3005
Music of the Romantic Period	[FINE316]		MUSC3016
Music of the Twentieth Century	[FINE317]		MUSC3017
Native Music			NAAC2026
Music as Culture I - World Music			MUSC2066
Music as Culture II - Native Music			MUSC2067
<i>Theory</i>			
Materials of Music I: Theory	[MUSC115]		MUSC1115
Materials of Music II: Theory	[MUSC215]		MUSC2115
<i>Appreciation</i>			
Music Appreciation: Listening Fundamentals			MUSC1021
Music Appreciation: Cultural Survey			MUSC1022

Fine Arts Studies

Course	LSSU	Sault College	Algoma
Group II: Applied/Studio — Select at least six credits from Group II and III			
Applied Music Proficiency I	MUSC210		MUSC1401
Applied Music Proficiency II	[MUSC402], MUSC210		MUSC1402
Applied Music for Non-Concentration Students I	[FA120], MU210		MUSC1420
Applied Music for Non-Concentration Students II	MU210		MUSC2420
Applied Music for Non-Concentration Students III	MU210 [FA240]		MUSC3420
Class Piano	MUSC170		MUSC1701
Class Piano II	MUSC171		MUSC2701
Class Guitar	MUSC180		MUSC1801
Class Guitar II	MUSC181		MUSC2801
Group III: Ensemble			
University Choir	MUSC140 & 141 [FINE161]		MUSC1611, 2611, 3611
Instrumental Chamber Ensemble	MUSC250 & 251		MUSC1621, 2621, 3621
Sault Symphony Orchestra	MUSC110 & 111		MUSC1631, 2631, 3631
Jazz Ensemble	MUSC160		MUSC1651, 2651, 3651
Concert Band	MUSC161		MUSC1671, 2671, 3671
Chamber Music	MUSC250 & 251		
Vocal Chamber Ensemble			MUSC 1641, 2641, 3641
Native Arts and Culture Concentration			
Introductory Ojibwe	[FINE105] NATV141 & 142	NSA118 & 120	OJIB1005
<i>Complete at least 18 credits from Group I and six more from Group I or Group II.</i>			
Group I: Core Courses			
Native Art History			NAAC2006
Native Literature	NATV235		NAAC2016
Native Music	[FINE226]		NAAC2026
Arts & Culture I: Dgwaagi			NAAC2036
Arts and Culture II: Biboon			NAAC2046
Arts and Culture III: Minookmi/Niibin			NAAC2056

Fine Arts Studies

Course	LSSU	Sault College	Algoma
Living Arts I: Dgwaagi			NAAC2066
Living Arts II: Biboon			NAAC2076
Living Arts III: Minookmi/Niibin			NAAC2086
Intermediate Ojibwe		NSA126 & 129	OJIB2005
Advanced Ojibwe			OJIB3005
Introduction to North American Native Art	[FINE326]		VISA2026
Ojibwe Art and Culture	[FINE207]		VISA2027
Music as Culture I: World Music			MUSC2067
Anishinaabe Culture and Civilization			OJIB2015
Seminar in Advanced Language Studies			OJIB3015
Anishinaabe Oral Literature			OJIB3105
Group II: Approved Native Arts and Culture Elective Courses			
Ethnology of North American Native Peoples			ANTR2035
Native Canadians: Heritage and Issues			ANTR2055
The Art of Ribbon Making			NAAC1001
The Art of Regalia Making			NAAC1011
Cradle Boards and Bandolier Bags			NAAC1021
Native Cultures of North America	NATV225		NAAC2256
Seminar in Native American Studies	NATV310		NAAC3106
Contemporary Native American Issues	NATV320		NAAC3206
Theater Concentration			
Introduction to Theater	[FINE115]		THEA1115
<i>Select 21 additional credits including at least six from each group</i>			
Group I: Theater History/Theory			
Drama to 1642			ENGL2465
Shakespeare I			ENGL2536
Shakespeare II			ENGL2537
Studies in Drama:			
The Genre & Theater in Context	THEA333		ENGL3336
Modern & Contemporary Drama			ENGL3475
Shakespeare			ENGL4326
Contemporary Canadian Drama			ENGL4416
Medieval English Drama	[FINE426]		ENGL4426
Le theatre classique			FREN3006
Le theatre franais moderne			FREN3326
Theater History I	THEA251 & 252		THEA2245
Canadian Theatre			THEA2357
Theories of Drama			THEA3346

Fine Arts Studies

Course	LSSU	Sault College	Algoma
Group II: Practical/Performance Theater			
Problems in Speech/Drama	THEA161		THEA1616
Modern European Theater	[FINE201]		THEA2015
Acting I	[FINE215]		THEA2115
Theater Movement			THEA2137
Introduction to Stage Craft			THEA2167
Speech and Drama Production	THEA309		THEA3096
Acting II			THEA3115
Basic Scenic Design	[FINE367]		THEA3167
Directing in the Theater			THEA3187
Theater Practicum			THEA3417
Visual Arts Concentration			
Art History and Appreciation	ARTS250 & 251 [FINE249 & 250]	ART125 & 129 ART259 & 279	VISA1005
Drawing I	ARTS110	FA150	VISA1506
Design I	[FINE151] ARTS109	FA151	VISA1516
Color Theory	[FINE152]	FA152	VISA1526
<i>Select at least 12 credits from the classes below.</i>			
Medieval Art History			HIST3826
Aspects of Renaissance Art			HIST3836
Native Art History			NAAC2006
Philosophy of Art and Literature	[FINE224]		PHIL2245
Painting, Composition and Design			VISA1116
Drawing, Painting, and Composition			VISA2107
Graphic Arts, Watercolor, Mixed Media	ARTS211		VISA2116
Modern Art	[FINE200]		VISA2005
Introduction to North American Native Art			VISA2026
Ojibwe Art and Culture			VISA2027
Art of Canada			VISA3005
Special Topics I	[FINE326]		VISA3026
Special Topics II	[FINE327]		VISA3027
Design II	[FINE171]	FA171	VISA2716
Drawing II	[FINE172]	FA170	VISA2706
Drawing III	[FINE251]	FA251	VISA3516
Drawing IV		FA271	VISA3716
Painting I	ARTS111	FA155	VISA2556
Painting II	[FINE174]	FA174	VISA2746
Painting III		FA253	VISA3536

Fine Arts Studies

Course	LSSU	Sault College	Algoma
Painting IV		FA278	
Photography I	[FINE106]	PHO100	VISA2056
Photography II	[FINE107]	PHO115	VISA2156
Photography III		PHO215	VISA3006
Pottery I	[FINE157]	FA157	VISA2576
Pottery II		FA176	VISA2766
Psychology of Art I	[FINE159]	FA159	VISA2596
Psychology of Art II		FA178	VISA2786
Fabric Surface Design I		FA154	VISA2546
Printmaking I	[FINE258]	FA158	VISA2586
Children's Illustrated Books			ENGL2166
Understanding Comics			ENGL2167
Textiles		FA160	VISA2606
Sculpture I	[FINE228]		VISA2206
Sculpture II	[FINE229]		VISA2207

Writing Concentration

Select six credits from the following three courses*.

British Literature from Chaucer to the Twentieth Century	ENGL233 & 234	ENGL1005
Introduction to Canadian Literature		ENGL1205
Introduction to Writing & English Studies	ENGL180	ENGL1705

*or equivalent introductory literature course

Pick at least 18 additional credits in writing, including at least three credits from each of Groups I and II and additional credits in writing from Group III. A minimum of nine credits in applied rhetoric or writing courses must be completed. If writing is elected as a third discipline, ENGL1705 must be completed.

Approved Writing Courses

Group I: Practical Writing & Production Courses

Advanced Writing	ENGL310	ENGL2206
Practical Criticism		ENGL2306
Stylistics		ENGL2902
Technical Writing	ENGL306	ENG210, 300
Writing for the Mass Media	COMM280	WRIT2107
Print Newswriting	JOUR211	WRIT2117
Desktop Publishing	DATA250	WRIT2416
Reading and Writing for the Out-of-Doors		WRIT3056
Electronic Editing and Production	JOUR310	WRIT3107
Advanced Reading and Writing	ENGL310	ENG315

Course	LSSU	Sault College	Algoma
Group II - Creative Writing Courses			
Composition and Rhetorical Theory			ENGL2515
Responding to Writing	ENGL320		ENGL3206
Rhetoric and Composition	ENGL321		ENGL3216
Creative Writing	ENGL221		ENGL3516
Studies in Creative Writing			ENGL3517
The Writer’s Voice I			ENGL3806
The Writer’s Voice II			ENGL3807
Introduction to Creative Writing			ENGL2546
Group III - Senior Year Courses			
History & Structure of English Language	ENGL420		ENGL4206
History of Literary Criticism	ENGL421		ENGL4216
History of Literary Criticism			ENGL4605
History of the English Language			ENGL4925
Broadcast Newswriting	JOUR410		WRIT4106
Broadcast Editing and Production	JOUR411		WRIT4116
Arts Management Concentration			
Required History Courses: 7-8 credits			
Art History and Appreciation I	ARTS250		
Art History and Appreciation II	ARTS251		
or			
History & Appreciation of Music I	MUSC220		
History & Appreciation of Music II	MUSC221		
or			
History of Drama & Theatre I	THEA251		
History of Drama & Theatre II	THEA252		
or			
Dance History	DANC305		
and			
Elective from	ARTS250-251, MUSC220-221, or THEA251-252		
Required Courses: 25-28 credits			
Principles of Accounting I	ACTG132		
Principles of Accounting II	ACTG133		
Business and Professional Speaking	COMM210		

Fine Arts Studies

Course	LSSU	Sault College	Algoma
Public Relations	COMM320		
Principles of Finance	FINC245		
Internship in Department	INTD399		
Marketing Principles and Strategy	MRKT281		
Management Concepts and Applications	MMGT360		
<i>or</i>			
Advertising Theory and Practice	MRKT387		

Total Credits for Concentration: 34-35 credits

Dance Concentration

Technique Classes: 8 credits

Ballet I	DANC101
Ballet II	DANC201
Ballet III	DANC301
Modern Dance I	DANC125
Modern Dance II	DANC225
Jazz Dance I	DANC120
Scottish Highland	DANC130
Social Dance	RECA173

Dance Performance: 13

Dance Company	DANC110
Musical Theatre: Tap/Jazz	DANC220
Dance History	DANC305
Choreography	DANC310
Senior Thesis	DANC401

Elective: 2 or 3 credits

Creative Movement for Elem Educators	DANC205
<i>or</i>	
Movement for Actors	DANC210

Total credits for Dance Concentration: 23-24

Fire Science

Program Description:

This degree is designed to provide both the necessary certifications to enter the fire service and also the general education and background necessary for advancement to higher rank and supervisory level.

There are three tracks a student may pursue to obtain the degree.

Fire Science Generalist Emphasis

— This program is designed to prepare graduates for careers in the area of fire protection, education, fire equipment service/supply and emergency planning. Students may select a minor of their choice. For those who are going to pursue work in a career fire department, a minor in paramedic technology is strongly recommended. Others may select a minor which is more applicable to their own career aspirations such as management, computer technology, public administration, environmental science or other area.

Fire Science Hazardous Materials

Emphasis — This program combines a major in fire science with a minor in chemistry. A graduate with a degree in this emphasis may work in the area of environmental protection and quality, water quality, hazardous waste disposal, or hazardous chemical mitigation/clean-up. Positions are available in the private and public sectors. In the case of fire service, graduates may work as a member or supervisor of a hazardous materials response team dealing with an accident or release of dangerous products. Positions in emergency planning are also available. With the continued emphasis on homeland security and the threats of a biological or chemical attack upon a civilian population, readiness and response are vital to saving lives.

Fire Science Engineering Emphasis

— The combination of fire science and engineering courses provides a

graduate with the knowledge necessary to evaluate building plans and designs from the standpoint of fire behavior and safety. The design of fire protective systems and alarms is important to the protection of life and property. There are also positions available in firms and governmental organizations which conduct materials testing and fire behavior research. Graduates may also wish to continue their education to obtain a graduate degree. Professional qualifications, such as that of Fire Protection Engineer, or other state/province designations, may also be obtained.

Career Descriptions:

Firefighter — Works for fire departments at the local, state and federal levels; works for the armed forces and the U.S. Department of the Interior; suppresses structural and other types of fires using a variety of methods; acts as emergency medical technician or paramedic.

Fire Safety Officer — Works in industry and for the government as fire inspector and safety officer; conducts safety and fire surveys; plans for fire and other disasters.

Fire Protection Systems Designer — Designs fire protection systems for industry; provides consulting services for industry and other organizations.

Hazardous Materials Specialist — Works in industry as a manager of hazardous materials; safety officer; consultant for industry in the area of hazardous materials.

Fire Officer/Chief Officer — Leads and manages the fire department. Provides command at the scene of emergencies. Prepares budgets; sets and administers department policies; supervises training; ensures compliance with local, state and federal law; conducts fire prevention/code enforcement efforts; and

Bachelor of Science

Emphasis in:

**Engineering
Technology**

Generalist

Hazardous Materials

Career Choices:

Fire Fighter

Fire Safety Officer

Fire Protection Systems Designer

Hazardous Materials Specialist

Fire Officer/Chief Officer

Emergency Planner

Student Profile:

Are you...

interested in the safety of others?

physically fit?

manages day-to-day operations. The chief also serves as an advisor to local government and keeps the community prepared for emergency response.

Emergency Planner — Works in office of emergency service and planning at the local, state and federal levels. Responsibilities include preparation of plans for disaster response; coordination of emergency response with other agencies; and preparation of emergency plans.

Fire Science

Engineering Technology Emphasis Bachelor of Science

General Education Requirements (32 credits)		
Major Requirements (49 credits)		
CJUS341	Fire Cause and Arson Investigation	3
FIRE101	Introduction to Fire Science	3
FIRE111	Hazardous Materials	3
FIRE197	Physical Fitness for Public Safety	1
FIRE201	Fire Protection Construction Concepts	3
FIRE204	Fire Protection Hydraulics and Pumps	3
FIRE206	Fire Protection Systems Equipment and Industrial Fire Protection	3
FIRE211	Tactics & Strategy	3
FIRE220	Fire Science Certification	4
FIRE301	Code Enforcement Inspection and Fire Prevention	3
FIRE312	Hazardous Materials Management	4
FIRE315	Company Level Supervision and Management	3
FIRE401	Senior Seminar	3
FIRE402	Fire Service and the Law	3
FIRE403	Fire Science Internship	3
<i>Statistics: Choose one of the following:</i>		
BUSN211	Business Statistics	3
CJUS345	Statistics and Design for Public Safety	4
MATH207	Principles of Statistical Methods	3
POLI211	Political Science Research and Statistics	4
PSYC210	Statistics	3
SOCY302	Statistics for Social Science	4
Support Courses (35 credits)		
CSCI101	Intro. to Microcomputer Applications	3
MATH112	Calculus for Business/Life Science	4
MATH140	Pre-Calculus	5
EGME337	Thermodynamics	4
EGME338	Fluid Mechanics	2
EGMT225	Statics & Strength of Materials I	4
EGMT332	Thermodynamics & Heat Transfer for Technologists	4
EGNR140	Linear Algebra and Numerical Methods for Engineers	2
EGNR245	Calculus Applications for Technology	3
PHYS221	Elements of Physics I	4
Electives (9 credits)		
B.S. Degree Requirements (8 credits)		
Social Science, Natural Science or Math not used in General Education		
Total Credits: 124		

Students entering LSSU's School of Criminal Justice and Fire Science who wish to obtain a 4-year (baccalaureate) Fire Science Degree will enter into their regular degree program. Students will, however, be placed into Pre-Fire Science core courses that will introduce them to the basic concepts for the degree. Students will apply for admission to 300/400-level courses after completing the Pre-Fire Science Core (PFS).

Pre-Fire Science Core (PFS) courses include the following:

COMM101 Fund. of Speech Communication	MATH110 or higher
ENGL110 First-Year Composition I	One (1) Lab Science
ENGL111 First-Year Composition II	

All 100-level FIRE courses required in the emphasis excluding FIRE197.

Students will apply using an application form obtained from the School of Criminal Justice and Fire Science during the semester they will complete the above requirements.

Fire Science Generalist Emphasis Bachelor of Science

General Education Requirements (33 credits)		
Major Requirements (49 credits)		
CJUS341	Fire Cause & Arson Investigation	3
FIRE101	Introduction to Fire Science	3
FIRE111	Hazardous Materials	3
FIRE197	Physical Fitness for Public Safety	1
FIRE201	Fire Protection Construction Concepts	3
FIRE204	Fire Protection Hydraulics & Pumps	3
FIRE206	Fire Protection Systems Equipment and Industrial Fire Protection	3
FIRE211	Tactics & Strategy	3
FIRE220	Fire Science Certification	4
FIRE301	Code Enforcement Inspection and Fire Prevention	3
FIRE312	Hazardous Materials Management	4
FIRE315	Company Level Supervision and Management	3
FIRE401	Senior Seminar	3
FIRE402	Fire Service and the Law	3
FIRE403	Fire Science Internship	3
<i>Statistics: Choose one of the following:</i>		
BUSN211	Business Statistics	3
CJUS345	Statistics and Design for Public Safety	4
MATH207	Principles of Statistical Methods	3
POLI211	Political Science Research and Statistics	4
PSYC210	Statistics	3
SOCY302	Statistics for Social Science	4
Support Courses (7-9 credits)		
EGMT332	Thermodynamics & Heat Transfer for Technologists	4
MATH111	College Algebra	3
MATH140	Pre-Calculus	5
Minor or Approved Concentration (20 credits)		
Students may complete an approved minor or an approved concentration. The minor may be an approved minor other than Fire Science or you may develop an approved concentration in one or more disciplines with the approval of your academic advisor.		
Electives (7 credits)		
B.S. Degree Requirements (8 credits)		
Social Science, Natural Science or Math not used in General Education		

Fire Science Hazardous Materials Emphasis Bachelor of Science

General Education Requirements (25 credits)		
Major Requirements (46 credits)		
FIRE101	Introduction to Fire Science	3
FIRE111	Hazardous Materials	3
FIRE197	Physical Fitness for Public Safety	1
FIRE201	Fire Protection Construction Concepts	3
FIRE204	Fire Protection Hydraulics & Pumps	3
FIRE206	Fire Protection Systems Equipment and Industrial Fire Protection	3
FIRE211	Tactics & Strategy	3
FIRE220	Fire Science Certification	4
FIRE301	Code Enforcement Inspection and Fire Prevention	3
FIRE312	Hazardous Materials Management	4
FIRE315	Company Level Supervision and Management	3
FIRE401	Senior Seminar	3
FIRE402	Fire Service and the Law	3
FIRE403	Fire Science Internship	3
<i>Statistics: Choose one of the following:</i>		
BUSN211	Business Statistics	3
CJUS345	Statistics and Design for Public Safety	4
MATH207	Principles of Statistical Methods	3
POLI211	Political Science Research and Statistics	4
PSYC210	Statistics	3
SOCY302	Statistics for Social Science	4
Support Courses (64 credits)		
BIOL131	General Biology: Cells	4
BIOL132	General Biology: Organisms	4
BIOL230	Introduction to Soils	4
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM225	Organic Chemistry I	4
CHEM226	Organic Chemistry II	4
CHEM231	Quantitative Analysis	4
CHEM232	Instrumental Analysis	4
CHEM351	Introductory Biochemistry	4
EGMT332	Thermodynamics & Heat Transfer for Technologists	4
GEOG108	Physical Geography: Meteorology & Climatology	4
MATH111	College Algebra	3
MATH112	Calculus for Business & Life Sciences*	4
NSCI102	Introduction to Geology	4
NSCI103	Environmental Science	3
NSCI104	Environmental Science Lab	1
Total Credits: 131		

*or MATH151

Bachelor of Science Degree:

At least eight (8) semester credits in addition to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Fish Health

Program Description:

The Bachelor of Science degree in Fish Health prepares students for assessment of aquatic animal health in areas of bacterial, viral and parasitic disease. The degree requirements cover content in fish ecology, physiology and hatchery culture, including diseases caused by environmental stress (e.g. gas bubble disease or issues with low dissolved oxygen), as well as those caused by nutritional and mineral deficiencies. In addition, the program includes background in the microbial, viral and parasitic vectors of disease as well as the ecology of disease transmission. The program satisfies the academic requirements for American Fisheries Society (AFS) Fish Pathologists. The program is an excellent preparation for veterinary school* and other careers in the health professions. Our graduates are currently employed as medical doctors, dentists, veterinarians, clinical laboratory scientists, biological researchers, consultants and teachers. Many careers in biology require education beyond the baccalaureate degree and LSSU's biology program has a proven record of excellent preparation.

*Most veterinary colleges will also require one year of physics.

Career Description:

Fish Health Biologist/Pathologist— An individual in the fish health field who utilizes various disciplines including fish biology, water quality, microbiology, parasitology, toxicology, pharmacology, and histopathology to provide an accurate evaluation and diagnosis of fish health problems.

Health Professional — An individual trained as a medical doctor, veterinarian, veterinary technician, public health officer or in other health professions to safeguard the health of our communities.

Aquatic Animal Health Inspector — A trained individual who possesses the technical skills, knowledge and experience to conduct surveillance testing and/or health inspections of aquatic animal populations for specific aquatic animal pathogens regulated by domestic and foreign agencies, according to high ethical standards.

Biological Science Technician — An individual trained as one of the following: molecular biologist, fish biologist, microbiologist, hatchery biologist, hatchery technician.

Research Biologist — Conducts applied or basic research in biomedical sciences, animal sciences, cellular or molecular biology for private companies, state or federal laboratories and university research centers.

Zoo/Nature Center Staff — Individuals who care for animals in captive or natural settings.

Fish Culture Biologist — An individual able to oversee fish rearing operations with background in fish reproduction, feeding and nutrition; genetics and breeding; fry and fingerling nursing, as well as disease control.

Bachelor of Science

Career Choices:

Fish Health Biologist/Pathologist
Health Professional
Aquatic Animal Health Inspector
Biological Science Technician
Research Biologist
Zoo/Nature Center Staff
Fish Culture Biologist

Student Profile:

Do you have...
a sharp inquisitive mind?
interest and ability in science and mathematics?
an interest in animal health professions?

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Fish Health

Fish Health Bachelor of Science

Biology Core		(22 credits)
BIOL131	General Biology I	4
BIOL132	General Biology II	4
BIOL199	Freshman Seminar	1
BIOL220	Genetics	4
BIOL280	Biometrics	3
BIOL299	Sophomore Seminar	1
BIOL337	General Ecology	3
BIOL399	Junior Seminar	1
BIOL499	Senior Seminar	1
Fish Health Major		54
BIOL204	General Microbiology	4
BIOL310	Ichthyology	3
BIOL330	Animal Physiology	4
BIOL333	Fish Ecology	3
BIOL345	Limnology	3
BIOL372	Fish Culture	3
BIOL422	Parasitology	3
BIOL423	Immunology	4
BIOL425	Virology	3
BIOL426	Ecology of Disease	3
BIOL433	Histology	3
BIOL434	Histopathology lab	1
BIOL480	Advanced Clinical Microbiology	3
BIOL490	Independent Study in Biology (Fish Health Internship)	4
CHEM451	Biochemistry	4
HLTH208	Nutrition	3
HLTH209	Pharmacology	3
Chemistry Minor		21
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM225	Organic Chemistry I	4
CHEM226	Organic Chemistry II	4
CHEM451	Biochemistry	4
Support Courses		7
MATH111	College Algebra	3
MATH112	Calculus for Business & Life Science	4
General Education		17
Electives		8
TOTAL CREDITS		125

Fisheries and Wildlife Management

Program Description:

Fisheries and Wildlife Management programs place a strong emphasis on understanding the relationship between organisms and their habitats by blending a conceptual understanding of fish and wildlife ecology and population dynamics with practical skills obtained during laboratory and field exercises. Students graduating from this rigorous, applied curriculum can meet the qualifications of state and federal natural resource management agencies as technicians and biologists.

These programs require completion of general education requirements and electives so that at least 125 credits are earned.

Career Descriptions:

Fisheries & Wildlife Biologist — Manages both fish and wildlife populations. This option will furnish a broad education for a variety of state, federal or private career opportunities.

Fisheries Biologist — Manages sport and commercial fisheries and fish hatchery operations. This option provides hands-on preparation for those interested in fisheries and/or hatchery management.

Wildlife Biologist — Manages game and non-game wildlife populations. This option offers an aggressive preparation for those interested in any aspect of wildlife ecology or management.

Bachelor of Science

Concentrations in

**Fisheries Management
Wildlife Management**

Career Choices:

Fisheries & Wildlife Biologist

Fisheries Biologist

Wildlife Biologist

Student Profile:

Do you...

have interest and ability in science and mathematics?

enjoy the outdoors?

like to work in all weather conditions?

respect and promote the conservation of natural resources?

have the ability to analyze and understand quantitative data?

have good oral and written communication skills?

want to consider pursuing a graduate degree?

Bachelor Degrees

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Fisheries and Wildlife Management

Fisheries and Wildlife Management Bachelor of Science

Fisheries & Wildlife Core Requirements (61-64 credits)		
BIOL131	General Biology I: Cells	4
BIOL132	General Biology II: Organisms	4
BIOL199	Freshman Seminar	1
BIOL202	Field Botany	3
<i>or</i>		
BIOL284	Forestry	4
BIOL203	Fundamentals of Natural Resources	3
BIOL220	Genetics	4
BIOL243	Vertebrate Anatomy	4
BIOL250	Quantitative Biology	3
BIOL280	Biometrics	3
BIOL299	Sophomore Seminar	1
BIOL310	Ichthyology	3
BIOL311	Mammology	3
BIOL312	Ornithology	3
BIOL330	Animal Physiology	4
BIOL333	Fish Ecology	3
BIOL337	General Ecology	3
BIOL339	Wildlife Ecology	3
BIOL345	Limnology	3
BIOL399	Junior Seminar	1
BIOL432	Fisheries Management	3
BIOL439	Wildlife Management	3
BIOL499	Senior Seminar	1
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM220	Survey of Organic Chemistry	4
<i>or</i>		
PHYS221	Principles of Physics I	4
EVRN126	Interpretation of Maps and Aerial Photography	2
EVRN131	Introduction to GIS and GPS	2
MATH111	College Algebra	3
MATH112	Calculus for Business & Life Sciences	4
MATH207	Principles of Statistical Methods	3
<i>Research Option</i>		
BIOL495	Senior Project	1
BIOL	Biology Elective	3
	Free Electives	7
<i>OR</i>		
<i>GIS Minor</i>		
CSCI105	Intro. to Computer Programming	3
CSCI211	Database Applications	3
EVRN231	Intermediate GIS	2
EVRN325	Geospatial Analysis III	3
<i>One course from:</i>		
EVRN345	Advanced Spatial Analysis and Statistics	4
EVRN355	GIS Programming	4
EVRN465	Geographic Databases and Web Based GIS	4
General Education Requirements		25
TOTAL CREDITS		125-128

Fisheries and Wildlife Management Fisheries Management Concentration Bachelor of Science

Fisheries & Wildlife Core Requirements (61-64 credits)		
BIOL131	General Biology I: Cells	4
BIOL132	General Biology II: Organisms	4
BIOL199	Freshman Seminar	1
BIOL202	Field Botany	3
<i>or</i>		
BIOL284	Forestry	4
BIOL203	Fundamentals of Natural Resources	3
BIOL220	Genetics	4
BIOL243	Vertebrate Anatomy	4
BIOL250	Quantitative Biology	3
BIOL280	Biometrics	3
BIOL299	Sophomore Seminar	1
BIOL310	Ichthyology	3
BIOL330	Animal Physiology	4
BIOL333	Fish Ecology	3
BIOL337	General Ecology	3
BIOL345	Limnology	3
BIOL372	Freshwater Fish Culture	3
BIOL399	Junior Seminar	1
BIOL432	Fisheries Management	3
BIOL475	Aquatic Entomology	3
BIOL499	Senior Seminar	1
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM220	Survey of Organic Chemistry	4
<i>or</i>		
PHYS221	Principles of Physics I	4
EVRN126	Interpretation of Maps and Aerial Photography	2
EVRN131	Introduction to GIS and GPS	2
MATH111	College Algebra	3
MATH112	Calculus for Business & Life Sciences	4
MATH207	Principles of Statistical Methods	3
<i>Research Option</i>		
BIOL495	Senior Project	1
BIOL	Biology Elective	3
	Free Electives	7
<i>OR</i>		
<i>GIS Minor</i>		
CSCI105	Intro. to Computer Programming	3
CSCI211	Database Applications	3
EVRN231	Intermediate GIS	2
EVRN325	Geospatial Analysis III	3
<i>One course from:</i>		
EVRN345	Advanced Spatial Analysis and Statistics	4
EVRN355	GIS Programming	4
EVRN465	Geographic Databases and Web Based GIS	4
General Education Requirements		25
Free Electives		5
TOTAL CREDITS		125-128

Fisheries and Wildlife Management Wildlife Management Concentration Bachelor of Science

Fisheries & Wildlife Core Requirements (61-64 credits)		
BIOL131	General Biology I: Cells	4
BIOL132	General Biology II: Organisms	4
BIOL199	Freshman Seminar	1
BIOL202	Field Botany	3
BIOL203	Fundamentals of Natural Resources	3
BIOL220	Genetics	4
BIOL243	Vertebrate Anatomy	4
BIOL250	Quantitative Biology	3
BIOL280	Biometrics	3
BIOL284	Forestry	4
<i>or</i>		
BIOL437	Plant Ecology	3
BIOL286	Principles of Watersheds	3
BIOL299	Sophomore Seminar	1
BIOL311	Mammology	3
BIOL312	Ornithology	3
BIOL330	Animal Physiology	4
BIOL337	General Ecology	3
BIOL339	Wildlife Ecology	3
BIOL399	Junior Seminar	1
BIOL439	Wildlife Management	3
BIOL499	Senior Seminar	1
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
EVRN126	Interpretation of Maps and Aerial Photography	2
EVRN131	Introduction to GIS and GPS	2
MATH111	College Algebra	3
MATH112	Calculus for Business & Life Sciences	4
MATH207	Principles of Statistical Methods	3
<i>Research Option</i>		
BIOL495	Senior Project	1
BIOL	Biology Elective	3
	Free Electives	11
<i>OR</i>		
<i>GIS Minor</i>		
CSCI105	Intro. to Computer Programming	3
CSCI211	Database Applications	3
EVRN231	Intermediate GIS	2
EVRN325	Geospatial Analysis III	3
<i>One course from:</i>		
EVRN345	Advanced Spatial Analysis and Statistics	4
EVRN355	GIS Programming	4
EVRN465	Geographic Databases and Web Based GIS	4
General Education Requirements		25
Free Electives		5
TOTAL CREDITS		125-128

Forensic Chemistry

Program Description:

The B.S. in Forensic Chemistry combines elements of criminal justice and biology with a strong chemistry program. The forensic chemist analyzes and interprets materials collected at crime scenes, accidents, and at sites of terrorist activities.

The degree is offered in response to strong student, state and local government demand for an undergraduate academic program to prepare students for careers in forensic chemistry. According to the U.S. Department of Labor Bureau of Labor Statistics 2006-07 Occupational Outlook Handbook, forensic science technicians will grow much faster than average

Graduates with a bachelor of science in forensic chemistry work in forensic laboratories for federal, state, or local government agencies or in some cases, work for private investigative laboratories. Some graduates may also go on to pursue a graduate degree.

Career Descriptions:

Laboratory Forensic Chemist —
Analyzes materials collected at crime scenes, interprets analytical data for prosecuting attorneys, criminal justice personnel, and insurance company investigators.

Crime Scene Investigator —
Evaluates and collects evidence at crime scenes, performs field chemical analyses.

FBI Laboratory Chemist —
Analyzes materials collected from federal crime scenes such as drug busts, terrorism acts, and counterfeit activities.

Forensic Chemistry Bachelor of Science

Major Requirements		(54 credits)
Chemistry		(38 credits)
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM225	Organic Chemistry I	4
CHEM226	Organic Chemistry II	4
CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4
CHEM353	Introductory Toxicology	3
CHEM395	Junior Seminar	1
CHEM or CJUS445	Forensic Science	4
CHEM451	Intro to Biochemistry	3
CHEM495	Senior Project	1-3
CHEM499	Senior Seminar	1
Criminal Justice		(16 credits)
CJUS101	Introduction to Criminal Justice	3
CJUS243	Investigation	3
CJUS319	Substantive Law	3
CJUS409	Procedural Law	3
CJUS444	Criminalistics	4
Support Courses		(50 credits)
BIOL131	General Biology: Cells	4
BIOL132	General Biology: Organisms	4
BIOL204	Microbiology	4
CHEM452	Biochemistry	3
MATH111	College Algebra	3
MATH112	Calculus for Business & Life Sciences	4
MATH207	Principles of Statistical Methods	3
OR		
BUSN211	Business Statistics	3
PHYS221	Physics I	4
PHYS222	Physics II	4
POLI110	Introduction to American Government and Politics	4
PSYC101	Introduction to Psychology	4
PSYC259	Abnormal Psychology	3
SOCY103	Cultural Diversity	3
SOCY214	Criminology	3
General Education (not used above)		(16 credits)
Free Electives to total		124
Total Credits		124

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Bachelor of Science

Career Choices:

Laboratory Forensic Chemist

Crime Scene Investigator

FBI Laboratory Chemist

Student Profile:

Do you...

have an interest in solving crimes?

want to help law enforcement interpret evidence?

enjoy working in a multi-disciplinary field that utilizes chemistry, biology and criminal justice?

have the ability to communicate and work with a broad array of people?

have skills in managing people such as laboratory technicians?

French

Bachelor of Arts
French Studies
Elementary Teaching
Certification
Secondary Teaching
Certification

Career Choices:

- Elementary Teacher
- Secondary Teacher
- University Professor
- International Business
- Communication
- Travel and Tourism

Student Profile:

Do you...

- have diligence?
- have open-mindedness?
- want to expand your cultural awareness?

Program Description:

The program of French Studies offers students the possibility to acquire not only a comprehensive knowledge of modern spoken and written French, but also the possibility to participate in a rich experience designed to enhance their intellectual formation and to qualify them for an increasing number of professions at home and abroad. One semester of directed academic and cultural immersion in a French-speaking university completes the normal cycle of studies for a bachelor of arts in French Studies.

Coupled with another major, the major in French Studies becomes a valuable asset for careers in Nursing, Criminal Justice, Teaching, and International Business, as well as a highly valued component for majors in Spanish, English History, and the Arts.

Career Descriptions:

Elementary or Secondary Teacher — Teaches French from elementary to university level in the U.S. and Canada, as well as England and the former British empire. There is an increasing demand in the francophone world for teachers of English with knowledge of French.

International Business — Works in international business ventures, mergers, etc. France alone counts for over 1200 companies with subsidiaries in the U.S. and is presently the largest recipient of U.S. investments. French-speaking Canada, a member of NAFTA, is the United States' most important export market.

Communication — Uses French language in global information networks. French is the second language of the Internet. Translates from French to English and English to French in areas of science, technology, electronics and literature.

Travel and Tourism — Works in airlines, travel agencies, hotels, restaurants, museums and historic sites. After the U.S., France is the second-most visited tourist destination in the world and is known as the language of cuisine, fashion, personal care products, architecture, theater, arts and dance.

French Studies
Bachelor of Arts

Requirements: In addition to the general education requirements, students must complete 48 semester hours of credit in French, the last six of level-400, preferably taken as directed academic and cultural immersion in a French-speaking university.

Required Courses		
FREN151	First Year French I	4
FREN152	First Year French II	4
FREN251	Second Year French I	4
FREN252	Second Year French II	4
FREN351	Advanced Conversation and Composition I	3
FREN352	Advanced Conversation and Composition II	3
FREN353	Business French I	3
FREN354	Business French II	3
FREN355	Survey of French Literature I	3
FREN356	Survey of French Literature II	3
FREN360	French Cultural Perspectives	3-4
FREN370	The Francophone World I	4
FREN460	Directed Academic and Cultural Immersions	6

Required Cognates		
HIST315	Europe From Napoleon to World War I	4
HIST316	Europe in the 20th Century	4

French French Studies- Elementary Teaching Bachelor of Arts

Required Courses	52
FREN151 First Year French I	4
FREN152 First Year French II	4
FREN251 Second Year French I	4
FREN252 Second Year French II	4
FREN351 Adv Conv & Composition I	3
FREN352 Adv Conv & Composition II	3
FREN353 Business French I	3
FREN354 Business French II	3
FREN355 Survey of French Literature I	3
FREN356 Survey of French Literature II	3
FREN360 French Cultural Perspectives	4
FREN370 The Francophone World I	4
FREN460 Dir Acad & Cult Immer	6
EDUC447 Theories and Methods of Teaching Foreign Languages	4

Required Cognates	8
HIST315 Europe from Napoleon to Wld War I	4
HIST316 Europe in the 20th Century	4

Elementary Planned Program [EPP]	51
MATH103 Num Syst & Problem Solving	4
MATH104 Geometric & Measurement	4
BIOL107 Field Biology	3
NSCI101 Conceptual Physics	4
NSCI102 Intro Geology	4
NSCI110 Chemistry in Society	4
PSCI110 American Government	4
GEOG201 World Regional Geography	4
PSYC265 Child Adolescent Psychology	3

Select one history sequence (8 credits)

HIST101 World Civilization I	4
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AND

HIST102 World Civilization II	4
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OR

HIST131 US History I	4
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AND

HIST132 US History II	4
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ENGL222 English Grammar	3
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ENGL335 Children's Literat Classroom	3
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Choose one literature class from the following:

ENGL180 Introduction Literary Studies	3
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ENGL235 Survey Native Lit. N Am.	3
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ENGL236 Literature Culture	3
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General Education Requirements	(36-42)
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ENGL110 First year Composition I	3
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ENGL111 First year Composition II	3
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COMM101 Fundamentals Speech	3
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HUMN251 Humanites I	4
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HUMN eletives	3-4
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Social Science elective	3-4
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Social Science elective	3-4
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Natural Science elective	4
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Natural Science elective	4
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Math elective	3-5
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Diversity elective	3-4
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Professional Education Requirements and Education Cognates- see Elementary Teaching.

Electives to total at least 124 credits

French French Studies- Secondary Teaching Bachelor of Arts

Required Courses	52
FREN151 First Year French I	4
FREN152 First Year French II	4
FREN251 Second Year French I	4
FREN252 Second Year French II	4
FREN351 Adv Conv & Composition I	3
FREN352 Adv Conv & Composition II	3
FREN353 Business French I	3
FREN354 Business French II	3
FREN355 Survey of French Literature I	3
FREN356 Survey of French Literature II	3
FREN360 French Cultural Perspectives	4
FREN370 The Francophone World I	4
FREN460 Dir Acad & Cult Immer	6
EDUC447 Theories and Methods of Teaching Foreign Languages	3

Required Cognates	8
HIST315 Europe from Napoleon to Wld War I	4
HIST316 Europe in the 20th Century	4

General Education Requirements	(36-42)
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ENGL110 First year Composition I	3
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ENGL111 First year Composition II	3
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COMM101 Fundamentals Speech	3
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HUMN251 Humanites I	4
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HUMN eletives	3-4
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Social Science elective	3-4
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Social Science elective	3-4
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Natural Science elective	4
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Natural Science elective	4
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Math elective	3-5
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Diversity elective	3-4
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An approved teaching minor is required.

Professional Education Requirements and Education Cognates- see Secondary Teaching.

Electives to total at least 124 credits

Geology

Bachelor's Degree

Options:

Geology:
Environmental Geology
Secondary Teaching

Career Choices:

Energy Fuel Exploration Geologist
 Mineral Exploration and Production Geologist
 Paleontologist
 Geophysicist
 Environmental Geologist
 Hydrogeologist
 Teacher

Student Profile:

Do you...

like the outdoors?

like to travel?

like to use computers?

enjoy meeting interesting people all over the world?

want to be involved in resource management and protecting the environment?

enjoy applying science and mathematics to understanding earth issues?

enjoy reconstructing the earth's history?

like the challenge of finding new resources?

Program Description:

Geology examines the dynamic Earth and its physical, chemical and biologic history. It involves the study of changes that are taking and have taken place and the forces that cause these changes. For example, geologists interpret the movements of the continents over geologic time and the formation of mountains, volcanoes and other features of the Earth's surface. Geologists attempt to understand our physical environment from which we derive most of the natural resources essential to civilization. They investigate the processes that led to the formation of mineral deposits, and oil, gas and coal. They also study environmental change throughout the history of the Earth and how those changes and the development of life are related. Geologists attempt to predict natural disasters such as earthquakes, volcanic eruptions, and landslides, and they are very active in modeling groundwater flow to develop water reserves for municipalities and to protect groundwater from contamination. Geologists study the natural world and apply their knowledge to achieve harmony between the human race and its environment.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Career Descriptions:

Energy Fuels Exploration

Geologist — Searches worldwide for petroleum, gas, coal. Career opportunities are with integrated energy fuels exploration companies and government agencies.

Mineral Exploration and

Production Geologist — Studies the origin, occurrences and extraction of metallic and non-metallic mineral resources such as gold, iron, uranium, diamonds, clay and limestone. Career opportunities are with many different kinds of companies and government agencies.

Paleontologist — Studies the origin and evolution of life through time and its applications to interpreting the geologic record. Career opportunities are with energy companies, museums, universities, government agencies.

Geophysicist — Uses non-destructive methods to determine the electrical, magnetic, gravimetric and seismic properties of earth with applications to exploration and environmental concerns. Career opportunities are with integrated energy, mineral and environmental companies, consulting firms and government agencies.

Environmental Geologist/

Hydrogeologist — Studies surface and groundwater supplies and contamination; flooding and land slide potential; and environmental quality issues such as chemical contamination of soils and solid waste disposal. Career opportunities are with companies in many industries, government agencies, and consulting firms.

Teacher — Teaches geology and earth science in secondary schools.

Geology Bachelor of Science

Geology (60 credits)	
GEOL121	Physical/Historical Geology I 4
GEOL122	Physical/Historical Geology II 4
GEOL218	Structural Geology and Tectonics 5
GEOL223	Mineralogy and Petrology 5
GEOL280	Introduction to Field Geology 3
GEOL315	Geoenvironmental Systems 5
GEOL318	Tectonic Systems 5
GEOL323	Geochemical Systems 4
GEOL325	Clastic Systems 4
GEOL411	Hydrologic Systems: Surface and Groundwater 4
GEOL431	Geophysical Systems 5
GEOL445	Carbonate Systems 5
GEOL450	Geology Seminar I 2
GEOL451	Geology Seminar II 2
GEOL480	Advanced Field Geology 3

Support Courses (27-30 credits)	
CHEM115	General Chemistry I 5
CHEM116	General Chemistry II 4
PHYS221	Elements of Physics I* 4
PHYS222	Elements of Physics II* 4
[MATH111	College Algebra* 3-5
or	
MATH140	Precalculus Mathematics*] 3-5
and	
MATH112	Calculus for Business and Life Sciences* 4
[MATH207	Principles of Statistical Methods or
MATH308	Probability and Mathematical Statistics 3-4
or	
BUSN211	Business Statistics]

*Students with adequate preparation in mathematics are advised to take MATH151 and MATH152 in place of MATH111 or MATH140 and MATH112 and to take PHYS231-PHYS232 in place of PHYS221-PHYS222.

Free elective credits and general education requirements must be completed so that at least 124 semester credits have been earned.

Geology: Environmental Geology Option Bachelor of Science

Total Program Requirements Plus Distributed Electives (95 credits)

Program Requirements (73-80 credits)	
GEOL121	Physical & Historical Geology I 4
GEOL122	Physical & Historical Geology II 4
GEOL218	Structural Geology and Tectonics 5
GEOL223	Mineralogy and Petrology 5
GEOL280	Introduction to Field Geology 3
GEOL315	Geoenvironmental Systems 5
GEOL411	Hydrologic Systems: Surface and Groundwater 4
GEOL431	Geophysical Systems 5
GEOL450	Geology Seminar I 2
GEOL451	Geology Seminar II 2
GEOL480	Advanced Field Geology 3
CHEM115	General Chemistry I 5
CHEM116	General Chemistry II 4
[CHEM225	Organic Chemistry I and
CHEM226	Organic Chemistry II 4-8
or	
CHEM220	Survey of Organic Chemistry]
PHYS221	Elements of Physics I* 4
PHYS222	Elements of Physics II* 4
[MATH111	College Algebra* 3-5
or	
MATH140	Precalculus Mathematics*] and
MATH112	Calculus for Business and Life Sciences* 4
[MATH207	Principles of Statistical Methods or
MATH308	Probability and Mathematical Statistics 3-4
or	
BUSN211	Business Statistics]

Distributed Electives (15-22 credits)

Select electives to equal total of 95 credits	
BIOL230	Introduction to Soil Science 4
CHEM231	Quantitative Analysis 4
CHEM332	Instrumental Analysis 4
CHEM341	Environmental Chemistry I 4
CHEM342	Environmental Chemistry II 4
EVRN131	Introduction to GIS and GPS 2
FIRE312	Hazardous Material Management 4
GEOL325	Clastic Systems 4
GEOL445	Carbonate Systems 5
GEOL490	Research Topics in Geology 1-4
NSCI103	Environmental Science 3

*Students with adequate preparation in mathematics are advised to take MATH151 and MATH152 in place of MATH111 or MATH140 and MATH112 and to take PHYS231-PHYS232 in place of PHYS221-PHYS222.

Free elective credits and general education requirements must be completed so that at least 124 semester credits have been earned.

Geology Secondary Teaching Earth/Space Science Bachelor of Science

Earth/Space Science Requirements (51 credits)

GEOL121	Physical & Historical Geology I 4
GEOL122	Physical & Historical Geology II 4
GEOL218	Structural Geology and Tectonics 5
GEOL223	Mineralogy and Petrology 5
GEOL280	Introduction to Field Geology 3
GEOL315	Geoenvironmental Systems 5
GEOL318	Tectonic Systems 5
GEOL445	Carbonate Systems 5
NSCI116	Oceanography 4
NSCI119	Astronomy 4
GEOG108	Physical Geography: Meteorology 4

Complete one methods course from the following:

EDUC443	Secondary Methods: Science 3
EDUC453	Ind. Study: Science Methods 3

Cognate (6 credits)

MATH207	Principles of Statistics 3
MATH111	College Algebra 3

Professional Education Requirements and Education Cognates- see Secondary Teaching.

Free elective credits and general education requirements must be completed so that at least 124 semester credits have been earned.

History

Bachelor of Arts
Bachelor of Science
Secondary Teacher
Certification

Career Choices:

- Secondary Teacher
 - Museum Archivists and Curator
 - University Professor
 - Government Worker
-

Student Profile:

Are you...
interested in the past?
a critical thinker?
a good reader?
curious about how the past
affects the present?

Program Description:

The bachelor of arts or science degree will prepare you for entry-level work in industry and government as well as prepare you for graduate or professional schools.

Students may wish to co-enroll in the Teacher Education Program and complete the requirements for elementary or secondary certification.

Other Qualifications — Graduate degrees may be necessary for some of the positions shown. The Ph.D. is essential for appointment to a permanent teaching and research position in colleges and universities.

Career Descriptions:

Secondary Teacher — Teaches middle and high school students; becomes educational administrator.

Museum Archivist and Curator — Searches for, acquires, appraises, analyzes, describes, arranges, catalogs, restores, preserves, exhibits, maintains and stores items of lasting value for museums.

University Professor — Teaches undergraduate and graduate courses; conducts research.

Government Worker — Works for a variety of local, state and federal agencies as operational level personnel and manager.

Other Opportunities — Includes preparation for graduate or professional schools.

History Bachelor of Arts Bachelor of Science

Required Courses

HIST101	History of World Civilization I and	8
HIST102	History of World Civilization II or	
HIST131	United States History I and	8
HIST132	United States History II	
HIST496	Historical Methods	2
HIST497	Senior Seminar in History	2

300/400-Level

Choose 16 credits from the following:

HIST301	History of England - 1000-1714	4
HIST302	England in the Modern World	4
HIST310	Russia: From Underdeveloped State to Superpower	4
HIST315	Europe from Napoleon to world War I	4
HIST316	Europe in the 20th Century	4
HIST331	American Intellectual and Cultural History I	4
HIST332	American Intellectual and Cultural History II	4
HIST335	American Political Parties	4

Additional History Electives to Total 30 Semester
Hours

GEOG201	World Regional Geography	4
GEOG306	Cultural Geography	3

Choose one course from:

ECON201	Principles of Macroeconomics	3
GEOG321	Geography of Europe and Great Britain	4
GEOG322	Geography of South American, Central American and Caribbean Region	4
GEOG323	Geography of East and Southeast Asia	4
GEOG325	Regional Geography of North America	4
GEOG360	Historical Geography of Eastern North America	4

Minor

General Education Requirements

BA Degree Requirements

One Year Foreign Language	8
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or

BS Degree Requirements

Natural Science, Mathematics, or Social Science beyond general education and major requirements	8
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Total Credits for Degree: 124

History Secondary Teacher Certification Bachelor of Arts Bachelor of Science

Requirements: In addition to general education requirements, students must complete:

1. 47 semester credit hours in the courses specified below, or their equivalents;
2. A minor approved for teacher certification; and
3. Professional Education Requirements and Education Cognates- see Secondary Teaching.

Secondary History Major (47 credits)

HIST101	History of World Civilization I	4
HIST102	History of World Civilization II	4
HIST131	United States History I	4
HIST132	United States History II	4
HIST496	Historical Methods	2
HIST497	Senior Seminar in History	2
GEOG201	World Regional Geography	4
GEOG302	Economic Geography	3
POLI110	Intro. to American Government	4
Complete one methods course from the following:		
EDUC444	Secondary Methods: Social Studies	3
EDUC454	Directed Study: Social Studies	

History Cognates

Select three courses from the following list:

HIST302	England and the Modern World	4
HIST315	Europe: From Napoleon to WWII	4
HIST316	Europe in the 20th Century	4
HIST361	Latin America	4
HIST371	Far East Civilization 1850-Present	4
HIST440	The Declaration of Independence and the Constitution	4
HIST441	Diplomatic History U.S. I	4
HIST442	Diplomatic History U.S. II	4

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252,
GRMN141-142 or 241-242, NATV141-142 or
201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Bachelor of Science Degree:

At least eight (8) semester credits in addition to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Individualized Studies

Bachelor of Arts Bachelor of Science

Career Choices:

Your choice of career

Student Profile:

Do you ...

have a career choice in mind where a regular degree will not give you the background you need?

Program Description:

The individual studies degree may be appropriate if you desire an unusually specialized program. The purpose of the degree is to provide you an opportunity to specialize in two or more academic areas. You will meet with an academic advisor to plan an individualized studies academic program that reflects your professional and personal goals.

Guidelines for an individualized studies degree are:

1. Contact a department chair or regional site director with a preliminary plan for degree development.
2. The department chair or regional site director will identify possible faculty advisor/s or another department chair to counsel you in degree planning.
3. The advisor/s will assist you in the development of the proposal. The proposal must include justification for specialization and a list of courses which meet the individualized studies degree requirement including:
 - a. general education requirements.
 - b. minimum of 124 credits and a minimum of 32 hours on campus or a minimum of 32 hours of LSSU classes offered at a regional center. Fifty percent of the 300-400 level credits used

in the concentration areas must be completed with LSSU classes.

c. 24 credits at 300/400 level in addition to general education requirements and a 2.00 cumulative GPA.

d. BA or BS degree requirement.

4. You need to contact the chairperson of the Individualized Studies Committee to schedule a committee meeting.
5. You will present the degree proposal to the committee for review. It is recommended that your advisor attend this meeting.
6. The committee will approve your original proposal, approve your proposal with recommended changes, or not approve your degree proposal.
7. You and your advisor will submit an approved Degree Audit Sheet to the chairperson to be distributed to the committee.
8. You will process a Curriculum Change Sheet.
9. Any course changes from the approved program must be submitted to the committee for approval.

Career Description:

You plan your career and with the help of your advisor and department chair, set up your program to meet your career goals.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Industrial Technology

Program Description:

Your academic experience will include a foundation in the basic sciences, mathematical concepts through algebra and trigonometry, general education, software, technology and automation.

You will learn to apply your skills toward the solution of practical, industrial-type technical problems. During your senior year, you will participate in the construction-and-build semester of a real-world industrial project, working with engineers and company representatives. During your time at LSSU, you will also have developed communication skills that will enable you to grow and succeed in your professional career.

Not a first-time college student? There are multiple technical and free electives to allow transfer students to fit into the flow of the program.

Career Descriptions:

As a graduate, you will have the ability to seek employment in the technical areas of business, industry, and manufacturing. Graduates will find opportunities in the high-tech areas of manufacturing, robotics, and automation.

Industrial Technology Bachelor of Science

Required Courses

CHEM108	Applied Chemistry	3
CHEM109	Applied Chemistry Lab	1
CSCI101	Introduction to Microcomputer Applications	3
CSCI105	Introduction to Computer Programming	3
ECON202	Principles of Microeconomics	3
EGEE125	Digital Fundamentals	4
EGET110	Applied Electricity	4
EGET175	Applied Electronics	4
EGME110	Manufacturing Processes	3
EGME141	Solid Modeling	3
EGME240	Assembly Modeling and GD&T	3
EGMT225	Statics and Strength of Materials I	4
EGMT310	CNC Manufacturing Processes	4
EGNR265	C Programming	3
CSCI121	Principles of Programming	3
EGNR310	Advanced Quality Engineering	4
EGRS215	Robotics Technology I	2
EGRS365	Programmable Logic Controllers	3
EGRS380	Robotics Technology II	2
EGRS381	Robotics Technology II Lab	1
MATH102	Intermediate Algebra	4
MATH140	Precalculus	5
MATH207	Principles of Statistical Methods	3
PHYS221	Principles of Physics I	4

Complete one sequence:

Industrial Project

EGNR496	Senior Directed Project	3
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Cooperative Project

EGNR450	Cooperative Education Project I	2
EGNR451	Cooperative Education Project II	2

Approved Electives (18 credits*)

Approved by the coordinator of the manufacturing engineering technology degree program.

Free Electives (8 credits)

General Education (22-23 credits)

Bachelor of Science

Career Choices:

Process Control Technician

Robotics Programmer

Maintenance Technologist

Service Technician

Sales Technician

Automation Specialist

CNC Programmer

PLC Programmer

CAD Designer

Student Profile:

Do you...

like working with your hands?

enjoy practical problem solving?

have a desire to see projects through to completion?

have high motivation and drive?

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Integrated Science

Bachelor of Science Integrated Science Elementary Teaching Secondary Teaching

Career Choices:

Elementary Classroom Teacher
with science emphasis

Middle School Science Teacher
(all science subjects)

High School Science Teacher
(all science subjects)

Science Specialist

Science Curriculum Specialist

Student Profile:

Do you have ...

a love for helping others to learn science?

aptitude in natural sciences?

skills in planning, organization and problem solving?

ability to communicate effectively orally and in writing?

ability to effectively organize and present information verbally?

ability to communicate and work with a broad array of people?

Program Description:

This program includes either training for elementary level teacher certification with a major in integrated science, or an elementary teaching minor in integrated science, or an approved secondary teaching major leading to Michigan Teacher certification in Integrated Science (program code DI).

Elementary teachers will hold full elementary certification for self contained classrooms, as well as qualification to teach all science subjects in the middle school.

Secondary teacher certification enables the candidate to teach biology, chemistry, Earth/space science, life science, physics and physical science in grades 6-12.

Contact the School of Education for more information.

In addition to classroom teaching, graduates can pursue careers as science educators, curriculum specialists or enter graduate study in science, science education or related fields.

Career Descriptions:

The Integrated Science Program prepares teachers for ALL science subjects.

Biology teachers teach only courses titled: Biology, Human Biology, Life Science, etc. Chemistry teachers only teach courses titled: Chemistry, physical science etc. Physics teachers only teach courses titled: Physics, physical science.

Integrated Science teachers teach ALL the science subjects, at all grades (depending on whether they choose an elementary or secondary program plan). Job titles include: **Science teacher, curriculum specialist, and science educator.**

Responsible for developing and implementing science curriculum at all grade levels, daily classroom operations, and developing relationships with students and parents, the Integrated Science program prepares students to teach biology, chemistry, Earth/space science, physics, life science and physical science courses.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Integrated Science

Integrated Science Elementary Teaching Bachelor of Science

Elementary Integrated Science Major (44 credits)

BIOL107	Field Biology	3
BIOL131	General Biology: Cells	4
BIOL132	General Biology: Organisms	4
CHEM105	Life Chemistry II	4
GEOG108	Physical Geography: Meteorology and Climatology	4
	<i>or</i>	
NSCI116	Oceanography	4
GEOL121	Physical Historical Geology I	4
NSCI101	Conceptual Physics	4
NSCI103	Environmental Science	3
NSCI104	Environmental Science Lab	1
NSCI110	Chemistry in Society	4
NSCI119	Astronomy	4

Science Cognates (5 credits)

EDUC421	Elementary Science Methods	2
MATH207	Principles of Statistical Methods	3

Planned Program

Language Arts:

ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
ENGL222	English Grammar	3
ENGL335	Children's Literature in the Classroom	3

Choose one literature class from the following:

ENGL180	Introduction to Literary Studies	3
ENGL235	Survey of Native Literature of North America	3
ENGL236	Literature and Culture	3

Mathematics:

MATH103	Number Systems & Problem Solving	4
MATH104	Geometry and Measurement	4
MATH207	Principles of Statistical Methods (or equivalent)	3

Natural Sciences:

BIOL107	Field Biology	3
NSCI101	Conceptual Physics	4
NSCI102	Introduction to Geology	4
NSCI110	Chemistry in Society	4

Social Studies:

HIST101	World Civilization I and	4
HIST102	World Civilization II	4
	<i>or</i>	
HIST131	United States History I and	4
HIST132	United States History II	4
GEOG201	World Regional Geography	4
POLI110	American Government	4

All Students:

PSYC265	Child and Adolescent Psychology	3
EDUC330	Reading in the Elementary Classroom	3

General Education (19 credits)

COMM101	Fund. of Speech Communication	3
	Approved Social Science	9
HUMN251	Humanities I	4
	Approved Humanities	3

Professional Education Requirements and Education Cognates- see Elementary Teaching.

Free Electives as needed to reach 124-credit minimum

Integrated Science Secondary Teaching Bachelor of Science

Secondary Integrated Science Major (74 credits)

BIOL122	Human Anatomy & Physiology	4
BIOL131	General Biology: Cells	4
BIOL132	General Biology: Organisms	4
BIOL220	Genetics	4
BIOL240	Natural History of Vertebrates	3
BIOL337	General Ecology	3
CHEM105	Life Chemistry II	4
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4
GEOG108	Physical Geography: Meteorology and Climatology	4
GEOL121	Physical Historical Geology I	4
GEOL122	Physical Historical Geology II	4
NSCI116	Oceanography	4
NSCI119	Astronomy	4
PHYS221	Principles of Physics I	4
PHYS222	Principles of Physics II	4

Complete one of the following methods courses:

EDUC443	Secondary Methods: Science	3
EDUC453	Directed Study: Science Methods	3

Departmental Cognates (9 credits)

CHEM395	Junior Seminar	1
CHEM499	Senior Seminar	1
MATH112	Calculus for Business and Life Sciences	
	<i>or</i>	4
MATH151	Calculus I	
MATH207	Principles of Statistical Methods	3

General Education (25 credits)

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
	Approved Social Science	9
HUMN251	Humanities I	4
	Approved Humanities	3

Professional Education Requirements and Education Cognates- see Secondary Teaching.

Free Electives as needed to reach 124-credit minimum (0-3 credits)

Legal Studies

Bachelor of Science

Specialties in:

Client Advocacy

Criminal Law

**Environmental Law
and Policy**

Labor Law

Legal Administration

Legal Technology

**Legislative/
Constitutional Law**

Personal Injury

Career Choices*:

Corporate Legal Assistant

Governmental Legal Assistant

Litigation Legal Assistant

Real Estate Legal Assistant

Student Profile:

Do you have...

an interest in the law?

a desire and commitment
to help others?

a good work ethic?

good verbal and written
communication skills?

detail orientation
and good organization skills?

a well-established set of ethics?

self-motivation, initiative
and a positive outlook?

good human relations skills?

an ability to think logically?

a willingness to learn new skills
and to be challenged?

Program Description:

The legal assistant profession is one of the occupations projected to grow the fastest through the year 2014 according to the U.S. Department of Labor. A legal assistant (or paralegal) is a valued member of the legal team and works under the supervision of attorneys.

This program is approved by the American Bar Association and is designed to train qualified legal assistants capable of working in a variety of areas of the law and in a variety of work environments. Consequently, the role and job duties of a legal assistant vary depending on the areas of law and work environment in which a legal assistant is employed. Such diversity, varied challenges, and employment possibilities are what makes the legal assistant profession so interesting and rewarding.

There are four different degrees or offerings in legal studies. They are as follows: (1) a four-year baccalaureate degree in legal studies with an emphasis in legal administration, criminal law, personal injury, labor law, legislative/constitutional law, environmental law and policy, legal technology, or client advocacy or a selected minor as approved by the legal studies coordinator; (2) a two-year associate's degree in legal studies; (3) a post-baccalaureate (one-year) certificate in legal studies (which is available to students who already have a bachelor's degree in some other discipline and wish to make a career change or advancement); or (4) a minor in legal studies which can complement various majors (and may also be helpful to students who are planning on attending law school).

Career Descriptions*:

Litigation Legal Assistant —

Conducts legal, factual and computerized research; drafts legal pleadings and documents; interviews clients and witnesses; investigates, gathers and organizes case information; assists at trial.

Corporate Legal Assistant —

Drafts and/or analyzes various legal documents; attends meetings, negotiations or closings; performs legal and factual research; monitors compliance with applicable industry regulations; assists attorneys with preparation for collective bargaining, contract negotiations, administrative hearings or trials.

Criminal Law Legal Assistant —

Conducts comprehensive interviews of defendants, law enforcement, victims, and/or witnesses; performs case and field investigations; locates and coordinates usage of applicable experts; prepares motions, briefs or other legal documents; acts as a litigation assistant during trial and any appeal.

Governmental Legal Assistant —

Works as an immigration specialist; civil rights analyst; environmental protection specialist; mediation specialist; legislative analyst; workers compensation claims examiner, etc. (even the White House has employed legal assistants).

Real Estate Legal Assistant —

Conducts title searches; drafts real estate closing documents; monitors compliance with title, survey, disclosure and/or regulatory requirements; schedules and participates in real estate closings.

**Note: The above career descriptions are only a sampling of the numerous avenues available to legal assistants. See next page for additional employment listings.*

Legal Studies Bachelor of Science

For this degree, students must complete the required courses in the majors that are listed below, the general education requirements, plus electives to total 124-128 credits. Students must elect a specialty area (see next page) or a minor as approved by the legal studies coordinator.

Required Major Courses (58-60 credits)

BUSN350	Business Law I	3
BUSN355	Business Law II	3
CJUS319	Substantive Criminal Law	3
CJUS409	Procedural Criminal Law	3
LAWS102	Legal Research and Case Analysis	3
LAWS125	Civil Litigation and Procedure	4
LAWS140	Personal Injury Litigation and Investigative Techniques	3
LAWS150	Legal Professionals and Ethical Considerations	3
LAWS202	Legal Writing and Analysis	3
LAWS250	Law Office Management, Systems and Technology	3
LAWS299	Legal Internship and Professional Development Seminar	6-8
LAWS320	Real Estate Law	3
LAWS321	Family Law	2
LAWS322	Probate Law & Procedure	3
LAWS401	Evidence & Trial Practice	3
LAWS450	Advanced Legal Writing & Interviewing Seminar	3
LAWS	Elective**	3
POLI467	Constitutional Law and Civil Liberties*	4

General Education (36-39 credits)*

ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
COMM101	Fund. of Speech Communication	3
HUMN251	Humanities I	4
HUMN	Elective	3
	Social Science	6-8
	Social Science Diversity	3-4
	Natural Science	8
MA110 (or higher)	Explorations in Math	3
PHIL205	Logic	3

Computer Cognates - Required (6-7 credits)

OFFC119	Accounting Procedures***	4
	and	
CSCI101	Intro. to Microcomputer Appl.	3
	or	
DATA225	Word Processing Techniques	3
	or	
DATA231	Database	3
	or	
DATA235	Spreadsheets	3
	or	
DATA250	Desktop Publishing & Presentation Design	3

Legal Specialty or Minor (20+ credits)

See below and next page.

Electives (8 credits or less)

Electives are to be chosen in consultation with advisor.

*The legal studies B.S. degree requires eight 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 areas section, the minor and/or POLI467. Students should consult their advisor.

**See LAWS300, seminar in legal studies; also consult with legal studies coordinator.

***ACTGI32 may be substituted for OFFC119.

Legal Studies Specialties*

A student shall obtain a minimum of 20 credits in any one of the specialty areas listed below. Specialty area courses should be selected in consultation with your legal studies advisor. As an alternative to selecting a specialty area within this program, a student may choose a minor that must be approved by the legal studies advisor or dean.

Note: At least nine credits shall be at the 300-400 level, with the exception of the Legal Technology Specialty. Also, in selecting and planning courses within a given specialty be sure to review necessary course prerequisites.

Criminal Law Specialty

CJUS101	Intro. to Criminal Justice	3
CJUS243	Investigation	3
CJUS250	Correctional Law	3
CJUS341	Fire Cause and Arson Investigation	3
CJUS355	Juvenile Justice	3
CJUS444	Criminalistics	4
LAWS301	Alternative Dispute Resolution and Conflict Management	3
PSYC101	Introduction to Psychology	4
PSYC259	Abnormal Psychology	3
SOCY101	Introduction to Sociology	3
SOCY103	Cultural Diversity	3
SOCY214	Criminology	3
SOCY338	Deviance	3

Labor Law Specialty

ECON201	Principles of Macroeconomics	3
	or	
ECON202	Principles of Microeconomics	3
LAWS301	Alternative Dispute Resolution and Conflict Management	3
LAWS406	Worker's Disability Compensation Law	2
MGMT360	Management Concepts and Applications	3
MGMT365	Human Resource Management	3
MGMT451	Labor Law	4
MGMT464	Organizational Behavior	3
MGMT469	Management Concepts and Applications	3
PSYC228	Organizational Behavior	3
PSYC383	Industrial Psychology	3
SOCY313	Work and Organization	3

Employment:

Legal assistants are employed with ...

private law firms

corporations

financial institutions

government

(federal, tribal, state or local)

courts and mediation systems

real estate offices and title

companies

insurance companies

special interest groups

prosecutor or public defender of-

fices

educational institutions

financial service organizations

credit and collection agencies

service, consulting

or publishing companies

Completion of the Legal
Studies Program
DOES NOT AUTHORIZE
graduates to practice law
as an attorney

Legal Studies

Legal Administration Specialty

ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	4
ACTG232	Intermediate Accounting I	4
ACTG233	Intermediate Accounting II	4
ACTG332	Cost Management I	4
ACTG333	Cost Management II	4
ACTG334	Accounting Information Systems	3
ACTG421	Federal Taxation Accounting I	3
ACTG422	Federal Taxation Accounting II	3
BUSN226	Records Management	3
COMM210	Business & Professional Speaking	3
COMM320	Public Relations	4
COMM325	Organizational Communication	3
ECON302	Managerial Economics	4
FINC341	Managerial Finance	4
FINC443	Insurance	4
LAWS301	Alternative Dispute Resolution and Conflict Management	3
MRKT281	Marketing Principles & Strategy	3
MRKT385	Services Marketing	3
MRKT387	Advertising Theory & Practice	3
MGMT360	Management Concepts and Applications	3
MGMT365	Human Resource Management	3
MGMT380	Principles of Leadership	3
MGMT464	Organizational Behavior	3
MGMT476	Employee Training & Development	4
PSYC228	Organizational Behavior	3

Legislative/Constitutional Law Specialty

ECON201	Principles of Macroeconomics or	3
ECON202	Principles of Macroeconomics	3
ECON305	Public Finance	3
HIST131	United States History I	4
HIST132	United States History II	4
HIST335	American Political Parties	4
HIST440	The Declaration of Independence and the Constitution	4
LAWS301	Alternative Dispute Resolution and Conflict Management	3
LAWS305	Tribal Law and Government	3
POLI130	Introduction to State and Local Government	4
POLI201	Intro. to Public Administration	3
POLI301	Policy Analysis and Evaluation	4
POLI364	Political Parties, Interest Groups & Public Opinion	3
POLI367	Congress & the Presidency	4
POLI401	Prin. of Public Administration	3

Personal Injury Specialty

BIOL105	Function of the Human Body	4
BIOL121	Human Anatomy & Physiology I	4
BIOL122	Human Anatomy & Physiology II	4
CHEM104	Life Chemistry I	3
CHEM105	Life Chemistry II	4
FINC443	Insurance	4
HLTH101	Intro. to Medical Terminology	2
HLTH209	Pharmacology**	3
LAWS301	Alternative Dispute Resolution and Conflict Management	3

LAWS405	No-Fault Automobile Law	3
LAWS406	Worker's Disability Compensation Law	2
PSYC101	Introduction to Psychology	4
PSYC217	Social Psychology	3
PSYC357	Personality Theory	3
PSYC385	Health Psychology	3
EVNR285	Principles of Epidemiology	3

Environmental Law and Policy Specialty

ECON202	Principles of Microeconomics	3
ECON307	Environmental Economics	3
EVNR126	Interpretation of Maps and Aerial Photography	2
EVNR131	Introduction to GIS and GPS	2
EVNR231	Intermediate GIS	2
EVNR285	Principles of Epidemiology	3
EVNR311	Environmental Law	3
EVNR313	Solid and Hazardous Waste	3
INTD300	The Human Environment	3
LAWS301	Alternative Dispute Resolution and Conflict Management	3
NSCI103	Environmental Science	3
NSCI104	Environmental Science Lab	1
POLI342	International Environmental Policy	3
SOCY227	Population and Ecology	3

Legal Technology Specialty***

BUSN226	Records Management	3
CSCI101	Intro. to Microcomputer App.****	3
CSCI103	Survey of Computer Science****	3
CSCI105	Intro. to Computer Programming	3
CSCI163	Troubleshooting & Repair of Personal Computer	3
CSCI221	Computer Networks	3
CSCI263	Storage, Protection & Recovery of Personal Computer	3
DATA121	Computer App. for Business****	3
DATA225	Word Processing Techniques	3
DATA231	Database	3
DATA235	Spreadsheets	3
DATA250	Desktop Publishing & Presentation Design	3
DATA261	Multimedia Applications	3
LIBR101	Information & Information Technology Literacy	1
OFFC235	Automated Office Systems	3

Client Advocacy Specialty

CJUS250	Correctional Law	3
CJUS355	Juvenile Justice	3
COMM201	Small Group Communication	3
COMM302	Argumentation & Advocacy	3
HLTH210	Intro. to Health Care Concepts	3
HLTH352	Health Care Issues of Aging Pop.	3
LAWS301	Alternative Dispute Resolution and Conflict Management	3
LAWS305	Tribal Law & Government	3
SOCY102	Social Problems	4
SOCY238	Social Psychology	4
SOCY326	Sociology of Aging and the Aged	3
SOCY327	Sociology of Dying and Death	3
SOCY/SOWK338	Deviance	3

SOWK/PSYC201	Communication Skills in Counseling	3
SOWK/PSYC391	Family Therapy	3
SOWK/HMSV480	Grant Writing	3
PSYC101	Introduction to Psychology	4
PSYC155	Lifespan Development	3
PSYC217	Social Psychology	3
PSYC259	Abnormal Psychology	3
PSYC265	Child & Adolescent Development	3
PSYC301	Exceptional Child & Adolescent	3
PSYC396	Tests & Measurements	3

**LAWS300 seminar in legal studies may apply to certain specialties and can be taken with approval of legal studies coordinator. In the alternative, these special topics may be used as the required legal studies elective. In addition, with the approval of the legal studies coordinator, a student may be able to complete an independent study (LAWS490) in his/her selected specialty.*

***Prerequisites: BIOL122 or BIOL105 and CHEM105.*

****A student may not count a computer cognate that he/she selected as a part of the major towards this specialty.*

*****A student may only complete one of these three courses in this specialty.*

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Liberal Studies

Program and Career Description:

The liberal studies program is designed for those students who either desire a specific set of courses contained in particular minors or who are planning on attending graduate or professional school.

This program is quite rigorous in that there are a minimum number of upper division credits required as well as a senior capstone experience.

Thus, the graduates of this program will have a firm grounding in the liberal arts as well as the requisite communication skills necessary for success in today's world.

Liberal Studies Bachelor of Science or Bachelor of Arts

Major Requirements

Minimum of 60 credits must be completed which include two academic minors having no more than two courses in common.

Additional Major Requirements:

PHIL	Elective	3
SOCY103	Cultural Diversity	3
INTD490	Senior Directed Study	3

A minimum of 24 of these 60 credits must be at the 300/400 level.

General Education

ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
COMM101	Fund. of Speech Communication	3

Humanities (7-8 credits)

HUMN251	Humanities I	4
HUMN	Elective	3-4

Mathematics (3-5 credits)

MATH110	(or higher) Exploration in Math	3
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PHIL205 Logic

Natural Science (8 credits)

Social Science (6-8 credits) from different disciplines

Social Science (diversity; 3-4 credits)

Bachelor of Science

Social Science or Natural Science or Mathematics	8
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Bachelor of Arts

Foreign Language	8
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Electives to total 124 credits

Guidelines:

Once a student decides on this major:

1. The student contacts the liberal studies degree director.
2. Student and director agree on choice of minors.
 - a. If needed, director consults with faculty in the discipline.
 - b. If needed, director consults with the Liberal Studies Degree Committee.
3. Student and director discuss core requirements, general education requirements, BA/BS requirements and elective choices.
4. Student and director discuss other requirements; i.e., upper division minimum requirements.
5. Student is given an educational plan including a Degree Audit Sheet.
6. If necessary, student makes formal request to change major.
 - a. Advisor(s) assigned after consultation
7. Student matriculates.
8. Student meets with liberal studies director spring of junior year to set up senior capstone experience (INTD490). Subsequent meeting with advisor(s).
9. In senior year, student returns to liberal studies director for final review and signature.

Bachelor of Arts

Bachelor of Science

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Bachelor of Science Degree:

At least eight (8) semester credits in addition to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Manufacturing Engineering Technology

Bachelor of Science

Option:
General

Minor:
Robotics Technology

Career Choices

Process Control Engineer
Robotics Engineer
Maintenance Technologist
Project Manager
Systems Engineer
Service Engineer
Manufacturing Engineer
Sales Engineer
Consultant Engineer
Production Technologist
Automation Engineer
Applications Engineer

Student Profile:

Do you have ...

an interest in math, computers and science?

a desire to learn how manufacturing processes are designed and implemented?

a good work ethic?

a strong motivation to learn and succeed in life?

Program Description:

Manufacturing engineering technology (MfgET) is a multi-disciplinary field that integrates knowledge from areas of study such as science, math, computers, mechanical engineering, electronics engineering, management and economics. MfgET is a profession that gives you the expertise to develop tools, processes, machines and equipment to make quality products at a reasonable cost. The profession also involves working with and coordinating people from several other fields.

In addition to providing a strong background in the fundamentals of manufacturing engineering technology, *the program places an emphasis on the application of computer systems to modern manufacturing technologies.* This includes topics such as robotics, computer-aided design (CAD), programmable logic controllers (PLC), computer-aided manufacturing (CAM), and simulation of manufacturing systems. The classes and labs in the curriculum average about 12 students and are taught by faculty who are dedicated to undergraduate teaching excellence.

Students pursuing the B.S. degree in manufacturing at LSSU have the option to minor in robotics technology. LSSU is one of a few universities in the U.S. to offer the robotics minor in the TAC of ABET-accredited* manufacturing engineering technology B.S. degree. LSSU is home to one of the best robotics educational facilities in North America. Graduates with this emphasis have had nearly 100 percent job placement with high and competitive starting salaries. Your minor in robotics will be identified on your transcripts.

A scientific "high technology" basis in the field of manufacturing engineering technology is evolving. The MfgET program is designed to place LSSU graduates at the leading edge of this evolution.

Career Description:

Whether it be a single gear or a complete automobile engine, the complete set of events that results in a finished product is planned and implemented by a manufacturing engineer. Once you graduate from LSSU, you will have many manufacturing career choices ranging from applied technical research to management of systems and personnel. Typical graduates have obtained engineering and technology positions in design of automated manufacturing systems, computer-aided design and manufacturing, quality control, robotics applications, automotive component manufacturing, design of manufacturing processes and equipment, maintenance, sales and management of manufacturing systems. Some graduates have also transferred to graduate schools to pursue master's and doctoral degrees.

Cooperative Education:

Opportunities are available as part of this program for students who are academically qualified. A certificate that documents this practical training is available.

**Technology Accreditation Commission (TAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Phone: 410-347-7700*

Manufacturing Engineering Technology

Manufacturing Engineering Technology Bachelor of Science

Departmental Requirements: (102 credits)

Mathematics (12 credits)

MATH112	Calculus for Business and Life Science	4
MATH140	Precalculus Mathematics	5
MATH207	Principles of Statistical Methods	3

Science (9 credits)

CHEM115	General Chemistry I	5
PHYS221	Principles of Physics I	4

Engineering Technology (62 credits)

EGEE125	Digital Fundamentals	4
EGNR101	Introduction to Engineering	2
EGNR140	Linear Algebra and Numerical Methods for Engineers	2
EGNR245	Calculus Applications for Technology	3
EGNR265	"C" Programming	3
EGNR310	Advanced Quality Engineering	4
EGNR491	Engineering Design Project I	3
EGNR495	Engineering Design Project II	3
EGET110	Applied Electricity	4
EGET175	Applied Electronics	4
EGME110	Manufacturing Processes I	3
EGME141	Solid Modeling	3
EGME240	Assembly Modeling and GD&T	3
EGME275	Engineering Materials	3
EGME276	Strength of Materials Lab	1
EGMT225	Statics and Strength of Materials	4
EGMT310	CNC Manufacturing Processes	4
EGRS215	Robotics Technology I	2
EGRS365	Programmable Logic Controllers	3
EGRS380	Robotics Technology II	2
EGRS381	Robotics Technology Lab	1
EGRS480	Manufacturing Automation	3
EGRS481	Manufacturing Automation Lab	1

Support Courses (16 credits)

ECON302	Managerial Economics	4
MGMT360	Management Concepts and Applications	3
	Cooperative Education*	2
	Technical Electives	3-4
	Free Electives	3

Select a Senior Engineering Project Sequence: (0-8 credits)

Industrial Project (0 add'l credits-see above)

EGNR491	Engineering Design Project I	3
EGNR495	Engineering Design Project II	3

Co-op Project (add'l 6 credits)

EGNR250	Cooperative Education I	2
EGNR450	Cooperative Education Project I	2
EGNR451	Cooperative Education Project II	2
EGNR491	Engineering Design Project I	3

Research Project (add'l 8 credits)

EGNR260	Engineering Research Methods	2
EGNR460	Engineering Research Project I	4
EGNR461	Engineering Research Project I	2

General Education (22 credits)

COMM101	Fundamentals of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
HUMN251	Humanities I	4
	Humanities/Aesthetics Elective	3-4
	Social Science Elective	3-4
	Cultural Diversity Elective	3

Your degree options:

You may choose to follow one of the following degree options while studying manufacturing engineering technology at LSSU. They are the **general option** or the **minor in robotics technology**.

In the **general option**, you will have the ability to choose the specific course of study for the course(s) noted as technical electives in the curriculum.

For the **robotics technology minor**, you will complete a specified advanced course in robotics in place of the technical electives credits.

The advanced course will provide you with a strong background in systems integration, machine vision, sensors and automation. LSSU is one of a few universities in the USA that offer you this option to specialize in robotics in the manufacturing program. LSSU is home to one of the best robotics educational facilities in North America. Graduates with this emphasis have had nearly 100-percent job placement with high and competitive starting salaries.

Your completion of study in the robotics minor will be identified on your transcript.

Additional Credits for the Robotics Technology minor (4 credits)

EGRS430	Systems Integration and Machine Vision	4
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General Option

	Free Electives	3-4
	Technical Electives**	3-4

Select one from the following courses:

EGEE250	Microcontroller Fundamentals	4
EGMT332	Thermodynamics and Heat Transfer for Technologists	4
MGMT375	Introduction to Supply Chain Management	3
MGMT471	Production/Operations Management	3

Total Credits: minimum of 124

*If co-op education opportunity is available, a technical elective approved by coordinator may be substituted.

**As approved by program coordinator.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Mathematics

Bachelor of Science Mathematics Mathematics — Actuarial and Business Applications Elementary Teaching Secondary Teaching

Career Choices

Actuary
Operations Research Analyst
Statistician
Research Scientist
Elementary/Secondary Teacher
School Administrator/Counselor
Educational Consultant or Trainer

Student Profile:

Do you ...

have intellectual curiosity?
enjoy the challenge of
problem-solving?
like to explore quantitative
problems in the world of business?
have proficient skills in spoken
and written communication?
have proficient skills in reading,
mathematics, science and
liberal arts?

Program Description:

Mathematics:

Many who major in the field of mathematics combine those studies with education courses and obtain employment as teachers. People with mathematics degrees are found in a broad range of occupations where quantitative skills are needed; one of the largest employers of mathematics is the National Security Agency. Often a minor field of study (such as computer science) provides the supporting credential for entry-level jobs.

Actuarial and Business Applications:

The actuarial and business applications option combines mathematical knowledge with quantitative business applications. The result is a very marketable degree that provides many exciting career opportunities for graduates. A student should be prepared to take the first actuarial examination in the spring of his/her junior year and the second examination the following spring. A student choosing this emphasis will complete a minor in accounting-finance.

Teaching degrees — A completion of a fifth-year internship and graduate course work qualifies you for elementary or secondary teacher certification in Michigan and Ontario, as well as reciprocity with several other states.

Graduate school — An undergraduate mathematics major with emphasis on abstraction, together with an analytical approach to problem solving, continues to provide strong preparation for graduate work in diverse fields — especially when combined with a minor in the related field.

Career Descriptions:

Operations Research Analyst — Helps organizations operate as efficiently as possible through the application of mathematical principles to organizational problems.

Statistician — Government agencies such as the Bureau of Labor employ statisticians to monitor the consumer price index, employment statistics and the like. Industries use statisticians in their efforts to forecast future needs, to implement quality control, and to design information-gathering strategies.

Research Assistant — Mathematicians are sometimes needed as members of a multi-discipline research team, responsible for creating a mathematical model of a real-world process or context, which then is used to help solve problems of interest to the team's efforts.

Actuary — Assembles and analyzes statistics to calculate probabilities of sickness, death, injury, disability, retirement, property loss and unemployment for insurance companies.

School Administrator or Counselor — A valid teaching certificate and teaching experience are prerequisites. Further course work and separate certification are also required.

Educational Consultant or Trainer — Trains personnel in industry on new procedures and/or equipment needed.

Mathematics
Bachelor of Science

Departmental Requirements:		(55 credits)
MATH151	Calculus I	4
MATH152	Calculus II	4
MATH251	Calculus III	4
MATH215	Fundamental Concepts of Mathematics	3
MATH216	Discrete Mathematics and Problem Solving	3
MATH261	Intro. to Numerical Methods	3
MATH305	Linear Algebra	3
MATH308	Probability and Mathematical Statistics	3
MATH309	Applied Statistics	4
MATH310	Differential Equations	3
MATH341	Abstract Algebra I	3
MATH351	Graph Theory	3
MATH401	Mathematical Modeling	3
MATH411	Advanced Calculus	3
MATH490	Research Topics in Mathematics	3
<i>Choose any two (2) of the following</i>		(6 credits)
CSCI103	Survey of Computer Science	3
CSCI105	Intro. to Computer Programming	3
CSCI121	Principles of Programming	3
Other Requirements		(4 credits)
PHYS231	Applied Physics for Engineers and Scientists I	4
General Education		(29-33 credits)
Free Electives or Academic Minor		(32-36 credits)
Total Credits:		124
Free elective and general education requirements must be completed so that at least 124 semester credits have been earned.		

Mathematics
Elementary Teaching
Bachelor of Science

In this program, you will complete a teaching major in mathematics and a planned program in the other three academic areas essential to elementary school teaching: language arts, natural science and social science. The planned program is explained in the School of Education section of this catalog.	
The program also includes general education requirements and a professional education component. Students take the first two teacher education courses (EDUC150 and EDUC250) and then apply for formal admission to the Teacher Education Program.	
You earn a bachelor's degree including internship with accompanying graduate course work in order to become certified to teach.	
Degree Requirements:	
Mathematics Requirements (37 hours)	
CSCI103	Survey of Computer Science 3
CSCI105	Intro. to Computer Programming 3
MATH103	Number Systems and Problem Solving 4
MATH104	Geometry & Measurement 4
MATH151	Calculus I 4
MATH152	Calculus II 4
MATH215	Fundamental Concepts of Math 3
MATH305	Computational Linear Algebra 3
MATH308	Probability and Mathematical Statistics 3
<i>or</i>	
MATH207	Principles of Statistical Methods 3
MATH321	History of Mathematics 3
MATH325	College Geometry 3
Professional Education Requirements and Education Cognates- see Elementary Teaching.	
Free elective and general education requirements must be completed so that at least 124 semester credits have been earned.	

Bachelor of Science Degree:
At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.
These bachelor of science degree requirements can be used for majors or minors, but not general education.

Mathematics

Mathematics Secondary Teaching Bachelor of Science

In this program, you will complete a major in mathematics tailored to the needs of a secondary teacher and a minor in a “teachable field.” Computer science courses are included and during your methods classes, you will work extensively with computer and calculator technology as it applies to classroom teaching.

This program also includes general education requirements, and professional component. Students take the first two teacher education courses (EDUC150 and EDUC250) and then apply for formal admission to the Teacher Education Program.

You earn a bachelor’s degree including a teaching internship with accompanying graduate course work in order to become certified to teach.

Degree Requirements:

Mathematics Requirements	(42 credits)
MATH151 Calculus I	4
MATH152 Calculus II	4
MATH207 Principles of Statistical Methods	3
MATH215 Fundamental Concepts of Math	3
MATH216 Discrete Mathematics and Problem Solving	3
MATH251 Calculus III	4
MATH305 Computational Linear Algebra	3
MATH310 Differential Equations	3
MATH321 History of Mathematics	3
MATH325 College Geometry	3
MATH341 Abstract Algebra I	3
MATH401 Mathematical Modeling	3

Cognate

CSCI105 Intro. to Computer Programming	3
or	
CSCI121 Prin. of Computer Programming	

Teaching Minor (21-22 credits)

Professional Education Requirements and Education Cognates- see Secondary Teaching

General Education (30-34 credits)

The remainder of the 124 credits for graduation are gained through the general education requirements and electives.

Total Credits: 124

Mathematics Actuarial and Business Applications Bachelor of Science

Departmental Requirements:	(52 credits)
MATH151 Calculus I	4
MATH152 Calculus II	4
MATH251 Calculus III	4
MATH215 Fundamental Concepts of Mathematics	3
MATH216 Discrete Mathematics and Problem Solving	3
MATH305 Linear Algebra	3
MATH308 Probability and Mathematical Statistics	3
MATH309 Applied Statistics	4
MATH310 Differential Equations	3
MATH341 Abstract Algebra I	3
MATH351 Graph Theory	3
MATH401 Mathematical Modeling	3
MATH411 Advanced Calculus	3
MATH490 Research Topics in Mathematics	3

<i>Choose any two (2) of the following</i>	(6 credits)
CSCI103 Survey of Computer Science	3
CSCI105 Intro. to Computer Programming	3
CSCI121 Principles of Programming	3

Other Requirements	(7 credits)
ECON201 Principles of Macroeconomics	3
FINC341 Managerial Finance	4

A student choosing this emphasis will complete a minor in accounting-finance (24 credits).

General Education	(33-37 credits)
Free Electives	(11-15 credits)
Total Credits	124

Elective credits and general education requirements must be completed so that at least 124 semester credits have been earned.

Mechanical Engineering

Program Description:

Mechanical engineering is a broad-based program that prepares you for a rewarding career in mechanical and related engineering fields. Course work for this EAC of ABET-accredited* program includes 71 hours in technical specialties, 34 hours in math and sciences and 25 hours in general education for a total of 130 hours in the bachelor of science degree. You will work with mechanical systems in the laboratories and receive an excellent mix of theory and application.

Program Highlights:

- Emphasis is on preparing you to solve real-world engineering problems.
- You will participate in multidisciplinary, industrial or research-based senior engineering design projects which emphasize teamwork, communications, project management, customer relations and ethics.
- You will learn numerous software packages for CAD, CAM, fluid dynamics, finite element analysis, programmable logic controllers, robots and technical analysis.
- Cooperative education opportunities are available.

Degree Options — You must choose from among four options: *mechanical design, robotics and automation, vehicle systems, or general* while studying mechanical engineering.

The *robotics and automation option* will give you skills through courses in machine vision, system integration, automated manufacturing, robotics, and programmable logic controllers.

The *vehicle systems option* will give you skills through courses in vehicle dynamics, geometric dimensioning and tolerancing, vehicle testing (automotive, trucks, rail, etc.), and vibration and noise control.

The *general option* enables students to select courses from the options described above as well as other advanced technical courses.

Career Description:

Once you graduate with a mechanical engineering degree, you will have a wide variety of career choices with small and large companies. Typical graduates obtain engineering positions in manufacturing, product and/or process design, product and/or process development, testing, research, maintenance and sales.

Cooperative Education:

Opportunities are available as part of this program for students who are academically qualified. A certificate that documents this practical training is available.

Bachelor of Science

Options in:

**General Mechanical
Robotics and
Automation
Vehicle Systems**

Career Choices:

Design Engineer
Systems Engineer
Plant Engineer
Maintenance Engineer
Process Engineer
Product Engineer
Project Engineer
Sales Engineer
Research Engineer
Development Engineer
Manufacturing Engineer

Student Profile:

Do you ...
like problem solving?
like applying theories
in laboratories?
like working with mechanical
systems?

Bachelor Degrees

**Engineering Accreditation
Commission (EAC) of ABET, 111
Market Place, Suite 1050, Baltimore,
MD 21202-4012. Phone: 410-347-7700*

Mechanical Engineering

Mechanical Engineering Bachelor of Science

Departmental Requirements (105 credits)

Mathematics

MATH151	Calculus I	4
MATH152	Calculus II	4
MATH251	Calculus III	4
MATH308	Probability & Mathematical Statistics	3
MATH310	Differential Equations	3

Sciences

CHEM115	General Chemistry I	5
PHYS231	Applied Physics for Engineers and Scientists I	4
PHYS232	Applied Physics for Engineers and Scientists II	4

Engineering

EGEE210	Circuits Analysis	4
EGEE305	Analog and Digital Electronics	3
EGNR101	Introduction to Engineering	2
EGNR140	Numerical Applications for Engineers	2
EGNR265	"C" Programming	3
EGNR340	Linear Algebra and Numerical Methods for Engineers	2
EGEM220	Statics	3
EGEM320	Dynamics	3
EGME110	Manufacturing Processes I	3
EGME141	Solid Modeling	3
EGME225	Mechanics of Materials I	3
EGME275	Engineering Materials I	3
EGME276	Strength of Materials Lab	1
EGME337	Thermodynamics	4
EGME338	Fluid Mechanics	2
EGME339	Fundamentals of Fluid Mechanics	1
EGME350	Mechanical Engineering Design	4
EGME431	Heat Transfer	3
EGME432	Thermal & Fluids Lab	1
EGRS460	Control Systems	4

Select a Senior Sequence:

Industrial Project

EGNR491	Engineering Design Project I	3
EGNR495	Engineering Design Project II	3

Co-op Project

EGNR250	Cooperative Education I	2
EGNR450	Cooperative Education Project I	2
EGNR451	Cooperative Education Project II	2
EGNR491	Engineering Design Project I	3

Research Project

EGNR260	Engineering Research Methods	2
EGNR460	Engineering Research Project I	4
EGNR461	Engineering Research Project II	2

General Education (25 credits)

COMM101	Fund. of Speech Communication	3
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ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
HUMN251	Humanities I	4
	Humanities	3
	Social Science	6
	Social Science Diversity	3

Select one of the following options to complete the Mechanical Engineering degree

Vehicle Systems Option

EGEE365	Vehicle Instrumentation	4
EGME240	Assembly Modeling and GD&T	3
EGME310	Vehicle Development & Testing	2
EGME415	Vehicle Dynamics	2
EGME425	Vibrations and Noise Control	4

Robotics and Automation Option

EGRS365	Programmable Logic Controllers	3
EGRS385	Robotics Engineering	3
EGRS430	Systems Integration and Machine Vision	4
EGRS435	Automated Manufacturing Systems	4

General Mechanical Option

EGME240	Assembly Modeling and GD&T	3
or		
EGRS365	Programmable Logic Controllers	3

Select 10 credits from the list below with at least 4 credits at the 400 level.

EGEE365	Vehicle Instrumentation	4
EGME310	Vehicle Development & Testing	2
EGME415	Vehicle Dynamics	2
EGME425	Vibration and Noise Control	4
EGNR310	Advanced Quality Engineering	4
EGRS365	Programmable Logic Controllers	3
EGRS385	Robotics Engineering	3
EGRS430	Systems Integration and Machine Vision	4
EGRS435	Automated Manufacturing Systems	4

Total Credits: minimum of 130

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Nursing

Program Description:

Professional nursing blends a unique body of knowledge from the sciences, social sciences and humanities with a compassionate heart and a sensitive spirit to provide holistic care to those in need.

The Department of Nursing offers two curricular tracks to the bachelor of science degree in nursing; the four-year, pre-licensure program and the two-year, completion program for the registered nurse. The programs provide you with the opportunity to acquire knowledge, values and skills necessary for the practice of professional nursing.

Course requirements provide liberal backgrounds in physical science, social science and humanities. This curriculum provides a solid basis for the variety of roles in nursing practice. The nursing curriculum provides an interdisciplinary major and therefore does not require a minor to meet graduation requirements. This nursing program is approved by the Michigan Board of nursing and is accredited by the National League for Nursing Accrediting Commission.*

**National League for Nursing
Accrediting Commission,
3343 Peachtree Rd. N.E. Suite 500
Atlanta, GA 30326.
Telephone: 404-975-5000.*

Career Descriptions:

Hospital Nurse — Provides holistic nursing care to clients of all ages in a hospital setting.

Home Care Nurse — Works with clients in their own homes to assist them to optimal wellness.

School Nurse — Works with administrators, teachers and parents to safeguard the health of school-age children.

Public Health Nurse — Works with and in the community to promote and maintain the health of the local population.

Nurse Manager — Works in a variety of field settings providing supervision and support for nurses and nursing practice.

Clinic Nurse — Works in various levels of nursing care for the health benefit of clients receiving service in outpatient settings.

Bachelor of Science Pre-Licensure Program

Post-Licensure Completion Program

Career Choices:

Hospital Nursing

Home Care Nursing

School Nursing

Public Health Nursing

Administrative Nursing

Clinic Nursing

Student Profile:

Do you....

like science, art and humanity?

want to help people?

work well with people?

like flexibility and change?

Nursing – Pre-Licensure and Post-Licensure Tracks

Nursing, B.S. Four-Year Program Pre-Licensure Track

Pre-Nursing Entrance Requirements:

To qualify as a pre-nursing major, applicants must satisfy University admission requirements described in the admission section of the Catalog. (This information is also included on the Website).

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.

Students complete one year in pre-nursing before making application to the Department of Nursing for admission to the nursing major. Admission is based upon 1) filing a Declaration of Intent to enter the nursing program by the assigned deadline of each semester, 2) successful completion of selected pre-nursing courses, 3) academic achievement, 4) a negative criminal background report, and 5) completion of TEAS and Critical Thinking ATI tests

It is recommended that students be able to demonstrate computer literacy — basic word processing, library and Internet searches. Mathematics competency is required prior to the sophomore year. Entrance into nursing requires a cumulative grade point average of 2.7 or above in nursing, nursing

support and English courses. A maximum of 27 students with the highest grade point average will be accepted fall and spring semester.

Required academic courses are separated into three groups:

1. Nursing support courses (basic prenursing competency skills, anatomy and physiology, microbiology, life chemistry, mathematics, psychology, sociology, nutrition, pharmacology, pathophysiology, computer applications in the health sciences, health issues of aging populations, multicultural approach to health care and statistics).
2. General education requirements (English, humanities and speech).
3. Nursing courses

Progression Requirements in Nursing:

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.

Transfer credit will be granted on an individual basis. Only those courses with a grade of C or better are transferable. Credits for baccalaureate nursing courses and pharmacology are transferable for five years.

Time requirement 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 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 Nursing Student Handbook and viewable on-line.

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. The Michigan Board of Nursing may deny a graduate the opportunity to take the licensure examination on the basis of conviction for a crime or substance abuse. The Immigration Service may deny a visa for entry to Ontario on the basis of a conviction for a crime or for substance abuse. Applicants with a history of a conviction or substance abuse should consult with the Department of Nursing associate dean and direct questions to the Michigan Board of Nursing and the Immigration Service prior to entry in the program.

Nursing – Pre-Licensure and Post-Licensure Tracks

Nursing, B.S. Completion Program for RN Students Post-Licensure Track

Entrance Requirements:

To qualify for admission to the RN completion program, applicants must satisfy University admission requirements as described in the admission section of the Catalog. (This information is also included on 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 state- or provincial-approved associate's degree or diploma nursing programs with a cumulative grade point average of 2.7 in all nursing, nursing support and English courses. Nursing support courses include: chemistry, mathematics, anatomy and physiology, microbiology, statistics, nutrition, pharmacology, pathophysiology, computer applications in health sciences, psychology and sociology courses. Credit may be granted for nutrition and pharmacology upon writing the required NLN tests and achieving scores at the 50th percentile or above. NLN tests may be repeated once; students must enroll in the course if not successful on second writing. Though students may be admitted to the university at any point, all support courses need to be completed before the start of the first professional nursing course in the program sequence (NU360).

Required Admission Credentials:

Submit to Admissions Office: standard LSSU Application for Admission; transcripts from previous nursing school(s) and college(s). Submit to Department of Nursing: copy of current Michigan or Ontario professional nursing license. All credentials must be on file preceding semester of entry.

Transfer Credits:

Transfer credits may be granted on an individual basis for equivalent general education and support courses. Only those courses with a grade of C or better may be transferred. A maximum of 32 semester hours credit in basic nursing courses may be transferred. Credit for pharmacology courses is acceptable for five years.

Time required for completion will be two years including two summers.

Progression and readmission policies are detailed in the 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 Nursing Student Handbook.

The RN completion program is offered on a part-time basis at the LSSU Regional Centers in Petoskey and Escanaba. Contact the Admission's Office at ext. 2231 for further information and specific course offerings.

Nursing Pre-Licensure Program

Curriculum: Health care is moving to a more community-based system. To prepare nurses for this change, the nursing curriculum has recently been revised; students admitted to the University fall 2000 or later will complete the following curriculum for a bachelor of science in nursing:

Nursing (66 credits)	
NURS211	Intro. to Professional Nursing 3
NURS212	Health Appraisal 4
NURS213	Fundamentals of Nursing 6
NURS325	Nursing of Childbearing Families 5
NURS327	Adult Nursing I 8
NURS328	Multicultural Approaches to Health Care 3
NURS331	Community Mental Health Nursing 5
NURS352	Health Issues of Aging Populations 3
NURS431	Adult Nursing II 8
NURS432	Nursing of Populations 5
NURS434	Nursing Research 3
NURS435	Management in Nursing 4
NURS436	Nursing Issues 2
NURS438	Nursing of Children & Families 6
Health Sciences (11 credits)	
HLTH208	Nutrition 3
HLTH209	Pharmacology 3
HLTH232	Pathophysiology 3
HLTH235	Healthcare Informatics 2
Other Disciplines (13 credits)	
BIOL121	Human Anatomy & Physiology I 4
BIOL223	Clinical Microbiology 3
CHEM104	Life Chemistry I 3
MATH207	Principles of Statistical Methods 3
General Education (34-35 credits)	
BIOL122	Human Anatomy & Physiology II 4
CHEM105	Life Chemistry II 4
COMM101	Fund. of Speech Communication 3
ENGL110	First-Year Composition I 3
ENGL111	First-Year Composition II 3
HUMN251	Humanities I 4
	Humanities Elective 3-4
PSYC101	Introduction to Psychology 4
PSYC155	Lifespan Development 3
SOCY101	Introduction to Sociology 3
General Electives (3 credits)	
Total Credits: 127	

Nursing Post-Licensure Completion Program

Prerequisite Courses for Entrance to Program: (62 credits)

BIOL121	Human Anatomy & Physiology I	4
BIOL122	Human Anatomy & Physiology II	4
BIOL223	Clinical Microbiology	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
HLTH208	Nutrition	3
HLTH209	Pharmacology	3
PSYC101	Introduction to Psychology	4
SOCY101	Introduction to Sociology	3
		30

NURS325	Nursing of Childbearing Families	5
NURS438	Nursing of Children & Families	6
NURS327	Adult Nursing I	8
NURS431	Adult Nursing II	8
NURS331	Community Mental Health Nursing	5
		32

Requirements for the bachelor of science degree in nursing (RN completion program) are as follows:

Nursing (33 credits)

NURS328	Multicultural Approach to Health Care	3
NURS352	Health Issues of Aging Populations	3
NURS360	Professional Nursing Concepts	4
NURS363	Comprehensive Health Appraisal	3
NURS365	Family Nursing Theory	3
NURS432	Nursing of Populations	5
NURS434	Nursing Research	3
NURS435	Management in Nursing	4
NURS436	Contemporary Issues in Nursing	2
NURS437	Professional Nursing Leadership	2

Health Sciences (11 credits)

HLTH208	Nutrition*	3
HLTH209	Pharmacology*	3
HLTH232	Pathophysiology**	3
HLTH235	Healthcare Informatics	2

Other Disciplines (13 credits)

BIOL121	Human Anatomy & Physiology I	4
BIOL223	Clinical Microbiology	3
CHEM104	Life Chemistry I	3
MATH207	Principles of Statistical Methods	3

General Education (32 credits)

PSYC101	Introduction to Psychology	4
SOCY101	Introduction to Sociology	3
BIOL122	Human Anatomy & Physiology	4
CHEM105	Life Chemistry II	4
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
COMM101	Fund. of Speech Communication	3
HUMN251	Humanities I	4
	Humanities Electives	3-4

General Electives (6 credits)

Total Credits: 127-128

* Credit granted for University/college courses. Students who completed a hospital diploma program, an integrated curriculum program, or took nutrition and/or pharmacology as part of an ADN program may receive university credit by taking the appropriate NLN examination, passing it at 50 percentile or higher and applying for course credit.

** Departmental examination available.

Bachelor of Science Degree:

At least eight (8) semester credits in addition to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Parks and Recreation

Program Description:

The bachelor of science degree in parks and recreation combines an associates degree in natural resources technology with additional course work relative to human resource management in the outdoor environment. Many jobs can be found in the public, private and commercial settings.

A one-semester internship is required for this degree.

Career Descriptions:

Park Ranger — Provides back country or front country assistance and information to visitors. Enforces rules and regulations of the park.

Outdoor Educator — Provides information, instruction, presentations and interactive opportunities relative to preserving, protecting and enhancing the natural environment.

Interpreter — Provides information to the visitor regarding natural and cultural history and phenomena of the area.

Recreation Technician — Plans, develops, implements/manages recreation projects, programs and facilities that are affiliated with the natural resources.

Instructor/Guide — Provides outdoor recreation that is adventure based. Serves as an instructor for extreme sports.

Game Reserve Manager — Manages properties specifically for hunting and harvesting animals.

Eco-Tourism Entrepreneur — Develops and facilitates travel experiences for individuals interested in visiting remote, neutral environments and eco-systems.

Parks and Recreation Bachelor of Science

General education requirements and sufficient electives must also be completed so that at least 126 credits have been earned.

Parks and Recreation Requirements (36 credits)

RECS101	Introduction to Recreation	3
RECS105	Program Development and Leadership	3
RECS262	Outdoor Recreation	3
RECS295	Recreation Practicum	1
RECS360	Facilitation and Interpretation	3
RECS362	Land Management for Recreation Purposes	3
RECS365	Expedition Management	3
RECS390	Recreation Leader Apprenticeship	1
RECS397	Recreation Studies Junior Research Seminar	1
RECS435	Problems, Issues and Research in Therapeutic Recreation and Leisure Sciences	3
RECS437	Recreation Studies Senior Research Seminar	1
RECS481	Professional Development Seminar	1
RECS482	Administration of Recreation and Leisure Services	4
RECS492*	Recreation Internship	6

Cognate Requirements (31 credits)

BIOL107	Field Biology	3
BIOL230	Introduction to Soils	4
BIOL240	Natural History of Vertebrates	3
BIOL284	Principles of Forestry	4
BIOL286	Watershed Management	3
CHEM108	Survey of General Chemistry	3
CHEM109	Survey of General Chemistry Lab	1
EVRN126	Interpretation of Maps and Aerial Photography	2
EVRN131	Introduction to GIS and GPOLI	2
EVRN231	Intermediate GIS	2
NSCI103	Environmental Science	3
NSCI104	Environmental Science Lab	1

Support Courses (33 credits)

ACTG230	Fundamentals of Accounting	4
ACTG132	Principles of Accounting I	4
OFFC119	Computerized Accounting Procedures	3
COMM101	Fund. of Speech Communication	3
CSCI101	Introduction to Microcomputer Applications	3
EMED189	Medical First Responder	3
FIRE102	Wildland and Rural Fire Control	3
HMSV480	Grantwriting	3
MATH111	College Algebra	3
POLI130	Introduction to State and Local Government	4
PSYC101	Introduction to Psychology	4
PSYC210	Statistics	3
MATH207	Principles of Statistical Methods	3

*RECS492 may be completed during the summer of the student's junior or senior year, in accordance with academic prerequisites.

Bachelor of Science

Career Choices:

Park Ranger
Recreation Technician
Outdoor Educator
Instructor/Guide
Interpreter
Game Reserve Manager
Eco-Tourism Entrepreneur

Student Profile:

Are you ...
people oriented?
a team leader and player?
a good communicator?
flexible and creative?
a decision maker/problem solver?
interested in recreation, leisure, or park services?
looking for a great variety of responsibility on the job site?

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Physical Science

Bachelor of Science

Career Choices:

Secondary Science Teacher

Science Educator

Science Curriculum Specialist

Student Profile:

Do you have an ...

Interest in the environment and environmental protection?

aptitude in natural sciences?

skills in planning, organization and problem solving?

ability to communicate effectively in writing?

ability to effectively organize and present information verbally?

ability to communicate and work with a broad array of people?

Program Description:

This program is an approved secondary teaching major leading to Michigan Teacher Certification in Physical Science (program code DP). This program combines an interdisciplinary preparation in the natural sciences (chemistry and physics) with your interest in a career as a secondary teacher at the junior or senior high level, grades 6-12.

When completing option A the candidate is not required to complete a teaching minor. A complete list of teaching minors is available from the School of Education website: <http://lssu.edu/education>. Option B candidates must complete a teaching minor.

Secondary teacher certification enables the candidate to teach chemistry, physics and physical science in grades 6-12. Contact the School of Education for additional information.

In addition to classroom teaching, graduates can pursue careers as science educators, curriculum specialists or enter graduate study in science, science education or related fields.

Career Description:

Science Teacher, Curriculum Specialist, Science Educator — Responsible for developing and implementing science curriculum in grades 6-12, daily classroom operations, and developing relationships with students, parents. The physical science program prepares candidates to teach chemistry, physics and physical science courses.

Physical Science Secondary Teaching Bachelor of Science

Complete one of the two options listed below (A or B), and all departmental cognates, general education requirements, teacher education courses and free electives for a minimum of 124 credits.

A. Comprehensive Physical Science Major: no minor required (54 credits)

CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM225	Organic Chemistry I	4
CHEM226	Organic Chemistry II	4
CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4
CHEM361	Physical Chemistry I	4
CHEM362	Physical Chemistry II	4
CHEM451	Biochemistry I	4
CHEM462	Advanced Inorganic and Physical Chemistry Lab	1
CHEM	Electives	3
PHYS221	Principles of Physics I	4
PHYS222	Principles of Physics II	4
PHYS	Electives	3

Complete one of the following methods courses:
 EDUC443 Secondary Methods: Science 3
 EDUC453 Directed Study: Science Methods 3

B. Group Physical Science Major: a teachable minor is required (40 credits)

CHEM105	Life Chemistry II	4
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4
CHEM361	Physical Chemistry I	4
CHEM362	Physical Chemistry II	4
CHEM462	Advanced Inorganic and Physical Chemistry Lab	1
PHYS221	Principles of Physics I	4
PHYS222	Principles of Physics II	4

Complete one of the following methods courses:
 EDUC443 Secondary Methods: Science 3
 EDUC453 Directed Study: Science Methods 3

In addition to the program option A or B, complete the following:

Departmental Cognates (14 credits)

EVRN395	Junior Seminar	1
EVRN495	Senior Project	1-3
EVRN499	Senior Seminar	1
MATH151	Calculus I	4
MATH152	Calculus II	4
MATH207	Principles of Statistical Methods	3

General Education (22 credits minimum)

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
	Social Science electives	6-8
HUMN251	Humanities I	4
	Humanities elective	3

Professional Education Requirements and Education Cognates- see Secondary Teaching.

Free Electives as needed to reach 124-credit minimum 2.70 GPA overall and major/minor B- (2.70) minimum in each EDUC course

NOTE: A candidate may double count math courses from the cognate section when completing a math teaching minor.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Political Science

Program Description:

Political science is the systematic study of government, politics and public policy. It is one of a number of liberal arts majors that prepare students for a broad range of career opportunities.

Political science majors choose one of four tracks or concentrations: general political science, pre-law, public administration or secondary teaching. Each concentration provides a combination of knowledge and skills especially appropriate for those with particular career goals. However, choosing one concentration over the others does not limit you to a particular career path — each of the tracks provides a solid grounding in political science and a broad liberal arts background.

General education requirements and sufficient elective credits must be completed so that at least 124 semester credits have been earned.

Other Qualifications — Graduate degrees are required for some positions; thus, a law degree is required for work as an attorney and a Ph.D. is required for appointment to permanent teaching and research positions in colleges and universities.

Career Descriptions:

With the skills they acquire in writing, speaking, analysis, critical thinking and leadership, political science majors are able to pursue a wide variety of career options (some of which require additional education).

A sample of typical occupations includes:

Attorney — Represents clients in private practice, in small or large law firms; represents corporations, labor unions, trade associations or governments as a salaried employee; serves as a prosecutor or public defender; serves as a judge. Requires the completion of a law degree following college.

Government Employee — Works for government agencies at the federal, state or provincial, or local level, or for international organizations, such as the United Nations.

Political Professional — Works as a campaign manager; staff assistant to legislators; elected office holder; or as a political liaison for professional, trade, business or other interest groups.

Journalist — Serves as reporter, editorial writer, editor or newscaster for newspapers, news magazines, or on radio or television.

Teacher — Teaches government and politics at the high school or college level.

Business Executive — Works in management, human resources, public relations or other areas in business.

Other Opportunities — Include preparation for graduate or professional schools in other fields such as business.

Bachelor of Arts Bachelor of Science

Tracks in:

**General Political
Science**

Pre-law

**Public Administration
Secondary Teaching**

Career Choices:

Attorney

Government Employee

Political Professional

Journalist

Teacher

Business Executive

Student Profile:

Do you ...

enjoy debating current issues?

enjoy leadership?

have an interest in public affairs?

work well with people?

Political Science

Political Science General Track Bachelor of Arts or Bachelor of Science

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. 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 government, politics, teaching, journalism and business.

Political Science Courses

POLI110	Introduction to American Government and Politics	4
POLI211	Political Science Research and Statistics	4

A minimum of one course in each of four political science fields, and two courses in one of the fields:

POLI	American Politics (325, 364, 367, 467)	3-4
POLI	Comparative Politics (160, 331, 333, 334, 335, 340)	3-4
POLI	International Relations (241, 411, 413, 420)	3-4
POLI	Political Philosophy (351, 352)	4
POLI491	Senior Seminar I	4
POLI492	Senior Seminar II	4

Additional political science electives to reach 42 credits 6-10
A minimum of 21 credits must be at the 300/400 level. (At least nine of these credits must be at the 400 level.)

General Political Science Cognates

COMM302	Argumentation and Advocacy	3-4
or		
COMM320	Public Relations	
CSCI101	Intro. to Microcomputer Applications	3
ECON201	Principles of Macroeconomics	3
ENGL310	Advanced Writing	3
or		
ENGL221	Creative Writing	3
HIST	Full-year history sequence (usually HS101-102 or HS131-132)	8
PHIL204	Introduction to Philosophy	3
or		
PHIL205	Logic	3

Bachelor of Arts or Bachelor of Science Cognates

Bachelor of arts cognates:		
One year of a foreign language	8	
or		
Bachelor of science cognates:	A minimum of nine credits from the following:	
ECON202	Principles of Macroeconomics	3
PSYC101	Introduction to Psychology	4
SOCY101	Introduction to Sociology	3
SOCY213	Introduction to Anthropology	3

Political Science Pre-Law Track Bachelor of Arts or Bachelor of Science

The pre-law concentration is designed to provide students 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.

Political Science Courses

POLI110	Introduction to American Government and Politics	4
POLI120	Introduction to Legal Processes	3
POLI130	Introduction to State and Local Government	4
POLI211	Political Science Research and Statistics	4
POLI222	Introduction to the Legal Profession	3

A minimum of one course in each of three political science fields:

POLI	Comparative Politics (160, 331, 333, 334, 335, 340)	3-4
POLI	International Relations (241, 411, 413, 420)	3-4
POLI	Political Philosophy (I351, 352)	4
POLI467	Constitutional Law and Civil Liberties	4
POLI491	Senior Seminar I	4
POLI492	Senior Seminar II	4

Additional political science electives to reach 42 credits 1-3
A minimum of 21 credits must be at the 300/400 level. (At least nine of these credits must be at the 400 level.)

Pre-law Cognates

ACTG230	Fundamentals of Accounting (or ACTG132 or OFFC119)	4
COMM302	Argumentation and Advocacy	3
CSCI101	Intro. to Microcomputer Applications	3
ENGL310	Advanced Writing	3
or		
ENGL221	Creative Writing	3
HIST	Full-year history sequence (usually 101-102 or 131-132)	8
LAWS102	Legal Research and Case Analysis	3
LAWS202	Legal Writing and Analysis	3
PHIL205	Logic	3

Two law courses from the following:

LAWS	Any legal assistant courses	2-4
CJUS202	Canadian Criminal Law	3
CJUS319	Substantive Criminal Law	3
CJUS406	Advanced Canadian Jurisprudence	3
CJUS409	Procedural Criminal Law	3
BUSN350	Business Law I	3
BUSN355	Business Law II	3

Bachelor of Arts/Bachelor of Science Cognates

Bachelor of Arts cognates:		
One year of a foreign language	8	
or		
Bachelor of Science cognates:	A minimum of nine credits from the following:	
ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
PSYC101	Introduction to Psychology	4
SOCY101	Introduction to Sociology	3
SOCY213	Introduction to Anthropology	3

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Bachelor of Science Degree:

At least eight (8) semester credits in addition to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Political Science Public Administration Track

Bachelor of Arts
Bachelor of Science

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.

Political Science Courses

POLI110	Introduction to American Government and Politics	4
POLI130	Introduction to State and Local Government	4
POLI201	Intro. to Public Administration	3
POLI211	Political Science Research and Statistics	4
POLI301	Policy Analysis and Evaluation	4
POLI401	Principles of Public Administration	3
POLI491	Senior Seminar I	4
POLI492	Senior Seminar II	4
POLI499	Public Administration Internship	3

A minimum of one course in each of three political science fields:

POLI	Comparative Politics (160, 331, 333, 334, 335, 340)	3-4
POLI	International Relations (241, 411, 413, 420)	3-4
POLI	Political Philosophy (351, 352)	4

Public Administration Cognates

ACTG230	Fundamentals of Accounting (or ACTG132 or OFFC119)	4
COMM302	Argumentation and Advocacy or	3-4
COMM320	Public Relations	
CSCI101	Intro. to Microcomputer Applications	3
ECON201	Principles of Macroeconomics	3
ECON305	Public Finance	3
ENGL310	Advanced Writing or	3
ENGL221	Creative Writing	
HIST	Full-year history sequence (usually 101-102 or 131-132)	8
MGMT360	Principles of Management	3
MGMT365	Human Resource Management	3
PSYC228	Organizational Behavior or	3
SOCY313	Work and Organization	

Political Science Secondary Teaching

Bachelor of Arts
Bachelor of Science

The secondary teaching concentration in political science is designed to provide a broad education in political science that will prepare students to teach high school courses in government and politics.

Political Science Requirements (41 credits)

POLI110	Introduction to American Government and Politics	4
POLI130	Introduction to State and Local Government	4
POLI211	Political Science Research and Statistics	4
POLI241	Intro. to International Relations	4
POLI352	Political Philosophy II	4
POLI367	Congress and the Presidency	4
POLI411	U.S. Foreign Policy	3
POLI467	Constitutional Law & Civil Liberties	4
ECON201	Principles of Macroeconomics	3
GEOG201	World Regional Geography	4

Complete one methods course from the following:

EDUC444	Secondary Methods in Social Studies	3
EDUC454	Directed Study: Social Studies Methods	

Departmental Requirements (19 credits)

Required for standards

POLI160	Introduction to Canadian Government and Politics	3
POLI491	Senior Seminar I	4
POLI492	Senior Seminar II	4
HIST131	United States History I	4
HIST132	United States History II	4

Professional Education Requirements and Education Cognates- see Secondary Teaching.

Minor 20-28
Complete the requirements of a certifiable teaching minor

Bachelor of Arts or Bachelor of Science Cognates 8-9

Bachelor of Arts Cognates
One year of a foreign language
or

Bachelor of Science Cognates
Three courses (minimum nine credits) from the following:

ECON202	Principles of Macroeconomics	3
PSYC101	Introduction to Psychology	4
SOCY101	Introduction to Sociology	3
SOCY213	Introduction to Anthropology	3

Total Required Credits 124-140
Depending upon minor chosen

Prelaw

(non-degree)

Career Choices:

Trial Lawyer
Corporate Counsel
Prosecuting Attorney
Judge or Magistrate
Law School Professor
or Administrator
Mediator or Arbitrator
Federal or State Legislator
Public Defender

Student Profile:

Do you have ...

An interest in the law?
Good verbal and written communication skills?
An ability to think logically?
A desire and commitment to help others?

LSSU Prelaw Advisor contact information:

Carol S. Andary
Coordinator of Legal Studies/
Prelaw Advisor/Attorney
School of Business
650 W. Easterday Avenue
Sault Ste. Marie, MI 49783

e-mail: candary@lssu.edu
telephone: 906-635-2104

Program Description:

There is essentially a three-step process in becoming a licensed attorney. First, an individual must complete an undergraduate degree at a college or university. Second, one must then go on to law school to obtain a juris doctorate degree. Finally, successful completion of the state bar exam is required for licensure. In being admitted into law school, the two most important factors that are evaluated by most law schools are undergraduate grades and Law School Admission Test (LSAT) scores — an entrance exam required of nearly all law schools in the United States and some in Canada.

The American Bar Association and most law schools do not recommend any particular undergraduate major before going on to law school. Consequently, a student should choose a major in which he/she has both interest and aptitude. Yet, there are important skills, values, and certain knowledge that can be acquired prior to law school which will assist a student in being successful at law school. Such values and knowledge include: analytical and problem-solving skills, critical reading abilities, writing skills, oral communication and listening abilities, research skills, task organization and management skills, ethical values, and, of course, knowledge of the law. In fact, a prelaw minor is available at LSSU which consists of courses that will assist a prelaw student in further developing these skills, values and knowledge.

Since there is no required prelaw major, the American Bar Association and law schools strongly recommend that law school bound students contact the Prelaw Advisor at their university as early in the educational process as possible. At LSSU, our approach to advising prelaw students is very individualized. We want to help each student fulfill their goals and to be successful at law school and beyond.

The Prelaw Advisor at LSSU can provide individualized guidance with regard to selecting an undergraduate curriculum (both a major and a minor); recommending particular courses that

will enhance necessary skills, values and knowledge; assisting in the law school admission process; and providing relevant career and professional trend information.

Although there is no recommended or required prelaw curriculum, there are some excellent options that students may want to consider at LSSU. The following LSSU programs include key components with regard to legal knowledge as well as writing, analytical and research skills:

- Business Administration—Legal Management (major)
- Legal Studies (major)
- Political Science—Prelaw Concentration (major)
- Prelaw (minor)

Students should seek guidance from LSSU's Prelaw Advisor as early as possible to ensure they are individually counseled with regards to their respective interests, undergraduate curriculum choice, as well as personal and professional goals.

Career Description:

Attorney — Quite simply, attorneys practice law. What that means depends upon the legal (or non-legal) work environment that one ultimately chooses, along with the area(s) of law in which one practices. The opportunities are endless given the various work environments and the numerous areas of law in which one can specialize. For instance, lawyers practice within private law practices; public interest groups; governmental agencies (federal, state, tribal or local); courts; business and industry (e.g., insurance companies, financial institutions, corporations, hospitals, public relation firms, political campaigns, labor unions, and trade associations); academics (as a law professor, law librarian or administrator); or in various non-legal careers such as the media, law enforcement, business, public relations, foreign service, or politics. In addition, within many of these varied work environments, there are numerous areas of law in which one may specialize.

Pre-Pharmacy

(transfer program)

Program Description:

Most pharmacy schools require students to take two years of pre-pharmacy preparation prior to being admitted to their four-year professional program. Admission into the professional pharmacy programs is very competitive and is based, to a large extent, on grades in specific required courses. Many pharmacy colleges also require applicants to take the Pharmacy College Admission Test (P.C.A.T.). This exam is generally taken mid-way through your second pre-pharmacy year.

Pre-pharmacy requirements vary greatly between different colleges that offer professional programs in pharmacy. In general, most require a pre-pharmacy program that emphasizes math and science as well as strong communication skills. Recently, a majority of the nation's schools began to move toward awarding the doctor of pharmacy (Pharm.D.) as the only professional degree in pharmacy. Because many pharmacy curricula are currently being modified, pre-pharmacy requirements are also subject to change.

The modifications in professional pharmacy curricula, combined with the variability in pre-pharmacy requirements, make it imperative for a pre-pharmacy student to determine the requirements for admission at the schools he or she desires to attend. A pre-pharmacy curriculum at Lake Superior State University can then be designed to help you obtain your goals. It is your responsibility to contact the directors of admissions at the pharmacy schools to which you are planning to apply so you can remain informed of their most recent requirements for admission.

Career Descriptions:

Community Pharmacist — Practices in local pharmacies, professional health centers, hospitals, nursing homes or neighborhood health centers.

Government Supervisory Posts — USPHS, USDA, DVA employ pharmacists for technical writing, science reporting, directing manufacturing firms or overseeing cultivation of medicinal plants.

Research Pharmacist — Within the pharmaceutical industry, conduct research to develop prescription and non-prescription drugs and other health products.

University Faculty — Teach students, conduct research, act as consultants for local, state, national and international agencies and organizations.

Career Choices

Community Pharmacist

Government Supervisory Posts

Research Pharmacist

University Faculty

Student Profile:

Do you...

enjoy math and science?

assume responsibility?

have good communication skills?

work well with people?

Following is an example of typical minimum requirements for admission to many pharmacy programs:

Biology (with lab)	1 year
General Chemistry (with lab)	1 year
Organic Chemistry (with lab)	1 year
Physics (with lab)	1 year
Economics	1 course
Calculus	at least 1 course
English Composition	1 year
Speech	1 course
Social Science	1 year

In addition, several schools have specific pre-pharmacy requirements that are not on this list.

Psychology

Bachelor of Arts Bachelor of Science

Career Choices:

Psychologist
Research/Statistical Assistant
University Professor

Student Profile:

Are you...
curious about people?
a critical thinker?
interested in why people behave the way they do?

Program Description:

A comprehensive four-year program with emphasis on research, experimentation, computer applications and a senior-research sequence. Excellent preparation for graduate work at the master's or Ph.D. level in a wide variety of psychology disciplines.

Other Qualifications — A master's degree in psychology is usually the minimum requirement for the sample careers shown. The Ph.D. is essential for most senior-level positions and is required for appointment to permanent teaching and research positions in colleges and universities.

Career Descriptions:

Psychologist — Studies human behavior and mental processes to understand, explain and change people's behavior. Psychologists conduct research or work in applied fields as counselors, industrial psychologists, trainers and market researchers. Other areas of concentration include medical, surgical and mental health.

Research/Statistical Assistant — Assists researchers with their data collection and analysis.

University Professor — Teaches undergraduate and graduate courses; conducts research; provides consulting services to the community and industry.

Other Opportunities — Include preparation for graduate or professional schools such as business or law.

Psychology Bachelor of Arts Bachelor of Science

Required Psychology Credits (36 credits)

PSYC101	Introduction to Psychology	4
PSYC210	Statistics	3
PSYC212	Experimental Psychology	4
PSYC311	Learning and Motivation	3
PSYC357	Personality Theory	3
PSYC396	Tests and Measurements	3
PSYC456	History & Systems of Psychology	3
PSYC457	Cognition	3
PSYC459	Physiological Psychology	3
PSYC495	Senior Research Practicum	3
PSYC498	Senior Research I	3
PSYC499	Senior Research II	1

Elective Psychology Credits (6 credits)

PSYC	Elective - any level	3
PSYC217	Social Psychology	3
PSYC259	Abnormal Psychology	3
PSYC265	Child & Adolescent Behavior	3

REQUIRED & ELECTIVES TOTAL 42 credits

Bachelor of Science cognates (8 credits)

Eight credits from the following: biology, chemistry and physical science beyond those used to fulfill general education requirements; mathematics at the level of MATH111 and above (except MATH207); any CSCI or DATA courses; PHIL204, PHIL205, HIST235.

General Education & Electives

Students must complete all general education requirements including BL105. **Students must take sufficient electives to total 124 semester credits.**

DEGREE TOTAL: 124 credits

Acceptable Minors 21 credits

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.

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Secondary Teaching

Program Description:

The program is highlighted by in-depth study in a subject major, extended teaching communities of diverse learners and scholarly inquiry.

While working toward completion of a major, students take the first two teacher education courses and then apply for formal admission to the program during their sophomore year.

Details of current teaching certificates, program requirements, policies and procedures are available via the School website: <http://lssu.edu/education>

Program Completer

The Michigan Department of Education identifies a “program completer” as one who has accomplished both (a) all institutional academic and other requirements such as to establish eligibility for recommendation for certification and (b) taken/passed the minimum number of state certification tests for the field of teaching desired.

Career Descriptions:

Secondary Teacher — Completion of internship and graduate course work qualifies students for secondary teacher certification in Michigan, as well as reciprocity with Ontario and many other states in the U.S.

School Administrator or School Counselor — A valid teaching certificate and teaching experience are recommended prerequisites to becoming either a school administrator or counselor. Further course work and separate certification are also required.

Educational Consultant or Trainer — Trains personnel in industry on new procedures and/or equipment as needed. Also develops curriculum for textbooks and/or special programs for educational institutions.

Bachelor of Science

Bachelor of Arts

Career Choices:

Secondary Teacher

School Administrator

School Counselor

Educational Consultant or Trainer

Student Profile:

Do you ...

like working with children and adults from diverse backgrounds?

have self-confidence, flexibility, enthusiasm and intellectual curiosity?

have proficiency in spoken and written communication, reading, mathematics, science and liberal arts?

Secondary Teaching

Education Secondary Teaching

Secondary Teaching:

Secondary teachers are certified to teach in their academic major and minor(s) in grades 7 through 12. This program leads to a bachelor of arts or a bachelor of science degree in the student's major area.

All academic majors and minors used for teacher certification undergo periodic review, evaluation and alignment with state standards. Since program approval and renewal cycles vary, individuals should contact the School of Education and/or the academic department to confirm the availability of each major or minor.

Credits used to obtain one major/minor cannot be used to obtain another major/minor, certain restrictions apply.

All program completers meet the requirements of the No Child Left Behind Act and are considered "Highly Qualified" in the areas indicated on the Michigan teaching certificate.

Certifications available in the following teaching option majors: See requirements in this catalog.

- a. Biology
- b. Business Administration - Business Education
- c. Chemistry
- d. Computer Science
- e. English Language & Literature
- f. Integrated Science*
- g. French Studies
- h. Geology: Earth/Space Science
- i. History
- j. Mathematics
- k. Physical Science*
- l. Political Science
- m. Social Studies
- n. Sociology
- o. Spanish

Students can also complete any of the following teaching option minors and be certified to teach in these areas. See requirements in this catalog.

- a. Biology
- b. Chemistry
- c. Communications (Speech)
- d. Computer Science
- e. Economics
- f. English
- g. French Language and Literature
- h. Geology: Earth/Space Science
- i. History
- j. Mathematics
- k. Political Science
- l. Psychology
- m. Sociology
- n. Spanish Language and Literature

General Programs for Secondary Teachers

1. One academic major from the above list (see individual school requirements)
2. One academic minor from above list (see individual school requirements)

3. Professional Education Requirements 33

EDUC150	Reflections on Learning and Teaching	3
EDUC250	Student Diversity & Schools	3
EDUC301	Learning Theory and Teaching Practice	4
EDUC430	General Methods for Secondary Teachers	3
EDUC431	The Secondary Learner	3
EDUC440	Reading in the Content Area	3
EDUC	Methods Class (minimum credits)	3
EDUC480	Internship in Teaching: Seminar	1
EDUC492	Internship/Advanced Methods: (Subject)	8
EDUC602	Reflection and Inquiry in Teaching Practice I	3
or		
EDUC605	Integrated Approach in Curricular Design and Implementation	3

Education Cognates (4 credits)

MATH207	Principles of Statistical Methods	3
one credit from course in ARTS, DANC, MUSC, THEA, or NATV240		
		1

4. General education requirements not met through major and minor
5. Prior to the internship, students must receive a passing score on the Michigan Test for Teacher Certification in their subject areas. Test results must be filed with the School of Education before the internship begins.

*A teachable minor is generally not required.

All individuals placed into the student teaching internship MUST meet ALL of the following criteria prior to placement in a K-12 classroom:

- a. Completion of all required EDUC courses with a grade of B- (2.70) or higher.
- b. Completion of all required courses in the education cognates, teaching major and/or teaching minor(s) with a GPA of 2.70 or higher and no grade below a C (2.0).
- c. Completion of elementary planned program requirements with GPA of 2.70 or higher and no grade below a C (2.0) - elementary candidates only.
- d. A candidate rating of 1, 2 or 3 on LSSU Form F365 the Pre-Internship Exit Interview.

Social Science

Program Description:

The social science degree helps prepare students to be effective citizens and develops skills useful in various employment areas, both in the public and private sectors. Both degree programs allow you to take a large number of electives, providing flexibility in accommodating a number of career plans.

Career Descriptions:

Urban and Regional Planner — Develops comprehensive plans and programs for the use of land for industrial and public sites.

Government Worker — Works for a variety of local, state and federal agencies as operational-level personnel and managers.

Social Science Bachelor of Arts Bachelor of Science

Major Area Requirements:

Introductory Sequences (27-31 credits)

Students must select four full-year introductory sequence courses 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 credits)

Students must choose at least nine credits from the 100-200 level in the six areas.

Upper-level Courses from the Six Areas of the Major (21 credits)

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 credits)

Students choose one course from List A and one course from List B:

List A: Statistics (choose one)

SOCY302 Statistics for Social Science

POLI210 Statistics

POLI211 Political Science Research and Statistics

List B: Methods (choose one)

SOCY202 Social Research Methods

PSYC212 Experimental Psychology

HIST496 Historical Methods

Minor or Cognate: To earn a bachelor of arts degree, students must take eight 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.

Bachelor of Science Bachelor of Arts

Career Choices

Urban and Regional Planner

Government Worker

Student Profile:

Do you...

like to make things happen?

want to change people for the better?

like to work with other people?

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Social Studies

Bachelor of Science
Bachelor of Arts
Elementary Education
Secondary Education

Career Choices

Elementary or Secondary
Teacher

Student Profile:

Do you...

- enjoy learning about history, political science, economics or geography?
- enjoy using your mind?
- wish to make a commitment to lifelong learning?
- want to contribute to children's intellectual and personal growth?

Program Description:

A passion for history, political science or economics will help enable you to successfully complete a bachelor of arts or bachelor of science in elementary or secondary education.

If you are preparing for elementary school teaching you will complete course work in the areas of language arts, mathematics and natural sciences as well as courses in Teacher Education.

Preparation for teaching at the secondary level includes completing the social studies major and also a minor program of study in one of many teaching areas.

Both the elementary and secondary teaching degrees require completion of the sequence of teacher education courses and a fifth-year student internship.

You will also complete courses to meet the general education requirements for both elementary and secondary education.

Basic knowledge in history, geography, political science and economics, plus more extensive study in two or more of these areas, is required for this major.

After successfully completing the first two years of the Teacher Education Program, you will apply for admission to the Teacher Education Program. There are a number of requirements for admission as a junior. These are designed to assure that students who wish to become teachers have an intellectually and professionally sound preparation. Among these requirements is an overall grade point average of 2.70.

Career Description:

Elementary or Secondary Teacher
— Teaches at the elementary, middle, or secondary school level. Nurtures the intellectual growth and development of young people. Teaching offers you the opportunity to expand your own knowledge and skills.

Social Studies Bachelor of Arts Bachelor of Science *Elementary Education*

Planned Program (37 credits)

Language Arts:

ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
ENGL235	Survey of Native Literature of North America	
	<i>or</i>	
ENGL236	Literature and Culture	3

Science:

BIOL107	Field Biology	3
NSCI101	Conceptual Physics	4
NSCI102	Introduction to Geology	4
NSCI110	Chemistry in Society	4

Mathematics:

MATH103	Number Systems and Problem Solving	4
MATH104	Geometry and Measurement	4
MATH110	Explorations in Mathematics	
	<i>or</i>	
MATH111	College Algebra	3

General Education and Electives: Students must complete all the general education requirements and electives to total 124 semester credits.

Major Area Requirements for both Elementary and Secondary Education

Introductory Sequences (29 credits)

ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
GEOG201	World Regional Geography	
	<i>or</i>	
GEOG302	Economic Geography	4
GEOG306	Cultural Geography	3
HIST101	History of World Civilization I	
	<i>and</i>	
HIST102	History of World Civilization II	8
	<i>or</i>	
HIST131	United States History I	
	<i>and</i>	
HIST132	United States History II	8
POLI110	Intro. to American Government and Politics	4
POLI130	Intro. to State and Local Government	4

Upper-Level Courses (17 credits)

Students must choose five additional courses from 300/400-level offerings in two or more of these disciplines: economics, geography, history, political science. No more than 12 of the 17 credits may be in any one discipline.

Methodology Courses

Select one methods course from the following:

HIST496	Historical Methods	2
PSYC212	Experimental Psychology	4
SOCY202	Social Research Methods	3

Select one statistics course from the following:

POLI211	Political Science Research and Statistics	4
PSYC210	Statistics	3
SOCY302	Statistics for Social Science	4

Professional Education Requirements and Education Cognates- see Elementary Teaching.

To earn a bachelor of arts degree, students must take eight credits of a foreign language.

Social Studies Bachelor of Arts Bachelor of Science *Secondary Education*

Minor (21 credits)

Students are encouraged to select a 21-credit teaching minor in economics, geography, history, political science, psychology or sociology. Courses counted for the major may be counted for the minor.

General Education and Electives

Students must complete all the general education requirements and electives to total 124 semester credits.

Major Area Requirements for both Elementary and Secondary Education

Introductory Sequences (29 credits)

ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
GEOG201	World Regional Geography	
	<i>or</i>	
GEOG302	Economic Geography	4
GEOG306	Cultural Geography	3
HIST101	History of World Civilization I	
	<i>and</i>	
HIST102	History of World Civilization II	8
	<i>or</i>	
HIST131	United States History I	
	<i>and</i>	
HIST132	United States History II	8
POLI110	Intro. to American Government and Politics	4
POLI130	Intro. to State and Local Government	4

Upper-Level Courses (17 credits)

Students must choose five additional courses from 300/400-level offerings in two or more of these disciplines: economics, geography, history, political science. No more than 12 of the 17 credits may be in any one discipline.

Methodology Courses

Select one methods course from the following:

HIST496	Historical Methods	2
PSYC212	Experimental Psychology	4
SOCY202	Social Research Methods	3

Select one statistics course from the following:

POLI211	Political Science Research and Statistics	4
PSYC210	Statistics	3
SOCY302	Statistics for Social Science	4

Professional Education Requirements and Education Cognates- see Secondary Teaching.

To earn a bachelor of arts degree, students must take eight credits of a foreign language.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Sociology — General

Bachelor of Arts

Bachelor of Science

Elementary Education

Secondary Education

Career Choices:

Public Relations Worker

Human Services Worker

Human Resources Manager

Politician

Elementary/Secondary Teacher

College Professor

Survey Researcher

Urban Planner

Student Profile:

Are you...

curious about people and how social systems work?

a critical thinker?

wanting to make things happen in organizations?

**Because curriculums in the human services area vary with each student, please see your advisor to set up a schedule that meets your needs for the double major in sociology and human services.*

Program Description:

This major prepares you to enter a variety of fields with a bachelor degree. It also provides an excellent foundation from which to continue educational preparation for a number of professions.

Many entry-level positions in private and public sector careers require the understanding of organizations and human relations provided by the Sociology major. The sociology program emphasizes research skills, knowledge about diversity, critical thinking and writing skills, all of which will enhance your value to employers. With assistance from your advisor and your career goals in mind, you will select one or two minors. This combination of broad knowledge about social organizations from the Sociology major together with a set of specific job skills and knowledge from the minor(s) will give you a competitive edge in securing employment and in making career changes as opportunities present themselves and the labor market demands change.

If you are preparing for graduate studies or professional school, you will find that the Sociology major, together with one or two carefully selected minor(s), provides competitive preparation for a number of areas of advanced study, such as social work, business, international relations, survey researcher, public relations, urban planning and more. If you are planning to undertake graduate studies in Sociology, you are encouraged to take both a major and a minor in Sociology. Or, if you are planning to apply to professional schools, such as law or medicine, you will find that the Sociology program, more than any other major, allows you extensive

time within the four-year program to take courses strategically selected to best prepare you for the desired professional program.

Career Descriptions:

Public Relations Worker—assists an institution or corporation in presenting itself before the public, often working with the media.

Human Services Worker—assists individuals and families to help them access needed resources, improve functioning and enhance quality of life.

Human Resources Manager—administers and helps develop policies for hiring, training, promotion and personnel management of employees in private firms or public agencies.

Politician—develops or administers laws and policies through an elected or appointed position

Elementary/Secondary Teacher—teaches elementary, middle or high school students; becomes educational administrator.

College Professor—teaches undergraduate and graduate courses, conducts research, and provides consulting services to the community and industry. An advanced degree, a master's or Ph.D. is required for this work.

Survey Researcher—conducts sociological studies for government agencies, businesses or political groups. An advanced degree, usually the Ph.D., is required.

Urban Planner—works with city government to develop policies and design programs. Academic work beyond the bachelor's degree is required for this work.

Sociology – General Bachelor of Arts Bachelor of Science

Required Sociology Credits (36 hours)

The sociology major consists of 27 credit hours of **core** courses and nine credit hours of sociology electives.

Core (27 hours)

Major courses required in sociology are:

SOCY101	Introduction to Sociology	3
SOCY238	Social Psychology	4
SOCY202	Social Research Methods	3
SOCY302	Statistics for Social Science	4
SOCY310	Development of Sociological Theory	3
SOCY311	Contemporary Sociological Theory	3
SOCY399	Sociology Junior Seminar	1
SOCY401	Sociological Seminar I	1
SOCY495	Senior Project I	2
SOCY402	Sociology Seminar II	1
SOCY496	Senior Project II	2

Elective Sociology Credits (9 hours)

Students must select an additional nine hours of sociology courses. No more than three hours may be SOCY/SOWK courses. At least three hours must be at the 300/400 level.

Minor or other Cognate (20 hours)

Choose one of the following alternatives. At least six credit hours must be at the 300/400 level.

Minor: Students may complete an approved minor. This minor could be in sociology, giving you a double concentration which provides a solid background for graduate work in sociology. Otherwise, the minor may be any approved minor at the University.

or

An approved concentration: You may develop an approved concentration in one or more disciplines in consultation with your advisor.

General Education: All bachelor's degree students must complete the general education requirements.

Bachelor of Science and Bachelor of Arts Requirements: *The student selects one of the following alternatives.*

Bachelor of Science

No additional courses

or

Bachelor of Arts

The student must complete one year of a foreign language (8 credits)

Students must take sufficient electives to total 124 semester credits.

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Sociology – General Secondary Education

Bachelor of Arts Bachelor of Science

In addition to the required Sociology and Core credits, complete a minor approved for teacher education. Then complete the planned program for secondary teachers.

Professional Education Requirements and Education Cognates - see Secondary Teaching

General Education: All bachelor's degree students must complete the general education requirements.

Bachelor of Science and Bachelor of Arts Requirements: *The student selects one of the following alternatives.*

Bachelor of Science

No additional courses

or

Bachelor of Arts

The student must complete one year of a foreign language (8 credits)

Students must take sufficient electives to total 124 semester credits.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Sociology — Social Services

Bachelor of Arts
Bachelor of Science

Career Choices:

- Human Services Worker
- Case Manager
- Administrator
- Adult Services Worker
- Community Action Worker
- Elder Services Worker

Student Profile:

Are you...

- patient with and caring toward others?
- someone who enjoys working with different people from different backgrounds?
- ethical and responsible?

Program Description:

This program provides entry level knowledge and skills for a variety of social service positions. A foundation of knowledge about social structure, organizations and human relationships is provided by the Sociology major. This major also helps you develop critical thinking ability, improve writing skills and acquire competency in conducting research—all valued by employers in the field of social services. To this sociological base are added knowledge about social work practice, current issues in social work, clinical diagnosis and skills in counseling. An extensive internship in one or more agencies allows you to apply knowledge and skills gained in the classroom in a closely supervised setting. Internships may be with local agencies or programs outside the local area.

You will find room within this four-year program to elect an additional minor, if you wish. You may choose among human service minors, such as Child Development, Corrections, Counseling, Gerontology, Human Service Administration, or Substance Abuse Counseling. Alternatively, you may choose to develop knowledge and skills supportive of a career in social services through taking a minor in such areas as Communications, Psychology, Public Relations, Public Administration, a foreign language or other.

If you plan to continue studies in a graduate program, such as a Master Degree in Social Work, this program provides the academic background and exposure to the field necessary for success in such graduate studies.

Career Descriptions:

Child Welfare Worker—works with children and families in a variety of settings to enable parents to care for children and to protect children where necessary.

Case Manager—monitors services, assesses needs, coordinates with other agencies, refers clients to other agencies and assists clients in accessing services.

Administrator—is responsible for service delivery, resource development, goal setting, supervision of staff and general management of programs.

Adult Services Worker—provides for the social, residential and custodial needs of adults unable to care for themselves.

Community Action Worker—assesses needs, implements services, helps develop programs, and assists young and old to connect to services within the community.

Elder Services Worker—works with elderly in independent living or residential facilities to assess needs, encourage family support and refer to service providers where needed.

Sociology – Social Services

Bachelor of Arts

Bachelor of Science

Sociology Concentration (36 credits)

Sociology Core (27 credits)

SOCY101	Introduction to Sociology	3
SOCY202	Social Research Methods	3
SOCY238	Social Psychology	4
SOCY302	Statistics for Social Science	4
SOCY310	Development of Sociological Theory	3
SOCY311	Contemporary Sociological Theory	3
SOCY399	Sociology Junior Seminar	1
SOCY401	Sociological Seminar I	1
SOCY495	Senior Project I	2
SOCY402	Sociology Seminar II	1
SOCY496	Senior Project II	2

Sociology Electives (9 credits)

Select an additional nine hours of Sociology (SOCY) courses including at least one 300/400 level elective Sociology course. Among the total of 36 Sociology credits, only three credits may be SOCY/SOWK courses.

Social Work Concentration (24 credits)

SOWK110	Introduction to Social Work	3
SOWK201	Communication Skills in Counseling	3
SOWK250	Social Work Practicum	9
SOWK310	Clinical Diagnosis and Treatment	3
SOWK344	Social Welfare System	3
SOWK480	Grantwriting	3

Support Course (4 credits)

BIOL105	Function of the Human Body	4
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Total Departmental Credits: 64

General Education: Complete the remainder of general education requirements.

Bachelor of Science and Bachelor of Arts Requirements

Select one of the following alternatives:

Bachelor of Science—no additional credits

Bachelor of Arts—requires one year of a foreign language (8 credits)

Electives must be taken to total 124 credits.

Associate Degree in Social Work

Upon completing this BS degree, you will have met the requirements for the Associate Degree in Social Work.

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Spanish

Bachelor of Arts

Spanish

Spanish- Elementary Teaching

Spanish- Secondary Teaching

Career Choices:

Spanish teaching and ESL

Domestic Careers in Public Services

Preparation for Graduate School

International Business, Diplomacy, and Law

Communication

Travel and Tourism

Student Profile:

Are you...

committed to the diligence to enjoy a long-range challenge?

interested in various forms of linguistic expression?

fond of literature by authors from diverse cultural backgrounds?

interested in exploring the interpretive possibilities of language and literature?

Program Description:

Spanish is spoken by the third largest group of the world's population today — 250 million people. The Spanish B.A. program at LSSU is designed to give students the opportunity to acquire Spanish language proficiency in listening, speaking, reading and writing. The program will introduce Spanish majors to prominent historical, social and artistic developments of Spanish speaking countries.

Students successfully completing their Spanish major studies will improve their skills in critical reading, analytic writing, communication and linguistic awareness. In addition, they will develop understanding of, and appreciation for, diversity and cultural difference through immersion into the history, culture, and art of Spanish speaking countries.

The program will prepare students for the communicative and culturally aware use of the Spanish language in careers related to international relations, business, communication and cultural exchange. Students with a degree in Spanish will gain marketable linguistic skills to work in areas of public service with bilingual or Spanish speaking populations in the United States.

Career Descriptions:

Spanish Teaching and ESL — After successful completion of state requirements and certification, students with a B.A. in Spanish are eligible to teach Spanish in elementary as well as secondary education. In addition, students may choose from job opportunities in the widening field of English as a Second Language (ESL), teaching English to students in both the United States and in Spanish speaking countries.

Preparation for Graduate School —

Students who earn a B.A. in Spanish at LSSU may apply for graduate school to pursue advanced studies in Spanish as either a major or minor.

International Business, Diplomacy and Law — In an increasingly global society, the ability to speak both English and Spanish provides students with marketable skills to function well in the world of international trade. Developing Spanish skills beyond the level of minimal language requirement classes greatly increases career opportunities for individuals in the areas of business, law, technology, and international relations. The global expansion of American companies creates a demand for those who are able to function and communicate effectively in international settings.

Communication — The process of learning a foreign language and understanding its embeddedness in a rich cultural and social context of diverse human efforts provides Spanish majors with a complex and comprehensive educational experience. Graduates will find an array of business related job opportunities in publishing, editing, the media, the arts, and communication.

Travel and Tourism — Mexico is, and for the past 20 years has been, the number one foreign destination for Americans. Consequently, there is a large demand for bilingual professionals in tourism and travel.

Domestic Careers in Public Services — As the latest USA census data show, the number of Spanish speakers is on the rise. As a result, there is a need for college-educated people able to effectively communicate with bilingual or Spanish-speaking populations in various areas of public service.

Spanish Bachelor of Arts

Spanish Degree Requirements		(45 credits)
Required		(20 credits)
SPAN161	First-Year Spanish I	4
SPAN162	First-Year Spanish II	4
SPAN261	Second-Year Spanish I	3
SPAN262	Second-Year Spanish II	3
SPAN361	Advanced Spanish Grammar	3
SPAN362	Advanced Spanish Composition	3
Electives		(25 credits)
<i>(9 credits must be at the 400 level)</i>		
LANG403	Language Acquisition & Foreign Language Teaching	3
SPAN100	Special Topics	1-3
SPAN200	Special Topics	1-3
SPAN300	Special Topics	1-3
SPAN400	Special Topics	1-3
SPAN165	Spanish for Public Safety	4
SPAN301	Study Abroad	8
SPAN368	Selected Topics in Conversation	2
SPAN380	Survey of Spanish-American Literature I	3
SPAN381	Survey of Spanish-American Literature II	3
SPAN401	The Spanish Novel	3
SPAN402	The Spanish-American Novel	3
SPAN410	Spanish-American Civilization	3
SPAN411	Spanish Civilization	3
SPAN412	Hispanic Literature of the Southwest	3
SPAN490	Topics in Hispanic Literature	1-4
General Electives		
COMM101	Fundamentals of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
HUMN251	Humanities I	4
	Approved Humanities	3-4
	Approved Social Science	6-8
	Approved Social Science Diversity	3-4
	Approved Natural Science	8
	Approved Mathematics	3-5
Bachelor of Arts Requirement		(8 credits)
<i>One year of foreign language</i>		
SPAN161	First-Year Spanish I	4
SPAN162	First-Year Spanish II	4

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:
CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Spanish Elementary Teaching Bachelor of Arts

Spanish Degree Teaching Major		(48 credits)
SPAN161	First-Year Spanish I	4
SPAN162	First-Year Spanish II	4
SPAN261	Second-Year Spanish I	3
SPAN262	Second-Year Spanish II	3
SPAN361	Advanced Spanish Grammar	3
SPAN362	Advanced Spanish Composition	3
EDUC447	Teaching Methods Foreign Lang	4
Directed Spanish Electives		
<i>Complete ONE course from each course-pair listed below (a total of three courses- 9 credits)</i>		
(A)SPAN380	Survey of Spanish-American Literature I	3
(A)SPAN381	Survey of Spanish-American Literature II	3
(B)SPAN401	The Spanish Novel	3
(B)SPAN402	The Spanish-American Novel	3
(C)SPAN410	Spanish-American Civilization	3
(C)SPAN411	Spanish Civilization	3
General Spanish Electives		
<i>Complete at least 15 ADDITIONAL semester credits from the directed electives or from the courses below:</i>		
LANG403	Language Acquisition & Foreign Language Teaching	3
SPAN301	Study Abroad	8
SPAN368	Selected Topics in Conversation	2
SPAN412	Hispanic Literature of the Southwest	3
SPAN490	Topics in Hispanic Literature	1-4
Elementary Planned Program		
MATH103	Num Syst & Problem Solving	4
MATH104	Geometry & Measurement	4
BIOL107	Field Biology	3
NSCI101	Conceptual physics	4
NSCI110	Chemistry in Society	4
NSCI102	Intro Geology	4
PSCI110	American Government	4
GEOG201	World Regional Geography	4
PSYC265	Child Adolescent Psychology	3
Select one history sequence		8 credits
HIST101	World Civilization I	4
HIST102	World Civilization II	4
OR		
HIST131	US History I	4
HIST132	US History II	4
ENGL222	English Grammar	3
ENGL335	Children's Literature Classroom	3
Choose one literature class from the following:		
ENGL180	Introduction Literary Studies	3
ENGL235	Survey Native Lit. N Am.	3
ENGL236	Literature Culture	3

General Education Requirements		(36-42)
ENGL110	First year Composition I	3
ENGL111	First year Composition II	3
COMM101	Fundamentals Speech	3
HUMN251	Humanities I	4
HUMN electives		3-4
Social Science electives		3-4
Social Science electives		3-4
Natural Science electives		4
Natural Science electives		4
Math elective		3-5
Diversity elective		3-4

Professional Education Requirements and Education Cognates - see Elementary Teaching

Spanish Secondary Teaching Bachelor of Arts

Spanish Secondary Teaching		(48 credits)
SPAN161	First-Year Spanish I	4
SPAN162	First-Year Spanish II	4
SPAN261	Second-Year Spanish I	3
SPAN262	Second-Year Spanish II	3
SPAN361	Advanced Spanish Grammar	3
SPAN362	Advanced Spanish Composition	3
EDUC447	Teaching Methods Foreign Lang	4
Directed Spanish Electives		
<i>Complete ONE course from each course-pair listed below (a total of three courses- 9 credits)</i>		
(A)SPAN380	Survey of Spanish-American Literature I	3
(A)SPAN381	Survey of Spanish-American Literature II	3
(B)SPAN401	The Spanish Novel	3
(B)SPAN402	The Spanish-American Novel	3
(C)SPAN410	Spanish-American Civilization	3
(C)SPAN411	Spanish Civilization	3
General Spanish Electives		
<i>Complete at least 15 ADDITIONAL semester credits from the directed electives or from the courses below:</i>		
LANG403	Language Acquisition & Foreign Language Teaching	3
SPAN301	Study Abroad	8
SPAN368	Selected Topics in Conversation	2
SPAN412	Hispanic Literature of the Southwest	3
SPAN490	Topics in Hispanic Literature	1-4
General Education Requirements		(36-42)
ENGL110	First year Composition I	3
ENGL111	First year Composition II	3
COMM101	Fundamentals Speech	3
HUMN251	Humanities I	4
HUMN electives		3-4
Social Science electives		3-4
Social Science electives		3-4
Natural Science electives		4
Natural Science electives		4
Math elective		3-5
Diversity elective		3-4
Approved Teaching Minor		(20)

Professional Education Requirements and Education Cognates - see Secondary Teaching

Sport and Recreation Management

Bachelor of Science

Bachelor of Arts

Career Choices:

Recreation Director

Sports Manager - Athletic Director

Recreation Facility Manager

Activity Programmers

Entrepreneur

Student Profile:

Are you ...

people oriented?

a team leader and player?

a good communicator?

flexible and creative?

a decision maker/problem solver?

interested in athletic, recreation,
leisure, or park services?

Program Description:

The bachelor of science/bachelor of arts in sport and recreation management is a professional degree which focuses on leading, planning, managing and directing athletic, recreation and leisure opportunities for all ages of clientele, in a variety of public, private and commercial settings. A business minor is included in the degree to enhance management knowledge and skills. Career specialization can be achieved through additional minors or concentrations. A bachelor of arts includes eight hours of foreign language requirements.

A one-semester internship is required for both the bachelor of science and bachelor of arts degrees.

Career Descriptions:

Recreation Director — Plans, implements and administers recreation/leisure programs.

Facility Manager — Manages sports/recreation facilities, including program development, scheduling, marketing, budgeting, public relations and human resource management.

Sports Manager — Manages youth sports, school-sponsored athletic programs, intramurals, sports associations, recreational sports, and semi- and professional sports. Specializations in marketing, public relations, and ticket and merchandise sales.

Activity Programmers/Leaders — Plans and/or provides recreation leisure services in the form of activities to specific or diverse age groups.

Entrepreneur — Owns and manages recreation/leisure business.

Sport and Recreation Management

Sport and Recreation Management Bachelor of Science

Department Requirements (33 credits)	
RECS101	Introduction to Recreation & Leisure Services 3
RECS105	Program Development & Leadership 3
RECS270	Sports Management 3
RECS295	Practicum 1
RECS375	Commercial Recreation 3
RECS390	Recreation Leader Apprenticeship 1
RECS397	Recreation Studies Junior Research Seminar 1
RECS435	Problems, Issues and Research in Therapeutic Recreation and Leisure Sciences 3
RECS437	Recreation Studies Senior Research Seminar 1
RECS450	Philosophy of Leisure and Human Performance 3
RECS481	Professional Development Seminar 1
RECS482	Administration of Recreation and Leisure Services 4
RECS492*	Internship 6

**It is recommended that RECS492 be completed during the summer of the student's senior year.*

Business Requirements (25 credits)	
ACTG132	Principles of Accounting I or 4
OFFC119	Computerized Accounting Procedures 3
BUSN231	Business Communications 3
BUSN350	Business Law I 3
ECON201	Principles of Macroeconomics 3
ECON202	Principles of Microeconomics 3
FINC245	Principles of Finance 3
MRKT281	Marketing Principles and Strategy 3
MGMT360	Principles of Management 3

Cognate Requirements (17-19 credits)	
BIOL105	Function of the Human Body 4
HLTH181	First Aid 1
HMSV480	Grantwriting 3
POLI130	Intro. to State & Local Government 4
	or
POLI160	Intro. to Canadian Government 3
PSYC101	Introduction to Psychology 4
	or
PSYC155	Lifespan Development 3
PSYC210	Statistics 3

Department Electives (12 credits)	
EXER140	Health and Fitness 3
EXER141	Introduction to Movement 3
EXER230	Athletic Injury and Illness Prevention 3
EXER234	Preventative Taping Techniques 1
EXER248	Psychology of Sport and Performance and Coaching 3
RECS212	Instructional Methods in Adapted Aquatics 2

RECS220	Methods of Arts & Crafts 3
RECS240	Found. of Therapeutic Recreation 3
RECS262	Outdoor Recreation 3
RECS280	Readiness in Games, Activities and Sports 3
RECS295	Practicum 1-3
RECS320	Dance and Rhythmic Activities for Recreation 3
RECS340	Program Development in Therapeutic Recreation 3
RECS344	Adapted Sports and Recreation 3
RECS362	Land Management for Recreation Purposes 3
RECS365	Expedition Management 3
RECS367	National Parks, National Monuments and National Culture 3
RECS370	Recreation for the Elderly 3
RECS390	Recreation Leader Apprenticeship 1
RECS496	Selected Research Topics 1-3

Elective credits and general education requirements must be completed so that at least 124 semester credits have been earned.

Sport and Recreation Management Bachelor of Arts

Department Requirements (35 credits)	
RECS101	Introduction to Recreation and Leisure Services 3
RECS105	Program Development & Leadership 3
RECS270	Sports Management 3
RECS295	Practicum 1
RECS375	Commercial Recreation 3
RECS390	Recreation Leader Apprenticeship 1
RECS397	Recreation Studies Junior Research Seminar 1
RECS435	Problems, Issues and Research in Therapeutic Recreation and Leisure Sciences 3
RECS436	Therapeutic Recreation and Leisure Science Research 2
RECS437	Recreation Studies Senior Research Seminar 1
RECS450	Philosophy of Leisure and Human Performance 3
RECS481	Professional Development Seminar 1
RECS482	Administration of Recreation and Leisure Services 4
RECS492*	Internship 6

**It is recommended that RECS492 be completed during the summer of the student's senior year.*

Business Requirements (25 credits)	
ACTG132	Principles of Accounting I or 4
OFFC119	Computerized Accounting Procedures 3
BUSN231	Business Communications 3
BUSN350	Business Law I 3
ECON201	Principles of Macroeconomics 3
ECON202	Principles of Microeconomics 3
FINC245	Principles of Finance 3
MRKT281	Marketing Principles and Strategy 3
MGMT360	Principles of Management 3

Cognate Requirements (19 credits)	
BIOL105	Functions of the Human Body 4
HLTH181	First Aid 1
HMSV480	Grantwriting 3
	Foreign Language 8
PSYC210	Statistics 3

Department Electives (12 credits)	
EXER140	Health and Fitness 3
EXER141	Introduction to Movement 3
EXER230	Athletic Injury and Illness Prevention 3
EXER234	Preventative Taping Techniques 1
EXER248	Psychology of Sport and Performance and Coaching 3
RECS212	Instructional Methods in Adapted Aquatics 2
RECS220	Methods in Arts & Crafts 3
RECS240	Found. of Therapeutic Recreation 3
RECS262	Outdoor Recreation 3
RECS280	Readiness in Games, Activities and Sports 3
RECS295	Practicum 1-3
RECS320	Dance and Rhythmic Activities for Recreation 3
RECS340	Program Development in Therapeutic Recreation 3
RECS344	Adapted Sports and Recreation 3
RECS362	Land Management for Recreation Purposes 3
RECS365	Expedition Management 3
RECS367	National Parks, National Monuments and National Culture 3
RECS370	Recreation for the Elderly 3
RECS390	Recreation Leader Apprenticeship 1
RECS496	Selected Research Topics 1-3

Elective credits and general education requirements must be completed so that at least 124 semester credits have been earned.

Bachelor of Science Degree:

At least eight (8) semester credits *in addition* to courses used for general education requirements from categories of social science, natural science or mathematics.

These bachelor of science degree requirements can be used for majors or minors, but not general education.

Bachelor of Arts Degree:

One year (8 credits) of a modern language other than English. If taken at LSSU, this would be:

CHIN151-152, FREN151-152 or 251-252, GRMN141-142 or 241-242, NATV141-142 or 201-202, or SPAN161-162.

One-half year of two different languages will not meet this requirement.

Business Administration

Associate Degree

Career Choices:

Marketing Manager
Management Trainee

Student Profile

Are you...
a people person?
enthusiastic and eager to learn
about business from the roots up?

Program Description:

This program prepares you 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.

Career Descriptions:

Marketing Manager — Entry-level positions, requiring a two-year degree in a marketing manager trainee program leading to retail or wholesale management positions.

Management Trainee — Entry-level position, requiring a two-year degree, into a management trainee position in manufacturing or the retail trade.

Business Administration Associate Degree

General Education Requirements		
COMM101	Fundamentals of Speech	3
ECON202	Principles of Microeconomics	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Math	3
<i>or</i>		
PHIL205	Logic	3
PSYC101	Introduction of Psychology	4
Departmental Requirements		
ACTG132	Principles of Accounting I	4
<i>or</i>		
ACTG230	Fundamentals of Accounting	4
BUSN231	Business Communications	3
BUSN350	Business Law I	3
BUSN355	Business Law II	3
<i>Choose one from:</i>		
DATA225	Word Processing	3-4
DATA231	Database	
DATA235	Spreadsheets	
DATA250	Desktop Publishing	
FINC245	Principles of Finance	3-4
<i>or</i>		
FINC341	Managerial Finance	3
MGMT365	Human Resource Management	3
MRKT281	Marketing Principles and Strategy	4
MRKT283	Principles of Selling	3
MRKT285	Retail Management	3
MRKT387	Advertising Theory and Practice	3

Sufficient elective credits must be completed so that at least 62 semester credits have been earned.

Chemical Technology

Program Description:

The associate of applied science degree prepares students to work as chemical technicians. It also easily fits within any of a number of existing baccalaureate degrees, providing the student a stepping stone to an advanced degree, as well as increased marketability for summer jobs and internships.

Chemical technicians and technologists conduct chemical and physical laboratory tests to assist scientists in making qualitative and quantitative analysis of solids, liquids and gaseous materials for purposes such as maintenance of environmental standards, and other work involving experimental, theoretical or practical application of chemistry and related sciences. Nationally, the mean hourly wage is \$15.46 (National Occupational Employment and Wage Estimates <http://stats.bls.gov>). Chemical technicians work in a variety of jobs for manufacturing companies, testing labs, government labs, for public utilities, and for universities.

Career Descriptions:

Laboratory Chemist — Has knowledge of EPA methods for volatile and semi-volatile analysis; works with other chemists to perform laboratory analysis.

Field Chemist — Applies chemical knowledge to environmental and health issues; supervises field technicians; and packages chemicals for transport and disposal. Customer relations skills are essential.

Physical Science Technician

— Performs the chemical analysis of plant and animal tissues, soils, sediments, and waters for environmental contamination, including sample receipt, storage, extraction cleanup and digestion analysis.

Chemical Technology Associate of Applied Science

Degree requirements (31-33 credits)

CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM225	Organic Chemistry I	4
CHEM226	Organic Chemistry II	4
CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4
FIRE312	Hazardous Material Management	4
INTD399	Internship in Chemistry	2-4

Other Departments (11 credits)

BUSN211	Business Statistics	3
PHYS221	Elements of Physics I	4
PHYS222	Elements of Physics II	4

Free Electives (4-6 credits)

General Education (14 credits)

ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
COMM101	Fund. of Speech Communication	3
MATH140	Precalculus Mathematics	5

Total Credits: 62

Associate of Applied Science

Career Choices:

Laboratory Chemist

Field Chemist

Physical Science Technician

Student Profile

Do you...

enjoy chemistry?

work independently and on a variety of tasks?

have an aptitude for problem solving and teamwork?

enjoy classes in math and science?

have strong writing, listening and speaking skills?

Chemistry

Associate Degree

Career Choices:

Physical Science Technician

Laboratory Chemist

Field Chemist

Student Profile:

Do you have...

an interest in the environment and environmental protection?

an aptitude in natural sciences, particularly chemistry and mathematics?

skills in planning, organization and problem solving?

an ability to communicate effectively in writing?

an ability to effectively organize and present information verbally?

an ability to communicate and work with a broad array of people?

Program Description:

Graduates of the two-year associate's degree in chemistry may find employment as chemical laboratory technicians or proceed on to complete bachelor's degrees in an area of chemistry. This program transfers directly into the bachelor's degree in environmental chemistry.

Career Descriptions:

Physical Science Technician —

Performs a variety of technical procedures related to the chemical analyses of plant and animal tissues, soils, sediments and waters for environmental contaminants, including sample receipt, storage, homogenization, extraction, cleanup, digestion analysis and reporting; assists analytical chemists in routine maintenance of analytical instruments.

Laboratory Chemist — Knowledge of EPA methods for volatile and semi-volatile analysis, A.A.S. (Flame/Graphite a plus) and/or I.C.P., instrument maintenance.

Field Chemist — Supervises field technicians; packages chemicals for transportation and disposal, loads and unloads supply trucks; customer relation skills are essential.

Chemistry Associate

Chemistry		(25 credits)
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM225	Organic Chemistry I	4
CHEM226	Organic Chemistry II	4
CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4

Other Departments		(19 credits)
BUSN211	Business Statistics	3
MATH151	Calculus I	4
MATH152	Calculus II	4
PHYS231	Applied Physics I	4
PHYS232	Applied Physics II	4

General Education		(9 credits)
COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3

Free Electives		(9 credits)
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Students are required to take a total of 62 semester credits.

Computer Science

This degree provides an initial framework in computer science which allows you to branch into many career paths. Students complete a capstone “real-world” project in their sophomore (CS290) year. You will often choose a project that relates to your specific interests, such as Web page design, database administration, and applications or systems programming.

Entry-level Computer Programmer

— Designs, writes and tests programs as part of a programming team. Programs could be at the application or system level.

Systems Analyst — Works in an IT group at a large company, research institute or school.

Database Administrator — Analyzes, designs, and updates the database needs of an organization.

Computer Science Associate

Departmental Courses (34 credits)

CSCI103	Survey of Computer Science	3
CSCI105	Intro. to Computer Programming	3
CSCI121	Principles of Programming	3
CSCI122	Programming Tools and Techniques	3
CSCI163	Troubleshooting/Repair of Personal PCs	3
	<i>or</i>	
CSCI315	Computer Organization and Architecture	3
CSCI201	Data Structures and Algorithms	3
CSCI211	Database Applications	3
CSCI221	Computer Networks	3
CSCI291	Computer Science Project	4
MATH111*	College Algebra	3
MATH207*	Principles of Statistical Methods	3

Support Courses (7 credits)

BUSN121	Introduction to Business	3
PSYC101*	Introduction to Psychology	4

General Education Requirements (15 credits)

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Mathematics	3
	<i>or</i>	
PHIL205	Logic	3
	General Education Electives	6

Free Electives 13

Total Credits in Program 62

*May be used for general education credit.

Associate Degree

Career Choices:

Entry-level Computer Programmer

Information Technology Assistant

Database Administrator

Student Profile:

Do you...

like working with computers?

enjoy the challenge of problem-solving?

Associate Degrees

Criminal Justice

Associate Degree

Emphasis in:

Corrections

Law Enforcement

Career Choices:

Corrections Officer

Police Officer

Loss Control Officer

Student Profile:

Are you...

interested in people?

curious about human behavior?

able to work without supervision?

Program Description:

The associate degree in corrections will prepare you to work in correctional facilities as corrections officers. The degree contains the five courses required by the Michigan Corrections Officers Training Council (MCOTC). Associate degree graduates may also find paraprofessional jobs in other areas of corrections. This degree is compatible with the bachelor of science degree in criminal justice/corrections.

The associate degree in law enforcement will prepare you for work in local law enforcement agencies provided you attend a police academy after graduation. This associate degree is also compatible with the bachelor of science degree in criminal justice/law enforcement. Graduates may also find positions with private security agencies.

Criminal Justice Law Enforcement Emphasis Associate Degree

General Education Requirements (18 credits)

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Math	3
PHIL205	Logic	3
	General Education Electives	6

Major Requirements (16 credits)

CJUS101	Intro. to Criminal Justice	3
CJUS102	Police Process	3
CJUS201	Firearms Training	1
CJUS206	Law Enforcement/Loss Control Internship	3
CJUS212	Loss Control	3
CJUS243	Investigation	3

Support Courses (17 credits)

POLI110	Introduction to American Government and Politics	4
POLI120	Introduction to Legal Process	3
SOCY103	Cultural Diversity	3
SOCY214	Criminology	3
PSYC101	Introduction to Psychology	4

Electives (17 credits)

Canadian students may substitute POLI160 for POLI110.

Career Descriptions:

Corrections Officer — Works in secure correctional facilities; performs custodial services; acts as assistant resident unit manager; assists prisoners with their transition back to society.

Police Officer — Works for local or state agencies; has broad arrest powers; is responsible for the safety of his/her respective communities; investigates crimes; provides a variety of related services.

Loss Control Officer — Provides many of the same services that the police do only in the private sector; maintains perimeter security in industrial settings; performs retail shoplifting investigations.

Criminal Justice Corrections Emphasis Associate Degree

General Education Requirements (18 credits)

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Math	3
PHIL205	Logic	3
	General Education Electives	6

Major Requirements (30 credits)

CJUS101	Intro. to Criminal Justice	3
CJUS110	Introduction to Corrections	3
CJUS130	Client Relations in Corrections	3
CJUS140	Correctional Client Growth & Development	3
CJUS220	Institutional Corrections	3
CJUS240	Community Based Corrections	3
CJUS250	Correctional Law	3
CJUS319	Substantive Criminal Law	3
CJUS202	Canadian Criminal Law	3
CJUS330	Correctional Casework	3
CJUS355	Juvenile Justice	3

Support Courses (6 credits)

POLI120	Introduction to Legal Process	3
POLI160	Intro. to Canadian Government and Politics	3
SOCY214	Criminology	3

Electives (8 credits)

Early Childhood Education

Program Description:

This two-year program leads to an associate's degree in early childhood education. It is for students interested in working with young children from birth through age five. Students are expected to acquire an understanding of developmental patterns of the preschool child in such areas as condition, emotion, social interaction and physical growth. This understanding will be the basis of working with groups of children and will culminate in a practicum.

Graduates also matriculate into the four-year bachelor's degree program in early childhood education at the University or pursue a degree in human services or elementary education. A total of 62 credits is required.

Career Descriptions:

Graduates of this program normally seek position 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.

Child Care Provider —

Involvement with children in educational games and learning activities; supervises children at play; and provides general care of children.

Early Childhood Teacher/ Head Start Assistant Teacher

— Involvement with children in educational games and learning activities; supervises children at play; maintains records or files.

Administrative Position

— Oversees a center's operation including budgetary, staffing and equipment needs.

Early Childhood Education

Associate Degree

Degree Requirements:

BIOL105	Function of the Human Body	4
CHLD101	Foundation of Early Childhood Education	3
CHLD105	Child Guidance & Welfare	3
CHLD110	Curriculum Development and Teaching Practice	3
CHLD111	Infants & Toddlers: Developmentally Appropriate Practices	3
CHLD220	Early Childhood Literature	3
CHLD260	Practicum I	4
CHLD261	Practicum II	4
CHLD270	Administration of Early Childhood Programs	3
HLTH104	Nutrition for Early Childhood	3
HLTH181	First Aid	1
SOCY103	Cultural Diversity	3
SOCY225	Native Cultures of North America	3
SOCY113	Sociology of the American Family	3

Cognate Required:

PSYC155	Lifespan Development	3
PSYC265	Child & Adolescent Development	3
PSYC228	Organizational Behavior	3
PSYC301	Exceptional Child & Adolescent	3

General Education Requirements (18 credits)

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Math	3
PHIL205	Logic	6
	General Education Electives	6

Associate Degree

Career Choices:

Child Care Provider

Early Childhood Teacher/
Head Start Assistant Teacher

Administrative Position

Student Profile:

Are you ...

interested in working with infants, toddlers and pre-school children?

patient and understanding?

interested in helping to mold the children of our future?

Associate Degrees

Electrical Engineering Technology

Associate Degree

Career Choices:

- Electronic Technician
- Technical Sales

Student Profile:

- Do you want to...
- work with electronic circuitry?
 - program machines?
 - work with industrial robots?

Program Description:

LSSU’s Electrical Engineering Technology (EET) Associate’s program integrates knowledge from areas of study such as science, math, computers, and electrical engineering to prepare you for an engineering technology career.

The EET program includes topics such as C programming, robotics, digital and microcontroller fundamentals. Most technical classes in the curriculum include a laboratory along with the lecture.

Career Description:

Electrical engineering technologists are employed in many industries including: aerospace, robotics, chemical, medical, industrial electronics, automotive, and automated manufacturing.

Electrical Engineering Technology Associate Degree

Degree Requirements:		
Engineering and Engineering Technology Courses		28
EGEE125	Digital Fundamentals <i>C or better required</i>	4
EGEE250	Microcontroller Fundamentals	4
EGET110	Applied Electricity <i>C or better required</i>	4
EGET175	Applied Electronics <i>C or better required</i>	4
EGME141	Solid Modeling	3
EGNR101	Introduction to Engineering	2
EGNR140	Linear Algebra and Numerical Methods for Engineers	2
EGNR265	C Programming	3
EGRS215	Robotics Technology I	2
Mathematics and Science Courses		22
CHEM108	Applied Chemistry	3
CHEM109	Applied Chemistry Lab	1
MATH111	College Algebra <i>C or better required</i>	3
MATH112	Calculus for Business and Life Science	4
MATH131	College Trigonometry	3
PHYS221	Elements of Physics I <i>C or better required</i>	4
PHYS222	Elements of Physics II	4
General Education		9
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
COMM101	Fundamentals of Speech Communication	3
Free Elective *		3
Total Credits		62

* General Education approved Humanities, Social Science, or Cultural Diversity elective is recommended for those students intending to pursue a BS-EET degree.

Fire Science

Program Description:

The associate degree in fire science degree prepares you for entry-level positions with fire departments and some government agencies. You may also be eligible for Michigan Firefighter Certification through the Michigan Firefighters Training Council (MFFTC). Students in this program will have the opportunity to experience a “hands-on” approach by practicing with up-to-date equipment and experiencing live fire training in the burn training center located adjacent to campus. This degree is also compatible with the bachelor of science degrees in fire science and public safety.

Career Descriptions:

Firefighter — Works for local and federal fire departments; works for the armed forces; suppresses structural and other types of fire using a variety of methods; acts as emergency medical technician or paramedic.

Fire Safety Officer — Works in industry and for the government as fire inspector and safety officer; conducts safety and fire surveys; assists fire professionals in their duties.

Fire Science Associate Degree

General Education Requirements (18 credits)

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Math	3
	or	
PHIL205	Logic	3
	General Education Electives	6

Major Requirements (24 credits)

CJUS341	Fire Cause & Arson Investigation	3
FIRE101	Introduction to Fire Science	3
FIRE111	Hazardous Materials	3
FIRE201	Fire Protection Construction Concepts	3
FIRE204	Fire Protection Hydraulics & Pumps	3
FIRE206	Fire Protection Systems Equipment and Industrial Fire Protection	3
FIRE211	Tactics & Strategy	3
FIRE315	Company Level Supervision and Management	3

Support Courses (17 credits)

EMED190	Prehospital Emergency Care & Crisis Intervention I	4
EMED191	Prehospital Emergency Care & Crisis Intervention II	4
SOCY, PSYC or POLI Electives		9

Electives to total 62 credits (3 credits)

(FIRE197 and FIRE220 required for MFFTC certification)

Associate Degree

Career Choices:

Firefighter

Fire Safety Officer

Student Profile:

Are you...

interested in the safety of others?
physically fit?

General Engineering

Associate Degree

64-Hour Program

Program Description:

You should enroll in this program if you want to major in engineering but have not yet selected a specific field. You also should enroll in this program if you plan to transfer to an engineering program at another university after two years at Lake Superior State University.

General Engineering Associate Degree

Departmental Requirements

Engineering Courses		(21 credits)
EGEE210	Circuit Analysis	4
EGEM220	Statics	3
EGNR101	Intro. to Engineering	2
EGNR140	Linear Algebra and Numerical Methods for Engineers	2
EGNR265	"C" Programming	3
EGNR340	Advanced Numerical Methods for Engineers	1
Approved Technical Electives (see advisor for details)		6
Mathematics and Science Courses		(28 credits)
CHEM115	General Chemistry I	5
MATH151	Calculus I	4
MATH152	Calculus II	4
MATH251	Calculus III	4
MATH310	Differential Equations	3
PHYS231	Applied Physics for Engineers and Scientists I	4
PHYS232	Applied Physics for Engineers and Scientists II	4
General Education		(15 credits)
COMM110	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH151	Calculus I*	4
General Education Electives		6

Total Credits: 64

*Engineering course qualifies as General Education course

General Engineering Technology

Program Description:

You should select this program if you are interested in engineering technology but have not decided upon a specific program. You will receive extra advising and schedule courses in different areas to assist in determining career interests. As soon as you choose an engineering technology major, you will transfer to that program.

General Engineering Technology Associate Degree

Associate Degree

62-Hour Program

Departmental Requirements

Engineering and Engineering Technology Courses

EGNR101	Introduction to Engineering	2
EGET110	Applied Electricity	4
EGMT225	Statics and Strength of Materials	4
	Technical Electives	20

Mathematics and Science Courses

MATH140	Precalculus Mathematics	5
MATH151	Calculus I	4
PHYS221	Elements of Physics I	4
PHYS222	Elements of Physics II	4

Support Course

CSCI101	Intro. to Microcomputer Applications	3
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Choose Tech Electives from:

CHEM108	Applied Chemistry	3
	<i>and</i>	
CHEM109	Applied Chemistry Lab	1
EGET175	Applied Electronics	4
EGME110	Manufacturing Processes I	3
EGME141	Parametric Modeling	2
EGME142	Descriptive Geometry	2
MATH207	Principles of Statistical Methods	3

General Education Requirements

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Mathematics	3
	<i>or</i>	
PHIL205	Logic	
	General Education Electives	6

Health Care Provider

Associate of Applied Science

Career Choices:

- Hospital Nurse
- Extended Care Nurse
- Office or Clinical Nurse
- Mental Health Nurse

Student Profile:

- Do you ...*
- like working with people?
 - like challenges?
 - want to make a difference in people's lives?

Program Description:

The associate of applied science degree program serves the community by providing students with the necessary skills and training to provide safe and competent care to patients. Students wishing to obtain an associate of applied science degree would be able to complete the required course work in four semesters. The general education courses required for the associate of applied science degree would apply to the baccalaureate degree in nursing, allowing for a smooth articulation between the two programs if students wish to continue their education.

Career Descriptions:

- Hospital Nurse** — Works in hospital settings providing direct patient care to clients of all ages.
- Office Nurse** — Works in physician offices or outpatient clinics assisting in the direct patient care of clients.
- Extended Care** — Works in long-term care facilities providing care to the elderly.
- Mental Health Nurse** — Works in community mental health centers or group homes providing care for the mentally ill.

Health Care Provider Associate of Applied Science Degree

Major Requirements		(39 credits)
HLTH108	Nutrition for Practical Nursing	3
PNUR101	Introduction to Practical Nursing I	2
PNUR102	Drugs and Dosages	3
PNUR104	Introduction to Practical Nursing II	2
PNUR113	Fundamentals to Practical Nursing	7
PNUR201	Medical Surgical Practical Nursing	10
PNUR202	Ethical/Legal Aspects of Practical Nursing	2
PNUR203	OB Practical Nursing	5
PNUR204	Pediatric Practical Nursing	5

Support Courses		(29-35 credits)
BIOL105	Function of the Human Body	4
BIOL121	Human Anatomy & Physiology I	4
BIOL122	Human Anatomy & Physiology II	4
CHEM104	Life Chemistry I	3
PSYC101	Introduction to Psychology	4
PSYC155	Lifespan Development	3
MATH081*	Pre-Algebra I	1
MATH082*	Pre-Algebra II	1
MATH083*	Pre-Algebra III	1
MATH084*	Introductory Algebra I	1
MATH085*	Introductory Algebra II	1
MATH086*	Introductory Algebra III	1
MATH102	Intermediate Algebra	4
SOCY101	Introduction to Sociology	3

General Education		(6 credits)
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3

Total Degree Credits: 74-80

*If needed for prerequisite of MATH102

Health/Fitness Specialist

Program Description:

This degree prepares you for entry-level positions in the health and fitness industry. Specific course work and experiences prepare you to be certified by the American College of Sports Medicine as an Exercise LeaderSM or Health/Fitness Instructor. Students develop fitness assessment skills with current technologies employed for anthropometric, cardiovascular and metabolic functioning.

Career Descriptions:

Health Fitness Instructor/Leader
— Employed in the fitness industry to assess fitness status of clients, prescribe physical activity and teach exercise classes to improve fitness parameters.

Exercise Test Technologist — Employed in clinical settings to assist in administering fitness testing activities with individuals suffering from a medical condition working under the direction of medical staff.

Health/Fitness Specialist Associate Degree

General Education Requirements (19 credits)

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH111	College Algebra	3
PSYC101	Introduction to Psychology	4
	Elective	3

Departmental Requirements (32 credits)

EXER105	Program Development and Leadership in Recreation and Leisure Services	3
EXER140	Health Fitness	3
EXER141	Introduction to Movement	3
EXER230	Athletic Training I	3
EXER248	Psychology of Sport and Performance and Coaching	3
EXER262	Exercise Physiology I	3
EXER268	Fitness Evaluation I: Field Tests	2
EXER275	Nutrition for Sport and Exercise Performance	2
EXER295	Practicum	2
EXER	Departmental Electives	6
RECA150	Individual Physical Fitness	1
RECA	Elective	1

Cognate Requirements (13 credits)

BIOL121	Human Anatomy & Physiology I	4
BIOL122	Human Anatomy & Physiology II	4
CHEM115	General Chemistry I	5

Minimum Credits for Degree 64

Associate Degree

Career Choices:

Health Fitness instructor/Leader
Exercise Test Technologist

Student Profile:

Are you...
people oriented?
attracted to the study of human physiology and nutrition?
a person who values fitness and a healthy lifestyle?

Internet/Network Specialist

Associate Degree

Career Choices:

- Information Technology Specialist
- Network Analyst
- Webmaster

Student Profile:

Do you ...
like working with computers?
enjoy the challenge of
problem-solving?

Program Description:

This degree provides you with knowledge in the use of computer networks as they apply to commercial and industrial enterprises. You will be prepared to analyze the needs of a user, to design a computer network system to satisfy those needs, and to modify and maintain the network environment relative to both hardware and software.

Most organizations make use of the Internet and the World Wide Web. You will use state-of-the art software tools to prepare you to meet the growing needs of the business world.

One of the main objectives in this program is to develop an understanding of the business world so that you can effectively communicate with all levels of management.

Career Descriptions:

Information Technology Specialist — Works in an IT group at a large company, research institute or school.

Network Analyst — Designs, installs, maintains, troubleshoots and administers local area network systems.

Webmaster — Designs and creates Web pages, manages Web server software and consults with clients about WWW needs.

Internet/Network Specialist Associate Degree

Departmental Courses		(28 credits)
CSCI103	Survey of Computer Science	3
CSCI105	Intro. to Computer Programming	3
CSCI106	Web Page Design and Development	3
CSCI163	Troubleshooting and Repair of Personal Computers	3
CSCI211	Database Applications	3
CSCI221	Computer Networks	3
CSCI271	Network Hardware and Software	3
CSCI281	Intro. to UNIX and Network Programming	3
CSCI292	Computer Networking Project	4
Support Courses		(6 credits)
BUSN121	Introduction to Business	3
BUSN231	Business Communications	3
General Education Requirements		(18 credits)
COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Mathematics	3
PHIL205	Logic	3
	General Education Electives	6
Free Electives		(10 credits)
Total Credits:		62

Legal Studies

Program Description:

The legal assistant profession is one of the occupations projected to grow the fastest through the year 2014 according to the U.S. Department of Labor. A legal assistant (or paralegal) is a valued member of the legal team and works under the supervision of attorneys.

This program is approved by the American Bar Association and is designed to train qualified legal assistants capable of working in a variety of areas of the law and in a variety of work environments. Consequently, the role and job duties of a legal assistant vary depending on the areas of law and work environment in which a legal assistant is employed. Such diversity, varied challenges, and employment possibilities are what makes the legal assistant profession so interesting and rewarding.

There are four different degrees or offerings in legal studies. They are as follows: (1) a four-year baccalaureate degree in legal studies with an emphasis in legal administration, criminal law, personal injury, labor law, legislative/constitutional law, environmental law and policy, legal technology, or client advocacy or a selected minor as approved by the legal studies coordinator; (2) a two-year associate's degree in legal studies; (3) a post-baccalaureate (one-year) certificate in legal studies (which is available to students who already have a bachelor's degree in some other discipline and wish to make a career change or advancement); or (4) a minor in legal studies which can complement various majors (and may also be helpful to students who are planning on attending law school). The requirements for these programs are based upon the guidelines of the National Association of Legal Assistants.

Career Descriptions*:

Litigation Legal Assistant —

Conducts legal, factual and computerized research; drafts legal pleadings and documents; interviews clients and witnesses; investigates, gathers and organizes case information; assists at trial.

Corporate Legal Assistant — Drafts and/or analyzes various legal documents; attends meetings, negotiations or closings; performs legal and factual research; monitors compliance with applicable industry regulations; assists attorneys with preparation for collective bargaining, contract negotiations, administrative hearings or trials.

Criminal Law Legal Assistant —

Conducts comprehensive interviews of defendants, law enforcement, victims, and/or witnesses; performs case and field investigations; locates and coordinates usage of applicable experts; prepares motions, briefs or other legal documents; acts as a litigation assistant during trial and any appeal.

Governmental Legal Assistant —

Works as an immigration specialist; civil rights analyst; environmental protection specialist; mediation specialist; legislative analyst; workers compensation claims examiner, etc. (even the White House has employed legal assistants).

Real Estate Legal Assistant —

Conducts title searches; drafts real estate closing documents; monitors compliance with title, survey, disclosure and/or regulatory requirements; schedules and participates in real estate closings.

**Note: The above career descriptions are only a sampling of the numerous avenues available to legal assistants. See next page for additional employment listings.*

Associate Degree

Career Choices*:

Litigation Legal Assistant

Corporate Legal Assistant

Criminal Law Legal Assistant

Governmental Legal Assistant

Real Estate Legal Assistant

Student Profile:

Do you have ...

an interest in the law?

a desire and commitment to help others?

a good work ethic?

good verbal and written communication skills?

detail orientation and good organizational skills?

a well-established set of ethics?

self-motivation, initiative and a positive outlook?

good human relation skills?

an ability to think logically?

a willingness to learn new skills and to be challenged?

Legal Studies

Employment:

Legal assistants are employed with ...

private law firms

corporations

financial institutions

government
(federal, tribal, state or local)

courts and mediation systems

real estate offices and title companies

insurance companies

special interest groups

prosecutor and public defender offices

educational institutions

financial service organizations

credit and collection agencies

service, consulting
or publishing companies

Legal Studies Associate Degree

For this degree, students must complete the courses below, the general education requirements for the associate degree and electives to total 64 credits.

Students completing the associate degree in legal studies may conveniently continue their education in a baccalaureate degree in legal studies or other fields such as business administration, human services or political science. Those interested in this option should consult the legal studies advisor/coordinator.

Required Courses		(51 credits)
BUSN350	Business Law I	3
BUSN355	Business Law II	3
CJUS319	Substantive Criminal Law	3
LAWS102	Legal Research and Case Analysis	3
LAWS125	Civil Litigation and Procedure	4
LAWS140	Personal Injury Litigation & Investigative Techniques	3
LAWS150	Legal Professionals and Ethical Considerations	3
LAWS202	Legal Writing & Analysis	3
LAWS250	Law Office Management, Systems & Technology	3
LAWS299	Legal Studies Internship and Professional Development Seminar	4
LAWS320	Real Estate Law	3
LAWS321	Family Law	2
LAWS322	Probate Law and Procedure	3
OFFC119	Accounting Procedures	4
POLI110*	Intro. to American Government & Politics	4
COMM101*	Fund. of Speech Communication	3
Cognate Required		(3 credits)
<i>Choose three credits from:</i>		
CSCI101	Intro. to Microcomputer Appl.	3
DATA225	Word Processing Techniques	3
DATA231	Database	3
DATA235	Spreadsheets	3
DATA250	Desktop Publishing & Presentation Design	3
General Education Requirements		(12 credits)
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Math	3
PHIL205	Logic	3
	General Education Electives	3

**POLI110 and CO101 also meet general education requirements.*

The completion of the Legal Studies Program
DOES NOT AUTHORIZE graduates to
practice law as an attorney.

Liberal Arts

Program Description:

This degree is offered to students who complete general education requirements, any minor* presently offered by the University, and free electives for a total of 62 credit hours (minimum). Consult departmental offerings for requirements of a minor and electives.

Courses selected for credits toward the general education requirements may be, at the discretion of the department offering the minor, accepted for the minor.

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.

**see minors section.*

Career Descriptions*:

Examples of positions that can be acquired through the completion of a liberal arts degree include the following.

Computer Operator - Oversees operation of computer hardware systems; anticipates problems before they occur as well as repair problems; maintains security; troubleshoots; networks; and maintains large databases.

Manager - Maintains efficiency and profitability; implements programs for budgeting; sets goals and objectives; and oversees general managers and other staff.

Supervisor - Performs administrative tasks; supervises staff; sets standards; meets deadlines; conducts performance evaluations; and interviews prospective employees.

Associate Degree

Career Choices:

Computer Operator
Manager
Supervisor

Student Profile:

Are you ...
undecided about your
future career choice?
in need of an associate degree
for employment purposes?

Liberal Arts

Associate of Arts

General education requirements for the liberal arts associate degree include classes in communication skills, mathematics, humanities, social science and natural science.

Communication Skills

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-year Composition II	3

Humanities

HUMN251	Humanities I	4
<i>Choose one from:</i>		
ARTS250	Art History and Appreciation I	4
ARTS251	Art History and Appreciation II	4
HUGE100	Approved transfer course for Humanities	
HUMN203	Survey of Chinese Culture	3
HUMN240	Native Art and Culture	3
HUMN252	Humanities II	4
HUMN255	World Mythology	4
MUSC220	History and Appreciation of Music I	4
MUSC221	History and Appreciation of Music II	4
NATV240	Native Art and Culture	3
PHIL302	Ancient Western Philosophy	3
PHIL305	Modern and Contemporary Philosophy	3
	Second Year Foreign Language	6-8

Mathematics

(3-5 credits)

MAGE100	Approved transfer course from CLEP	3
MATH110	(or higher) Explorations in Math or	3
PHIL205	Logic	

Natural Science

Choose two (8 credits) from:

BIOL105	Function of the Human Body	4
BIOL122	Human Anatomy & Physiology II	4
BIOL131	General Biology: Cells	4
BIOL204	General Microbiology	4
CHEM105	Life Chemistry II	4
CHEM108	Applied Chemistry and	3
CHEM109	Applied Chemistry Lab	1
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
GEOL115	Field Excursions in Earth Science	4
GEOL121	Physical and Historical Geology I	4
GEOL122	Physical and Historical Geology II	4
GEOG106	Physical Geography: Landforms	4
GEOG108	Physical Geography: Meteorology and Climatology	4
NSCI101	Conceptual Physics	4
NSCI102	Introduction to Geology	4
NSCI103	Environmental Science and	3
NSCI104	Environmental Science Lab	1
NSCI110	Chemistry in Society	4
NSCI116	Introduction to Oceanography	4
NSCI119	Descriptive Astronomy	4
NSGE100	Approved transfer course for Natural Science	4

PHYS221	Elements of Physics I	4
PHYS231	Applied Physics for Engineers and Scientists I	4

Social Science

Choose two from different disciplines

(6-8 credits):

ECGE100	Economics General Education	3-4
ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
ECON208	Honors Prin. of Microeconomics	3
ECON209	Honors Prin. of Macroeconomics	3
ECON302	Managerial Economics	4
GEOG201	World Regional Geography	4
GEOG302	Economic Geography	4
GEGE100	Geography General Education	3-4
HIST101	History of World Civilization I	4
HIST102	History of World Civilization II	4
HIST103	Chinese Cultural Diversity	3
HIST131	United States History I	4
HIST132	United States History II	4
HSGE100	History General Education	3-4
POLI110	Intro. to American Government and Politics	4
POLI160	Intro. to Canadian Government and Politics	4
POLI241	Intro. to International Relations	4
PSGE100	Political Science General Education	3-4
PSYC101	Introduction to Psychology	4
PSYC155	Lifespan Development	3
PYGE100	Psychology General Education	3-4
SOCY101	Introduction to Sociology	3
SOCY102	Social Problems	4
SOCY113	Sociology of the American Family	3
SOGI100	Sociology General Education	3-4

Social Science - Diversity

Choose one class (3-4 credits) from:

BUSN308	Managing Cultural Differences	3
EDUC250	Student Diversity and Schools	3
GEOG306	Cultural Geography	3
HIST203	Chinese Cultural Diversity	3
HLTH328	Multicultural Approaches to Health Care	3
NATV225	Native Cultures of North America	3
POLI333	Human Rights and World Politics	4
POLI334	Middle East Politics	3
SDGE100	Social Science Diversity General Education	3
SOCY103	Cultural Diversity	3
SOCY213	Introduction to Anthropology	3
SOCY225	Native Cultures of North America	3
SOCY226	Races and Minorities	3
SOCY321	Sociology of Women	3

Manufacturing Engineering Technology

Program Description:

The manufacturing engineering technology associate's degree program prepares you to work with traditional and modern manufacturing equipment and methods in today's high-tech manufacturing environment. Graduates will have theoretical and practical knowledge in traditional manufacturing processes such as turning, milling, foundry and welding along with newer technologies such as robotics, CAD (computer-aided drafting), and CAM (computer-aided manufacturing).

Throughout the program, students acquire cross-disciplinary skills in manufacturing, computer applications, electronics and mechanical technology that are in high demand in industry.

Career Description:

Typical job categories for graduates of this program are robot programmer, manufacturing technician, systems programmer, mechanical technician, CAD draftsman, CAM programmer/operator, and electro-mechanical maintenance engineer.

Manufacturing Engineering Technology Associate Degree

Departmental Requirements (52 Credits)

Engineering and Engineering Technology Courses (35 credits)

EGEE125	Digital Fundamentals	4
EGNR101	Introduction to Engineering	2
EGNR265	"C" Programming	3
EGET110	Applied Electricity	4
EGET175	Applied Electronics	4
EGME110	Manufacturing Processes I	3
EGME141	Solid Modeling	3
EGME240	Assembly Modeling and GD&T	3
EGMT225	Statics and Strength of Materials	4
EGRS215	Robotics Technology I	2
	Electives	3

Mathematics and Science Courses (17 credits)

CHEM115	General Chemistry I*	5
MATH140	Precalculus Mathematics	5
MATH207	Principles of Statistical Methods*	3
PHYS221	Elements of Physics I*	4

General Education Requirements (9 credits)

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3

Electives** (3 credits)

Total Credits: 64

**The math, chemistry and physics courses satisfy the general education and departmental requirements.*

***A social science course is recommended for those students intending to continue for the B.S. degree in Manufacturing Engineering Technology.*

Associate Degree

Career Choices:

Robot Programmer
Manufacturing Technician
Systems Programmer
Mechanical Technician
CAD Draftsman
CAM Programmer/Operator
Electro-Mechanical Maintenance Engineer

Student Profile:

Do you have...

a good work ethic and ability to think logically?
a willingness to learn new manufacturing skills?
an interest in computer applications and electrical-mechanical topics?
a willingness to learn additional math topics?
verbal and written communication skills?

Natural Resources Technology

Associate Degree

Career Choices:

Natural Resource Technician
Forestry, Wildlife, Parks

Student Profile:

Do you ...

enjoy the outdoors and are you willing to work under all weather conditions?

have an awareness of and respect for the environment?

have a strong work ethic?

work cooperatively?

have strong oral and written communication skills?

Program Description:

The natural resources technology program stresses the acquisition of field skills necessary for success in a natural resources center, as well as the theoretical foundations for these skills. This practical knowledge is enriched by course materials which emphasize communication skills along with the links between society, economics, policy and the natural resource base. This program can be taken as a stand alone two-year program, can constitute the first half of the bachelor of science in parks and recreation management, or it can be used in conjunction with a three-year criminal justice program to prepare a student for a career in conservation law.

All natural resource technology students are strongly encouraged to participate in at least one summer of work or volunteer experience in the natural resource field to gain the professional experience and contacts they will need to begin their careers.

Continuing education to bachelor's degree program — The high degree of competition in the natural resource field makes the pursuit of a bachelor's degree highly desirable. Programs which join well with the NRT degree are the parks and recreation management degree, the fisheries & wildlife degree and the 2+3 criminal justice degree programs. These programs lead to careers such as conservation officer, park naturalist, expedition leader, guide or recreation specialist.

Career Description:

Natural Resource Technician — Forestry, wildlife, fisheries and park technicians are responsible for data collection and other hands-on work in either the public or private sector.

Natural Resources Technology Associate Degree

Students are required to take sufficient elective credits to reach the minimum of 62 semester credits needed for graduation. Only 2 credits of RECA courses can be applied to elective credits.

Biology, Chemistry and Environmental Science Requirements (31 Credits)

BIOL107	Field Biology	3
BIOL230	Introduction to Soil Science	4
BIOL240	Natural History of the Vertebrates	3
BIOL284	Principles of Forestry	4
BIOL286	Principles of Watersheds	3
CHEM108	Survey of General Chemistry	3
CHEM109	Survey of General Chemistry Lab	1
EVRN126	Interpretation of Maps and Aerial Photography	2
EVRN131	Introduction to GIS and GPS	2
EVRN231	Intermediate GIS	2
NSCI103	Environmental Science	3
NSCI104	Environmental Science Lab	1

General Education and Other Departments (24 Credits)

COMM101	Fund. of Speech Communication	3
CSCI101	Intro. to Microcomputer Applications	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
FIRE102	Wildland and Rural Fire Control	3
EMED189	Medical First Responder	3
MATH111	College Algebra	3
RECS101	Introduction to Recreation and Leisure Services	3

Free Electives (7 Credits)

Office Administration

This program is designed for those seeking careers in an office setting.

Students are trained on a variety of computer application software packages and formats. Strong personal skills are emphasized. Good basic writing skills are required. The majority of computer-based classes are taught in the School of Business and Economics computer lab using current computer technology.

Office Administrator/Administrative Assistant — Provides support services in keyboarding, transcribing, collecting, preparing and recording report information; operating office business machines; and a variety of office duties.

Secretary — Performs and coordinates office duties; schedules appointments; maintains files, takes dictation; types letters; makes travel arrangements; contacts clients; and operates office equipment.

Office Manager — Maintains efficiency and profitability; implements budgets; motivates workers; sets goals and objectives.

Clerk — Performs many duties including payroll, auditing, accounts receivable and payable; maintains files; types correspondence; operates office equipment.

Office Administration Associate Degree

Degree Requirements (64 credits)

Departmental Requirements (29 credits)

BUSN226	Records Management	3
BUSN231	Business Communications	3
BUSN121	Introduction to Business	3
DATA225	Word Processing Techniques	3
DATA231	DataBase	3
DATA235	Spreadsheets	3
DATA250	Desktop Publishing	3
OFFC112	Keyboard Skillbuilding	1
OFFC119	Accounting Procedures	
	<i>or</i>	4
ACTG132	Principles of Accounting I	
OFFC235	Automated Office Systems	3

Business Electives (6-9 credits)

BUSN350	Business Law I	3
BUSN261	Business Skills	1-3
DATA261	Multimedia Applications	3
FINC245	Principles of Finance	3
MRKT281	Marketing Principles & Strategy	3
MGMT360	Management Concepts and Applications	3
MGMT365	Human Resource Management	3

General Education Requirements (18 credits)

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Math	
	<i>or</i>	3-5
PHIL205	Logic	
	General Education Electives	6

Associate Degree

Office Administrator

Administrative Assistant

Secretary

Office Manager

Clerk

Do you...

enjoy working with people?

have detail orientation
and flexibility?

like to work in a fast- paced envi-
ronment ?

enjoy performing routine
office duties?

like working with databases,
spreadsheets and word processing?

Associate Degrees

Paramedic Technology

Associate Degree

Career Choices

Emergency Paramedic
Firefighter-Paramedic
Public Safety Officer
Hospital Technician

Student Profile:

Are you...
action-oriented, seeking a challenging and rewarding career?
interested in medicine?
good at working with people?
highly motivated with good leadership qualities?

Program Description:

Paramedics are trained to aggressively manage all types of emergency situations by providing scene control, emergency medical care and patient transport to a medical facility or trauma center. The paramedic is an integral part of the health care team, serving as an extension of the hospital emergency department. Paramedics provide a variety of skilled functions in the pre-hospital phase of patient care, often the most critical period of care. The professional paramedic is highly motivated and qualified by education and certification to provide pre-hospital care under the supervision of a physician director of the Emergency Medical Service System.

This program is designed to allow current fire science and public safety students to earn a minor and obtain their paramedic certification; it also allows students to obtain paramedic certification without committing to a four-year degree. Students can be certified as an Emergency Medical Technician-Basic after the first year with little or no previous training; and as a Paramedic at the end of the second year. Graduates will be eligible to challenge state and/or national licensure examination for both EMT-Basic and paramedic license.

Career Descriptions:

Emergency Paramedic — Works in the pre-hospital setting, providing emergency care and scene management in all types of emergency situations.

Firefighter-Paramedic — Works in civilian or private setting, providing fire suppression, rescue operations and emergency care.

Public Safety Officer — Works in the community, providing emergency care, fire/rescue and law enforcement services to the general public.

Hospital Technician — Works in the hospital or trauma center setting, providing staff support services in critical care areas including the emergency department and critical care/intensive care units.

Paramedic Technology Associate Degree

Paramedic Technology		(49 credits)
EMED190	Prehospital Emergency Care I	4
EMED191	Prehospital Emergency Care II	4
EMED211	Emergency Pharmacology I	2
EMED212	Emergency Pharmacology II	2
EMED251	Advanced Emergency Care I	4
EMED252	Advanced Emergency Care II	4
EMED261	Emergency Cardiology I	2
EMED262	Emergency Cardiology II	2
EMED271	Prehospital Emergency Pediatrics	2
EMED284	Advanced Skills and Situations I	3
EMED285	Advanced Skills and Situations II	3
EMED286	Paramedic Operations	2
EMED297	Paramedic Clinical I	2
EMED298	Paramedic Clinical II	2
EMED299	Paramedic Field Internship	4
EMED301	National Registry Certification Prep	2
HLTH101	Intro. to Medical Terminology	2
HLTH232	Pathophysiology	3
General Education		(16 credits)
COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Math	3
	or	
PHIL105	Logic	3-4
	Gen ed elective	
Other Disciplines		(7 credits)
MATH111	College Algebra	3
BIOL105	Functions of the Human Biology	4
Total Degree Credits		68-69

Personal Computer Specialist

Program Description:

Personal computers of today outperform the mainframe computers of a generation ago at a fraction of the cost. This associate's degree trains individuals to assist personal computer users. They will be able to assemble, upgrade, maintain, troubleshoot, and repair personal computers. Computer skill courses are combined with general education and business courses.

Career Descriptions:

Computer professionals are in demand by businesses of all sizes to assemble, upgrade, maintain and repair the personal computers which are on virtually every office desk. The PC specialist also works in the area of peer-to-peer and client-server local area networks as well as in configuring systems for maximum efficiency. PC specialists frequently install and operate user application software packages as well as train individuals in the use of these programs.

Computer Sales/Installer — Sells and installs computers; maintains current knowledge in advancement of today's computers; installs hardware and software.

Network Installer and Maintenance Worker — Installs hardware and software; provides networking capabilities; troubleshoots; maintains computers to prevent problems.

Personal Computer Specialist Associate Degree

Required for Degree 62 credits

General Education Requirements 18 credits

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Math	3
PHIL205	Logic	3
	General Education Electives	6

Department Requirements 31 credits

OFFC119	Accounting Procedures (or ACTG132 and ACTG133)	4
BUSN231	Business Communications	3
CSCI163	Troubleshooting and Repair of Personal Computers	3
CSCI221	Computer Networks	3
CSCI263	Managing Computer Security	3
DATA225	Word Processing Techniques	3
DATA250	Desktop Publishing and Presentation Design	3
DATA261	Multimedia Applications	3
DATA231	Database	3
DATA235	Spreadsheets	3

Business or Computer Science Electives 9

BUSN121	Introduction to Business	3
BUSN350	Business Law I	3
CSCI105	Intro. to Computer Programming	3
CSCI106	Web Page Design and Development	3
CSCI271	Network Hardware and Software	3
CSCI281	Network Design and Implementation	3
FINC242	Personal Finance	3
FINC245	Principles of Finance	3
MRKT281	Marketing Principles and Strategy	3

Electives must be completed to total a minimum of 62 semester credits.

Associate Degree

Career Choices

Computer Sales/Installer

Network Installer
and Maintenance Worker

Student Profile

Are you...

a people person?

enthusiastic and eager to learn
about business from the roots up?

enjoy working with computer
hardware and software?

Associate Degrees

Social Work

Associate Degree

Career Choices:

Paraprofessional Social Worker
Adult Care Worker
Child Services Worker

Student Profile:

Do you...

enjoy working closely with people?
wish to help people who are struggling with difficult situations?
have respect for persons from different backgrounds?

Program Description:

Workers in this field help people improve their lives, work to alleviate human suffering and promote social justice. In direct service delivery programs you will be working with people who are caught in the grips of social problems and/or struggling with personal adjustment issues. This program provides beginning level skills and knowledge to enable you help people in these circumstances.

You will learn about the field of social work, current issues in social work, introductory level clinical diagnosis and practice and will acquire skills in one-on-one counseling. Behavioral and social science perspectives on human behavior as well as basic human biology are included in this program. An extensive internship experience in one or more agency settings will provide you with an opportunity to apply, in a supervised setting, knowledge and skills gained in the classroom. The internship may be completed in the local area or outside the local area.

If you are seeking the Associate Degree in Social Work you are strongly encouraged to continue your studies to complete a Bachelor's degree to be successful in today's competitive labor market. You may find the expanded understanding of human behavior provided by the Sociology major or Psychology major to be particularly useful for work in social work programs. Both of these majors also help you develop critical thinking ability, improve writing skills and learn about research through first-hand experience developing and conducting a research project. These abilities are valued by employers in social work and human service agencies.

Although most students combine the Associate Degree in Social Work with a bachelor degree in Psychology or Sociology, some choose other

bachelor programs to best prepare them to achieve their particular career goals. Advisors will help you make these decisions.

Career Descriptions:

Paraprofessional—Assists professionals in human service and social work settings, working with adults, families, children and/or the elderly helping connect people with resources and improve individual functioning.

Adult care worker—Provides services guiding and assisting adults in an out-patient setting or adult foster care living facility.

Adult care worker—Works with professionals to provide assistance to families and children in their homes or placement elsewhere, facilitating adjustment and improving interaction.

Social Work Associate Degree

Required Courses		(21 credits)
SOWK110	Introduction to Social Work	3
SOWK201	Communication Skills in Counseling	3
SOWK250	Social Work Practicum	9
SOWK310	Clinical Diagnosis and Treatment	3
SOWK344	Social Welfare Systems	3

Cognates- Required		(3 credits)
<i>Select one additional social work course, not taken above, from the following:</i>		
SOWK202	Social Research Methods	3
SOWK291	Group Counseling	3
SOWK338	Deviance	3
SOWK341	Addiction	3
SOWK391	Family Therapy	3

General Education		(22-24 credits)
BIOL105	Function of the Human Body	4
COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Math	3
<i>or</i>		
PHIL205	Logic	
PSYC101	Introduction to Psychology	3 or 4
<i>or</i>		
SOCY101	Introduction to Sociology	
SOCY102	Social Problems	3 or 4
<i>or</i>		
PSYC155	Lifespan Development	

Electives (8 credits)
Take additional electives to total a minimum of 64 credits.

Total Credits Required: 64

Substance Abuse Prevention and Treatment

Program Description:

This program provides the basic knowledge and skills for entry level substance abuse work. Included are social, psychological and biological bases of substance abuse, with special attention to alcoholism, and skills training in counseling. You will also improve your communication skills and expand your knowledge about cultural diversity and psychological and social foundations of human behavior. You will apply knowledge and skills acquired in an extensive internship working under close supervision in a substance abuse program. Placements include residential and out-patient rehabilitation settings, detoxification programs, and prevention programs. You may complete your internship locally or outside the local area.

If you are seeking the Associate Degree in Substance Abuse Prevention and Treatment you are strongly encouraged to continue your studies to complete a Bachelor's degree to be successful in today's competitive labor market. You may find the expanded understanding of human behavior provided by the Psychology major or Sociology major to be particularly useful for work in social work programs. Both of these majors also help you develop critical thinking ability, improve writing skills and learn about research through first-hand experience developing and conducting a research project. These abilities are valued by employers in this field.

Although most students combine the Associate Degree in Social Work with a bachelor degree in Sociology or Psychology, some choose other bachelor programs to best prepare them to achieve their particular career goals. Advisors will help you make these decisions.

Career Descriptions:

Substance Abuse Worker – assesses need for services, provides individual and group counseling, supervises in in-patient programs, and helps clients connect with services to support recovery.

Preventive Services Worker – in outreach and community efforts prepares and delivers information and programs to reduce drug use and dependency, including smoking cessation programs, often working with other community programs or agencies, such as school systems.

Substance and Abuse Treatment and Prevention Associate Degree

Required Courses (39 credits)

BIOL105	Function of the Human Body	4
HMSV204	Fundamentals of Drug Abuse	3
HMSV250	Human Services Practicum	9
HMSV292	Alcohol Abuse Prevention & Treatment	3
PSYC101	Introduction to Psychology	4
PSYC201	Communication Skills in Counseling	3
PSYC259	Abnormal Psychology	3
SOCY102	Social Problems	4
SOCY341	Addiction	3
SOCY344	Social Welfare Systems	3

Cognates- Required (6 credits)

PSYC291	Group Counseling	3
	or	
PSYC391	Family Therapy	3
SOCY225	Native Cultures of North America	3
	or	
SOCY103	Cultural Diversity	3

General Education Requirements (18 credits)

COMM101	Fund. of Speech Communication	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH110	(or higher) Explorations in Math	3
	or	
PHIL205	Logic	3
	General Education Electives*	6
	*met by BIOL105 and PSYC101	

Electives (7 credits)

General education requirements and sufficient electives must be completed to total a minimum of 62 semester credits.

Total Credits Required: 62

Associate Degree

Career Choices:

Substance Abuse Worker
Preventive Services Worker

Student Profile:

Do you...

enjoy working with people from different backgrounds?

have patience with human struggles and failings?

view yourself as ethical and caring?

Technical Accounting

Associate Degree

Career Choices

- Accounts Receivable/
Payable Clerk
- Payroll Clerk
- Bookkeeper
- Accounting Data Entry Clerk
- Cost Accounting Clerk

Student Profile:

- Do you...*
- like system and order?
 - work well with numbers and information?
 - work independently and have good interpersonal skills?

Program Description:

This program is designed for those who do not plan to go to college for four years but desire a working knowledge in the field of accounting. The program provides students with knowledge in the accounting techniques used in business as well as knowledge of economics, business law, data processing and business communication. After completing this program, you may transfer to the four-year program without loss of credits.

Career Descriptions:

Accounts Receivable/Payable Clerk — Posts details of transactions; totals accounts and computes interest charge; monitors loans.

Payroll Clerk — Distributes and collects time sheets; computes pay including calculations of taxes, insurances or payroll deductions; maintains backup files. Payroll clerks keep up with changes in payroll tax and deduction laws.

Bookkeeper — Handles all aspects of financial transactions; records debits and credits; compares current and past balance sheets; summarizes details of separate ledgers; and prepares reports for supervisors and managers.

Accounting Data Entry Clerk — Enters data into computer; edits current information; proofreads new entries.

Cost Accounting Clerk — Posts details of transactions; maintains ledgers; maintains accounts payable and receivable ledgers; total, reconcile and compute interest charges.

Technical Accounting Associate Degree

General Education Requirements (18 credits)		
COMM101	Fundamentals of Speech	3
ECON201	Prin. of Macroeconomics	3
<i>or</i>		
ECON202	Prin. of Microeconomics	3
ENGL110	First-Year Composition I	3
ENGL111	First-Year Composition II	3
MATH111	College Algebra	3
	General Education Elective	3

Departmental requirements		
ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	4
ACTG232	Intermediate Accounting I	4
ACTG233	Intermediate Accounting II	4
ACTG332	Cost Accounting I	3
ACTG421	Federal Taxation Accounting I	3
BUSN231	Business Communication	3
BUSN350	Business Law I	3
DATA235	Spreadsheets	3
FINC245	Principles of Finance	3-4
<i>or</i>		
FINC341	Managerial Finance	

Sufficient elective credits must be completed so that at least 64 semester credits have been earned.

Information Processing

Program Description:

This program prepares you for entry-level positions as a word processor or receptionist. The program develops other fundamental skills in communications, computer applications and records management. Requires minimum of 32 credits.

Career Descriptions:

Data Entry Clerk – Provides data entry for any organization.

Word Processor — Prepares documents.

Receptionist — A business front-desk position which involves greeting the public and performing routine office duties.

Secretary — Performs routine office duties.

Computer Applications Specialist — Installs, operates and upgrades various software applications; i.e., spreadsheet, database, graphs, word processing and special-use programs.

Information Processing Certificate

BUSN121	Introduction to Business	3
BUSN226	Records Management	3
COMM101	Fundamentals of Speech	3
DATA225	Word Processing	3
DATA231	Database	3
DATA235	Spreadsheets	3
DATA261	Multimedia Applications	3
ENGL110	First-Year Composition I	3
OFFC112	Keyboard Skillbuilding	1

Sufficient elective credits must be completed so that at least 32 semester credits have been earned.

Certificate

Career Choices:

Data Entry Clerk

Word Processor

Receptionist

Secretary

Computer Applications Specialist

Certificates

International Studies

Certificate

Career Choices:

International Business Manager

International Sales Representative

Foreign Relations Officer

Program Description:

This program can be completed in three ways:

- Concurrently with a B.S. or B.A. degree program
- Post-baccalaureate program
- Minor

The purpose of the certificate program is to better prepare a person to work with a more diverse work force. The program is designed to begin preparing students for potential foreign work assignments and improved multicultural relations.

The international studies certificate/minor is an interdisciplinary program. Course substitutions to meet your objectives in international studies may be approved by your academic advisor. As an example, Canadian or American courses might be approved as a substitute for students from countries other than Canada or the U.S. Also, special topics courses listed in the certificate curriculum may change with future development and additional international courses.

The listed courses may be taken throughout a student's baccalaureate program or as a one-year, post graduate certificate. This program features opportunities for students to study in foreign countries and in classes at Lake Superior State University with international faculty.

Career Descriptions:

International Business Manager

— Negotiates contracts and joint ventures with foreign suppliers and buyers; works as a manager in a foreign plant/office or in establishing an operation in a foreign country.

International Sales Representative

— Represents suppliers and buyers for the purpose of selling products and/or services; may

involve importing and exporting, joint ventures or foreign sales operations.

Foreign Relations Officer

— Works in a variety of governmental or private-sector positions; negotiates international programs and international agreements; promotes organizational interests in foreign countries.

International Studies Certificate

Choose at least one course from six of the following categories to total a minimum of 32 credits. Category 7, Foreign Language is required.

1. Cultural Diversity	
SOCY103 Cultural Diversity	3
BUSN308 Managing Cultural Differences	3
2. Business and Economics	
ECON408 International Economics	3
MRKT486 International Marketing	3
BUSN400 Special Topics:	
3. Geography	
GEOG302 Economics Geography	4
GEOG306 Cultural Geography	3
4. Political Science	
POLI411 U.S. Foreign Policy	3
POLI420 Politics of the World Economy	4
POLI331 Comparative Politics of Western Europe and Russia	4
POLI334 Middle East Politics	3
5. History	
HIST310 Russia	4
HIST316 Europe in the 20th Century	4
HIST361 Latin America	4
HIST371 Far East Civilization	4
HIST442 Diplomatic History of the U.S.	4
6. Humanities	
HUMN261 World Literature I	3
HUMN262 World Literature II	3
FREN353 Business French I	3
FREN354 Business French II	3
FREN360 French Cultural Perspectives	3-4
JAPN105 Intensive Introductory Japanese Language I	10
JAPN106 Intensive Introductory Japanese Language II	10
JAPN201 Culture and Society of Japan I	3
JAPN202 Culture and Society of Japan II	3
JAPN301 Japanese Art and Culture I	4
JAPN302 Japanese Art and Culture II	4
7. Foreign Language	
A minimum of two semesters of a modern foreign language	
	8

Special Topics: Study in a foreign country may be used for up to eight credits of the Humanities and/or Foreign Language credits.

Paramedic Training

Program Description:

This program provides advanced life support skills to assess and treat the sick and injured. It will allow graduates to qualify to write the state licensing examination for paramedic and possess advanced life support skills to assess and treat the sick and injured.

Admission requirements are:

- 18 years of age by September of year entering program.
- evidence of high school diploma or equivalent.
- evidence of valid, current Michigan driver's license.
- evidence of valid, current Michigan EMT-basic certification or National Registry EMT certification.
- evidence of current CPR or CPR instructor certification.
- evidence of completion of ENGL110 First-Year Composition I, three credits.

Career Descriptions:

Emergency Paramedic — Works in the pre-hospital setting, providing emergency care and scene management in all types of emergency situations.

Firefighter-Paramedic — Works in civilian or private setting, providing fire suppression, rescue operations and emergency care.

Public Safety Officer — Works in the community, providing emergency care, fire/rescue and law enforcement services to the general public.

Hospital Technician — Works in the hospital or trauma center setting, providing staff support services in critical care areas including the emergency department and critical care/intensive care units.

Paramedic Training Certificate

Department Requirements

EMED211	Emergency Pharmacology I	2
EMED212	Emergency Pharmacology II	2
EMED251	Advanced Emergency Care I	4
EMED252	Advanced Emergency Care II	4
EMED261	Advanced Cardiology I	2
EMED262	Advanced Cardiology II	2
EMED271	Prehospital Emergency Pediatrics	2
EMED284	Advanced Skills and Situations I	3
EMED285	Advanced Skills and Situations II	3
EMED286	Paramedic Operations	2
EMED297	Paramedic Clinical I	2
EMED298	Paramedic Clinical II	2
EMED299	Paramedic Field Internship	4
EMED301	National Registry Certification Prep	2

Support Courses

BIOL105	Functions of the Human Body	4
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Total Credits **40**

Certificate

Career Choices:

Emergency Paramedic

Firefighter-Paramedic

Public Safety Officer

Hospital Technician

Personal Computer Specialist

Certificate

Career Choices:

- Computer Repair Technician
- Network Technician
- Applications Specialist

Program Description:

This program provides the skills necessary to assist personal computer users with the assembly, upgrade, maintenance and repairing of personal computers. With additional courses in general education and business, holders of this certificate can obtain the associate's degree. Requires a minimum of 32 credits.

Career Descriptions:

- A variety of entry-level technical positions serve the personal computer user.
- Computer Repair Technician** — Works on computers, peripheral equipment and word processing systems; installs equipment; works closely with other computer technicians.
- Network Technician** — Assists in installation of computers; provides networking capabilities; troubleshoots.
- Applications Specialist** — Provides assistance with computer programs/software; installs software.

Personal Computer Specialist Certificate

CSCI163	Troubleshooting of Repair of Personal Computers	3
CSCI221	Computer Networks	3
CSCI263	Storage, Protection and Recovery and Repair of Personal Computers	3
DATA225	Word Processing Techniques	3
DATA231	Database	3
DATA235	Spreadsheets	3
DATA261	Multimedia Applications	3
ENGL110	First-Year Composition I	3
OFFC119	Accounting Procedures	4
	Electives	4

Practical Nursing

Program Description:

The certificate of practical nursing provides students with the necessary skills and training to provide safe and competent care to patients and qualifies students to write the required licensure examinations for practical nursing. Course work can be completed in 4 semesters of full-time study, or in 24 months of part-time study.

Career Descriptions:

Hospital Nurse — Works in a hospital setting providing direct patient care to clients of all ages.

Office Nurse — Works in a physician's office or outpatient clinic assisting in the direct patient care of clients.

Extended Care — Works in a long-term care facility providing care to the elderly.

Mental Health Nurse — Works in community mental health centers or group homes providing care for the mentally ill.

Practical Nursing Certificate

Major Requirements		(39 credits)
HLTH108	Nutrition for Practical Nursing	3
PNUR101	Introduction to Practical Nursing I	2
PNUR102	Drugs and Dosages	3
PNUR104	Introduction to Practical Nursing II	2
PNUR113	Fundamentals to Practical Nursing	7
PNUR201	Medical Surgical Practical Nursing	10
PNUR202	Ethical/Legal Aspects of Practical Nursing	2
PNUR203	OB Practical Nursing	5
PNUR204	Pediatric Practical Nursing	5

Support Courses		(7-9 credits)
BIOL105	Function of the Human Body	4
PSYC155	Lifespan Development	3
MATH081*	Pre-Algebra I	1
MATH082*	Pre-Algebra II	1
MATH083*	Pre-Algebra III	1

Total Degree Credits: 46-49

*If needed

Certificate

Career Choices:

Hospital Nurse

Extended Care Nurse

Office or Clinical Nurse

Mental Health Nurse

Student Profile:

Do you ...

like working with people?

like challenges?

want to make a difference in people's lives?

Certificates

Minors

At least six semester hours of the required courses must be taken at LSSU for a student to obtain these minors. The grade point average for minors must be a C or better. **Teaching minors** must be a 2.70 or higher.

Accounting — Finance

Total Credits Required: 24

ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	4
FINC341	Managerial Finance	4
ACTG and FINC Electives		12

Anishinaabemowin/ Ojibwe Language and Literature

Total Credits Required: 30

NATV141	Anishinaabemowin/Ojibwe I	4
NATV142	Anishinaabemowin/Ojibwe II	4
NATV201	Second Year Anishinaabemowin/ Ojibwe Conversation I	4
NATV202	Second Year Anishinaabemowin/ Ojibwe Conversation II	4
NATV301	Anishinabe Oral and Recorded Literature I	3
NATV302	Anishinabe Oral and Recorded Literature II	3
NATV401	Seminar in Advanced Language Studies I	4
NATV402	Seminar in Advanced Language Studies II	4

Art

Total Credits Required: 20

ARTS109	Principles of Design and Color	3
ARTS110	Fundamentals of Drawing and Composition	3
ARTS111	Introduction to Painting Media and Techniques	3
ARTS211	Mixed Media Explorations	3
ARTS250	Art History & Appreciation I	4
ARTS251	Art History & Appreciation II	4

Biology

Total Credits Required: 21

BIOL131	General Biology: Cells	4
BIOL132	General Biology: Organisms	4
BIOL204	General Microbiology	4
BIOL337	General Ecology	3
BIOL	Biology Electives (200+ level)	6

Biology-Secondary Teaching

Total Credits Required: 25

BIOL122	Anatomy and Physiology II	4
BIOL131	General Biology: Cells	4
BIOL132	General Biology: Organisms	4
BIOL220	Genetics	4
BIOL240	Natural History of the Vertebrates	3
BIOL337	General Ecology	3
<i>Complete one methods course from the following:</i>		
EDUC443	Secondary Methods: Science	3
EDUC453	Directed Study: Science Methods	
Biology Departmental Requirement		
BIOL121	Anatomy and Physiology I	4

Business French

Total Credits Required: 28

FREN151	First Year French I	4
FREN152	First Year French II	4
FREN251	Second Year French I	4
FREN252	Second Year French II	4
FREN351	Advanced Conversation and Composition I	3
FREN352	Advanced Conversation and Composition II	3
FREN353	Business French I	3
FREN354	Business French II	3

Chemistry

Total Credits Required: 21

CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4

And complete one of the following options:

a)		
CHEM220	Survey of Organic Chemistry	4
CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4
<i>or</i>		
CHEM361	Physical Chemistry I	4
b)		
CHEM225	Organic Chemistry I	4
CHEM226	Organic Chemistry II	4
CHEM231	Quantitative Analysis	4
<i>or</i>		
CHEM451	Introductory Biochemistry	4

Chemistry-Secondary Teaching

Total Credits Required: 24

CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM105	Life Chemistry II	4
CHEM231	Quantitative Analysis	4
CHEM332	Instrumental Analysis	4
EDUC443	Science Methods-Secondary	3
<i>or</i>		
EDUC453	Directed Study: Science Methods	

Child Development

Total Credits Required: 29

CHLD101	Foundations of Early Childhood Education	3
CHLD105	Child Guidance & Welfare	3
CHLD110	Curriculum Development and Teaching Practices	3
CHLD111	Infants and Toddlers: Developmentally Appropriate Practices	3
CHLD220	Early Childhood Literature	3
CHLD260	Practicum I	4
PSYC155	Lifespan Development	3
PSYC301	Exceptional Child and Adolescent	3
HLTH104	Nutrition for Early Childhood	3
HLTH181	First Aid	1

Communication

Total Credits Required: 21

COMM201	Small Group Communication	3
<i>or</i>		
COMM225	Interpersonal Communication	3
COMM211	Advanced Public Speaking	3
<i>or</i>		
COMM210	Business & Professional Speaking	3
COMM302	Argumentation & Advocacy	3
COMM307	Classical/Contemporary Rhetoric	3
<i>or</i>		
ENGL321	Rhetoric & Composition Theory	3
COMM308	Communication Theory	3
COMM325	Organizational Communication	3
COMM416	Communication in Leadership	3

Students must complete 21 semester hours of credit in addition to basic requirements of composition and speech (COMM101).

Computer Science

Total Credits Required: 24

CSCI105	Intro. to Computer Programming	3
CSCI121	Principles of Programming	3
CSCI122	Programming Tools and Techniques	3
CSCI201	Data Structures and Algorithms	3
CSCI211	Database Applications	3
CSCI221	Computer Networks	3
CSCI315	Computer Organization and Architecture	3
Plus three additional CSCI credits at the 300- or 400-level		

Computer Science — Teaching

Total Credits Required: 26

CSCI105	Intro. to Computer Programming	3
CSCI121	Principles of Programming	3
CSCI122	Programming Tools and Techniques	3
CSCI201	Data Structures and Algorithms	3
CSCI211	Database Applications	3
CSCI221	Computer Networks	3
CSCI315	Computer Organization and Architecture	3
EDUC445	Teaching Computer Science in the Secondary Classroom	3

Corrections

Total Credits Required: 21

Required Courses:

CJUS110	Introduction to Corrections	3
CJUS220	Institutional Corrections	3
CJUS240	Community Based Corrections	3
CJUS319	Substantive Criminal Law	3

*Minimum of nine hours from:
(At least one must be 300-400)*

CJUS130	Client Relations in Corrections	3
CJUS140	Correctional Client Growth & Development	3
CJUS250	Correctional Law	3
CJUS330	Correctional Casework	3
CJUS355	Juvenile Justice	3

Counseling

Total Credits Required: 21

PSYC155	Lifespan Development	3
PSYC201	Communication Skills in Counseling	3
PSYC396	Tests and Measurements*	3
SOCY344	Social Welfare Systems	3
HMSV250	Human Services Practicum	3
BIOL105	Function of the Human Body**	4
PSYC259	Abnormal Psychology***	3
or		
SOCY338	Deviance***	3
PSYC291	Group Counseling	3
or		
PSYC391	Family Therapy	3
PSYC240	Behavioral Management	3
or		
PSYC385	Health Psychology	3

**May count toward general education.

***May count toward SOCY/PSYC minor.

Note: PSYC396 has a prerequisite of one of these statistics courses: MATH207, PSYC210 or SOCY302

Note: Students seeking a BS degree in sociology-social services will notice that there is considerable overlap in the requirements for some of the skill minors. You must complete the minimum number of hours in each minor without counting a course twice. If additional courses must be taken to meet this requirement, select from the following:

HMSV480	Grantwriting	3
PSYC217	Social Psychology	3
PSYC228	Organizational Behavior	3
PSYC240	Behavior Management	3
PSYC259	Abnormal Psychology	3
PSYC311	Learning & Motivation	3
PSYC357	Personality Theory	3
PSYC383	Industrial Psychology	3
PSYC385	Health Psychology	3
PSYC457	Cognition	3
PSYC459	Physiological Psychology	3
SOCY214	Criminology	3
SOCY103	Cultural Diversity	3
SOCY242	Sociology of Sex	3
SOCY321	Sociology of Women	3
SOCY327	Sociology of Dying & Death	3
SOCY338	Deviance	3

Dance

Total Credits Required: 21

Technique Classes - Select six (6) credits from:

DANC101	Ballet I	1
DANC201	Ballet II	1
DANC301	Ballet III	1
DANC125	Modern Dance I	1
DANC225	Modern Dance II	1
DANC120	Jazz Dance I	1
DANC130	Scottish Highland Dance	1
RECA173	Social Dance	1

Choose one Emphasis from Dance Education or Dance Performance

Dance Education Emphasis

DANC110	Dance Company	1-3
DANC205	Creative Movement for Elementary Educators	3
DANC210	Movement for Actors	2
DANC305	Dance History	3
DANC401	Senior Thesis	3

Dance Performance Emphasis

DANC110	Dance Company	1-3
DANC220	Musican Theatre Tap/Jazz	1
DANC305	Dance History	3
DANC310	Choreography	3
DANC401	Senior Thesis	1-4

Electives from either Emphasis to total 21 credits

Early Childhood Education — Teaching

Total Credits Required: 27

CHLD101	Foundations of Early Childhood Education	3
CHLD110	Curriculum Development & Teaching Practices	3
CHLD220	Early Childhood Literature	3
CHLD260	Practicum I	4
or		
CHLD261	Practicum II	4
CHLD270	Administration of Early Childhood Programs	3
CHLD420	Emergent Literacy	3
CHLD430	Directed Studies — Early Childhood Education	4
CHLD450	Internship in Teaching Infant/Toddler Preprimary Ed.	4

Earth/Space Science — Secondary Teaching

Total Credits Required: 29

GEOL121	Physical History of Geology I	4
GEOL122	Physical History of Geology II	4
NSCI116	Oceanography	4
NSCI119	Astronomy	4
GEOG108	Physical Geography: Meteorology	4
EDUC443	Secondary Science Methods	3
MATH207	Principles of Statistics	3
MATH111	College Algebra	3

Economics

Total Credits Required: 21

ECON201	Prin. of Macroeconomics	3
ECON202	Prin. of Microeconomics	3
ECON308	Intermediate Microeconomics	3
ECON309	Intermediate Macroeconomics	3
ECON	Electives	9

Economics — Finance

Total Credits Required: 28

ACTG132	Principles of Accounting I	4
ACTG133	Principles of Accounting II	4
ECON201	Prin. of Macroeconomics	3
ECON202	Prin. of Microeconomics	3
FINC341	Managerial Finance	4
ECON or FINC	Electives	10

Economics Teaching

Total Credits Required: 25

ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
FINC242	Personal Finance	3
HIST132	U.S. History I	4
GEOG302	Economic Geography	4
POLI110	Intro. to American Gov Politics	4
BUSN403	Business Government and Society	3
EDUC456	Directed Study in Business/Economics Methods	1

Electrical Engineering

Total Credits Required: 23-25

EGNR101	Introduction to Engineering	2
or		
CSCI103	Survey of Computer Science	3
EGNR140	Linear Algebra and Numerical Methods for Engineers	2
EGEE125	Digital Fundamentals	4
EGEE210	Circuit Analysis	4

EGEE250	Microcontroller Fundamentals	4
EGEE305	Analog and Digital Electronics	3
or		
EGEE370	Electronic Devices	4
EGEE330	Electro-Mechanical Systems	4

Not for electrical engineering students.

English Language and Literature

Total Required Credits 21

Required Courses:

ENGL180	Introduction to Literary Studies	3
ENGL231	American Literature I	6
and		
ENGL232	American Literature II	3
or		
ENGL233	English Literature I	6
and		
ENGL234	English Literature II	3

One course (3-4 credits) from the following:

COMM309	Speech and Drama Productions	3
COMM333	Studies in the Drama: the Genre and Theater in Context	3
ENGL235	Survey of Native Literature of North America	3
ENGL236	Literature and Culture	3
ENGL340	Genre Studies	3
HUMN255	World Mythology	4
HUMN256	Introduction to Film: Images of Our Culture	3
HUMN261	World Literature I	3
HUMN262	World Literature II	3

Three courses (9 credits) from the following:

ENGL306	Technical Writing	3
ENGL310	Advanced Writing	3
ENGL340	Genre Studies	3
ENGL401	Medieval Literature	3
ENGL402	Renaissance Literature	3
ENGL403	Restoration Literature	3
ENGL405	Romantic Literature	3
ENGL406	Nineteenth Century Literature	3
ENGL407	Twentieth Century Literature	3
ENGL410	The Children's Literary Tradition	3
ENGL420	History of the English Language	3
ENGL421	History of Literary Criticism	3
ENGL433	Topics in Literature and Composition	3
ENGL450	Directed Individual Study	3

English Teaching — Elementary

Total Credits Required: 24

English Requirements:

ENGL180	Introduction to Literary Studies	3
ENGL222	English Grammar	3
ENGL335	Children's Literature in the Classroom	3
ENGL410	The Children's Literary Tradition	3
EDUC411	Elementary Language Arts Methods	3

Select one from the following:

ENGL235	Survey of Native Literature of North America	3
ENGL236	Literature and Culture	3
ENGL340	Genre Studies	3

Select one literature sequence from the following:

ENGL231	American Literature I, and	3
ENGL232	American Literature II	3
or		
ENGL233	English Literature I, and	3
ENGL234	English Literature II	3

English Teaching — Secondary

Total Credits Required: 24

English Requirements:

ENGL180	Introduction to Literary Studies	3
ENGL222	English Grammar	3
ENGL320	Responding to Writing	3

Select one methods course from the following:

EDUC441	Secondary Language Arts Methods	3
EDUC451	Independent Study: Language Arts Methods	3

Select one literature sequence from the following:

ENGL231	American Literature I, and	3
ENGL232	American Literature II	3
or		
ENGL233	English Literature I, and	3
ENGL234	English Literature II	3

Select one from the following:

ENGL235	Survey of Native Literature of North America	3
ENGL236	Literature and Culture	3
ENGL340	Genre Studies	3

Select one general elective from the following:

ENGL306	Technical Writing	3
ENGL310	Advanced Writing	3
ENGL401	Medieval Literature	3
ENGL402	Renaissance Literature	3
ENGL403	Restoration Literature	3
ENGL405	Romantic Literature	3
ENGL406	Nineteenth Century Literature	3
ENGL407	Twentieth Century Literature	3

Environmental Science

Total Credits Required: 45

Required Courses:

BIOL131	General Biology: Cells	4
BIOL132	General Biology: Organisms	4
BIOL337	General Ecology	3
CHEM115	General Chemistry I	5
CHEM116	General Chemistry II	4
CHEM220	Survey of Organic Chemistry	4
CHEM231	Quantitative Analysis	4
NSCI103	Environmental Science	3
EVRN311	Environmental Law	3
or		
EVRN313	Solid and Hazardous Waste	3
EVRN341	Environmental Chemistry I: Water and Water Pollution Control	4
or		
CHEM342	Environmental Chemistry II: Air and Solid Wastes	4

Additional courses to total 45 credit hours:

BIOL204	General Microbiology	4
BIOL230	Introduction to Soils	4
CHEM341	Environmental Chemistry I: Water and Water Pollution Control	4
CHEM342	Environmental Chemistry II: Air and Solid Wastes	4
EVRN126	Interpretation of Maps and Aerial Photography	2
EVRN131	Introduction to GIS and GPS	2
EVRN231	Intermediate GIS	2
EVRN285	Principles of Epidemiology	3
EVRN311	Environmental Law	3
EVRN313	Solid & Hazardous Waste	3
GEOL311	Principles of Hydrology	3

Fire Science

Total Credits Required: 21

Required Courses:

FIRE101	Introduction to Fire Science	3
FIRE111	Hazardous Materials	3
FIRE204	Fire Protection Hydraulics and Pumps	3
FIRE206	Fire Protection Systems, Equipment and Industrial Fire Protection	3

Minimum of 9 credits from the following:

FIRE201	Fire Protection Construction Concepts	3
FIRE211	Tactics and Strategy	3
FIRE301	Code Enforcement Inspection and Fire Prevention	3
FIRE315	Company Level Supervision and Management	3
CJUS341	Fire Cause & Arson Investigation	3
FIRE220	Fire Science Certification	4

Francophone Cultures

Total Required Credits: 30

FREN151	First-Year French I	4
FREN152	First-Year French II	4
FREN251	Second-Year French I	4
FREN252	Second-Year French II	4
FREN351	Advanced Conversation and Composition I	3
FREN352	Advanced Conversation and Composition II	3
FREN360	French Cultural Perspectives	4
FREN370	The Francophone World I	4

French Language and Literature

Total Required Credits: 28

FREN151	First Year French I	4
FREN152	First Year French II	4
FREN251	Second Year French I	4
FREN252	Second Year French II	4
FREN351	Advanced Conversation and Composition I	3
FREN352	Advanced Conversation and Composition II	3
FREN355	Survey of French Literature I	3
FREN356	Survey of French Literature II	3

French Teaching

Total Required Credits: 39

FREN151	First Year French I	4
FREN152	First Year French II	4
FREN251	Second Year French I	4
FREN252	Second Year French II	4
FREN351	Advanced Conversation and Composition I	3
FREN352	Advanced Conversation and Composition II	3
FREN355	Survey of French Literature I	3
FREN356	Survey of French Literature II	3
FREN360	French Cultural Perspectives	4
FREN370	The Francophone World I	4
EDUC447	Theories Methods of Teaching Foreign Languages	3

General Business

Total Credits Required: 22-23

Required Courses:

ACTG132	Principles of Accounting I	4
or		
OFFC119	Accounting Procedures	3
MGMT360	Management Concepts & Apps.	3
MRKT281	Marketing Principles & Strategy	3
ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
FINC245	Principles of Finance	3-4
or		
FINC341	Managerial Finance	3
BUSN231	Business Communication	3

Geographic Information Systems

Total Credits Required: 22

Required Courses:

CSCI105	Introduction to Computer Programming	3
CSCI211	Database Applications	3
EVRN126	Interpretation of Maps and Aerial Photography	2
EVRN131	Introduction to GIS and GPS	2
EVRN231	Intermediate GIS	2
EVRN325	Geospatial Analysis III	3
Any 200-level course in Statistics		3
Directed Electives:	4 credits	
Choose 1:		
EVRN345	Advanced Spatial Analysis and Statistics	4
EVRN355	GIS Programming: VBA and Applications	4
EVRN465	Geographic Databases and Web-Based GIS	4

Geography

Total Credits Required: 20

Geography (9-11 credits)

GEOG106	Physical Geography: Landforms	4
or		
GEOL121	Physical and Historical Geology I	4
GEOG108	Physical Geography: Meteorology and Climatology	4
GEOG302	Economic Geography	4
GEOG306	Cultural Geography	3
GEOG492	Individualized Studies in Geography	2-4

Geography electives to total 20 credits:

GEOG201	World Regional Geography	4
GEOG321	Geography of Europe and Great Britain	4
GEOG322	Geography of South America, Central America and the Caribbean Region	4
GEOG323	Geography of East and Southeast Asia	4
GEOG325	Regional Geography of North America	4
GEOG360	Historical Geography of Eastern North America	4

It is strongly suggested that students pursuing professional careers complete MATH207 Principles of Statistical Methods.

Geography Teaching

Elementary-Total Required Credits: 33

Secondary-Total Required Credits: 34

Required Courses:

GEOG108	Physical Geography: Meteorology and Climatology	4
GEOG201	World Regional Geography	4
GEOG302	Economic Geography	4
GEOG306	Cultural Geography	3
GEOG321	Geography of Europe and Great Britain	4
HIST131	U.S. History I	4
HIST132	U.S. History II	4
POLI110	Intro. to American Government and Politics	4

Select one of the following:

Elementary candidates

EDUC422	Social Studies Elementary Methods	2
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Secondary candidates

EDUC444	Social Studies Secondary Methods	3
EDUC454	Independent Study: Secondary Social Studies Methods	

Geology

Total Required Courses: 21

GEO121	Physical/Historical Geology I	4
GEO115	Field Excursions in Earth Science	
GEO122	Physical/Historical Geology II	4
GEO128	Structural Geology and Tectonics	5
GEO123	Mineralogy and Petrology	5
GEO120	Introduction to Field Geology	3

Gerontology

Total Credits Required: 23

Required Courses:

PSYC155	Lifespan Development	3
RECS370	Recreation for the Elderly	3
SOCY326	Sociology of Age and Aging	3
SOCY327	Sociology of Death and Dying	3

Select Regular or Nursing Track: 11 credits

Regular Track

BIOL105	Functions of the Human Body	4
BIOL122	Human Anatomy and Physiology II	
RECS101	Introduction to Recreation and Leisure Services	3
RECS105	Program Development and Leadership in Recreation and Leisure Services	3
RECS295	Practicum	1

Nursing Track

BIOL122	Human Anatomy and Physiology II	4
HLTH352	Health Issues of Aging Populations	3
INTD399	Internship in:	1
NURS290	Directed Study in Nursing	3

Health Care Administration

Total Credits Required: 30

ACTG230	Fundamentals of Accounting	4
FINC245	Principles of Finance	3
MGMT365	Human Resource Management	3
MGMT469	Collective Bargaining	3
EXER140	Health & Fitness	3
HLTH208	Nutrition	3
HLTH210	Intro. to Health Care Concepts	3
HLTH352	Health Issues of Aging Populations	3
BUSN354	Legal & Financial Issues in Health Care Administration	3
INTD399	Internship	3

History

Total Credits Required: 21-22

Required Courses:

HIST101	History of World Civilization I	4
HIST102	History of World Civilization II	4
HIST131	United States History I	4
HIST132	United States History II	4
HIST496	Historical Methods	2
HIST	300/400-Level History Elective	8

One course from:

GEOG306	Cultural Geography	3
GEOG321	Geography of Europe and Great Britain	4
GEOG322	Geography of South America, Central America and the Caribbean Region	4
GEOG323	Geography of East and Southeast Asia	4
GEOG325	Regional Geography of North America	4
GEOG360	Historical Geography of Eastern North America	4

History — Elementary Teaching

Total Required Credits: 36-37

Required Courses:

HIST101	History of World Civilization I	4
HIST102	History of World Civilization II	4
HIST131	U.S. History I	4
HIST132	U.S. History II	4
HIST496	Historical Methods	2
GEOG201	World Regional Geography	4
GEOG302	Economic Geography	4
POLI110	Intro. to American Government	4
EDUC422	Elementary Methods: Social Studies	2

History Cognates

Select one from the following:

HIST440	The Declaration of Independence and the Constitution	4
HIST441	Diplomatic History of the U.S. I	4
HIST442	Diplomatic History of the U.S. II	4
HIST302	England in the Modern World	4
HIST315	Europe: From Napoleon to WWI	4
HIST316	Europe in the 20th Century	4
HIST361	Latin America	4
HIST371	Far East Civilization: 1850-Present	4

History — Secondary Teaching

Total Required Credits: 36-37

Required Courses:

HIST101	History of World Civilization I	4
HIST102	History of World Civilization II	4
HIST131	U.S. History I	4
HIST132	U.S. History II	4
HIST496	Historical Methods	2
GEOG201	World Regional Geography	4
GEOG302	Economic Geography	4
POLI110	Intro. to American Government	4
EDUC444	Secondary Methods: Social Studies	3
EDUC454	Independent Study: Social Studies Methods	

History Cognates

Select one from the following:

HIST440	The Declaration of Independence and the Constitution	4
HIST441	Diplomatic History of the U.S. I	4
HIST442	Diplomatic History of the U.S. II	4

HIST302	England in the Modern World	4
HIST315	Europe: From Napoleon to WWI	4
HIST316	Europe in the 20th Century	4
HIST361	Latin America	4
HIST371	Far East Civilization: 1850-Present	4

Homeland Security

Total Credits Required: 21

Required Courses:

CJUS101	Introduction to Criminal Justice	3
CJUS103	Introduction to Terrorism and Homeland Security	3
CJUS203	Cyberterrorism	3
CJUS303	Critical Infrastructure Protection	3

Select two courses from:

CJUS204	Domestic and International Terrorism	3
CJUS325	Homeland Security and Emergency Services	3
CJUS384	International and Comparative Criminal Justice Systems	3

Select one course from:

CJUS306	Security Systems	3
CJUS313	Crisis Intervention and Deviant Behavior	3
CJUS444	Criminalistics	4
FIRE312	Hazardous Materials Management	3

Human Nutrition

Total Credits Required: 26

BIOL122	Anatomy and Physiology II	4
CHEM105	Life Chemistry II	4
HLTH104	Nutrition for Early Childhood	3
HLTH108	Understanding Clinical Nutrition	3
HLTH208	Principles of Human Nutrition	3
EXER275	Nutrition for Sport and Exercise Performance	2
HLTH330	Applied Nutrition	2
HLTH452	Contemporary Issues in Nutrition	3
HLTH490	Independent Study in Health	2
EXER496	Selected Research Topics	

Human Resource Management

Total Credits Required: 31

ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
BUSN350	Business Law I	3
MGMT360	Management Concepts & Apps.	3
MGMT365	Human Resource Management	3
MGMT451	Labor Law	4
MGMT469	Collective Bargaining	3
PSYC228	Organizational Behavior	3
PSYC396	Tests and Measurements	3
PSYC201	Communication Skills in Counseling	3
PSYC383	Industrial Psychology	

Human Services Administration

Total Credits Required: 22

SOCY344	Social Welfare Systems	3
MGMT365	Human Resource Management	3
DATA	Elective	3
POLI201	Intro. to Public Administration	3
PSYC228	Organizational Behavior	3
HMSV250	Human Services Practicum	3
ACTG230	Fundamentals of Accounting	4
MRKT281	Marketing Principles and Strategy	3

Humanities

Total Credits Required: 24

Required Courses:

HUMN251 Humanities I	4
HUMN252 Humanities II	4

Select 6-8 credits from one discipline

Select 10 credits from three other disciplines

No more than 3 credits in studio or performance classes

Art	
Film	
Second Year Foreign Language (provided it is not used to satisfy any other requirement)	
History of Drama	
Music	
Mythology	
Philosophy	
World Literature	

Institutional Loss Control

Total Credits Required: 21

CJUS212 Loss Control	3
CJUS306 Security Systems	3
CJUS341 Fire Cause & Arson Investigation	3
FIRE101 Introduction to Fire Science	3
FIRE111 Hazardous Materials	3
FIRE206 Fire Protection Systems Equipment and Industrial Fire Prevention	3
FIRE301 Code Enforcement Inspection and Fire Prevention	3

This minor may not be used for fire science majors.

Integrated Science — Elementary Education

This minor is limited to elementary education students completing a dual minor with an education major or as a minor to an approved teacher education major.

Total Credits Required: 32

Required Courses:

GEOL121 Physical Historical Geology	4
GEOG108 Meteorology and Climatology or	4
NSCI116 Oceanography	
BIOL107 Field Biology	3
BIOL131 General Biology I	4
NSCI101 Conceptual Physics	4
NSCI110 Chemistry in Society	4
NSCI103 Environmental Science	3
NSCI104 Environmental Science Laboratory	1

Science Cognates:

MATH207 Principles of Statistical Methods	3
EDUC421 Elementary Science Methods	2

International Studies

Total Credits Required: 32

Choose at least one course from six of the following categories to total a minimum of 32 credits. Category 7, foreign language, is required.

1. Cultural Diversity

SOCY103 Cultural Diversity	3
BUSN308 Managing Cultural Differences	3

2. Business and Economics

ECON408 International Economics	3
MRKT486 International Marketing	3
BUSN400 Special Topics	3

3. Geography

GEOG302 Economics Geography	4
GEOG306 Cultural Geography	3

4. Political Science

POLI411 U.S. Foreign Policy	3
POLI420 Politics of the World Economy	4
POLI331 Comparative Politics of Western Europe and Russia	4
POLI334 Middle East Politics	3

5. History

HIST310 Russia: From Under-developed State to Superpower	4
HIST316 Europe in the 20th Century	4
HIST361 Latin America	4
HIST371 Far East Civilization: 1850 to Present	4
HIST442 Diplomatic History of the U.S. I	4

6. Humanities

HUMN261 World Literature I	3
HUMN262 World Literature II	3
FREN353 Business French I	3
FREN354 Business French II	3
FREN360 French Cultural Perspectives	3-4
JAPN105 Intensive Introductory Japanese Language I	10
JAPN106 Intensive Introductory Japanese Language II	10
JAPN201 Culture and Society of Japan I	3
JAPN202 Culture and Society of Japan II	3
JAPN301 Japanese Art and Culture I	4
JAPN302 Japanese Art and Culture II	4

7. Foreign Language

A minimum of two semesters of a modern foreign language 8

Special Topics — study in a foreign country may be used for up to eight credits of the humanities and foreign language credits.

Japanese Study

Total Credits Required: 26-28

Required Courses:

JAPN105 Intensive Introductory Japanese Language I	10
JAPN106 Intensive Introductory Japanese Language II	10

Select two courses from the following:

JAPN201 Culture and Society of Japan I	3
JAPN202 Culture and Society of Japan II	3
JAPN301 Japanese Art and Culture I	4
JAPN302 Japanese Art and Culture II	4

Students must complete 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. Completion of this minor shall fulfill the one-year foreign language required for a bachelor of arts degree. Students are strongly advised to take GEOG323.

Law Enforcement

Total Credits Required: 21

Required Courses:

CJUS101 Intro. to Criminal Justice	3
CJUS102 Police Process	3

Minimum of 15 hours from:

CJUS202 Canadian Criminal Law	3
CJUS206 Law Enforcement/Loss Control Internship	3

CJUS243 Investigation	3
CJUS313 Crisis Intervention and Deviant Behavior	3
CJUS319 Substantive Criminal Law	3
CJUS321 Ethical Issues in Public Safety	3
CJUS406 Advanced Canadian Jurisprudence	3
CJUS409 Procedural Criminal Law	3
CJUS444 Criminalistics	4

Legal Studies

Total Credits Required: 26

Required Core Courses:

LAWS102 Legal Research and Case Analysis	3
LAWS202 Legal Writing & Analysis	3
LAWS125 Civil Litigation and Procedure	4
LAWS150 Legal Professional and Ethical Considerations	3
OFFC119 Accounting Procedures or	4
POLI110 Intro. to American Government and Politics	

Electives: Minimum of nine credits from the following courses (with six credits selected from 300-400 level courses):

LAWS140 Personal Injury Litigation & Investigative Techniques	3
LAWS250 Law Office Management, Systems & Technology	3
LAWS300 Seminar in Legal Studies	1-4
LAWS301 Alternative Resolution and Dispute Conflict Management	3
LAWS305 Tribal Law and Government	3
LAWS320 Real Estate Law	3
LAWS321 Family Law	2
LAWS322 Probate Law & Procedure	3
LAWS401 Evidence & Trial Practice	3
LAWS405 No-Fault Automobile Law	3
LAWS406 Worker's Disability Compensation Law	2
CJUS319 Substantive Criminal Law	3
CJUS409 Procedural Criminal Law	3
BUSN350 Business Law I	3
BUSN355 Business Law II	3

Loss Control

Total Credits Required: 21

Required Courses:

CJUS212 Loss Control	3
CJUS306 Security Systems	3

Minimum of six hours from:

CJUS202 Canadian Criminal Law	3
CJUS319 Substantive Criminal Law	3
CJUS406 Advanced Canadian Jurisprudence	3
CJUS409 Procedural Criminal Law	3

Minimum of nine hours from:

MGMT365 Human Resource Management	3
CSCI101 Intro. to Microcomputer Applications	3
MGMT451 Labor Law	4
MRKT281 Marketing Principles & Strategy	3
MGMT360 Management Concepts & Apps.	3

Marketing

Total Credits Required: 21

Required Courses:

MRKT281 Marketing Principles & Strategy	3
MRKT283 Personal Selling	3
MRKT381 Consumer Behavior	3
MRKT486 International Marketing	3
MRKT Electives (300 level or above)	6
ECON202 Principles of Microeconomics	3

Mathematics

Total Credits Required: 22

Required Courses:

MATH151	Calculus I	4
MATH152	Calculus II	4
MATH207	Principles of Statistical Methods	3
or		
MATH308	Probability and Mathematical Statistics	3

Plus additional mathematics courses numbered 215 or higher for a minimum of 22 credits.

Mathematics-Elementary Teaching

Total Credits Required: 23

Courses Required:

MATH103	Number Systems and Problem Solving	4
MATH104	Geometry & Measurement	4
MATH112	Calculus for Business and Life Sciences	4
or		
MATH151	Calculus I	3
MATH207	Prin. of Statistical Methods	3
MATH215	Fund. Concepts of Math	3
MATH321	History of Mathematics	3
EDUC420	Math Methods for Elementary Teachers	2

Mathematics-Secondary Teaching

Total Credits Required: 26

MATH151	Calculus I	4
MATH152	Calculus II	4
MATH215	Fund. Concepts of Mathematics	3
MATH216	Discrete Mathematics and Problem Solving	3
MATH207	Principles of Statistical Methods	3
MATH321	History of Mathematics	3
MATH325	College Geometry	3
EDUC442	Math Methods for Secondary Teachers	3

Mechanical Engineering

Total Credits Required: 22

EGNR140	Linear Algebra and Numerical Methods for Engineers	2
EGEM220	Statics	3
EGEM320	Dynamics	4
EGME110	Manufacturing Processes	3
EGME141	Solid Modeling	3
EGME225	Mechanics of Materials	3
EGME350	Machine Design I	4
or		
EGME337	Thermodynamics	4

Not for mechanical engineering students.

Native Studies of the Americas

Total Credits Required: 23

The Native Studies of the Americas minor is designed to provide valuable historical and contemporary information about Native culture and society. The courses in the Native Studies of the Americas minor reflect the Native experience throughout North and South America, but focus on issues of importance to Native peoples in the Great Lakes region.

The Native Studies of the Americas minor is appropriate for students majoring in a wide variety of subjects who may or may not be Native themselves, but expect to work in a Native setting or in an area with a high Native population. Students who are simply interested in and wish to explore the Native cultures in our area will also benefit from this program.

Required Courses (10 credits)

NATV/SOCY225	Native Cultures of North America	3
NATV/HIST230	Survey of Native History of North America	4
NATV 310	Seminar in Native Studies of the Americas	3

Electives from the following (13 credits) (at least 3 credits must be 300 level)

SOCY103	Cultural Diversity	3
NATV141	Ojibwe I, Anishinaabemowin	4
NATV142	Ojibwe II, Anishinaabemowin	4
NATV201	Second-Year Ojibwe I, Anishinaabemowin	4
NATV202	Second-Year Ojibwe II, Anishinaabemowin	4
NATV210	Indigenous Peoples of Central and South America	3
NATV/ENGL235	Survey of Native Literature of North America	3
NATV/HUMN240	Native Art and Culture	3
NATV/LAWS/POLI305	Tribal Law and Government	3
NATV320	Contemporary Native Issues of North America	3

Office Administration

Total Credits Required: 22

DATA250	Desktop Publishing and Presentation Design	3
BUSN226	Records Management	3
BUSN121	Introduction to Business	3
OFFC119	Accounting Procedures	4
DATA235	Spreadsheets	3
or		
DATA231	DataBase	3
DATA225	Word Processing Techniques	3
DATA	Elective	3

Paramedic Technology

Current licensure as a Michigan Basic EMT and all course prerequisites must be met by the student prior to beginning this program.

Total Credits Required: 44

<i>Paramedic Technology (36)</i>		
EMED211	Emergency Pharmacology I	2
EMED212	Emergency Pharmacology II	2
EMED251	Advanced Emergency Care I	4
EMED252	Advanced Emergency Care II	4
EMED261	Emergency Cardiology I	2
EMED262	Emergency Cardiology II	2
EMED271	Prehospital Emergency Pediatrics	2
EMED284	Advanced Skills and Situations I	3
EMED285	Advanced Skills and Situations II	3
EMED286	Paramedic Operations	2
EMED297	Paramedic Clinical I	2
EMED298	Paramedic Clinical II	2
EMED299	Paramedic Field Internship	4
EMED301	National Registry Certification Preparation	2
<i>Co-requisites (8 credits)</i>		
BIOL121	Human Anatomy & Physiology I	4
BIOL122	Human Anatomy & Physiology II	4

Personal Computer Specialist

Total Credits Required: 20

CSCI163	Troubleshooting and Repair of Personal Computers	3
CSCI221	Computer Networks	3
CSCI263	Storage, Protection and Recovery of Repair of Personal Computers	3
DATA261	Multimedia Applications	3
DATA/CSCI/EGRS Electives		8

Philosophy

Total Credits Required: 20-21

Required Courses (12 credits):

PHIL205	Logic	3
PHIL215	Ethical Theory and Practice	3
PHIL302	Ancient Western Philosophy	3
PHIL305	Modern and Contemporary Philosophy	3

Elective Courses: 8-9 credits

PHIL100	Special Topics (if offered)	1-4
PHIL200	Special Topics (if offered)	1-4
PHIL204	Introduction to Philosophy	3
PHIL210	Existentialism	3
PHIL220	Biomedical Ethics	3
PHIL250	Philosophy of Religion	3
PHIL300	Special Topics (if offered)	1-4
PHIL400	Special Topics (if offered)	1-4
PHIL490	Directed Study in Philosophy	1-4
HUMN261	World Literature I	3
HUMN262	World Literature II	3

Political Science

Total Credits Required: 28

Required Courses:

POLI110	Intro. to American Government & Politics	4
POLI211	Political Science Research & Statistics	4

A minimum of one course in each of the following four fields: 13-16 credits

American Politics	
POLI325, 364, 367, 467	
Comparative Politics	
POLI160, 331, 333, 334, 335, 340	

International Relations	
POLI241, 411, 413, 420	

Political Philosophy	
POLI351, 352	

Additional political science electives must be taken to reach 28 credits. A minimum of 12 credits must be at the 300/400 level. 4-7

Political Science Teaching

Total Credits Required: 27

POLI110	Intro. to American Government and Politics	4
POLI130	Intro. to State and Local Government	4
POLI211	Political Science Research and Statistics	4
POLI241	Intro. to International Relations	4
POLI352	Political Philosophy II	4
GEOG201	World Regional Geography	4

Select one methods course from the following:

EDUC444	Secondary Methods: Social Studies	3
EDUC454	Independent Study: Social Studies Methods	1-3

Prelaw

Total Credits Required: 27-29

Required Courses:

COMM302	Argumentation and Advocacy	3
LAWS102	Legal Research and Case Analysis	3
LAWS125	Civil Litigation and Procedure	4
LAWS150	Legal Professionals and Ethical Considerations	3
LAWS202	Legal Writing and Analysis	3
PHIL205	Logic	3
POLI222	Introduction to the Legal Profession	3

Select two courses from the following: 5-7

Any LAWS course(s)		
BUSN350	Business Law I	3
	or	
BUSN355	Business Law II	
CJUS319	Substantive Criminal Law	3
	or	
CJUS409	Procedural Criminal Law	
POLI467	Constitutional Law and Civil Liberties	4

Professional Communication

Total Credits Required: 21-22

Required Courses:

COMM308	Communication Theory	3
DATA250	Desktop Publishing and Presentation Design	3
ENGL222	English Grammar	3
ENGL306	Technical Writing	3
INTD399	Internship	3

Elective Courses: 6-7 credits

COMM210	Business and Professional Speaking	3
	or	
BUSN231	Business Communications	3
COMM211	Advanced Public Speaking	3
COMM302	Argumentation and Advocacy	3
COMM320	Public Relations	3
COMM325	Organizational Communication	3
ENGL221	Creative Writing	3
	or	
JOUR220	Photojournalism	3
ENGL310	Advanced Writing	3
ENGL320	Responding to Writing	3
HMSV480	Grantwriting	3
MRKT281	Marketing Principles & Strategy	3
MRKT387	Advertising Theory and Practice	3

Psychology

Total Credits Required: 23

PSYC101	Introduction to Psychology	4
PSYC210	Statistics	3
PSYC212	Experimental Psychology	4
PSYC	Electives	6
PSYC	Elective at 300+ level	3
PSYC357	Personality Theory	3
	or	
PSYC396	Tests & Measurements	3
	or	
PSYC457	Cognition	3
	or	
PSYC459	Physiological Psychology	3

Psychology — Secondary Teaching

Total Credits Required: 23

PSYC101	Introduction to Psychology	4
PSYC210	Statistics or MATH207	3
PSYC212	Experimental Psychology	4
PSYC217	Social Psychology	3

PSYC311	Learning and Motivation	3
PSYC357	Personality Theory	3
PSYC457	Cognition	3

Public Administration

Total Credits Required: 28

POLI110	Intro. to American Government & Politics	4
POLI130	Intro. to State and Local Government	4
POLI201	Intro. to Public Administration	3
POLI301	Policy Analysis & Evaluation	4
POLI401	Prin. of Public Administration	3
POLI499	Political Science/Public Administration Internship	3
ECON201	Prin. of Macroeconomics	3
POLI211	Political Science Research & Statistics	4

Public Relations

Total Credits Required: 21

Required Courses: 13 credits

COMM320	Public Relations	4
COMM210	Business and Professional Speaking	3
	or	
COMM211	Advanced Public Speaking	3
COMM302	Argumentation and Advocacy	3
COMM308	Communication Theory	3

Elective Courses: 8 credits

BUSN231	Business Communications	3
COMM280	Understanding Mass Media	3
COMM307	Classical/Contemporary Rhetoric	3
	or	
ENGL321	Rhetoric and Composition Theory	3
COMM325	Organizational Communication	3
DATA225	Word Processing Techniques	3
DATA250	Desktop Publishing and Presentation Design	3
ENGL310	Advanced Writing	3
INTD399	Internship in Public Relations	1-4
MRKT281	Marketing Principles and Strategy	3
MRKT387	Advertising Theory and Practice	3
POLI325	Politics and Media	3

Recreation Studies

Total Credits Required: 24

Required Courses: 16 credits

EXER140	Health and Fitness	3
RECS101	Intro. to Recreation and Leisure Services	3
RECS105	Program Development and Leadership	3
RECS295	Practicum	2
RECS390	Recreation Leader Apprenticeship	1
RECS482	Administration of Recreation and Leisure Services	4

Departmental Elective: 8 credits

	(six credits from 300- and 400-level classes)	
HMSV480	Grantwriting	3
RECA210	Lifeguarding	2
RECA211	Water Safety & Lifeguard Instructor	2
RECS212	Instructional Methods in Adapted Aquatics	2
RECS220	Methods in Arts & Crafts	3
RECS240	Foundation of Therapeutic Recreation	3
RECS262	Outdoor Recreation	3
RECS270	Sports Management	3
RECS280	Readiness in Games, Activities and Sports	3
RECS320	Dance & Rhythmic Activities for Recreation	3
RECS340	Program Development in Therapeutic Recreation	3

RECS344	Adapted Sports and Recreation	3
RECS346	Clinical Issues in Therapeutic Recreation	3
RECS362	Land Management for Recreational Purposes	3
RECS365	Expedition Management	3
RECS367	National Parks, National Monuments and National Culture	3
RECS370	Recreation for the Elderly	3
RECS375	Commercial Recreation	3
RECS397	Recreation Studies Junior Research Seminar	1
RECS437	Recreation Studies Senior Research Seminar	1
RECS435	Problems & Issues in Therapeutic Recreation	3
RECS440	Disabilities Seminar	3
RECS450	Philosophy of Human Performance and Leisure	3
RECS496	Selected Research Topics	1

Robotics Technology

Total Credits Required: 24

Required Courses: 12 credits

EGRS215	Robotics Technology I	2
EGRS380	Robotics Technology II	2
EGRS381	Robotics Technology Lab	1
EGRS365	Programmable Logic Controllers	3
EGRS480	Manufacturing Automation	3
EGRS481	Manufacturing Automation Lab	1

Select 12 credits from either of the two following sequences:

Engineering

EGNR140	Linear Algebra and Numerical Methods for Engineers	2
EGNR245	Calculus Applications in Technology	3
EGNR265	"C" Programming	3
EGRS430	Systems Integration and Machine Vision	4

Computer Science

CSCI121	Principles of Programming	3
CSCI221	Computer Networks	3
CSCI461	Decision Support and Expert Systems	3
	or	
CSCI490	Special Topics	3
CSCI or MATH	300-level or above	3

Social Work

Total Credits Required: 21

Required Courses:

SOWK110	Introduction to Social Work	3
SOWK201	Communication Skills in Counseling	3
SOWK250	Social Work Practicum	6-9
SOWK310	Clinical Practice and Diagnosis	3
SOWK344	Social Welfare Systems	3

One elective course from the following:

SOWK202	Social Research Methods	3
SOWK291	Group Counseling	3
SOWK301	Alternative Dispute Resolution and Conflict Management	3
SOWK305	Tribal Law and Government	3
SOWK338	Deviance	3
SOWK341	Addiction	3
SOWK391	Family Therapy	3
SOWK480	Grantwriting	3

The practicum may be taken for six or nine credits; nine credits are required when application for social work technician registration with state of Michigan is desired.

Social Studies-Elementary Teaching

Total Credits Required: 29

Required Courses:

ECON201	Principles of Macroeconomics	3
ECON202	Principles of Microeconomics	3
GEOG201	World Regional Geography	4
GEOG306	Cultural Geography	3
POLI110	Intro. to American Government and Politics	4
POLI130	Intro. to State and Local Government	4

Select one sequence:

HIST101	History of World Civilization I and	4
HIST102	History of World Civilization II or	4
HIST131	United States History I and	4
HIST132	United States History II	4

Students in the elementary teaching program may take this minor in combination with any other elementary teaching minor(s) or major(s).

Society and Environment

Total Credits Required: 25

ECON202	Principles of Microeconomics	3
ECON307	Environmental Economics	3
INTD300	The Human Environment	3
INTD490	Senior Directed Study	3
NSCI103	Environmental Science	3
POLI342	International Environmental Policy	3
SOCY102	Social Problems	4
SOCY227	Population and Ecology	3

Sociology — General

Total Credits Required: 20

SOCY101	Introduction to Sociology	3
SOCY238	Social Psychology	4

Additional sociology courses (13 credits) to total a minimum of 20 hours, among which at least six hours are 300- or 400-level courses.

Sociology Teaching

Total Credits Required: 23-24

Required Courses:

SOCY101	Introduction to Sociology	3
SOCY103	Cultural Diversity	3
SOCY102	Social Problems	4
SOCY238	Social Psychology	4

Choose one of the following:

SOCY304	Development of Sociological Theory	3
SOCY325	Social Stratification	3
SOCY302	Statistics for Social Science	4

Additional sociology electives to total 23-24 semester hours. At least nine credits must be at the 300/400 level.

Spanish Language, Literature and Culture

Total Credits Required: 28

Required Courses:

SPAN161	First Year Spanish I	4
SPAN162	First Year Spanish II	4
SPAN261	Second Year Spanish I	3
SPAN262	Second Year Spanish II	3
SPAN361	Advanced Spanish Grammar	3
SPAN362	Advanced Spanish Composition	3

Minimum of 8 credit hours from the following list of Spanish electives:

SPAN301	Study Abroad	8
SPAN368	Selected Topics in Conversation	2
SPAN380	Survey of Spanish-American Lit. I	3
SPAN381	Survey of Spanish-American Lit. II	3
SPAN401	The Spanish Novel	3
SPAN402	The Spanish-American Novel	3
SPAN410	Spanish-American Civilization	3
SPAN411	Spanish Civilization	3
SPAN412	Hispanic Literature of the Southwest	3
SPAN490	Topics in Hispanic Literature	1-4
LING403	Language Acquisition and Foreign Language Teaching	3

A minimum of 28 hours in Spanish, with at least 3 hours of 400-level Spanish course work, must be completed for all Spanish minors. In addition, all Spanish minors are required to take Spanish 361 and 362 in residency at LSSU. With faculty approval, courses taken abroad may substitute for Spanish 261 and 262.

Spanish Language — Teaching

Total Credits Required: 28

Required Courses:

SPAN161	First Year Spanish I	4
SPAN162	First Year Spanish II	4
SPAN261	Second Year Spanish I	3
SPAN262	Second Year Spanish II	3
SPAN361	Advanced Spanish Grammar	3
SPAN362	Advanced Spanish Composition	3
EDUC447	Theories and Methods of Teaching Methods Foreign Languages	3

Directed Spanish Electives:

Complete ONE course from each course-pair listed below (a total of three courses - 9 credits)

SPAN380	Survey of Spanish-American Lit. I	3
SPAN381	Survey of Spanish-American Lit. II	3
SPAN401	The Spanish Novel	3
SPAN402	The Spanish-American Novel	3
SPAN410	Spanish-American Civilization	3
SPAN411	Spanish Civilization	3

General Spanish electives:

Complete at least five ADDITIONAL semester credits from the directed electives or from the courses below.

SPAN301	Study Abroad	8
SPAN368	Selected Topics in Conversation	2
SPAN412	Hispanic Literature of the Southwest	3
SPAN490	Topics in Hispanic Literature	1-4
LING403	Language Acquisition and Foreign Language Teaching	3

Speech and Drama

Students must complete 21 semester hours of credit in addition to Composition and Speech (COMM101) from communication 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 that overlap both programs.

Substance Abuse Counseling

Total Credits Required: 21

HMSV204	Fundamentals of Drug Abuse	3
HMSV250	Human Services Practicum	3
HMSV292	Alcohol Abuse Prevention and Treatment	3
SOCY341	Addiction	3
PSYC201	Communication Skills in Counseling	3
PSYC396	Tests and Measurements*	3
PSYC291	Group Counseling or	3
PSYC391	Family Therapy	
BIOL105	Function of the Human Body**	4
PSYC259	Abnormal Psychology***	3
SOCY338	Deviance***	3

**May count toward general education.

***May count toward SOCY/PSYC minor.

Students must obtain a Michigan Apprentice Counseling Certificate by successfully completing the Michigan Office of Substance Abuse Counseling Examination before applying for a practicum.

Note: PSYC396 has a prerequisite of one of these statistics courses: MATH207, PSYC210 or SOCY302.

Teaching — Elementary

Professional Education Requirements: 32 credits

All students complete:

EDUC150	Reflections on Learning	3
EDUC250	Student Diversity and Schools	3
EDUC301	Learning Theory and Teaching Practice	4
EDUC330	Reading in the Elementary Classroom	3
EDUC410	Corrective Reading in the Classroom	3
EDUC411	Elementary Language Arts and Methods Across the Curriculum	3
EDUC420	Math Methods for Elementary Teachers	2
EDUC421	Science Methods for Elementary Teachers	2
EDUC422	Social Studies Methods for Elementary Teachers	2

Education Cognates: 4 credits

MATH207	Principals of Statistical Methods	3
ARTS/DANC/MUSC/THEA or NATV240		1

Teaching — Secondary

Professional Education Requirements: 29 credits

All students complete:

EDUC150	Reflections on Learning	3
EDUC250	Student Diversity and Schools	3
EDUC301	Learning Theory and Teaching Practice	4
EDUC430	General Methods for Secondary Teachers	3
EDUC431	The Secondary Learner	3
EDUC440	Reading in the Content Area	3
EDUC44x or 45x	Secondary Methods: [Subject]	3

Education Cognates: 4 credits

MATH207	Principals of Statistical Methods	3
ARTS/DANC/MUSC/THEA or NATV240		1

Theatre

Total Credits Required: 24

Required courses offered at

Lake Superior State University:

THEA161	Problems in Speech/Drama	3
THEA251	History of Drama and Theatre I	
	or	3
THEA252	History of Drama and Theatre II	
THEA309	Speech and Drama Production	3
THEA333	Studies in the Drama: The Genre	
	and Theatre in Context	3

Required courses offered at

Algoma University:

THEA2115	Acting I	3
THEA2167	Introduction to Stage Craft	3
THEA3417	Theatre Practicum	3

Select one course from the following:

ENGL402	Renaissance Literature	3
ENGL3475	Modern and Contemporary Drama	3
THEA2137	Theatre Movement	3
THEA2357	Canadian Theatre	3
THEA3115	Acting II	3
THEA3167	Basic Scene Design	3
THEA3187	Directing the Theatre	3
THEA3346	Theories of Drama	3

Web Development

Total Credits Required: 21

CSCI105	Introduction to Computer	
	Programming	3
CSCI106	Web Page Design and Development	3
CSCI107	Web Graphic Design and	
	Development	3
CSCI121	Principles of Programming	3
CSCI207	Developing Multimedia and Rich	
	Interactive Web Sites	3
CSCI211	Database Applications	3
CSCI325	Developing Web Applications with	
	JavaScript and PHP	3
	or	3
CSCI326	Developing Web Applications with	
	ASP.NET	

Course Descriptions

Each course description is preceded by the following type of heading:

CHEM999 Chemistry
(3-3) 5

or

CHEM999 Chemistry
(3-3) alternate years 5

The first line provides the code number (CHEM999) and the course name; see abbreviation legend at left. The second line includes several pieces of information: The two numbers in parentheses are hours of lecture-lab per week; the far right digit indicates the number of credit hours. Sometimes, no semester will be indicated, or there may be an alternate years or “every third year” notation. Consult either the on-line course schedule listings prior to pre-registration or your department chair concerning scheduling of such courses.

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.

Abbreviations

ACTG	Accounting	GEOL	Geology
ARTS	Art	GRMN	German
BIOL	Biology	HIST	History
BUSN	Business	HLTH	Health Sciences
CHEM	Chemistry	HMSV	Human Services
CHLD	Early Childhood Education	HONR	Honors Program
CHIN	Chinese	HUMN	Humanities
CJUS	Criminal Justice	INTD	Interdisciplinary
COMM	Communication	JAPN	Japanese Studies
CSCI	Computer Science	JOUR	Journalism
DANC	Dance	LAWS	Law
DATA	Data Processing	LIBR	Library
ECON	Economics	LING	Linguistics
EDSE	Special Education	MATH	Mathematics
EDUC	Teacher Education	MGMT	Management
EGEE	Electrical Engineering	MRKT	Marketing
EGEM	Engineering Mechanics	MUSC	Music
EGET	Electrical Engineering Technology	NATV	Native American Studies
EGME	Mechanical Engineering	NSCI	Natural Science
EGMT	Manufacturing Engineering Technology	NURS	Nursing
EGNR	General Engineering	OFFC	Office Administration
EGRS	Robotics and Control Systems	PHIL	Philosophy
EMED	Emergency Medical Services	PHYS	Physics
ENGL	English	PNUR	Practical Nursing
EVNR	Environmental Science	POLI	Political Science
EXER	Exercise Science	PSYC	Psychology
FINC	Finance	RECA	Recreational Activities
FINE	Fine Arts	RECS	Recreation Studies
FIRE	Fire Science	SERV	Student Services
FREN	French	SOCY	Sociology
GEOG	Geography	SOWK	Social Work
		SPAN	Spanish
		THEA	Theatre
		USEM	University Seminar

ACCOUNTING

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

ACTG132 Principles of Accounting I (4,0) 4

An introduction to the principles and procedures of accounting as applied to proprietorships and corporations. Areas of study include the accounting, internal control and the asset, liability and equity sections of the balance sheet.

ACTG133 Principles of Accounting II (4,0) 4

This course emphasizes the role of managerial accounting information within a firm. Topics include budgeting, responsibility accounting, cost allocations, cost behavior, decision models, product costing, cost control, performance evaluation, capital budgeting, cash flows and methods of financial analysis. Prerequisite: Grade of C or higher in ACTG132.

ACTG230 Fundamentals of Accounting (4,0) 4

This course is designed to give non-business majors an understanding of the accounting process and the knowledge to read, understand, and use financial statements and reports in making decisions. The emphasis is on the use, rather than the generation, of accounting information. This course is not open to business majors.

ACTG232 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: ACTG132 and 133.

ACTG233 Intermediate Accounting II (4,0) 4

Continuation of ACT232 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: ACTG232.

ACTG332 Cost Management I (4,0) 4

A study of contemporary production costing and cost management practices. Topics include job order and process costing systems, value chain management, activity based costing, activity based management, customer profitability, managing quality and time, cost allocations, joint process costing, and managing support service costs. Prerequisite: ACTG133 and pre-business core (PBC).

ACTG333 Cost Management II (4,0) 4

A continuation of AC332. Topics include cost estimation procedures and computer applications, financial and CVP models, cost management and decision making, strategic issues in capital investment decision, budgeting and financial planning, standard costing, traditional- and activity-based budgeting, performance evaluation, transfer pricing, and incentive systems for performance evaluation.

Prerequisites: ACTG332 and DATA235, and pre-business core (PBC).

ACTG334 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: ACTG233, ACTG332, introductory data processing course and pre-business core (PBC).

ACTG335 Accounting Systems Theory (1,0) 1

This course is designed to provide the student with the theory of accounting information systems. Together with computerized accounting applications, this course will substitute for ACTG334, accounting information systems. This course is designed for use only at the Regional Centers, where ACTG334 may not be offered. Prerequisites: Computerized accounting applications course and spreadsheet course.

ACTG350 Incom3 Tax Practicum (0,3) 1

Field instruction and practical experience in federal and state income tax preparation. Prerequisite: ACTG421. Repeat up to two times for a maximum of 2 credits.

ACTG421 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: ACTG133, pre-business core (PBC) and junior standing or approval of the department.

ACTG422 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: ACTG421 and pre-business core (PBC).

ACTG427 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: ACTG233 and 333, and pre-business core (PBC).

ACTG432 Advanced Accounting I: Consolidations (3,0) 3

This course involves a study of corporate business combinations and the preparation of related consolidated financial statements. International accounting issues related to the hedging of foreign currency transactions and the translation of foreign financial statements will also be presented. Prerequisite: ACTG233 and pre-business core (PBC).

ACTG433 Advanced Accounting II: Governmental (3,0) 3

An introduction to governmental and nonprofit accounting as applied to state and local governments and other nongovernmental not-for-profit entities. Areas of study include both the source of GASB standards and statements and the application of this theory to the governmental accounting cycle. Students will also be exposed to and apply a variety of financial performance measures unique to this sector of the economy. Students will prepare a monthly transaction analysis and complete a governmental practice set. Prerequisite: ACTG233 and pre-business core (PBC).

ART

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

ARTS109 Principles of Design and Color (3,0) 3

This course acquaints students with the various possibilities of working with two-dimensional design. Using graphite, marker, collage and basic print making/stamping techniques, participants will explore line, form, shape, texture, color and the use of negative and positive space. In addition to in-class assignments, participants will be required to research, complete and present a major piece in two-dimension at the end of the semester. Prerequisite: none. *Equivalent to FINE151 + VISA1516 for BRIDGE.*

ARTS110 Fundamentals of Drawing (3,0) 3

This course will introduce the participant to basic drawing techniques, focusing upon the use of predominantly dry media such as graphite, charcoal, colored clays and chalks. Students will be required to work in-studio on a number of projects (still life, object drawings, texture, tone and line explorations), working toward the creation of a portfolio of drawings for final submission. Prerequisite: none. *Equivalent to FINE150+ VISA1506 for BRIDGE.*

ARTS111 Introduction to Painting Media and Techniques (3,0) 3

The course focuses on painting as a process of self-expression. Participants will be introduced to the use of acrylics, watercolors and water-soluble oils. An introduction to Itten's color theories and basic compositional styles will help ground participants in their exploration of the media offered. Brush handling, mixed-media techniques, and the use of in-studio still-life arrangements will be highlighted. Prerequisite: ARTS109. *Equivalent to FINE155 + VISA 2556 for BRIDGE.*

**ARTS211 Mixed Media Explorations
(3,0) 3**

Students will be invited to work hands-on in an open studio environment, examining the development of their own visual language in relation to the media and methodologies presented. Participants will be invited to draw from personal experiences as well as from their environment as catalysts for art making. All will be encouraged to work with acrylics, watercolors, water-based oils, drawing media, photographs/laser copies, found materials, etc. At the end of the course, participants will be required to present a brief seminar with essay. Prerequisites: ARTS109. *Equivalent to FINE178 + VISA2786 for BRIDGE.*

**ARTS212 Art for Elementary Teachers
(3, 0) 3**

This course is designed to provide an understanding of the philosophy, theories and contemporary issues of art education in kindergarten through sixth grade. Various art media will be explored by the student, and curriculum planning and evaluation will be discussed.

**ARTS250 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, Roman 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 credit for general education requirements.

**ARTS251 Art History
and Appreciation II
(4,0) 4**

A study of European and American art from the Renaissance to the 20th 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 credit for general education requirements.

BIOLOGY

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

**BIOL105 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. Not open to biological majors or minors. Prerequisite: Reading ACT of 19 or equivalent.

**BIOL107 Field Biology
(2,3) 3**

Introduction to organisms and their environmental interactions and conservation concerns with emphasis on Eastern UP. Lab consists primarily of field experiences. Not open to biology majors. Prerequisite: Reading proficiency (SA091 or satisfactory score on ACT or Placement Exam).

**BIOL121 Human Anatomy
and Physiology I
(3,3) 4**

This is the first half of a two-course sequence. This course covers organization of the human body, basic principles of chemistry, the integumentary system, the skeletal and muscular systems, the nervous system and special senses. Laboratory experiences are designed to compliment the lecture topics. This course may not be used as a general education natural science elective nor does this sequence apply toward a major or minor in biological science. Prerequisites: High school chemistry and Reading ACT of 19 or equivalent.

**BIOL122 Human Anatomy
and Physiology II
(3,3) 4**

The second half of the Human Anatomy and Physiology sequence emphasizes the endocrine system, cardiovascular system, lymphatics and the immune response, respiratory system, digestive system, urinary system and the reproductive system. Laboratory experiences are coordinated with the lecture discussions. Prerequisite: BIOL121.

**BIOL131 General Biology: Cells
(3,3) 4**

An introduction to general biology. This course will provide an overview of biology and serve as a framework for further biological studies. Deliberations on the nature and philosophy of science (especially biology) will provide a basis for discussion of ecology, evolution, and cell biology. Prerequisites: Satisfy the LSSU reading proficiency requirement; MATH086, ENGL091, or equivalent.

**BIOL132 General Biology:
Organisms
(3,3) 4**

An introduction to the diversity of life, including the morphology, physiology, reproduction, general habitats and taxonomy of organisms. Adaptation to environment and modern concepts of evolution are stressed as unifying themes throughout the course. Prerequisites: Satisfy the LSSU reading proficiency requirement; MATH086, ENGL091, or equivalent.

**BIOL199 Freshman Seminar
(1,0) 1**

Students meet in discipline-based, student-faculty groups in conjunction with BIOL299, 399 and 499. Weekly meetings will include discussion of literature relevant to the discipline and progress reports from upperclass students engaged in scholarly projects. Freshmen will assist with ongoing projects and will be guided by faculty and seniors enrolled in BIOL499 to generate and interpret data from these projects. Prerequisite: MATH102. Pre- or corequisite: BIOL131.

**BIOL202 Field Botany
(2,3) 3**

A study of the common families, genera, and species, especially those in the local flora. Prerequisite: BIOL132.

**BIOL203 Fundamentals of Natural
Resources
(3,0) 3**

This course will introduce students to the history of natural resource conservation and management, career opportunities within the field of natural resources, and interaction between humans and the environment. The course will focus extensively on basic concepts in human dimensions as they apply to natural resource conservation and management. Course topics include assessing social attitudes and values, social conflicts and conflict resolution, legal and regulatory framework of natural resource management, and the role of stakeholder groups in conservation and management. Pre- or co-requisite: ENGL110.

**BIOL204 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. A study of mycoplasma, viruses and molds will be incorporated with genetic engineering and recombinant DNA. Labs will emphasize the identification and cultivation of molds and bacteria. Prerequisites: CHEM104, 108 or 116.

**BIOL220 Genetics
(3,3) 4**

A study of the nature, transmission, recombination and function of hereditary material in animals, plants and microorganisms. The lecture includes Mendelian, molecular and population genetics. The laboratory includes exercises in Mendelian genetics, cytogenetics, recombinant DNA, and computer simulations of population genetics. Prerequisites: BIOL131 and CHEM116. A statistics course is strongly recommended.

**BIOL223 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: CHEM105 and BIOL122. Does not apply towards a major or minor in biology.

**BIOL230 Introduction to Soil Science
(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: CHEM108 and 109 or above; NSCI103 or BIOL131; EVRN126.

BIOL240 Natural History of the Vertebrates**(3,0) 3**

A survey course covering the taxonomy, phylogeny and ecology of vertebrates with an emphasis on North American taxa. Prerequisite: BIOL107 or 132.

BIOL243 Vertebrate Anatomy**(3,3) 4**

A detailed study of the origin, phylogeny and anatomy of the vertebrates. Laboratories emphasize the thorough dissection of representatives of at least three classes of vertebrates. Prerequisite: BIOL132 and sophomore standing.

BIOL250 Quantitative Biology**(3,0) 3**

This course will use quantitative methods to examine biological relationships and processes. Students will explore diverse biological topics including heat and energy balance, relative growth, photosynthesis, genetic drift, and diffusion using a variety of quantitative tools. Prerequisites: BIOL131, 132 and MATH111.

BIOL280 Biometrics**(2,2) 3**

The application of inferential statistical methods to biological problems. The focus of the course is a systematic method for determining an appropriate statistical technique. Parametric and nonparametric procedures will be covered. Prerequisites: MATH207 and 111.

BIOL284 Principles of Forest Conservation**(2,4) 4**

An introduction to forest structure, function, and ecology. Important fundamentals of conservation biology such as the effects of disturbance, fragmentation, and biodiversity on forest ecosystems will be emphasized. Students will master identification of tree and shrub species of the Eastern Upper Peninsula and perform commonly used techniques to evaluate the forest resource. The lab portion of the course is in the field and proper dress is required. In addition, one all-day field trip will be scheduled. Prerequisites: BIOL132 or NSCI103; and EVRN126.

BIOL286 Principles of Watersheds**(3,0) 3**

Overview of the geomorphology, hydrology and biota of various watersheds, with emphasis on hydrographic methods, sampling techniques, land use and management principles. Prerequisites: MATH111.

BIOL287 Conservation Biology**(3,0) 3**

This course will provide a strong background in the field of conservation biology. The course will discuss patterns in, valuation of, and threats to biodiversity. The course will also examine tools and strategies for conserving biodiversity at the population and species levels and discuss the application of conservation biology in today's society. Specific topics include: (1) Principles of and issues in conservation; (2) Threats to biodiversity; (3) Methods and approaches to evaluate and mitigate threats; (4) Application of principles in the design of conservation reserves, restorations, and sustainable development. Prerequisites: BIOL131 & 132

BIOL290 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 department and college 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 Natural Science.

BIOL299 Sophomore Seminar**(1,0) 1**

Students meet in discipline-based, student-faculty groups in conjunction with BIOL199, 399 and 499. Weekly meetings will include discussion of literature relevant to the discipline and progress reports from upperclass students engaged in scholarly projects. Sophomores will assist with ongoing projects and will be guided by faculty and juniors enrolled in BIOL399 to conduct a comprehensive, annotated literature search in their area of interest. Prerequisite: BIOL199 and ENGL111.

BIOL302 Invertebrate Zoology**(3,0) 3**

A study of the invertebrate groups with emphasis on morphology, phylogeny and life cycles. Prerequisite: BIOL132.

BIOL303 General Entomology**(3,3) 4**

An introduction to the biology, ecology and systematics of the insects. This course covers fundamentals of insect taxonomy and physiology; and the varied roles insects play in the natural world and in human history and culture. Prerequisite: BIOL132.

BIOL310 Ichthyology**(2,3) 3**

A study of the anatomy, physiology, behavior, taxonomy and natural history of fishes, with emphasis on freshwater species, particularly those in the Great Lakes region. Prerequisite: BIOL250.

BIOL311 Mammalogy**(2,3) 3**

An investigation of the natural history, biology and taxonomy of mammals. Techniques for measuring and monitoring mammalian populations will be presented. The laboratory will focus on field techniques and the identification by skin, skull and track of mammals of the Great Lakes region. Prerequisite: BIOL243.

BIOL312 Ornithology**(2,4) 3**

A study of the biology and taxonomy of birds. Labs will focus upon bird anatomy and bird recognition using video tapes and specimens. Prerequisite: BIOL132.

BIOL315 Plant Physiology**(3,3) 4**

A study of the 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: BIOL250 and CHEM220 or CHEM226.

BIOL330 Animal Physiology**(3,3) 4**

The course examines the many ways animal groups solve the problem of maintaining internal homeostasis. Neural control, endocrine systems, gas exchange, energy acquisition and temperature regulation are a few of the topics examined. The lab is closely tied to the lecture material using non-invasive live animal experiments, computer-interfaced data gathering and analysis. Prerequisites: BIOL250 and CHEM116.

BIOL332 Embryology**(2,2) 3 *Alternate Years***

A study of pattern formation and morphogenic processes in animals, with an emphasis on vertebrates. The laboratory portion of the course emphasizes descriptive ontogeny of representative vertebrates. Prerequisites: BIOL131 and BL132. (BL243 is highly recommended.)

BIOL333 Fish Ecology**(3,0) 3**

A study of the relationship of fishes to their physical, chemical and biological environments in natural and perturbed aquatic ecosystems with an emphasis on response and adaptation at the organism, population and community levels. Various types of aquatic ecosystems will be examined with respect to habitat accommodations of fish and the impact of human activities. Includes ecological principles as applied to important sport, commercial and forage fish species. Prerequisite: BIOL310.

BIOL337 General Ecology**(2,3) 3**

A survey of concepts of plant and animal autecology, population ecology and community ecology. Prerequisites: BIOL131, 132 and MATH111.

BIOL339 Wildlife Ecology**(3,0) 3**

A quantitative analysis of the ecology and management of wildlife populations. Theories of population dynamics and distribution are presented. Community interactions including competition, predation, and herbivory, are explored in detail. Prerequisites: BIOL250, 280 and 337.

BIOL345 Limnology
(2,3) 3

An investigation of the principles of freshwater ecosystems with an emphasis on lakes. The physics and chemistry of natural systems are presented, as well as a survey of the dominant biota and their ecological interactions. Prerequisites: BIOL250 and CHEM116.

BIOL372 Freshwater Fish Culture
(2,3) 3

Instruction in water quality monitoring, production systems, feeding and nutrition, disease identification and management, and reproduction principles of freshwater fishes used for recreational and commercial fisheries management, bait and food products. Students will learn propagation and rearing techniques for important fishes, particularly those with recreational or commercial value. Prerequisites: BIOL280 and 310.

BIOL380 Clinical Hematology and Hemostasis

(3,3) 4 *alternate years*

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. Offered even-numbered spring semesters. Prerequisites: CHEM226 and BIOL330.

BIOL399 Junior Seminar
(1,0) 1

Students meet in discipline-based, student-faculty groups in conjunction with BIOL199, 299 and 499. Weekly meetings will include discussion of literature relevant to the discipline and progress reports from upper class students engaged in scholarly projects. Juniors will serve as mentors to sophomores in the group and will develop and present a proposal for a scholarly project. Prerequisites: BIOL280, 299 and COMM101.

BL405 Animal Behavior
(3,0) 3 *alternate years*

A course designed to examine the proximate mechanisms and the evolutionary development of animal behavior. Important concepts are explained by reference to illustrative studies. An appreciation of the methods and theoretical significance of current research is emphasized. Prerequisites: Junior standing and BIOL330 or 337. Offered even-numbered fall semesters.

BIOL420 Evolutionary Analysis
(3,0) 3

This course explores the fundamental mechanisms of evolutionary process and speciation, and illustrates the use of evolutionary analysis as a problem-solving tool. Issues of current interest in ecology, conservation, animal behavior, human medicine and a variety of other fields are addressed from the evolutionary perspective to explain biological phenomena and community interactions. Prerequisite: BIOL220 and 250.

BIOL421 Cell Biology
(3,3) 4

Cellular structure and function with emphasis on organelle ultrastructure, molecular organization of the cell, cell membranes and permeability, the cytoskeleton and cellular interactions. Prerequisites: BIOL220 and CHEM451.

BIOL422 Parasitology
(2,2) 3

A study of the morphology, taxonomy, habitats, pathology and life cycles of parasites. Prerequisites: BIOL131 and 132.

BIOL423 Immunology
(3,3) 4

A study of the basic elements of the immune response system and the various ways in which the immune system can fail, leading to immunopathological reactions. Labs will include current diagnostic methodologies. Prerequisites: BIOL131, 132, 204 and CHEM226.

BIOL425 Virology
(2,3) 3

The basic concepts of virology are discussed. Lab will cover some traditional virology methods but will emphasize recent molecular approaches to viral identification. Prerequisites: BIOL204 and CHEM451.

BIOL426 Ecology of Animal Disease
(3,0) 3

The course covers the population and environmental conditions that favor disease in both terrestrial and aquatic ecosystems. Basic concepts of infection through epidemics will be discussed. Prerequisites: BIOL337, and either BIOL422, 425 or 434.

BIOL432 Fisheries Management
(2,3) 3

A course covering the history, theory and practice of fisheries management with an emphasis on basic strategies used in effective management of fish populations in freshwater ecosystems. Students will learn methods of collection and synthesis of data regarding fish population dynamics and manipulation, habitat modification, and human management to achieve specific fisheries management goals and objectives. Prerequisites: BIOL280, 333 and 345.

BIOL433 Histology
(2,2) 3 *alternate years*

A systems approach is used to study the microscopic anatomy of mammalian tissues and organs. Related physiological processes are integrated with the anatomical studies. Prerequisites: BIOL131, 132 and junior standing.

BIOL434 Histopathology
(0,3) 1

The course is an extensive laboratory experience where students will learn to visually identify diseased tissue. They will also learn methods of sample preparation including sectioning and staining for microscopic identification of pathogens. Prerequisite: BIOL433.

BIOL437 Plant Ecology
(2,3) 3

A study of the autecology, population ecology and community ecology of plants, including fundamental theory, field methods and data analysis. Prerequisites: BIOL339 and either BIOL311 or 312.

BIOL439 Wildlife Management
(2,3) 3

The application of ecological principles to develop practical wildlife management strategies to preserve, enhance or create viable wildlife habitats and populations. Students will have the opportunity to observe and practice standard field and laboratory techniques. Prerequisites: BIOL339 and either BIOL311 or 312.

BIOL450 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 BIOL electives. This is a credit/no credit course.

BIOL460 Clinical Laboratory Science Internship
30

(15 credits per semester for a maximum of 30 credits)

Practical and didactic training with certified 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.

BIOL470 Restoration Ecology
(3,0) 3

This course will provide a broad overview of restoration of both terrestrial and aquatic ecosystems, including prairies, wetlands, lakes, and streams. Through lectures, field trips, and case study discussions, students will be introduced to ecological principles and techniques used to restore and rehabilitate ecosystems. Students also will be involved in identifying, designing, and evaluating local restoration projects in conjunction with local resource agencies. Pre-requisite: BIOL337

BIOL475 Aquatic Entomology
(2,3) 3

Survey and identification of regional lake and stream insects, with additional emphasis on life-history strategies and community ecology. Insect physiology, ecology, behavior, importance as fish food organisms, and utility as indicators of water quality is also presented. Prerequisites: BIOL337 and junior standing.

BIOL480 Advanced Clinical Microbiology
(2,3) 3 *alternate years*

An advanced course in clinical microbiology concerning the role of bacteria, viruses, and fungi as the cause of various human infections. Standard modern clinical laboratory methodology will be covered. Offered odd-numbered spring semesters. Prerequisites: BL204 and CH226.

BIOL490 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 department and college 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 College of Science, Technology, Engineering and Mathematics.

BIOL495 Senior Project**(0,3) 1**

A practicum under the guidance of a faculty mentor. The student will conduct a scholarly project based on the proposal submitted by the student in BIOL399 (or an appropriate substitute). May be repeated once for a maximum of two credits. Prerequisite: BIOL399.

BIOL497 Internship in Conservation Biology**6**

The Internship in Conservation Biology is a full semester/summer work experience. Interns will develop work goals, responsibilities, and outcomes with their agency supervisor and faculty mentor. Students will prepare formal communication components (workshop or oral presentation and a poster). The internship experience should be 12 weeks at 40 hours per week. Pre-requisite: INTD398

BIOL499 Senior Seminar**(1,0) 1**

Students meet in discipline-based, student-faculty groups in conjunction with BIOL199, 299 and 399. Weekly meetings will include discussion of literature relevant to the discipline and progress reports from upperclass students engaged in scholarly projects. Seniors will serve as mentors to freshmen in the group. Seniors will also produce a manuscript describing the results of their project and will be required to give poster and oral presentations to the University community. Prerequisite: BIOL495.

BUSINESS

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

BUSN121 Introduction to Business**(3,0) 3**

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.

BUSN131 Hospitality and Service Management**(4,0) 4**

An overview of the hospitality industry including the operation and trends in restaurant/food service management, lodging management and travel/tourism. Introduction to destinations and the following components of travel/tourism: modes of travel, tour management, associations, agencies, marketing and sales, career preparation and opportunities and travel publications.

BUSN211 Business Statistics**(3,0) 3**

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: MATH111.

BUSN226 Records Management**(3,0) 3**

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.

BUSN231 Business Communications**(3,0) 3**

Business and management communications problems. Direct, indirect, and persuasive letters; memos, short reports and directives. Some assignments must be typed. Extensive writing practice. Prerequisite: ENGL111.

BUSN261 Business Skills**(1,0) 1**

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.

BUSN291 Students in Free Enterprise**(0,3) 1**

Students work in teams to develop outreach programs. They learn by means of "real-world" experiences, then teach others how market economies and businesses operate. Corporate CEOs and senior executives judge these programs annually in regional competitions, and the winners of those contests then compete at the international exposition. Outreach program development enhances students' creative and communication skills by preparation of written and oral presentations. May be repeated for credit for a total of four credits.

BUSN299 Internship in [Discipline]**(4,0) 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 180 hours in an appropriate work setting. The course may be repeated once for a maximum of eight credits. Prerequisites: 2.5 GPA, sophomore standing, employer and instructor approval, and submission to, and approval by, departmental faculty of internship plan, including method of evaluation.

BUSN308 Managing Cultural Differences**(3,0) 3**

Study of differing cultural norms that impact business decisions; designed for students interested in international and cross-cultural activities. Prerequisite: pre-business core (PBC).

BUSN350 Business Law I**(3,0) 3**

This portion of business law covers the law applicable to contracts, sales, personal property and bailments. Prerequisite: pre-business core (PBC).

BUSN354 Legal and Financial Issues in Health Care Administration**(3,0) 3**

This course is intended for students preparing for careers in management in health care fields or as health care practitioners. Students will be made aware of legal and financial issues and problems including fault liability; institutional liability; forms of organization; credentialing and appointments; staffing issues; consent and refusal of treatment; and health care financing. The student will be more aware of the need to seek professional counsel to minimize and prevent litigation. Prerequisite: Junior standing. Also listed as HLTH354.

BUSN355 Business Law II**(3,0) 3**

This portion of business law covers the law applicable to commercial paper, corporations, partnerships, agency and employment. Prerequisite: pre-business core (PBC).

BUSN399 Internship in [Discipline]**(4,0) 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 180 hours in an appropriate work setting. The course may be repeated once for a maximum of eight credits. Prerequisites: 2.5 GPA, junior standing, employer and instructor approval, and submission to, and approval by, departmental faculty of internship plan, including method of evaluation; and pre-business core (PBC).

BUSN403 Business, Government and Society**(3,0) 3**

This course examines the relationships of the business firm to government and to society. The course focuses on the economic, legal, political, social and ethical environment of business firms. Topics include consumer protection, environmental regulation, antitrust, constitutional and administrative law, alternative dispute resolution, and other topics of current concern. The business firm is examined in the context of market capitalism and the global economy. The course is structured to meet communication-intensive requirement of general education. Prerequisites: ECON202, junior standing, and pre-business core (PBC).

BUSN405 Business Ethics and Social Responsibility**(3,0) 3**

Business ethics in organizations requires value-based leadership and purposeful actions that include planning and implementation of standards of appropriate conduct. This course will prepare students to be good corporate citizens through the study of business ethics, social responsibility, ethical decision making, corporate codes of ethical conduct, and how ethical behavior relates to organizational performance. Prerequisites: MGMT360 or MGMT365, and pre-business core (PBC).

BUSN466 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 organization from a top management perspective. Library research and case analysis are utilized. Prerequisites: Pre-business core (PBC), Senior status, and FINC341.

BUSN491 Research Reading in Business and Economics**(2-3,0) 2-3**

Independent study and seminar; individual student guidance by faculty for selected research topics in business. Prerequisites: Pre-business core (PBC) and Senior status.

CHEMISTRY

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

CHEM091 Basic Chemistry**(2,0) 2**

Thorough exposure to elementary chemistry designed to prepare students for college-level chemistry. Emphasis on drill to enhance problem-solving skills. Prerequisite: MATH084 or equivalent. Students must receive a C (2.0) or better in this course to qualify for CHEM104, 108 or 115. Credit in this course does not apply toward graduation.

CHEM104 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. Prerequisites: Reading ACT of 19 or equivalent and pre- or corequisite of MATH102.

CHEM105 Life Chemistry II**(3,2) 4**

A continuation of organic chemistry presented in CHEM104 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: CHEM104 or equivalent, with a grade of C (2.00) or better.

CHEM108 Applied Chemistry**(3,0) 3**

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. Prerequisites: Reading ACT of 19 or equivalent and pre- or corequisite of MATH102.

CHEM109 Applied Chemistry Lab**(0,3) 1**

Laboratory experience for CHEM108 Applied Chemistry (must complete both lecture and laboratory to qualify for general education credit). Corequisite: CHEM108.

CHEM115 General Chemistry I**(4,3) 5**

Fundamental principles of chemistry with emphasis on atomic structure, molecular structure and stoichiometry. Pre- or corequisite of MATH111 or higher with a grade of C (2.0) or better. Reading ACT of 19 or equivalent. One year of high school chemistry is strongly recommended.

CHEM116 General Chemistry II**(3,3) 4**

Continuation of CHEM115 with emphasis on equilibrium. Prerequisite: CHEM115 with a grade of C (2.0) or better.

CHEM220 Survey of Organic Chemistry**(3,3) 4**

A brief course in organic chemistry covering the nomenclature, structure, reactions and preparations of the important classes of organic compounds. It will also provide students with an introduction to spectrometric analysis of organic compounds and the chemistry of bio-organic compounds. The laboratory includes experiments in the isolation and preparation of typical organic compounds using microscale apparatus. Not open to students in chemistry or environmental chemistry degree programs. Prerequisite: CHEM116.

CHEM225 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: CHEM116 with a grade of C (2.00) or better.

CHEM226 Organic Chemistry II**(3,3) 4**

A continuation of CHEM225 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: CHEM225 with a grade of C (2.0) or better.

CHEM231 Quantitative Analysis**(3,3) 4**

Evaluation of analytical data and study of gravimetric and titrimetric methods of analysis. Prerequisites: CHEM116 with a grade of C (2.0) or better and MATH151 or MATH112.

CHEM290 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 College of Natural and Mathematical Sciences office.

CHEM332 Instrumental Analysis**(3,3) 4**

Continuation of CHEM231. 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: CHEM231.

CHEM341 Environmental Chemistry I: Water and Water Pollution Control**(3,3) 4 alternate years**

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: CHEM220 or 225 and CHEM226, 231, and NSCI103. Also listed as EVRN341.

CHEM342 Environmental Chemistry II: Air and Solid Wastes

(3,3) 4 *alternate years*

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: CHEM220 or 225 and CHEM226, 231 and NSCI103.

CHEM353 Introductory Toxicology

(3,0) 3 *alternate years*

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: CHEM226 or 220.

CHEM361 Physical Chemistry I

(4,0) 4 *alternate years*

Chemical thermodynamics with applications to both phase and chemical equilibria. Prerequisites: CHEM116, one year of calculus and one year of physics.

CHEM362 Physical Chemistry II

(3,3) 4 *alternate years*

Chemical dynamics, structure, quantum chemistry with applications to spectroscopy. Prerequisite: CHEM116, one year of calculus and one year of physics.

CHEM395 Junior Seminar

(0,2) 1

Literature searching, scientific writing, and oral presentation of scientific data. Students will be expected to listen to presentation of peers enrolled in CHEM/EVRN499 and develop a topic for their senior thesis. Prerequisite: Junior standing. Note: Also listed as EVRN395.

CHEM445 Forensic Science

(3,3) 4

This is a capstone class for the forensic chemistry degree. It will focus on standard and non-standard methods in forensic science. Lecture and laboratory concentrate on quantitative and qualitative drug analyses, fingerprint visualization techniques, ballistics, DNA analyses, and chemical analyses of evidence. Gas chromatography, atomic absorption spectrometry, and infrared spectroscopy techniques will be used to differentiate evidence. In this course much time will be spent on mechanisms of the analyses facilitating critical thinking skills. Prerequisites: CHEM332 and CJUS444. Note: Also listed as CJUS445.

CHEM450 Laboratory Apprenticeship

(0,3) *per credit* 1-2 *credit/no credit*

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 college dean. Credits may be used as CHEM electives.

CHEM451 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: CHEM226.

CHEM452 Biochemistry II: Intermediary Metabolism

(3,0) 3

A continuation of introductory biochemistry with a more-detailed study of the metabolism of carbohydrates, lipids, and nitrogen containing molecules such as amino acids and nucleotides. Emphasis will be placed on the similarities and differences among the various metabolic pathways and cycles. The interrelationships that exist among the various metabolic processes will also be discussed. An introduction to the genetic code and its relationship to nucleic acid and protein biosynthesis will also be presented. Prerequisite: CHEM451.

CHEM461 Advanced Inorganic Chemistry

(3,0) 3 *alternate years*

This is an every-other-year course. This course will meet for three hours per week. Advanced concepts of inorganic chemistry will be examined, including atomic structure, ionic and covalent substances, acids and bases, main group elements, and transition metal elements. Pre- or corequisites: CHEM226, 332 and 361.

CHEM462 Advanced Inorganic Chemistry Laboratory

(0,3) 1 *alternate years*

This is an every-other-year course. This laboratory will meet for three hours per week. Advanced concepts of inorganic chemistry will be examined in a laboratory setting.

CHEM490 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 department chair. 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 College of Natural and Mathematical Sciences office.

CHEM495 Senior Project

(0,3-9) 1-3

This is a variable credit practicum course in which students, under the guidance of a faculty mentor, conduct a scholarly project mutually agreed upon by the student and his/her faculty mentor. Credit for the course is based upon the scope of the scholarly project. This course may not be repeated for credit. Prerequisites: CHEM395 (also listed as EVRN395), CHEM231 and CHEM226 or 220. Dual listed as EVRN495.

CHEM499 Senior Seminar

(1,0) 1

Required for seniors majoring in chemistry/environmental science. Students will present a manuscript describing the results of their scholarly research and will be required to give poster and oral presentations to the University community. Pre- or corequisite: CHEM495 (also listed as EVRN495). Dual listed as EVRN499.

EARLY CHILDHOOD EDUCATION

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

CHLD101 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.

CHLD105 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: PSYC155 or 265.

CHLD110 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.

CHLD111 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: PSYC155 or 265.

CHLD220 Early Childhood Literature

(3,0) 3

Readings in developmentally appropriate literature and related activities across the curriculum for young children, ages birth through kindergarten. Prerequisites: ENGL110 and COMM101.

CHLD260 Practicum I

(1,12) 4 *credit/no credit grade*

The student will complete 12.5 hours weekly in an early childhood laboratory setting. Attendance at a weekly seminar is also required. Prerequisites: CHLD101 and 110 and permission of instructor.

CHLD261 Practicum II
(1,12) 4 *credit/no credit grade*
The student will complete 12.5 hours weekly in an early childhood laboratory setting. Attendance at a weekly seminar is also required. Prerequisites: CHLD101 and 110 and permission of instructor.

CHLD270 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: CHLD260 or 261.

CHLD340 Practicum III: Field Experiences
(1,12) 4
Students will gain hands-on experience and observational skills in a K-3 classroom. Students will attend individualized seminars, and complete 100 contact hours in the classroom with additional course requirements. Prerequisites: Permission of instructor and completion of CHLD260 and 261.

CHLD420 Emergent Literacy
(3,0) 3
A methods class which facilitates understanding of the reading, writing, oral and listening development of the child from preschool to early elementary. Prerequisite: CHLD220 or ENGL335.

CHLD430 Directed Studies in Early Childhood Education
(4,0) 4
Individual research study of a relevant topic of current trends and issues in early childhood. Topic will be defined jointly by student and instructor. Prerequisite: junior status.

CHLD450 Internship in Teaching: Infant-Toddler/Preprimary Education
4 *credit/no credit grade*
Directed and evaluated internship in an approved infant-toddler or preprimary classroom setting. Students must plan for a full-time (as determined by the program) student teaching experience for a total of 180 contact hours. Open only to elementary education students who are completing the early childhood endorsement (ZA) as required by the State of Michigan Department of Education. Prerequisites: completion of CHLD260 and/or ED261, and entrance into the Teacher Education Program. The student must meet all the requirements as determined by the internship site. Instructor's permission is required and placement will be made with the instructor's approval.

CHINESE
Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

CHIN151 First-Year Chinese I
(4,0) 4
An introductory course designed to develop the four basic language skills in listening, speaking, reading, and writing in the target language as well as the acquisition of basic Chinese grammar and vocabulary. A communicative approach based on real-life situations. Relevant Chinese cultural aspects discussed. English used as necessary in classroom instruction.

CHIN152 First-Year Chinese II
(4,0) 4
Further development of basic language skills in listening, speaking, reading and writing with a strong emphasis on speaking reading fluency. Relevant cultural aspects briefly discussed and the target language used progressively in instruction when it fits. Prerequisite: CHIN151 or equivalent.

CHIN251 Second-year Chinese I
(4,0) 4
An intermediate-level course aiming at expanding the learner's ability to communicate in everyday life situations in the target language. Continued focus on language proficiency in listening, speaking, reading, and writing as well as further development of vocabulary knowledge and consolidation of grammatical knowledge. Social and cultural norms and conventions discussed when appropriate. Communicative approach used in instruction. Prerequisite: CHIN151, CHIN152 or equivalent.

CHIN252 Second-year Chinese II
(4,0) 4
An intermediate-level course aiming at expanding the learner's ability to communicate in everyday life situations in the target language. Continued focus on language proficiency in listening, speaking, reading, and writing as well as further development of vocabulary knowledge and consolidation of grammatical knowledge. Social and cultural norms and conventions discussed when appropriate. Communicative approach used in instruction. Prerequisite: CHIN251 or equivalent.

CRIMINAL JUSTICE

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

CJUS101 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.

CJUS102 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.

CJUS103 Introduction to Terrorism and Homeland Security
(3,0) 3
This course will provide learners with historical view of terrorism, its origins, methodology, and ideology. It will also provide the learner with knowledge of specific events of the 20th century related to terrorism that have formed modern terrorism. Finally it will discuss the worldwide effort on deterring and discovering terrorist activities.

CJUS110 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.

CJUS130 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.

CJUS140 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.

CJUS197 Physical Fitness for Public Safety
(0,3) 1
This course provides physical fitness and skills necessary for the law enforcement and fire science certification students. Law enforcement students (MCOLES) take course both semesters of their senior year.

CJUS201 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.

CJUS202 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.

CJUS203 Cyberterrorism
(3,0) 3
This course will examine the problem of both domestic and global Cyberterrorism/Cybercrimes. The recognition of various types of crimes committed using computers, the Internet, and other Electronic Devices. Learners will learn investigative techniques and legal issues as related to the investigation of Cybercrimes.

CJUS204 Domestic and International Terrorism
(3,0) 3
This course will examine the history and modern trends of Domestic, International and Transnational Terrorism. This will include the profile of terrorist recruits, the structure and dynamics of terrorist organizations, and government sponsored terrorism. The motivation of various organizations and their methods of terrorist violence, as well as, their justification of violent acts will be discussed. Antiterrorism and Counterterrorism measures will be analyzed.

CJUS206 Law Enforcement/Loss Control Internship

(3,0) 3

Field experience for correlation of theoretical knowledge with practice in participating law enforcement or loss control agencies. Prerequisite: Permission of the instructor or sophomore standing. Course may be elected twice for credit of six hours

CJUS212 Loss Control

(3,0) 3

Study of security, including historical, legal and philosophical framework for various phases of security operations in our society today.

CJUS220 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.

CJUS240 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.

CJUS243 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: CJUS101.

CJUS250 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 and complex legal issues concerning American corrections.

CJUS303 Critical Infrastructure Protection

(3,0) 3

This course will examine the historical development of the United States modern infrastructures. The course will provide an in depth knowledge of the Critical Infrastructures and the current protection methods. The learner will then learn advanced protection techniques and vulnerability analysis skills utilized to protect the assets.

CJUS306 Security Systems

(3,0) 3

Overview of specialized areas of security in specific facilities with special attention given to management of security information. Prerequisites: Pre-criminal justice core (PCJ), and CJUS212.

CJUS313 Crisis Intervention and 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. Prerequisites: Pre-criminal justice core (PCJ), CJUS101 and 102.

CJUS319 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. Prerequisites: Pre-criminal justice core (PCJ), and CJUS101.

CJUS321 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: Pre-criminal justice core (PCJ), CJUS101 and 102.

CJUS325 Homeland Security and Emergency Services

(3,0) 3

Investigates the impact of the federal, homeland security apparatus on emergency response organizations at the state and local level. Includes a historical review of "homeland security" measures beginning in WWI and through WWII and the Korean War. Especially reviews the security situation during the Cold War. The course deals with the federal agencies usually not associated with homeland security, such as DEA, ATF, the military departments, FAA, CDC, the National Guard Bureau, and the DOD. Prerequisites: Pre-criminal justice core (PCJ), and junior standing. *Also listed as FIRE325.*

CJUS330 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; and correctional clients — probation and parole selection and appraisal — are concentrated upon. Prerequisites: Pre-criminal justice core (PCJ), CJUS220, 240, and junior or senior standing.

CJUS341 Fire Cause and Arson Investigation

(3,0) 3

Determination of fire cause and origin and explosion causes. Prevention, documentation and legal aspects examined. Prerequisites: Pre-criminal justice core (PCJ), and junior standing.

CJUS345 Statistics and Design for Public Safety

(3,2) 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. Prerequisites: Pre-criminal justice core (PCJ), junior standing in criminal justice or fire science and MATH086 or equivalent/satisfactory score on ACT or Placement Exam.

CJUS355 Juvenile Justice

(3,0) 3

Criminological theories of the causes of juvenile delinquency and prevention strategies. The functions of the juvenile justice system including: Police, courts, detention and legal rights. The Canadian Young Offenders Act will also be studied. Prerequisites: Pre-criminal justice core (PCJ), CJ101 and S0214.

CJUS384 International and Comparative Criminal Justice Systems

(3,0) 3

A survey of world criminal justice systems including police, courts, and corrections. Cross-national and cross-cultural criminality from several perspectives will be examined as will the globalization of crime. Prerequisite: Pre-criminal justice core (PCJ).

CJUS401 Senior Seminar

(3,0) 3

Seminar and independent study course with individual student guidance by faculty on selected research topics in criminal justice. Prerequisites: Pre-criminal justice core (PCJ) and senior standing.

CJUS402 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: Pre-criminal justice core (PCJ), senior standing and permission of instructor.

CJUS406 Advanced Canadian Jurisprudence

(3,0) 3

Expands upon the material covered in CJUS202, Canadian criminal law, including trial tactics and procedures, sentencing, jurors, invasion of privacy and other current topics. Prerequisites: Pre-criminal justice core (PCJ) and CJUS202.

CJUS409 Procedural Criminal Law

(3,0) 3

Principles, duties and mechanics of criminal procedures as applied to important areas of arrest, search and seizure. Prerequisites: Pre-criminal justice core (PCJ) and CJUS319.

CJUS411 Police Operations
(5,0) 5

A capstone course for Michigan Commission on Law Enforcement Standards (MCOLES) Criminal Justice certification students. Court functions, domestic violence law and procedures, ethical issues, civil disputes, interpersonal relations, juvenile offenders and other related topics. Cannot receive credit for CJUS313 and 411. Prerequisites: Pre-criminal justice core (PCJ) and senior criminal justice MCOLES student.

CJUS425 Women and Criminal Justice
(3,0) 3 *alternate years*

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: Pre-criminal justice core (PCJ), CJUS101, and junior or senior standing.

CJUS444 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. Prerequisites: Pre-criminal justice core (PCJ) and CJUS243.

CJUS445 Forensic Science
(3,3) 4

This is a capstone class for the forensic chemistry degree. It will focus on standard and non-standard methods in forensic science. Lecture and laboratory concentrate on quantitative and qualitative drug analyses, fingerprint visualization techniques, ballistics, DNA analyses, and chemical analyses of evidence. Gas chromatography, atomic absorption spectrometry, and infrared spectroscopy techniques will be used to differentiate evidence. In this course much time will be spent on mechanisms of the analyses facilitating critical thinking skills. Prerequisites: Pre-criminal justice core (PCJ), CHEM332 and CJUS444. Also listed as CHEM445.

**CJUS484 Futures Research:
Long-Range Planning
for Criminal Justice**

(3,0) 3 *alternate years*
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: Pre-criminal justice core (PCJ), CJUS101 and 102.

**CJUS490 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. May be repeated up to six credits. Prerequisites: Pre-criminal justice core (PCJ) and permission of instructor.

COMMUNICATION

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

**COMM101 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.

**COMM201 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: COMM101.

**COMM210 Business and Professional
Speaking**

(3,0) 3
An introduction to basic skills, principles and contexts of communication in business and professional settings. Application will be in presentational, team-building and interviewing skills. Prerequisite: COMM101.

**COMM211 Advanced Public
Speaking**

(3,0) 3
A grounding in upper-level public address with an emphasis on both informative and persuasive strategies. It will be taught using a combination of lecture, discussion, video analysis and critiques, and speeches. Prerequisite: COMM101.

**COMM225 Interpersonal
Communication**

(3,0) 3
An introduction to interpersonal communication theory, with a focus on improved understanding of relationships and an improved ability to communicate more effectively with a variety of people. Prerequisite: COMM101.

**COMM280 Understanding
the Mass Media**

(3,0) 3
Acquaints students with the basic similarities and differences in newswriting among the mass media, particularly newspapers, radio and television. Students will practice writing in the various formats. Prerequisite: ENGL110.

**COMM302 Argumentation
and Advocacy**

(3,0) 3
Provides a practical grounding in the methods of public debate. Students are familiarized with theoretical frameworks for testing propositions through direct clash of evidence and arguments. The emphasis is on practical experience gained through experiences in oral argument. Prerequisite: COMM101.

**COMM307 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: COMM101.

COMM308 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: COMM101.

COMM320 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: COMM101.

**COMM325 Organizational
Communication**

(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: COMM101.

**COMM416 Communication in
Leadership**

(3,0) 3
An advanced application of theory from the speech communication field to issues in organizational leadership. Leadership theory is surveyed from the speech communication perspective, with an eye toward building applicable skills. Particular emphasis is laid upon cultivating the ability to continue the process following the conclusion of the course. Prerequisite: COMM101.

COMPUTER SCIENCE

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

**CSCI101 Introduction to
Microcomputer Applications**

(2,2) 3
The study of a selection of contemporary microcomputer applications, including operating systems concepts, word processing, spreadsheets, database management systems, and the Internet and World Wide Web. Brief survey of other applications, such as presentation graphics, multimedia usage and desktop publishing. Does not apply toward credit in computer science major or minor.

CSCI103 Survey of Computer Science (2,2) 3

An introduction to the field of computer science for computer science majors. Microcomputer applications, history of computing, computer networks and the Internet, programming, hardware, theory of computation, artificial intelligence.

CSCI105 Introduction to Computer Programming (2,2) 3

An introductory course in computer programming using the Pascal language, intended for students with no prior computer programming experience. Input, output and simple data types. Arithmetic, control structures and simple data structures. Sound, graphics and animation techniques. Prerequisite: MATH086 or equivalent/satisfactory score on ACT or Placement Exam.

CSCI106 Web Page Design and Development (2,2) 3

Topics include planning a web site starting with domain name registration and selection of hosting service providers, creating web page using HTML/XHTML and cascading styles sheets; validating web pages; using web authoring tools such as Dreamweaver; publishing web pages to a remote web server, introductory web site design, including best practices for inserting graphics, page layout, building the web site navigation and user interface, integration of third-party and Web 2.0 tools and software, implementing web and accessibility standards, ethical and legal issues such as copyright and trademarks. Prerequisites: none.

CSCI107 Web Graphic Design and Development (2,2) 3

Apply graphic design, typography, color theory, and image composition to enhance a web site. Create web graphics using Adobe Photoshop and Microsoft Expression Design. Insert graphics into web pages and publish web sites using Adobe Dreamweaver and Microsoft Expresssion Web. Prerequisites: none

CSCI121 Principles of Programming (3,0) 3

A broad-based introduction to computer programming, using the C++ programming language and basic operating system features as vehicles. Basic programming principles, including built-in and programmer-defined data, operators, functions and control structures. Applications will be drawn from across the discipline of computer science. Prerequisite: CSCI105 and MATH102 (or equivalent math placement), with a grade of *C* or better in both classes.

CSCI122 Programming Tools and Techniques (3,0) 3

A continuation of CSCI121, with an emphasis on software development, rather than the syntactic and semantic details of C++ language. Advanced class concepts, including operator overloading, dynamic memory allocation, and inheritance. Exception handling, binary files, data representation, and advanced pointer applications. Text management, parsing techniques, and C-style input and output. Separate compilation and third-party libraries. Prerequisite: CSCI121 with a grade of *C* or better.

CSCI163 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.

CSCI201 Data Structures and Algorithms (3,0) 3

An introductory course in data structures and algorithms, with an emphasis on abstraction, implementation and analysis. Pointers, lists, stacks, queues, trees and binary trees, and graphs. Application of various data structures to problems selected from the spectrum of computer science topics. Prerequisite: CSCI122 with a grade of *C* or better and either MATH111 or 140 (or equivalent math placement) with a grade of *C* or better.

CSCI202 Operating Systems Management (2,2) 3

Installation and configuration of operating systems; Microsoft operating systems and Linux; advanced script writing and X-Windows; system maintenance, such as security, auditing, backups and restores. Prerequisite: CSCI103 with a grade of *C* or better.

CSCI203 System Integration and Maintenance (2,2) 3

PC system configuration and troubleshooting skills. Hard drives, monitors, sound cards, CD-ROM drives and other peripherals. Issues involved in integrating and configuring hardware and software system components. Prerequisite: CSCI163 with grade of *C* or better.

CSCI207 Developing Multimedia and Rich Interactive Web Sites (2,2) 3

Transform static web pages into rich media-based interactive web applications. Apply graphic design and marketing principles to design and produce audio and video components for both consumers and commercial web applications. Using Adobe Flash and Microsoft Silverlight, build rich interactive web applications. Publish web sites to a web server. Prerequisites: CSCI107

CSCI211 Database Applications (3,0) 3

An introductory course in database design and implementation, using microcomputer-based relational database software. Single and multi-table databases, forms and reports, query processing, data import and export, and database-related programming. Prerequisite: CSCI105 with a grade of *C* or better.

CSCI221 Computer Networks (2,2) 3

An introduction to the basic principles of computer networks and communication, exploring both the hardware necessary to support computer networks and the software needed to utilize those networks. Basic network topologies, network protocols, and local and wide-area networks. Prerequisites: CSCI103 and 105.

CSCI223 Advanced Networking I (2,2) 3 *alternate years*

Continuation of the CCNA (Cisco Certified Networking Associate) curriculum. Principles of Wide Area Networks, IQs, routers, routing protocols and configuration; hands-on training with CISCO routers. Prerequisite: CS221 with a grade of *C* or better.

CSCI225 Advanced Networking II (2,2) 3 *alternate years*

The final course in the Cisco Certified Network Associate (CCNA) curriculum. Students completing this course will be prepared to take the CCNA certification exam. Content includes routing protocols, virtual LANs, network management, design of LANs and WANs. Prerequisite: CSCI223 with a grade of *C* or better.

CSCI263 Managing Computer Security (3,0) 3

This course investigates the various security protection and recovery techniques available for networks and personal computers including security policies, procedures, and requirements necessary for protecting the integrity of information stored on networks, workstations, and other computer systems. Other topics include discussions on disaster recovery planning, emergency response teams, threat assessment, detection and remediation of a threat, standards for establishing a security framework, and operations security and production controls. Prerequisite: CSCI101 or 103.

CSCI271 Network Hardware and Software (2,2) 3

An introduction to network management strategies, network security systems, and network installation and maintenance. Topics on linked users to the Internet and e-mail are also included. Prerequisites: CSCI101 or 103, and 105, both with a grade of *C* or better.

CSCI275 Web Server Administration (2,2) 3

Install and configure a web server; identify the web server administrator's role; monitor web server performance and log files; configure file transfer and email services; secure the server. Plan and configure an e-commerce web site. Prerequisite: CSCI221.

CSCI281 Introduction to UNIX and Networking

(2,2) 3

An introduction to the UNIX operating system, shell scripting, and UNIX networking from the user's perspective. Topics include basic and intermediate UNIX commands and file structure, regular expressions, BASH/CSH shell scripting, basic UNIX network setup, introduction to UNIX system daemons and networking services. Prerequisite: CSCI221 or 271 with a grade of *C* or better.

CSCI290 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.

CSCI291 Computer Science Project

(4,0) 4

This is a hands-on course where the student is assigned a project at a corporate site. The student is expected to spend at least 8-10 hours a week on the project. Topics for the project may include creating a substantial Web site, designing and implementing an application system for a user, modifying and updating an existing software system, or other related projects. The projects will vary each semester.

CSCI292 Computer Networking Project

(4,0) 4

This is a hands-on course where the student is assigned a project in a corporate network setting. The projects will vary each semester to allow students to implement their knowledge to create and maintain a real-world network system. Activities could include the wiring of the network, installing and maintaining users, installing and repairing workstations, maintaining a Novell or Microsoft network, monitoring an NDS tree, and other similar activities. The student is expected to spend at least 8-10 hours per week on the project including hours on site, doing research, and writing weekly report logs.

CSCI303 Network Operating Systems I

(2,2) 3 *alternate years*

Installation, configuration and troubleshooting of network operating systems server software; hardware devices and drivers; system performance, reliability and availability; storage use and security. Prerequisite: CSCI202 with a grade of *C* or better.

CSCI305 Network Operating Systems II

(2,2) 3 *alternate years*

Installation, configuration and troubleshooting of network operating systems client software; managing file systems and storage; network protocols, remote access, printing and disaster recovery. Prerequisite: CSCI303 with a grade of *C* or better.

CSCI312 File and Database Management

(3,0) 3 *alternate years*

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: CSCI211 with a minimum grade of *C*.

CSCI313 Distributed Database Systems

(3,0) 3 *on demand*

This course is a study of distributed database systems and client-server applications. Topics include local and central site access, homogeneous and heterogeneous systems, transparencies, distributed query processing, SQL servers, transaction processing, concurrency, data allocation, analysis of failures, performance criteria, and programming considerations. Prerequisites: CSCI211 and 221, both with a grade of *C* or better.

CSCI315 Computer Organization and Architecture

(3,0) 3 *alternate years*

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: CSCI201 with grade of *C* or better.

CSCI319 Network Programming Using Java

(3,0) 3

Overview of Java; applet development in Java; building graphical interfaces with AWT and Swing; threads and multi-threaded applications; and building client-server applications with Java.

CSCI321 Computer Graphics

(3,0) 3 *alternate years*

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. Prerequisites: CSCI201, and either MATH112 or 151, all with a minimum grade of *C*.

CSCI325 Developing Web Applications with JavaScript and PHP

(2,2) 3

Transform static web sites into dynamic web sites using a combination of client and server-side web programs. Process and validate forms, build interactive web sites, manage web databases and publish web sites to a web server. Prerequisites: CSCI121, CSCI211

CSCI326 Developing Web Applications with ASP.NET

(2,2) 3

Create and publish web server and web database applications using the Microsoft ASP.net framework; Emphasis on improving performance, security, and isolating business logic from the user interface. Prerequisites: CSCI121, CSCI211

CSCI333 Systems Programming

(3,0) 3

An introduction to systems-level programming and scripting using UNIX and Perl. UNIX overview and commands; Web servers, CGI, and integration of UNIX and Perl; programming in Perl, including lists, hashes, conditionals, loops, pattern matching, process and file management, and other topics. Prerequisites: CSCI121 and 221, both with a grade of *C* or better.

CSCI334 Operating Systems Concepts

(3,0) 3 *alternate years*

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: CSCI333 with a minimum grade of *C*.

CSCI341 Discrete Structures for Computer Science

(4,0) 4 *alternate years*

Formal logic and proof techniques; recursion, recurrence relations and combinational methods; analysis of algorithms; algebraic structures; trees and graphs; Boolean algebra and computer logic; models of computation and formal languages. Emphasis will be on applications to computer science. Prerequisites: CSCI121 with a grade of *C* or better, and either MATH112 or 151 with a grade of *C* or better.

CSCI342 Advanced Programming Techniques

(3,0) 3 *alternate years*

Advanced data structures and programming techniques, including: divide and conquer, dynamic programming, greedy algorithms, graph algorithms, balanced trees. Emphasis will also be placed on the software development process, debugging and testing methodologies. Prerequisite: CSCI201 with a grade of *C* or better.

CSCI361 System Analysis and Design

(3,0) 3 *on demand*

A study of using structured analysis and structure design techniques to understand complex systems and implement the knowledge gained into a workable and usable management, business, or computer system. Topics include information systems development, project management, data and process modeling, system proposals, input and output design, prototyping, and systems construction and implementation. Prerequisite: CSCI211 with a grade of *C* or better.

CSCI412 UNIX Network Administration**(2,2) 3**

Network administration how to and issues for Linux. Installation of a Linux networked system, maintenance and upgrade of a Linux installation, security issues, common scripting languages, system admin tasks, NFS, and mail systems; other UNIXes. Prerequisites: CSCI221 and 281, both with a grade of C or better.

CSCI418 Senior Project I**(1,4) 3**

This course is the first part of the two-part sequence CSCI418/419. The student will begin a two-semester project by designing and implementing a software system, by creating or maintaining a network system, or by working on some other related computer project. The projects will vary each year to allow students to work on a state-of-the-art real-world system. Students in CSCI418 must take CSCI419 the following semester.

CSCI419 Senior Project II**(1,4) 3**

The second of a two-part sequence, CSCI419 provides students with the skills necessary for completion of their project design from CSCI418. In this course, the student will implement the design of a software system created in Senior Project I (CSCI418). The projects will vary each year to allow students to implement their knowledge to create a real-world software system. In addition, the student will analyze numerous ethical considerations associated with being a computer professional. Prerequisite: CSCI418.

CSCI422 Network and Computer Security**(2,2) 3**

An advanced look at common computer and network exploitation techniques in use today. Course emphasis is on how exploits work (both the exploiter's perspective as well as the software faults that allow these exploits to exist), what can be done with the exploits, as well as mitigation and solution techniques for containing the damage to the administered systems. Prerequisites: CSCI121, 221, 333 and 412.

CSCI428 Computer Science Cooperative Education I**(3,0) 3**

A practicum in which students work in a supervised capacity (one-site) with industry. The student will spend a semester in a co-op position in some field of computer science (networks, application development, database administration, etc.). The student will develop a co-op project proposal that must be submitted to and approved by the computer science faculty. The co-op experience must be of a significant nature such that it serves as capstone computer science experience for the student. This is the first of a two-course sequence. Prerequisites: CSCI290 and permission of the computer science faculty.

CSCI429 Computer Science Cooperative Education II**(3,0) 3**

A continuation of CSCI428 where students work in a supervised capacity in industry in a field of computer science. This is the second of a two-course sequence. The focus of this course is to finish the cooperative experience in industry and prepare a final report on the two-semester experience. The student will write a final report on the co-op experience and defend that report to the computer science faculty in open forum. Prerequisite: CSCI428.

CSCI438 Computer Science Research Project I**(3,0) 3**

This is a senior-level course in which students are actively involved in a faculty-supervised and guided research project. Students develop a research plan for some portion of the project and implement that plan. In particular, the student will work to develop a proposal of the expected research goals and create a project timeline and budget. The student's faculty advisor and the computer science faculty must approve the plan. This is the first of a two-course sequence. Prerequisite: Senior status and permission of the computer science faculty.

CSCI439 Computer Science Research Project II**(3,0) 3**

This is a continuation of CSCI438 Computer Research Project I. Prerequisite: CSCI438.

CSCI461 Decision Support and Expert Systems**(3,0) 3 on demand**

A study of using computer-based support systems for assisting managers in decision making. Topics include the decision making process; expert systems and artificial intelligence; knowledge engineering, data acquisition, and machine learning; data mining and data visualization; and designing and building decision support systems. Prerequisites: CSCI211 and either ECON201, 202 or 302, both courses with a grade of C or better.

CSCI490 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.

DANCE

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

DANC101 Ballet I**(0,3) 1**

An introduction to the art of classical ballet, its traditions, history and vocabulary. Class will include barre exercises, center floor work, exercises in strength and flexibility. A final exam of performance will be given at the end of the semester. This course may be repeated twice for credit.

DANC120 Jazz Dance I**(0,3) 1**

Introduction of jazz dance, its history and development as a performing art. Basic principles, steps and combinations. This course may be repeated once for credit.

DANC110 Dance Company**(0,2-6) 1-3**

The Dance Company will meet each week to work on technique in a variety of dance styles, choreograph and rehearse in preparation for outreach programs and performance. The goal of this course is to produce high quality, pre-professional level performance and to serve the community, both on and off campus by providing performances that are entertaining and educational. Prerequisites: A minimum of two years of dance training and instructor's permission. This course may be repeated twice for credit.

DANC125 Modern Dance I**(0,3) 1**

Modern dance will introduce students to dance through the exploration of freedom of movement and self expression. Class will include warm-up exercises, dance combinations, experiments in creativity and choreography and exercises in flexibility and strength to prepare the body to move more efficiently. To familiarize students with the history and variety of modern dance. This course may be repeated once for credit.

DANC130 Scottish Highland Dance**(0,3) 1**

Introduction to basic movements, steps and terminology of Highland dance. Emphasis on fundamentals of footwork and introduction to the history and cultural background of Scottish dance. Dances will include the Highland Fling and Sword Dance along with Scottish Country dances. Students will be given opportunities to perform and compete. No previous dance training is necessary. This course may be repeated once for credit.

DANC201 Ballet II**(0,3) 1**

A continuation of the art of classical ballet. Steps, exercises and combinations are done at an accelerated pace. Movements are more technical and intricate. Pre- pointe and pointe work can be done. Performance will be given at the end of the semester. Prerequisites: Ballet I, or previous ballet training, and instructor permission. This course may be repeated twice for credit.

DANC205 Creative Movement for Elementary Educators**(1,4) 3**

Exploration of movement as a means to improve communication, body/kinetic awareness, creative expression, self-confidence, self-esteem and perceptual motor development. Focus on teaching, creativity, and lesson planning with elementary school students. Prerequisite: Student should have an interest in working with young children. No previous dance experience is necessary. This course may not be repeated for credit.

DANC210 Movement for Actors
(1,2) 2

An active study in the principles and techniques of stage form, style, and projection necessary for actors; helping actors move more efficiently on stage. Emphasis on movement skills, posture, physical exercises, and improvisation. Prerequisite: Strong interest in theatre is recommended. This course may not be repeated for credit.

DANC220 Musical Theatre Tap/Jazz
(0,3) 1

Introduction to dance appropriate for use in Musical Theatre. Dance to support musical storyline. Several styles of jazz technique along with modern concepts, basic steps, terminology, combination, turns and leaps. Beginning tap: Basic steps, patterns, turns and combinations. Prerequisite: Jazz Dance I, or previous dance experience with permission from instructor. This course may be repeated twice for credit.

DANC225 Modern Dance II
(0,3) 1

A more concentrated and vigorous study of modern dance. Exploration of freedom of movement, creative self-expression, trust and partner work. Modern dance techniques and movements will be honed. Students will be responsible for researching past works and modern dancers. Students will be expected to create individual as well as group pieces. Prerequisite: Modern Dance I, or permission from instructor. This course may be repeated once for credit.

DANC301 Ballet III
(0,3) 1

A continuation of the art of classical ballet. Steps, exercises and combinations are done at a more accelerated pace. Movements are more technical and intricate. Pointe and pre-pointe work will be done in this class. Performance guaranteed. Prerequisite: Ballet I and II, or permission from instructor. This course may be repeated once for credit.

DANC305 Dance History
(3,0) 3

Focus on dance chronologically throughout the world during early lineage based societies, the Middle Ages in Asia and Europe, the Renaissance, and dance in America. Theatrical dance genres: ballet, modern, tap, jazz, and musical theatre will be viewed, reviewed and discussed as well as personal view of dance in contemporary society. Prerequisite: Students with a strong interest in dance along with a dance background in ballet or modern dance is recommended. This course may not be repeated for credit.

DANC310 Choreography
(1,4) 3

Choreography is the art of making dances. As a result of a semester filled with reading, reflection, experimenting, examining and sharing dance, students will create multiple short dances and a final project. Students may be responsible for producing a student dance concert to showcase their work. Prerequisite: At least two years of previous dance training in ballet or modern dance is highly recommended, or may be taken with permission. This course may not be repeated.

DANC401 Senior Thesis
1-4

A final project submitted by senior students. Course credits will be determined by the magnitude of the project. Prerequisites: Student should be pursuing a dance minor, or have completed at least three years of dance technique; DANC310, DANC305 and at least two semesters of DANC110 with a minimum of four formal performances. Project subject to instructor approval. This course may be repeated once for credit.

DATA PROCESSING

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

DATA225 Word Processing Techniques
(3,0) 3

Students will cover basics of word processing including document creating, saving, printing, and some advanced features such as table, merge, graphics and report formatting. Hands-on experience is scheduled in labs outside of classroom hours.

DATA231 Database
(3,0) 3

In this course, students will cover advanced database applications in business including creating database tables, forms, reports, mailing labels and charts; creating relationships between database tables; using database wizards; and performing queries and filtering records. A student may repeat this course covering a different database management system for a maximum of six credit hours.

DATA235 Spreadsheets
(3,0) 3

In this course, students will cover advanced spreadsheet applications in business including writing and working with formulas; creating templates; finding and organizing information by filtering, sorting and subtotaling; working with multiple worksheets; creating charts; working with data tables and scenario management; and importing data into spreadsheet software. A student may repeat this course covering a different spreadsheet software program for a maximum of six credit hour.

DATA250 Desktop Publishing and Presentation Design
(3,0) 3

Introduction to document design and layout, use of font, color and graphics to produce newsletters, brochures and presentations. Concepts included are presentation preparation and delivery. Graphics software will be used. Prerequisites: ENGL111 and a working knowledge of word processing.

DATA261 Multimedia Applications
(3,0) 3

In this course, students will be introduced to the design and production of Web sites. Graphics, animation, and sound will be incorporated in the creation of interactive Web pages. Macromedia Studio, which includes Dreamweaver and Flash, will be used.

ECONOMICS

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

ECON201 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: MATH086 or equivalent/satisfactory score on ACT or Placement Exam.

ECON202 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: MATH086 or equivalent/satisfactory score on ACT or Placement Exam.

ECON208 Honors Principles of Microeconomics
(3,0) 3

This course employs algebra, geometry and calculus intensively in the development of principles of microeconomics. The topics covered are nominally the same as in ECON202; however, there is more advanced coverage of topics in which a knowledge of mathematics is required. Prerequisites: MATH151 or 112. Credit not allowed for both ECON202 and 208.

ECON209 Honors Principles of Macroeconomics
(3,0) 3

This course employs algebra, geometry and calculus intensively in the development of principles of macroeconomics. The topics covered are nominally the same as in ECON201; however, there is more advanced coverage of topics in which a knowledge of mathematics is required. Prerequisites: MATH151 or 112. Credit not allowed for both ECON201 and 209.

ECON302 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. Prerequisites: MATH112 or equivalent, and pre-business core (PBC).

ECON304 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. Prerequisites: ECON201 and pre-business core (PBC).

ECON305 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. Prerequisites: ECON201 or 202, and pre-business core (PBC).

ECON307 Environmental Economics
(3,0) 3

This course examines the application of economic analysis to problems of air, water, forests, fisheries, energy, and soil use; economic approaches to valuing the environment; the benefits and costs of pollution control; and alternative policy approaches to environmental problems with emphasis on emissions trading. Prerequisites: ECON202 and pre-business core (PBC).

ECON308 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. Pre-requisites: ECON202 and pre-business core (PBC).

ECON309 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. Prerequisites: ECON201 and pre-business core (PBC).

ECON407 Introductory Econometrics
(3,0) 3

This course provides an introduction to the theory and use of regression analysis to solve problems in economics. The classical regression model is developed and extended to multiple regression. Topics include data problems, model specification, multicollinearity, goodness of fit, qualitative independent variables, heteroscedasticity, serial correlation, qualitative and limited dependent variables, and forecasting. Prerequisites: BUSN211 or MATH207, ECON201, 202, MATH112 or 151, and pre-business core (PBC).

ECON408 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: ECON201 and 202, and pre-business core (PBC).

ECON409 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 four credits. Prerequisite: pre-business core (PBC)

SPECIAL EDUCATION

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

EDSE301 Introduction to Special Education
(3,0) 3

An introduction to the historical and legal bases of special education. Research based examination of the models, theories and philosophy of teaching students with disabilities. Prerequisites: admission to the School of Education. This course may NOT be repeated for credit.

EDSE320 Introduction to Learning Disabilities
(3,0) 3

An examination of the educational research, characteristics, diagnostic principles and practices related to teaching students with learning disabilities. Pre/Corequisites: EDSE301. The course may NOT be repeated for credit.

EDSE330 Introduction to Cognitive Impairments
(3,0) 3

An examination of the educational research, characteristics, diagnostic principles and practices related to teaching students with cognitive impairments. Prerequisite: EDSE301. The course may NOT be repeated for credit.

EDSE340 Introduction to Emotional/Behavioral Impairments
(3,0) 3

An examination of the educational research, characteristics, diagnostic principles and practices related to teaching students with emotional and behavioral impairments. Prerequisite: EDSE301. The course may NOT be repeated for credit.

EDSE350 Assistive Technologies and Learning Disabilities
(3,0) 3

An examination of the research and best practices using assistive technologies to increase, maintain or improve the capabilities of students with impairments. Pre/Corequisite: EDSE301. The course may NOT be repeated for credit.

EDSE401 Curriculum Design and Learning Disabilities
(3,0) 3

An examination of the research and best practices for curriculum design, adapting and modifying curriculum, differentiated instruction, and Universal Design for Learning applied to the teaching of students with learning disabilities. Prerequisite: EDSE301. The course may NOT be repeated for credit.

EDSE402 Assessment and Learning Disabilities
(3,0) 3

An examination of the research and best practices related to assessment for identification, instruction and implementation of special education programs, with a focus on learning disabilities. Prerequisite: EDSE320. The course may NOT be repeated for credit.

EDSE410 Records, Regulations and Requirements
(3,0) 3

An examination of the regulations, requirements, policies and procedures for developing and maintaining records for students with disabilities. Legislation related to privacy and family education will be discussed. Prerequisite: EDSE301. The course may NOT be repeated for credit.

EDSE420 Communication and Community
(3,0) 3

Developing effective communication between all participants in the educational community involved in the education of students with special needs. Topics include preparing and implementing IEPs and communication with parents, students and teachers. Prerequisite: EDSE301. The course may NOT be repeated for credit.

EDSE430 Diagnosis, Development and Delivery
(3,0) 3

An examination of the research and best practices for identifying and implementing accommodations and modification in the curriculum and instructional delivery in the instruction of students with disabilities. Topics include the manifestations of student disabilities with developmental stage, cognitive development and psychosocial development. Prerequisite: EDSE301. The course may NOT be repeated for credit.

EDSE480 Student Teaching Seminar: Special Education
(1,0) 1

A seminar for teacher candidates during a student teaching internship in a special education classroom. Prerequisites: EDSE410 and 420, and admission to student teaching. The course may NOT be repeated for credit.

EDSE492 Internship/Supervised Student Teaching: Learning Disabilities
(8,0) 8

Supervised student teaching internship in a special education classroom, focus on working with students with learning disabilities. Prerequisites: EDSE410 and 420, and admission to student teaching. The course may NOT be repeated for credit.

TEACHER EDUCATION

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

EDUC150 Reflections on Learning and Teaching
(3,0) 3

Students will examine their experiences and assumptions about schooling in order to understand the multiple roles of teachers, characteristics of effective teaching practice, and the roles of school in society. Human development (physical, emotional and cognitive) is studied in terms of teaching and learning. Fieldwork required. Prerequisites: successful completion with a C- grade or better or placement beyond ENGL091.

EDUC250 Student Diversity and Schools**(3,0)****3**

This is a study of the forms of diversity found among students and how these differences affect students' participation in school. History and philosophy of American schools are also studied as are the legal responsibilities and rights of teachers and schools. Students study cooperative learning, questioning techniques, make school visits and plan and teach a short, engaging lesson. Fieldwork required. Pre- or corequisite: EDUC150.

EDUC301 Learning Theory and Teaching Practice**(4,0)****4**

A study of contemporary theories of human learning: how they are generated, researched and applied in teaching practices. Emphasis is placed on analyzing the advantages and disadvantages of various approaches to teaching and learning and the decisions which teachers make in applying theory to diverse classroom situations. Includes extensive classroom observations in K-12 schools. Fieldwork required. Prerequisite: EDUC150, 250 and admission to teacher education program.

EDUC330 Reading in the Elementary Classroom**(3,0)****3**

Study of reading as a process of constructing meaning through dynamic, interaction among reader, the text, and the context of the reading situation. Includes objectives, content, materials, organization and methods of teaching reading in the elementary school. Fieldwork required. Prerequisites: EDUC150, 250 and admission to the teacher education program. Pre- or corequisite EDUC301.

EDUC410 Corrective Reading in the Classroom**(3,0)****3**

Study of classroom methods for the diagnosis of students' reading strengths and weaknesses. Planning and implementing corrective and remedial interventions based on diagnosis. Fieldwork required. Prerequisites: EDUC150, 250, 301, 330 and admission to the teacher education program.

EDUC411 Elementary Language Arts and Methods Across the Curriculum**(3,0)****3**

A study of general strategies and methodologies to facilitate effective learning including the use of language arts as a vehicle for integrated curriculum. Classroom management and organization for productive learning communities are also studied. Integrated technology component. Fieldwork required. Prerequisites: EDUC150, 250, 301, 330 and admission to teacher education program.

EDUC420 Math Methods for Elementary Teachers**(2,0)****2**

A study of strategies and methodologies to facilitate effective mathematics instruction. Students learn to plan and present mathematics lessons and units using contemporary methods. Students use national and state standards and benchmarks in planning instruction and assessment. Integrated technology component. Fieldwork required. Pre- or corequisites: MATH103 and 104. Prerequisites: EDUC301 and admission to teacher education program.

EDUC421 Science Methods for Elementary Teachers**(2,0)****2**

A study of strategies and methodologies to facilitate effective science instruction. Students learn to plan and present science lessons and units using contemporary methods. Students use national and state standards and benchmarks in planning instruction and assessment. Integrated technology component. Fieldwork required. Prerequisites: EDUC150, 250, 301 and admission to the teacher education program.

EDUC422 Social Studies Methods for Elementary Teachers**(2,0)****2**

A study of strategies and methodologies to facilitate effective social studies instruction. Students learn to plan and present social studies lessons and units using contemporary methods. Students use national and state standards and benchmarks in planning instruction and assessment. Integrated technology component. Fieldwork required. Prerequisites: EDUC150, 250, 301 and admission to the teacher education program.

EDUC423 Arts Methods for Classroom Teachers**(2,0)****2**

Elementary teacher candidates examine the knowledge, understanding, and application of the content, functions, and achievements of dance, music, theatre, and the visual arts to promote elementary students' ability to create, perform and respond in and through the arts. Candidates demonstrate their understanding that all students can learn the knowledge and skills that make up the arts.

EDUC424 Health/Physical Methods for Classroom Teachers**(2,0)****2**

Elementary teacher candidates demonstrate the knowledge, understanding, and application of research-based strategies to create opportunities for all students to develop critical knowledge, skills, and behaviors that contribute to life-long health. Candidates demonstrate knowledge and understanding through planning and appropriate implementation of effective past and current research-based human movement and physical activity strategies as central elements to foster active, life-long healthy lifestyles for all elementary students.

EDUC430 General Methods for Secondary Teachers**(3,0)****3**

A study of strategies and methodologies to facilitate learning at the secondary level including classroom management and organization for productive learning communities. The multiple roles of the teacher in the secondary classroom are examined including participant, colleague, researcher, reflective practitioner, accountable professional, counselor and mentor. Integrated technology component. Fieldwork required. Prerequisites: EDUC150, 250, 301 and admission to the teacher education program.

EDUC431 The Secondary Learner**(3,0)****3**

A study of the dilemmas of adolescents as they affect students in secondary schools. The course focuses on the special needs and sensitivities of adolescents and implications for instruction and classroom management. Integrated technology component. Fieldwork required. Prerequisites: EDUC150, 250, 301 and admission to the teacher education program.

EDUC440 Reading in the Content Area**(3,0)****3**

A study of reading methods appropriate to use in secondary classrooms. Includes formal and informal assessment procedures for determining students' abilities and the accompanying strategies to enhance content area comprehension and concept development. Students use national and state standards and benchmarks in planning instruction and assessment. Integrated technology component. Fieldwork required. Prerequisites: EDUC150, 250, 301 and admission to the teacher education program.

EDUC441 Language Arts Methods for Secondary Teachers**(3,0)****3**

Curriculum, objectives, content, materials, organization, methods and assessment of core subject matter to diverse learners. Includes integrated technology, laboratory and field experiences. Students use national and state standards and benchmarks in planning instruction and assessment. Integrated technology component. Fieldwork required. Prerequisite: EDUC150, 250, 301 and admission to the teacher education program.

EDUC442 Math Methods for Secondary Teachers**(3,0)****3**

Curriculum, objectives, content, materials, organization, methods and assessment of teaching mathematics to diverse secondary learners. Students use national and state standards and benchmarks in planning instruction and assessment. Integrated technology component. Fieldwork required. Prerequisite: EDUC150, 250, 301 and admission to the teacher education program.

EDUC443 Science Methods for Secondary Teachers**(3,0)****3**

Curriculum, objectives, content, materials, organization, methods and assessment of teaching science to diverse learners. Students use national and state standards and benchmarks in planning instruction and assessment. Integrated technology component. Fieldwork required. Prerequisites: EDUC150, 250, 301 and admission to teacher education program.

EDUC444 Social Studies Methods for Secondary Teachers**(3,0)****3**

Curriculum, objectives, content, materials, organization, methods and assessment of teaching social studies to diverse secondary learners. Students use national and state standards and benchmarks in planning instruction and assessment. Integrated technology component. Fieldwork required. Prerequisites: EDUC150, 250, 301 and admission to teacher education program.

**EDUC445 Teaching Computer Science
in the Secondary Classroom**

(3,0) 3

Techniques, materials and models for computer science teachers. Classroom and instructional management. Hardware and software evaluation and selection. Computer programming, including a team software development project. Web pages as an educational resource. Legal, ethical, social, economic and personal issues. Prerequisites: CSCI101 or 103, 201, EDUC150, 250, 301, and admission to the teacher education program.

**EDUC446 Business Education
Methods for
Secondary Teachers**

(3,0) 3

A study of strategies and methodologies to facilitate effective business course instruction. Students learn to plan and present office cluster, accounting, marketing and computer software lessons and units using contemporary methods. Students use national and state standards and benchmarks in planning instruction and assessment. Integrated technology component. Field work required. Prerequisites: EDUC150, 250, 301 and admission to the teacher education program.

**EDUC447 Theories and Methods
of Teaching Foreign
Languages**

(3,0) 3

This course focuses on the teaching and learning of foreign languages in K-12 school settings. We will be looking at second/foreign language acquisition theories and the methods/strategies underlying the teaching of the four main domains (speaking, reading, writing, listening), plus grammar, vocabulary and culture of the foreign language. We will also be studying the related areas of foreign language materials selection and use, the integration and use of standards into the curriculum and instruction, and assessment and evaluation in teaching a foreign language. The field work component of this course will act as a cohesive tie between what we explore, study and experiment with in course readings and discussions and the real world of foreign language teachings. Prerequisites: EDUC150, 250 and admission to the teacher education program. Pre- or corequisites: EDUC301 and 330.

**EDUC451 Directed Study in
Language Arts Methods**

(1-3,0) 1-3

Independent research or directed study under the supervision of a faculty member. May be repeated for a total of nine credits. Prerequisite: Permission of instructor. *This course will substitute for EDUC441.*

**EDUC452 Directed Study in
Mathematics Methods**

(1-3,0) 1-3

Independent research or directed study under the supervision of a faculty member. May be repeated for a total of nine credits. Prerequisite: Permission of instructor. *This course will substitute for EDUC442.*

**EDUC453 Directed Study in
Science Methods**

(1-3,0) 1-3

Independent research or directed study under the supervision of a faculty member. May be repeated for a total of nine credits. Prerequisite: Permission of instructor. *This course will substitute for EDUC443.*

**EDUC454 Directed Study in
Social Studies Methods**

(1-3,0) 1-3

Independent research or directed study under the supervision of a faculty member. May be repeated for a total of nine credits. Prerequisite: Permission of instructor. *This course will substitute for EDUC444.*

**EDUC455 Directed Study in
Computer Science Methods**

(1-3,0) 1-3

Independent research or directed study under the supervision of a faculty member. May be repeated for a total of nine credits. Prerequisite: Permission of instructor. *This course will substitute for EDUC445.*

**EDUC456 Directed Study in
Business/Economics
Methods**

(1-3,0) 1-3

Independent research or directed study under the supervision of a faculty member. May be repeated for a total of nine credits. Prerequisite: Permission of instructor. *This course will substitute for EDUC446.*

**EDUC457 Independent Study:
Theories/Methods Teaching
Foreign Languages**

(1-3,0) 1-3

Independent research or directed study under the supervision of a faculty member. May be repeated for a total of nine credits. Pre-requisite: Permission of instructor. *This course will substitute for EDUC447.*

**EDUC480 Internship in Teaching
Seminar**

(1,0) 1

A seminar course for students currently enrolled in EDUC492 Internship/Advanced Methods: _____ to discuss issues in teacher education, classroom management, teaching of all students and professional development. Co-requisite: EDUC492.

**EDUC490 Research Topics
in Education**

(1-4) 1-4

Individual study under supervision of teacher education faculty member. May be repeated to a maximum of four credits. Prerequisites: admission to the teacher education program, senior status and permission of instructor.

**EDUC491 Internship/Advanced
Methods: [Subject]**

8

Directed and evaluated internship in heterogeneous classrooms. Teaching worthwhile content to students with varied learning needs. Theoretical and field-based explorations of common teaching dilemmas. Student will spend at least 25 clock hours weekly with a teacher in a school for field teaching experience. Prerequisites: successful completion of baccalaureate degree and all previous EDUC courses and field experiences. Permission and availability of participating schools. Corequisites: EDUC601 and 602. May be repeated once.

**EDUC492 Internship/Advanced
Methods: [Subject]**

8

Continuing internship in heterogeneous classrooms at selected schools. Increased emphasis on independent teaching. Maintaining classroom communities that ensure equitable access to important knowledge and skills. Assessing academic and social outcomes. Student will spend at least 25 clock hours weekly with a teacher in a school for field teaching experience. Prerequisites: Admission to student teaching internship. Corequisite: EDUC480.

EDUC602 Action Research I

(3,0) 3

Qualitative and quantitative research methods on teaching and learning. Criteria for judging validity and applicability of research-based knowledge. Framing educational problems worthy of inquiry through the research design and assessment of an Action Research proposal. Pre-requisite: Admission to MA: C&I program or permission of instructor, or Co-requisites: EDUC480 and EDUC492.

EDUC604 Action Research II

(3,0) 3

Collecting, analyzing and interpreting data on teaching, learning, and/or education policy — through Action Research in an education setting. Implementing the Action Research proposal designed in EDUC602. Dilemmas surrounding research on teaching practice. Appraising and reporting results of inquiry. Learners work independently with supervision of faculty. Pre-requisites: EDUC602 and formal admission to MA: C&I program or permission of instructor.

**EDUC605 Integrated Approaches in
Curricular Design and
Implementation**

(3,0) 3

Theoretical and practical examination of the principles of integrated curriculum, acquisition of skills and knowledge bases to facilitate the development of curriculum that is integrative, responsive to student needs, and meets recommended curricular frameworks and benchmarks. Pre-requisite: Admission to MA C&I program or permission of instructor; or co-requisites of EDUC480 and 491.

EDUC611 Psychological Foundations of Education**(4,0)****4**

Advanced research and study on educational psychology and learning theory, including constructivist theory, brain based research, cognition, and their application to instructional strategies. Pre-requisite: Admission to MA C&I program or permission of instructor.

EDUC612 Philosophical Foundations of Education**(4,0)****4**

Examines the philosophical underpinnings of education through study of individuals such as John Dewey, Paulo Friere and Maxine Greene. Research on the philosophical perspectives of education, the role of teachers and learners in education, and on applying a philosophical framework to contemporary educational issues. Pre-requisite: Admission to MA C&I program or permission of instructor.

EDUC613 Sociological Foundations of Education**(4,0)****4**

Advanced research and study on sociological foundations of education including the relationship of social factors to educational practices, race/gender/disabilities in the classroom, diversity in language cultures, school reform and multicultural perspectives. Focus on applications in instructional practice. Pre-requisite: Admission to MA C&I program or permission of instructor.

EDUC621 Educational Leadership**(4,0)****4**

A course to assist the classroom teacher addressing improving classroom and school effectiveness. An examination of effective supervisory principles and practices which can be used to strengthen instructional effectiveness and facilitate school improvement. Pre-requisite: Admission to MA C&I program or permission of instructor.

EDUC622 Integrating Technology into Curriculum and Instruction**(4,0)****4**

Understanding of the uses of technology in the presentation and construction of knowledge and the management of knowledge in educational settings. Emphasis on the use of technology as a tool in facilitating teaching effectiveness and student learning. Pre-requisite: Admission to MA C&I program or permission of instructor.

EDUC623 Foundations of Special Education**(4,0)****4**

This course will provide an overview of the history, philosophy and social context of Special Education. It will also address instruction of students with special needs. This course is intended to provide the underpinning for and concepts to be explored in advanced study in Special Education. Course reflects on teaching as enabling diverse learners to inquire into and construct subject-specific meanings, on adapting subject matter to learner diversity, and on constructing curriculum to serve the needs of diverse learners. Prerequisite: admission to program or permission of instructor.

EDUC624 Reading: Research and Methodologies**(3,0)****3**

Theories, research, and methods focused on enabling students to become self-regulated readers who effectively use multiple strategies in their reading. Strategic processes in comprehension, word identification, critical thinking, and analysis will be examined as will the role of the teacher as a model and mediator of such processes in a variety of reading contexts. Pre-requisite: Admission to MA C&I program or permission of instructor.

EDUC625 Multimedia Production in Instruction and Assessment**(3,0)****3**

The use of multimedia to enhance instructional and assessment strategies in education. Developing production skills in the construction of professional multimedia projects through the editing of digital images, video, and audio files. Focus on the use of multimedia as authentic assessment in an educational setting. Digital narrative as an instructional and assessment tool. Prerequisite: admission to MA C&I program or permission of instructor.

EDUC626 Educational Assessment and Measurement**(3,0)****3**

Principles and practices of evaluation and measurement, reliability, validity; informal and formal strategies; performance assessment. Innovations in educational assessment and accountability as well as teacher-made tests will be examined. Prerequisite: Admission to MA C&I program or permission of instructor.

EDUC627 Models of Teaching**(3,0)****3**

Models of teaching are designs for instruction developed to support particular types of learning. In this course, students will examine the theoretical and research bases of various models of teaching in terms of the instructional issues in their roles and educational setting. Prerequisite: Admission to MA C&I program or permission of instructor.

EDUC628 Supervision of Instruction**(2,0)****2**

This course is designed to develop an understanding of the principles and processes of supervising instruction within the framework of teacher growth. Students will explore the rationales, assumptions, processes, and implications related to a variety of instructional supervision practices, contexts, and role as well as discuss issues associated with the supervision of instruction and teacher growth. Prerequisite: Admission to MA C&I program or permission of instructor.

EDUC629 Issues in Special Education**(3,0)****3**

Contemporary issues in the education of students with special needs; assessment and identification; service delivery models; instruction and social/emotional considerations; parent/professional relationships; research priorities; and transition to employment. Prerequisite: Admission to MA C&I program or permission of instructor.

EDUC631 Teaching Language Arts: [Topic]**1-4**

A directed study course in English, speech and language to meet the individual's professional development goals through study to increase content knowledge and skills. The student will develop three research-based teaching units based on language arts content appropriate to the grade level of his/her teaching certificate/endorsements (K-12), and/or a research project or paper as determined by the instructor and approved by the School of Education. Prerequisite: Admission to the MA C&I program or approval of instructor; approved plan of study; and corequisite of concurrent enrollment in approved 300/400-level course.

EDUC632 Teaching Mathematics: [Topic]**1-4**

A directed study course in mathematics and computer science to meet the individual's professional development goals through study to increase content knowledge and skills. The student will develop three research-based teaching units based on math/cs content appropriate to the grade level of his/her teaching certificate/endorsements (K-12), and/or a research project or paper as determined by the instructor and approved by the School of Education. Prerequisite: Admission to the MA C&I program or approval of instructor; approved plan of study; and corequisite of concurrent enrollment in approved 300/400-level course.

EDUC633 Teaching Science: [Topic]**1-4**

A directed study course in life, physical and Earth/space sciences to meet the individual's professional development goals through study to increase content knowledge and skills. The student will develop three research-based teaching units based on science content appropriate to the grade level of his/her teaching certificate/endorsements (K-12), and/or a research project or paper as determined by the instructor and approved by the School of Education. Prerequisite: Admission to the MA C&I program or approval of instructor; approved plan of study; and corequisite of concurrent enrollment in approved 300/400-level course.

EDUC634 Teaching Social Studies: [Topic]**1-4**

A directed study course in history, geography, political science or economics to meet the individual's professional development goals through study to increase content knowledge and skills. The student will develop three research-based teaching units based on social studies content appropriate to the grade level of his/her teaching certificate/endorsements (K-12), and/or a research project or paper as determined by the instructor and approved by the School of Education. Prerequisite: Admission to the MA C&I program or approval of instructor; approved plan of study; and corequisite of concurrent enrollment in approved 300/400-level course.

EDUC635 Applying: [specify course title by section]

1

A directed study course applying the content knowledge developed through approved EDUC 900-level sections within the context of curriculum and instruction. The student will develop three research based teaching units based on content appropriate to the grade level of their teaching certificate/endorsements (K-12), and/or a research project or paper as determined by the instructor and approved by the LSSU Department of Education. Prerequisite: admission to the MA-C&I program or approved plan of study, permission of instructor. Co- or Prerequisite: concurrent enrollment or successful completion (B or higher) of an approved 900-level section. Course may be repeated up to three times for credit with permission of the graduate coordinator or Dean, up to once per section number or course title.

EDUC690 Special Topics

1-3

Courses and workshops designed to meet the special needs of K-12 teachers, e.g. workshops approved by the School of Education for graduate credit. The transcript will specify the specific content, e.g. Special Topics (K-4 Mathematics), etc. Approval of the School of Education is required to apply credits earned through special topics courses in the MA C&I program. May be repeated for credit when content varies. Prerequisite: Admission to the MA C&I program or approval of instructor.

EDUC695 Capstone Research I (2,0)

2

A practicum course for the development of a capstone curricular project that is integrated, responsive to student needs, incorporates appropriate instructional technology, and is aligned with recommended curriculum frameworks. Learners work independently with supervision of School of Education Graduate Faculty to complete a curricular portfolio developed from the duration of the program. Evaluation includes public presentation and oral defense before the School of Education Graduate Faculty. Prerequisites: EDUC602, 604 and 605; and admission to the MA C&I program or approval of instructor

EDUC696 Capstone Research II (1,0)

1

Formal presentation of the capstone research project in the Master of Arts and Curriculum and Instruction; completion and presentation of the candidate's Professional Teaching and Learning E-Portfolio aligned to the National Board of Professional Teaching Standards (NBPTS). Documentation of learning outcomes of K-16 and adult learners required. Offered during spring semester only. Directed study. Prerequisite: EDUC695. Course may not be repeated for additional credit.

EDUC910 Special Topics: [specify course title by section]

1-3

Topical courses in education based on independent or directed study, workshops or other professional development activities. Courses addressing the continuing education requirements of educational professionals (e.g. regular or special educators, instructional assistants, school psychologist, counselors). *Successful completion of this course will award non-matriculated graduate credit which may apply to the renewal of professional certificates/credentials but which does not apply to an LSSU graduate degree. Course number may be repeated when content and course title vary, once per section Grading: S=satisfactory, equivalent to a B or higher in graduate courses or NC=no credit. Tuition for non-matriculated graduate credit will be established by the Board of Trustees.

EDUC920 Special Topics: [specify course title by section]

2

Topical independent study courses in education delivered in partnership with Virtual Education Software. Courses addressing the continuing education requirements of educational professionals (e.g., regular or special educators, instructional assistants, school psychologist, counselors). This course requires DSL-level or higher internet and access to a computer for course assignments and to participation in online sessions and discussion boards. Sections of this course are based on curriculum developed by Virtual Education Software (VESi) and include additional assignments and group interaction including synchronous and asynchronous communication supervised by LSSU faculty. *Successful completion of this course will award non-matriculated graduate credit which may apply to the renewal of professional certificates/credentials but which does not apply to an LSSU graduate degree except as noted in EDUC635. Specific course titles under this number will be listed on the LSSU education web site, and are available through a cooperative contractual agreement with VESi. Course number may be repeated when and course title vary, once per section Grading: S=satisfactory, equivalent to a B or higher in graduate courses or NC=no credit. Tuition for non-matriculated graduate credit will be established by the Board of Trustees.

ELECTRICAL ENGINEERING

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

EGEE105 Fabrication Fundamentals (0,2)

1

This course introduces students to the process of the layout and construction of electronic circuits. Students will develop basic skills in the use of electrical CAD software, soldering, construction techniques and circuit board construction. Prerequisite: EGNR101 or 103.

EGEE125 Digital Fundamentals (3,2)

4

This course provides a study of numbering systems, Boolean algebra, optimization and reduction techniques, combinational logic, sequential digital logic, digital arithmetic, counters, multiplexers, demultiplexers, and microcomputer memory devices systems. Emphasis is placed on digital circuit design and contemporary programmable logic concepts. Prerequisite: One of the following: CSCI103, EGNR101 or 103. Pre- or corequisite: MATH140.

EGEE210 Circuit Analysis (3,2) or (3,2,1)

4

This course is an introduction to the analysis of linear circuits. Topics include: basic circuit elements and their terminal relations, Kirchhoff's laws, nodal analysis, mesh analysis, superposition theorem, Thevenin and Norton equivalent circuits, DC transient analysis of RC and RL circuits, phasors, sinusoidal steady-state response of RLC circuits and single-phase and three-phase AC power analysis. Prerequisites: MATH152, EGNR140 and one of the following: EGNR101, 103 or CSCI103.

EGEE250 Micro-Controller Fundamentals (3,2)

4

An introduction to micro-controller architecture, machine and assembly language program development, and computer system hardware and interfacing techniques. Prerequisite: EGEE125 with a grade of C or better.

EGEE280 Introduction to Signal Processing (2,2)

3

or (3,3)

4

The course introduces the mathematical modeling techniques used in the design and analysis of analog and digital signal processing systems. Topics include phasor representation of sinusoidal signals, analog signal processing techniques, spectral representations, frequency response, filtering and the Fourier transforms. The 4-credit version of the course also includes digital signal processing techniques and the Z transform. The 3-credit version of the course does not count toward a major in Electrical Engineering or Computer Engineering. Prerequisites: MATH152 and EGNR140.

EGEE305 Analog and Digital Electronics (2,3)

3

A study of digital electronics, electronic devices, and circuits for non-electrical engineering majors. Topics include discrete logic device, diodes, and amplifiers. Prerequisite: EGEE210 and PHYS232.

EGEE310 Network Analysis (4,0)

4

A continuation of EGEE210 with an emphasis on the systems approach to circuit analysis and design. Topics include the Laplace transform, transfer functions, frequency response, Fourier series, filter design, and op-amps. Prerequisites: EGEE210 and 280 with a grade of C or better, and MATH251. Pre- or corequisite: MATH310.

EGEE320 Digital Design
(3,3) 4

A study of logical and electronic circuit design techniques including combinational and sequential circuits, programmable logic devices, MSI and LSI devices. Synchronous state machine design using computer-based tools is emphasized for control applications. Prerequisite: EGEE125 with a grade of C or better, and either EGNR265 or CSCI121.

EGEE330 Electro-Mechanical Systems
(3,3) 4

A study of three-phase circuits, electro-mechanical energy conversion, transformers, AC and DC machines, motor drives, and controlled converters. The laboratory activities include planning and conducting tests of electrical machines, and simulation with physical modeling software. Prerequisite: EGEE210 with a grade of C or better, EGNR140, and MATH152.

EGEE345 Fundamentals of Engineering Electromagnetics
(3,0) 3

This course provides an in-depth knowledge of the fundamentals of electromagnetic theory. Topics include vector analysis, electrostatic fields and magnetostatic fields, while familiarizing students with the applications of such fields, Maxwell's equations, and an introduction to wave propagation and radiation. Prerequisites: EGEE210 with a grade of C or better, MATH251, 310, and PHYS232.

EGEE355 Microcontroller Systems
(3,3) 4

A study of microcontroller systems design based on the 8/16/32-bit microcontrollers. Assembly and C languages are used for program development in the design of embedded systems. Interfacing techniques, real-time control, and microcontroller emulator use are emphasized. Prerequisites: EGEE250 and one of the following: EGNR265 or CSCI121.

EGEE365 Vehicle Instrumentation
(3,3) 4

The course introduces instrumentation hardware and software that support the development, operation, and testing of vehicle systems. Topics include vehicle networks, data acquisition and control systems, modeling and simulation, and hardware and sensors interfacing. Prerequisites: EGNR210 and (EGNR265 or CSCI122)

EGEE370 Electronic Devices
(3,3) 4

This course provides an in-depth study of the basic electronic devices. Topics include diodes, MOS field effect transistors, bipolar junction transistors as well as amplifier concepts such as gain, bandwidth, biasing and frequency response. Diode rectifiers, common amplifier configurations, digital CMOS logic circuits, latches, flip-flops, and RAM cells are studied as applications of electronic devices. Prerequisites: EGEE125, 280 and 210 all with a grade of C or better, and MATH251.

EGEE375 Electronic Circuits
(3,3) 4

This course provides a study of analog applications of MOS field effect transistors and bipolar junction transistors. Topics include single-stage integrated-circuit amplifiers, differential and multi-stage amplifiers, feedback in amplifier circuits, operations amplifiers, signal generators, waveform-shaping circuits, output stages and power amplifiers. Prerequisite: EGEE370.

EGEE425 Digital Signal Processing
(2,2) 3

A study of the application of real-time digital signal processing in analog and digital control system design. The course emphasizes discrete Fourier transforms, design of digital filters, sampling theory, and process control using data acquisition equipment and computer simulation techniques. Additional emphasis is placed on communication theory in relation to its utilization of DSP technology. Prerequisites: EGEE250, and EGEE 280 with a grade of C or better, EGNR140, and either EGNR265 or CSCI121.

ENGINEERING MECHANICS

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

EGEM220 Statics
(3,0) or (3,0,1) 3

A study of theory and application of principles of statics with emphasis on problem solving, free body diagrams and vector analysis. Principle of equilibrium applied to particles and rigid bodies. Prerequisite: MATH151. Co- or Prerequisites: EGNR140 and PHYS231.

EGEM320 Dynamics
(3,0) or (3,0,1) 3

A study of theory and applications of dynamics and problem-solving techniques. Topics include position, velocity, and acceleration analysis of particles and rigid bodies. Newton's second law, work and energy and impulse and momentum are covered. Prerequisites: MATH152 and EGEM220.

ELECTRONICS ENGINEERING TECHNOLOGY

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

EGET110 Applied Electricity
(3,2) 4

This course covers basic principles of DC and AC electricity. Topics include resistance, inductance, capacitance, series and parallel circuits, magnetic circuits, transformers and electrical motors. Laboratory exercises will reinforce the lecture material. Prerequisite: MATH140 with a C or better.

EGET175 Applied Electronics
(3,2) 4

An introduction to the operation of basic electronic devices including diodes, transistors and operational amplifiers. Topics include: Power supplies, amplifiers, frequency response and filter circuits. Laboratory exercises will reinforce the lecture material and introduce computer circuit analysis. Prerequisite: EGET110.

EGET310 Electronic Manufacturing Processes
(3,3) 4

This course will cover traditional and modern techniques for the design, fabrication, and testing of electronic circuit boards. Traditional techniques include wire cutting and stripping and manual and wave soldering. Modern techniques include the routing of multilayer surface mount boards, solder paste stenciling and dispensing, pick-and-place assembly and programming, reflow oven soldering, and rework techniques. Additional topics may include mechanical mounting, assembly line coordination, cell manufacturing, and potting and sealing materials. Prerequisites: either (EGET110 and EGET175) or EGEE210

MECHANICAL ENGINEERING

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

EGME110 Manufacturing Processes
(2,3) 3

Capabilities and limitations of machines and processes for production planning and designing machinery, mechanical parts and systems. Prerequisite: none.

EGME141 Solid Modeling
(2,2) 3

An application of standard solid modeling software to draw, dimension, and design mechanical parts and assemblies. Topics covered include: standard drafting techniques, orthographic projections, wireframe and solid methods, Boolean operations, dimensioning, assemblies, and constraining. An introduction to animation of assemblies is also included. Prerequisite: None.

EGME225 Mechanics of Materials I
(3,0) 3

A study of stress analysis and measurements. Topics include axial, shear, torsion, bending stresses, axial strains, shear strains, Poisson's ratio, Hooke's law and the transformation of stresses and strains. Deflection of beams and buckling of columns are also treated. Prerequisite: EGEM220 with a grade of C or better. Pre- or corequisite: MATH152.

EGME240 Assembly Modeling and GD&T
(2,3) 3

The course is a continuation of EGME141. Parametric modeling and design of assemblies by the use of solid models. Emphasis will be placed on animation of assemblies to display the functionality of assemblies. Prerequisites: EGME110, 141, and sophomore standing.

**EGME275 Engineering Materials
(3,0) 3**

A study of physical structure of engineering materials, including metals, ceramics, polymers, and composites, as well as their properties and applications. Failure modes of materials, such as corrosion, fatigue, plastic deformation, and brittle failure, are also covered. For metal alloys, there is an emphasis on the interpretation of phase diagrams and time-temperature transformation diagrams. Prerequisite: CHEM115. Pre- or corequisite: EGME225 or EGMT225.

**EGME276 Strength of Materials Lab
(0,3) 1**

Laboratory experiments covering topics in mechanics of materials and engineering materials. Theory from mechanics of materials and engineering materials will be covered through hands-on experiments. Pre- or corequisites: EGME225 or EGMT225 and EGME275.

**EGME310 Vehicle Development & Testing
(1,2) 2**

A course providing a systematic overview of topics within the areas of automotive vehicle dynamics, component design and testing. An introduction to gross vehicle dynamics is followed by a detailed study of specific vehicle subsystems, including both their design and role in the overall vehicle behavior. Dynamic behaviors covered include acceleration, braking, cornering, ride, and load transfer. Subsystems considered include the brakes, steering system, suspension, tires, and drive train. Vehicle testing and benchmarking are also covered. Laboratory content includes and introduction to a commercial vehicle dynamics software package. Prerequisites: PHYS231 Pre or Corequisites: EGME220 or EGMT225

**EGME337 Thermodynamics
(4,0) or (4,0,1) 4**

A study of the theory and applications of thermodynamics. Topics covered include: thermodynamic properties, heat, work, first and second Laws of thermodynamics, entropy, power and refrigeration cycles, gas mixtures, and an introduction to transport theory. Prerequisite: MATH152 or MATH112 and EGMT332.

**EGME338 Fluid Mechanics
(2,0) 2**

A study of theory and applications of fluid statics and fluid dynamics. Topics covered include: Hydrostatic forces, buoyancy forces and stability, Bernoulli equations, dimensional analysis, flow in pipes, integral analysis of fluids, and introduction to pumps. Prerequisites: MATH151 or 112.

**EGME339 Fundamentals of Fluid Mechanics
(1,0) 1**

A study of the theory and fundamentals of fluid mechanics. Topics covered include: differential analysis of fluids, potential flow, open-channel flow, introduction to gas dynamics, and introduction to computational fluid dynamics (CFD). Prerequisite: EGME338. Pre- or corequisite: MATH310.

**EGME350 Mechanical Engineering Design
(3,3) 4**

Design and selection of machine components and power transmission units. Topics covered include curved beam theory, Catigliano's theory, static failure, impact and fatigue. Stress analysis in the laboratory will include strain gages, uniaxial testing machines, deflections and buckling of beams and report writing. Prerequisites: EGME141, 225, 275, and 276.

**EGME415 Vehicle Dynamics
(2,0) 2**

A study of vehicle dynamics, treating selected topics in automobile dynamics with more theoretical depth than EGME410, but also surveying heavy trucks, tracked and off-road vehicles (including terrain interaction), railway vehicles, and water-borne vessels. Dynamic modeling, as well as a thorough understanding of underlying physical phenomena, are emphasized. Prerequisites: EGME320, EGNR340 and EGME310.

**EGME425 Vibrations and Noise Control
(3,2) 4**

An introductory course on vibrations analysis, noise control, and acoustics. The vibrations portion includes the theory of discrete and continuous vibrating systems, and such applications as vibration mitigation, machinery vibrations, and rotor dynamics. The noise control/acoustics portion includes the theory of airborne sound, sound fields in bounded spaces, an overview of human hearing, and noise mitigation. Measurement techniques and signal analysis are covered in the laboratory segment. Prerequisites: EGME225, EGME320, EGNR340, MATH251 and 310.

**EGME431 Heat Transfer
(3,0) 3**

Theory and applications of heat transfer, Steady-state and transient conduction, forced convection, natural convection, radiation. Analysis of heat exchangers, boiling and condensation, introduction to numerical methods in heat transfer. Prerequisites: EGME337, 339 and EGNR265 or EGNR140.

**EGME432 Thermal and Fluids Lab
(0,3) 1**

Practical applications of thermodynamics, fluid mechanics, and heat transfer. Hands-on training in the operation of thermodynamic components, power generation systems, and fluid mechanical devices. Experimentation in heat transfer. Includes a major project in the area of power generation and dissipation. Prerequisites: EGME337 and 338. Pre- or corequisite: EGME431.

**EGME442 Finite Element Analysis
(3,3) 4**

This course will cover the fundamentals of finite element analysis. Topics include: Modeling elements, boundary conditions, loading, convergence and an introduction to modal analysis. Commercial software will be used in the laboratory along with 3-D mesh generation. Prerequisites: EGME350 and MATH310.

MANUFACTURING ENGINEERING TECHNOLOGY

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

**EGMT225 Statics and Strength of Materials I
(4,0) 4**

Fundamental concepts of statics and strength of materials. Solutions of problems introducing forces, moments, normal stress, shear stress, bending stress and torsional stress. Theory and application of strain gages. Prerequisites: MATH140 with a C or better grade and PHYS221.

**EGMT310 CNC Manufacturing Processes
(3,3) 4**

Writing CNC programs in machine codes, and the setup and trial runs to produce parts from these programs. Computer software interfacing between programming languages and various industrial machines will be stressed. Computer-aided manufacturing (CAM) topics and applications of CAM software will also be covered. Prerequisites: EGME110, 141 and sophomore standing.

**EGMT332 Thermodynamics and Heat Transfer for Technologists
(4,0) 4**

This course provides an algebra-based coverage of topics in thermodynamics and heat transfer relevant to technologists in manufacturing and fire science. Thermodynamics topics include properties of substances, energy balances, combustion and thermochemistry, and heating and ventilation systems. Basic principles of conduction, convection, and radiation, and their application to practical problems are covered in the heat transfer portion of the course. Prerequisite: MATH111 or 140.

GENERAL ENGINEERING

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

**EGNR101 Introduction to Engineering
(1,2) 2**

An introduction to the different areas of study within the fields of electrical and mechanical engineering. Lecture topics and laboratory activities will introduce computer programming, computer simulation exercises, data-acquisition systems, microcontroller systems, communications, robotic and manufacturing applications, material science and dynamics. Prerequisite or corequisite: MATH102.

**EGNR102 Concepts and History of Engineering
(2,0) 2**

This course provides instruction on problem-solving techniques using engineering tools and concepts as students work on an engineering design project. Topics in engineering ethics and the engineering work experience are discussed. A history of engineering and the development of the specific engineering fields are presented. Pre- or corequisite: MATH102.

**EGNR103 Engineering Orientation
(0,5,1) 1**

This course provides an orientation to the engineering and engineering technology fields at Lake Superior State University, including robotics. Students are introduced to the engineering professional organizations and are encouraged to participate in professional activities. Laboratory exercises focus on introducing students to the engineering facilities and programmatic options within the engineering and engineering technology disciplines. Academic success strategies are also presented. Pre- or co-requisite: MATH102.

**EGNR140 Linear Algebra
and Numerical Methods
for Engineers
(1,3) 2**

This course covers the engineering application of concepts from applied mathematics, iterative programming and numerical methods. Applications of linear algebra and complex numbers are introduced. Iterative programming emphasizes loops, conditional statements and user input-output. Numerical methods topics include root searching methods, numerical integration, and other algorithms involving iterative computations. The lab also includes instruction on commercially-available software used to implement the numerical methods studies. Pre-requisite: MATH140 (or high school mathematics that includes two years of algebra, one year of plane geometry, and one-half year of trigonometry and equivalent/satisfactory score on ACT or Placement Exam). Pre- or corequisite: MATH112 or 151.

**EGNR245 Calculus Applications
for Technology
(2,2) 3**

This course covers engineering applications of differential and integral calculus, including areas, volumes of solids, vector analysis, matrix algebra, polar and cylindrical coordinate systems, partial differentiation, and multiple integrals for typical engineering technology problems. Application and solutions to engineering problems will emphasize and require the use of commercial software packages such as MathCAD and MATLAB. Prerequisite: EGNR140.

**EGNR250 Cooperative Education
(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. Prerequisite: Permission of instructor.

**EGNR260 Engineering
Research Methods
(1,3) 2**

This is an introductory course covering research methods in engineering and engineering-related fields. The student will be involved in faculty-supervised and guided research activities such as assisting with developing experiments, gathering data and analyzing results. Much time will be spent learning about the research project, past experiments and future directions. Can be repeated for credit. Prerequisite: permission of instructor.

**EGNR265 "C" Programming
(3,0) or (3,0,1) 3**

An introductory course in "C" programming with an emphasis on structured programming techniques and on utilizing "C" to solve engineering-related problems. Topics include looping techniques, input and output to files, conditional flow of control, writing and utilizing functions, pointers, 1D and 2D arrays, and data storage. Prerequisites: MATH140 and sophomore standing.

**EGNR310 Advanced Quality
Engineering
(4,0) 4**

Provides an in-depth coverage of classical and modern methods of quality control and engineering. Topics include quality control principles and terms, classical qualitative and quantitative quality control methods, including statistical process control procedures, and robust design methods, as applied to product design and design of experiments. Includes introduction of ISO and Six Sigma standards. Extensive use is made of Excel spreadsheets. Prerequisite: MATH207.

**EGNR340 Advanced Numerical
Methods for Engineers
(0,2) 1**

This is the second course covering numerical methods in engineering. Topics will include numerical methods for the solution of differential equations used to model and solve engineering problems, as well as numerical algorithms for linear algebra problems, Taylor's series, Fourier analysis and other selected applications. Prerequisites: EGNR140. Pre- or Corequisite: MA310 and CSCI121 or EGNR265.

**EGNR346 Probability and Statistics
Laboratory for Engineers
(0,2) 1**

This laboratory accompanies MATH308, a calculus-based introduction to the basic theory of probability and statistics. Topics include methods of data collection, experimental design, interpretation of data and use of a statistical software tool. Pre- or corequisite: MATH308.

**EGNR450 Cooperative Education
Project I
(2,0) 2**

A course in which students work in a supervised engineering capacity (on site) with industry. This is the first of a two-course sequence that can replace the senior year Engineering Design Project II (EGNR495). The focus of this course is the development of the co-op project proposal and the initiation work on the co-op project. Prerequisite: EGNR250 Cooperative Education. Course may not be repeated for credit. Permission of instructor is required.

**EGNR451 Cooperative Education
Project II
(2,0) 2**

A continuation of EGNR450 where students work in a supervised engineering capacity (on site) with industry on a technical project. This is the second of a two-course sequence that can be used as credit for EGNR495, Engineering Design Project I. The focus of the course is the completion and final report of the cooperative education project. Course may be repeated once for credit. Prerequisite: EGNR450 Cooperative Education Project. Permission of instructor is required.

**EGNR460 Engineering Research
Project I
(2,6) 4**

This is a senior-level course in which students are actively involved in a faculty-supervised and guided research project. Students will acquire the skills listed under EGNR491 and develop a research plan for some portion of a project. The plan will be implemented in EGNR461. Specifically, the students will work to develop a proposal of the expected research goals and create a project timeline and budget. The student's faculty advisor and the director of the Lab for Undergraduate Research in Engineering (LURE) must approve the plan. Prerequisites: EG260, permission of instructor on the basis of senior status and expected graduation on or before December of the following calendar year. Students who plan to take EGNR461 must complete both EGNR460 and 461 in the same academic year.

**EGNR461 Engineering Research
Project II
(1,3) 2**

This is a senior-level course in which students are actively involved in a faculty-supervised and guided research project. Students implement their research plan developed in EGNR460 and lead research efforts. Results and finding must be reported in oral and/or written forms to appropriate constituencies outside the LSSU audience. Prerequisites: EGNR460 and permission of instructor. The dropping or failing of EGNR461 will result in the student having to repeat both EGNR460 and 461.

**EGNR490 Research Topics
in Engineering
(1-4,0) 1-4**

Special studies and/or research in engineering for individuals for 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.

**EGNR491 Engineering Design
Project I
(2,3) 3**

This course provides students with the skills necessary for successful completion of their design project. Topics include group dynamics, ethics, timelines, resource allocation, project management and performance evaluations. Skills in oral and written communications, problem conceptualization, creative problem solving and technical presentations are developed. Prerequisites: Permission of instructor on the basis of senior status and expected graduation on or before December of the following calendar year, and one of the following: EGEE320, 370, EGME350 or (EGRS365 and EGMT310). Students who plan to take EGNR495 must complete both EGNR491 and EGNR495 in the same academic year. Coop students must complete EGNR451 prior to enrolling in EGNR491.

EGNR495 Engineering Design Project II

(1,6) 3

A continuation of EGNR491. This course provides students with the skills necessary for successful completion of their design project. Topics include group dynamics, engineering economics, timelines, resource allocation, project management and performance evaluations. Skills in oral and written communications, problem conceptualization, creative problem solving, and technical presentations are developed. Prerequisite: EGNR491. The dropping or failing of EGNR495 will result in the student having to repeat both EGNR491 and 495.

EGNR496 Senior Directed Project

(1,6) 3

This course is designed to allow industrial technology majors the opportunity to implement a project while working collaboratively with engineering and engineering technology students. Students will be expected to use the skills and knowledge from previous course work. Project outcomes should relate to the student's individual areas of study and represent a synthesis of the previous learning under the supervision of a faculty member. Prerequisites: Approval of the department chair, senior status, and expected graduation on or before December of the following calendar year.

ROBOTICS AND CONTROL SYSTEMS

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

EGRS215 Robotics Technology I

(1,2) 2

An introduction and orientation to the field of robotics. Challenges in robotic manufacturing, design and structure of robotic systems, classification of robots, robot geometry, power sources, and robotic control systems are covered in this course. The lab part of the course will provide an overview of robotic applications in industry through videos and hands-on experiences. Applied laboratory topics will cover basic programming concepts and structures in the V+ robotics programming language using Adept and Staubli robots. Prerequisites: MATH102 or equivalent.

EGRS365 Programmable Logic Controllers

(2,3) 3

An introduction to programmable logic controllers (PLC) with an emphasis on programming of the controller and operator interface. Standard PLC devices (bits, timers, counters, etc.) and controller functions dealing with math, compare, moves, program flow, analog input, and high-speed counters will be covered in the course. Written and oral business communications are an integral part of the course. Co- or Prerequisites: EGNR265 or EGEE125 or CSCI121 and sophomore status.

EGRS366 Programmable Logic Controllers

(2,2) 3

An introduction to the use of programmable logic controllers (PLC). Basic components of the PLC 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. This course will only be offered at the regional sites. It is not a communication-intensive course. Prerequisite: electrical fundamentals course.

EGRS380 Robotics Technology II

(2,0) 2

This course will cover topics relative to robotics and robotic systems. Two- and three-dimensional kinematics, end effectors, active and passive collision systems, sensors, feedback devices, robotic safety, and principles of operation of applicable hardware will be studied. Prerequisites: MA140 with C grade or better, and PH221.

EGRS381 Robotics Technology II Lab

(0,3) 1

Laboratory exercises will provide hands-on examples of industrial use of robots. Focus will be on using advanced topics for the Adept and Staubli robots with the V+ programming language. Applications and projects will simulate industrial actual situations as well as emphasize system integration. Prerequisites: EGNR265 and EGRS215. Corequisite: EGRS380.

EGRS382 Introduction to Robotics Programming

(0,3) 1

The laboratory work will provide an introduction to the use and application of an industrial robot. Programming concepts and structures in the V+ programming language as used in Adept and Staubli robots will be studied. Industry-like applications and system integration projects will be assigned. Prerequisite: EGRS380.

EGRS385 Robotics Engineering

(2,3) 3

An introduction to the field of robotics engineering. Topics include classification of robotic manipulators, accuracy and repeatability, wrists and end-effectors, actuators and sensors, homogeneous transformations, Denavit-Hartenberg convention, forward kinematics, inverse kinematics, trajectory planning and an introduction to velocity kinematics. Laboratory exercises will focus on the operation and programming of industrial robots and robotics simulation using industry standard software. Prerequisites: EGNR265 or CSCI105, and MATH251.

EGRS430 Systems Integration and Machine Vision

(3,3) 4

A study of the theory and application of sensors and machine vision in modern manufacturing systems. Topics will include position sensors, encoders, interface electronics, force and torque sensors, LAN, PLC, electrical noise, machine vision, lighting techniques, control software, feature extraction techniques and robot guidance. Prerequisites: MATH152 or EGNR245, EGNR140, EGRS381 or EGNR385, and EGNR265 or CSCI121.

EGRS435 Automated Manufacturing Systems

(3,3) 4

A study and analysis of the components of an automated manufacturing system. Topics include analysis of flow lines, automated assembly systems, MRP, materials requirement planning, production economics and CIM. Course work will include applications of manufacturing systems software including factory simulation. Laboratory work will focus on systems integration, advanced programming of industrial robots, and flow line automation. Prerequisite: EGRS385.

EGRS460 Control Systems

(3,3) 4

An introduction to the analysis and design of linear feedback control systems. The course will include a study of system modeling, block diagrams, system response, stability, steady state error, bode plots and root locus. Laboratory exercises will develop a student's ability to design feedback systems and quantify system performance. Prerequisites: MATH310, EGNR340, EGEM220 and EGEE210.

EGRS461 Design of Control Systems

(3,3) 4

This course builds upon the fundamental control system theory covered in EGRS460 and introduces various control system design techniques. General topics include Bode and root locus design techniques, controllability and observability, optimal control, state space design, robust control and digital control system design. Several classical design techniques such as phase-lead, phase-lag, deadbeat, pole placement and PID design are covered. Prerequisite: EGRS460.

EGRS480 Manufacturing Automation

(3,0) 3

Study of the mathematical modeling of production concepts, analysis of automated flow lines, automated assembly systems, production economics, automated guided vehicles and materials requirement planning. Prerequisites: EGRS380, 381 or 382, and MATH112 or 151 with a grade of C or better.

EGRS481 Manufacturing Automation Lab

(0,3) 1

The first part of the laboratory work will focus on programming Fanuc robots using the Karel programming language. Industry-like applications and system integration projects will be assigned. The second part of the lab work will include the application of WITNESS discrete-event simulation software package to study and analyze manufacturing systems. Prerequisites: EGNR265 or CSCI121 either with a grade of C or better. Pre- or corequisite: EGRS480.

EGRS482 Automation and Simulation Lab

(0,3) 1

Laboratory work in automation will focus on programming Fanuc robots using the Karel programming language. Industry-like applications and system integration projects will be assigned. Lab work in simulation will include the introduction to a discrete-event manufacturing simulation software package. Several manufacturing systems will be modeled, verified, validated and optimized using the simulation software package. Prerequisite: EGRS480.

EMERGENCY MEDICAL SERVICES

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

EMED181 First Aid (0,5,1,5) 1

Basic course in first aid. Theoretical and practical experience in university laboratory.

EMED189 Medical First Responder (2,3) 3

This course is designed to teach students the principles of basic life support and emergency care. Topics include patient assessment and handling, airway maintenance, cardiopulmonary resuscitation, bandaging, splinting and spinal immobilization. Management of common environmental and medical emergencies will also be addressed. Upon successful completion of the course, students will be eligible to apply for a Michigan Medical First Responder license.

EMED190 Prehospital Emergency Care and Crisis Intervention I (3,3) 4

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.

EMED191 Prehospital Emergency Care and Crisis Intervention II (2,6) 4

Simulated practice with some in-hospital observation. Emphasis on laboratory practice of skills needed for functions of an EMT-A. Prerequisite: EMED190.

EMED211 Emergency Pharmacology I (2,0) 2

Introduction to emergency pharmacology including sources of drugs, drug laws and regulation, routes of administration, pharmacokinetics and pharmacodynamics, dosage calculations and the metric system. Emphasis will be placed on drugs used in the management of cardiovascular emergencies. Prerequisite: math competency or MATH103, and corequisite EMED251.

EMED212 Emergency Pharmacology II (2,0) 2

Continuation of HLTH211 with an overview of emergency drugs frequently used in the prehospital management of respiratory, endocrine, toxicological, obstetrical and other prehospital emergencies. Administration procedures and dosages for adult and pediatric patients will be covered. Prerequisite: EMED211 with a B- or above.

EMED251 Advanced Emergency Care I (4,0) 4

Study of prehospital emergencies geared toward rapid intervention and patient stabilization. Introduction to the pre-hospital environment and preparatory information will be covered including medical-legal issues, airway management, parenteral therapy and comprehensive patient assessment. Management of traumatic injury and multiple casualty incidents will be addressed. Prerequisite: admission to Paramedic Technology Program.

EMED252 Advanced Emergency Care II (4,0) 4

Continuation of EMED251 addressing treatment modalities for environmental, medical, obstetrical and behavioral emergencies in the adult and pediatric patient. Prerequisite: EMED251 with a B- or above.

EMED261 Emergency Cardiology I (2,0) 2

Introduction to basic cardiac monitoring and dysrhythmia recognition. Review of the anatomy and physiology of the cardiovascular system, principles of electrophysiology, EKG interpretation and dysrhythmia management will be covered. Sinoatrial, junctional and atrial dysrhythmias will be addressed. Corequisite: EMED251.

EMED262 Emergency Cardiology II (2,0) 2

Continuation of EMED261 with emphasis directed at identification and management of life-threatening dysrhythmias including ventricular dysrhythmias and heart blocks. Coronary artery disease, myocardial infarction and other cardiovascular emergencies will be addressed, and the course will conclude with ACLS certification. Prerequisite: EMED261 with a B- or above.

EMED271 Prehospital Emergency Pediatrics (2,0) 2

This course will prepare the Emergency Paramedic to effectively assess and manage the pediatric patient in the emergency setting. Program material will include differentiation between adult and pediatric anatomy and physiology, assessment of the neonatal and pediatric patient, and management of common medical and traumatic conditions experienced by the pediatric patient. Special emphasis will be placed on topic areas including resuscitation skills, pediatric pharmacology, and the special needs of the patient.

EMED284 Advanced Skills and Situations I (1,6) 3

Advanced skills and procedures discussed in Advanced Emergency Care will be demonstrated and practiced in a laboratory setting. Skills covered will include advanced airway management, parenteral therapy, cardiac monitoring and advanced patient assessment. Simulated patient scenarios will be designed to allow the student to practice these advanced skills in a realistic patient setting. Emphasis will be placed upon strengthening new skills and providing critical thinking opportunities which allow for the integration of theory with practical applications. Prerequisite: admission to the Paramedic Technology Program and corequisite EMED251.

EMED285 Advanced Skills and Situations II (1,6) 3

Continuation of HLTH284 with an emphasis placed on ACLS and PALS procedures and algorithms. Instructor and peer evaluation will enhance learning, and working in groups will promote the concepts of teamwork and individual leadership. Prerequisite: EMED284 with a B- or above. Corequisite: EMED252.

EMED286 Paramedic Operations (1,3) 2

This course will prepare the Emergency Paramedic to effectively handle unique situations which may be encountered in the prehospital setting that require highly specialized training. Program material will include managing multiple casualty situations, Medical Incident Command, hazardous materials incidents, rescue awareness and operations and crime scene awareness. Special emphasis will be placed on rescuer safety. Practical skills will include vehicular entry and disentanglement, and basic rescue operations.

EMED297 Paramedic Clinical I (0,12) 2

Clinical rotations in the hospital emergency department, surgical suite, outpatient surgery and with local EMS agencies designed to provide the student with hands-on practical experience of patient care. Corequisite: EMED251 and permission of the instructor.

EMED298 Paramedic Clinical II (0,12) 2

Clinical rotations in the hospital emergency department, intensive care unit, obstetrical unit, pediatrics unit and local EMS agencies will provide the student with a continuation of clinical exposure. Additional clinical experience in other areas may be included as the opportunity permits. Prerequisite: EMED297 with a B- or above and concurrent with EMED252.

EMED299 Paramedic Field Internship (0,21) 4

This course is a field internship designed to prepare the student to function confidently in the role of the Emergency Paramedic in the prehospital setting, upon completion of the didactic, practical and clinical components of the Paramedic Technology Program. It will also provide the student with an opportunity to develop team leadership skills, and improve existing knowledge and practical skills. Emphasis will be placed on developing critical thinking skills and independent leadership ability.

EMED301 National Registry Certification Preparation (2,0) 2

This course is designed to prepare the Paramedic Student to challenge the National Registry Paramedic Certification Examination upon completion of the didactic, practical and clinical components of the Paramedic Technology Program. It will provide the student with an opportunity to thoroughly review key information in the 8 modules of the National Standard Paramedic Curriculum. Emphasis will also be placed on improving the student's test-taking skills.

ENGLISH

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

ENGL091 Preparation for College Reading and Writing

(3,0) 3

This course focuses on reading and writing by having students take part in a rigorous program of reading that is coordinated with their writing assignments. By reading, and reflecting upon that reading through writing, students are introduced to the kinds of inquiry, analysis, and reporting that are basic to college-level study. A grade of C or higher is required to pass the course. Credit in this course does not apply toward graduation. All students whose ACT scores do not place them in ENGL110 must receive credit for ENGL091 before taking ENGL110.

ENGL110 First-Year Composition I

(3,0) 3

ENGL110 provides students with an introduction to the discipline of writing through an exploration of their own writing processes and products. Emphasis is placed on students learning to think critically about their own writing in order to address issues of coherence, grammar, mechanics, organization, clarity and content. Other material covered includes the role of literacy in society, the ways in which readers engage text, and the role of writing at the college level. Prerequisites: English ACT score of 18, and Reading ACT score of 19 (or equivalent) or a C or higher in ENGL091 and SERV091.

ENGL111 First-Year Composition II

(3,0) 3

First-Year Composition II prepares students for the complex demands of academic literacy and research. These require students to be able to critically observe personal and public knowledge; ask questions of reading and research; formulate hypotheses; design and conduct research projects, both in the library and in the field; and identify further avenues of inquiry. To help students develop these abilities, the course also teaches students the basic skills of analysis, interpretation, critical thinking and documentation. Required course work includes completion of an extended research project. Prerequisite: a grade of C or higher in ENGL110.

ENGL180 Introduction to Literary Studies

(3,0) 3

This course introduces students to the theory and methodology of literary study, focusing on three questions: What is a literary text? How do we read a literary text? How do we write about a literary text? Addressing these questions requires students to examine the social and cultural contexts of literature and its aesthetic, rhetorical and ideological aspects. These considerations will help students judge literary value and examine their own literary assumptions. Requires one research project and critical essays using MLA style. Prerequisite: ENGL110.

ENGL221 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: ENGL111.

ENGL222 English Grammar

(3,0) 3

Introduction to the basic Standard English grammar, its vocabulary and its principles as these rules apply to the structure of the sentence and the production of the meaning.

ENGL231 American Literature I

(3,0) 3

This course is a chronological study of American literature from the colonial writers through the Romantic period, ending with the Civil War. Prerequisite: ENGL180.

ENGL232 American Literature II

(3,0) 3

This course is 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: ENGL180.

ENGL233 English Literature I

(3,0) 3

Students will read and discuss selected works from the Old English period to the beginning of the eighteenth century. Emphasis will be placed on major writers and works, evaluated in their historical context. Prerequisite: ENGL180.

ENGL234 English Literature II

(3,0) 3

Students will read and discuss selected works from the eighteenth century to the twentieth century. Emphasis will be placed on major writers and works, evaluated in their historical context. Prerequisite: ENGL180.

ENGL235 Survey of Native Literature of North America

(3,0) 3

Students will examine various types of Native American literatures, including traditional stories, non-fiction, fiction and poetry from authors of numerous different nations. A variety of themes, including Native American identity and the role of culture in literature, will be covered. Corequisite: ENGL111 (also listed as NATV235).

ENGL236 Literature and Culture

(3,0) 3

Students will examine English-language texts from a variety of cultures, including American minorities and other underrepresented cultures. Students will observe the way in which culture is presented in the texts and how culture can help to shape the texts. Corequisite ENGL111.

ENGL306 Technical Writing

(3,0) 3

Technical writing is designed to introduce students to the theory and practice of technical communication. This course incorporates a broad approach, addressing the issues of critical thinking, collaboration, ethics, and the persuasive presentation of technical information in both written documents and oral presentations. The specific documents that will be covered include memos, formal business letters, technical descriptions, short and analytic reports, proposals and formal oral presentations. The central focus of the course will be the completion of a discipline-specific final project, in which the technical communication skills learned during the course will be enhanced. A major goal of this project, and the class, is to introduce students to the demands of their chosen professions, and thereby prepare them for the kinds of disciplined intellectual and practical work they will be required to complete. Prerequisite: ENGL111.

ENGL310 Advanced Writing

(3,0) 3

An exploration of the theory and practice of writing as it relates to the production of text, ENGL310 places emphasis on developing a conscious approach to writing. The course is designed to assist students in gaining control over the choices that create a coherent, precise, cohesive and professional text. This course may be taught on a tutorial basis. Prerequisites: a grade of C or higher in ENGL111 and junior standing.

ENGL320 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 writing 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.

ENGL321 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: ENGL110.

**ENGL335 Children's Literature
in the Classroom**

(3,0) 3

This course focuses on understanding the genres of children's literature for ages birth through adolescence and applying this knowledge, using various teaching strategies, to create a literature-based classroom for grades kindergarten through middle school. Required for elementary teacher non-English majors and an elective for elementary teacher English majors. Co-/prerequisites: ENGL111 and COMM101.

ENGL340 Genre Studies

(3,0) 3

This course focuses on an understanding of the formal characteristics, critical interpretation, and the history and development of a single literary genre, including but not limited to the novel, the short story, drama or poetry. Pre-/corequisites: ENGL231/2 or ENGL233/4. Variable topics: may be repeated twice for credit.

ENGL401 Medieval Literature

(3,0) 3

This course focuses on an understanding of the formal characteristics, critical interpretation, and the history and development of Medieval English literature between the Anglo-Saxon period and the 15th century. Prerequisite: ENGL233.

ENGL402 Renaissance Literature

(3,0) 3

This course focuses on an understanding of the formal characteristics, critical interpretation, and the history and development of Renaissance English literature between the 16th and 17th centuries. Prerequisite: ENGL233.

ENGL403 Restoration Literature

(3,0) 3

This course focuses on an understanding of the formal characteristics, critical interpretation, and the history and development of English literature and early American literature between the late 17th and 18th centuries. Prerequisites: ENGL231 and 233.

ENGL405 Romantic Literature

(3,0) 3

This course focuses on an understanding of the formal characteristics, critical interpretation, and the history and development of English and American literature in the period between 1780 and 1860. Prerequisites: ENGL231 and 234.

ENGL406 19th Century Literature

(3,0) 3

This course focuses on an understanding of the formal characteristics, critical interpretation, and the history and development of English and American literature in the period between 1860 and 1900. Prerequisites: ENGL232 and 234.

ENGL407 20th Century Literature

(3,0) 3

This course focuses on an understanding of the formal characteristics, critical interpretation, and the history and development of English and American literature in the 20th century. Prerequisites: ENGL232 and 234.

**ENGL410 The Children's
Literary Tradition**

(3,0) 3

Surveys the history of children's literature and its relationship to the development of cultural and societal conceptions of childhood. Emphasis is on critical reading and in-depth analysis of the various forms of this literary tradition. Prerequisite: ENGL231-232 or ENGL233-234, or permission of instructor.

**ENGL420 History of
the English Language**

(3,0) 3

Origin and development of the English language, including its relationship to other Indo-European languages, the history and structure of Old and Middle English, and the rise of modern English. Prerequisites: ENGL222, 233, 234.

**ENGL421 History of
Literary Criticism**

(3,0) 3

An investigation of the history of critical theory to include classicism, neoclassicism, romanticism, the New Critics and contemporary critical trends. Prerequisite: ENGL233-234.

**ENGL433 Topics in Literature
and Composition**

(3,0) 3

Study of various specialized topics in literature and composition not offered as part of the core classes. Topics may include studies of specific authors, theorists, and movements in literature and composition. Prerequisite: junior/senior standing. May be taken twice for credit (total of six credits).

ENGL450 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. Prerequisite: Permission of instructor.

ENGL490 Senior Thesis

(3,0) 3

Senior thesis is a sustained exploration of a literary, composition or language topic. Students will undertake an independent research project and develop it into a major paper. Prerequisites: English major and senior standing.

**ENVIRONMENTAL
SCIENCE**

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

**EVRN126 Interpretation of Maps and
Aerial Photography**

(1, 3) 2

Introduction to use and interpretation of 1:24,000 USGS topographic maps. Topics covered include: determination and calculation of scale, map coordinate systems, projections, and locating features using the General Land Office Survey System. Local landforms will be interpreted from aerial photography at a variety of scales and correlated with map interpretations. Land use and cover will be determined using both black and white and color infrared photography. Pre- or corequisite: MATH102 or higher.

**EVRN131 Introduction to GIS & GPS
(1,3) 2**

Basic theory and operation of GPS receivers, differential correction, spatial database design, coordinate system selection and conversions and field data collection. Introduction to geographic systems. GIS topics include data types and acquisition, SQL queries, basic geoprocessing, and layout and design. Prerequisite: EVRN126 or equivalent.

**EVRN231 Intermediate GIS
(0,4) 2**

An intermediate level GIS course that builds on the skills developed in EVRN131. Emphasis is placed on map overlay analysis, georeferencing, geocoding, and raster analysis using GIS and the Spatial Analyst extension. Integration and collection of raster and vector data into analyses is emphasized through multi-week projects. Prerequisite: EVRN131 or equivalent.

**EVRN285 Principles
of Epidemiology**

(3,0) 3

Principles, purpose and methods of descriptive and analytic epidemiology with emphasis on environmental health. Prerequisite: MATH207.

**EVRN290 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" (*incomplete*) 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.

**EVRN311 Environmental Law
(3,0) 3 alternate years**

Study of the fundamental concepts of environmental law and ethics. Course includes a survey of the field of environmental ethics and a discussion of ethical issues, a review of the basic legal systems and research techniques, state and federal environmental statutes and codes of conduct for environmental professionals. Extensive use of case studies related to application of environmental law are used to illustrate ethical dilemmas and the approaches for resolving them. Prerequisite: junior standing.

**EVRN313 Solid and Hazardous Waste
(3,0) 3 alternate years**

Identification and classification of solid and hazardous wastes, including discussion of storage and processing, collection and transportation, resource recovery and recycling and ultimate disposal. Topics on radiation, decay, health effects and sources of hazardous materials will also be covered. Prerequisite: MATH112 or equivalent.

EVNR325 Geospatial Analysis III
(1,6) 3 *alternate years*

A project-centered course incorporating advanced GIS tools and data sources for geospatial analysis. Course topics include computer systems analysis and design, project management, and the integration of information from multiple sources for the creation and analysis of georeferenced data. Project required, course may be repeated once with permission of instructor. Prerequisites: EVNR227 and MATH207.

EVNR341 Environmental Chemistry I: Water and Water Pollution Control

(3,3) 4 *alternate years*

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: CHEM220 or CHEM225/226, CHEM231 and NSCI103. Also listed as CHEM341.

EVNR345 Advanced Spatial Analysis and Statistics

(3,3) 4

Spatial statistics differ from traditional statistics in that space and spatial relationships are an integral and implicit component of analysis. The emphasis in this course is analyzing patterns, mapping clusters and identifying geographics distributions. Specific topics include point pattern analysis, spatial autocorrelation, spatial regression and kriging. Special emphasis will be placed on using the spatial analyst and 3-D analyst extensions tools for ArcGIS. Prerequisites: EVNR231 and an approved course in statistics.

EVNR355 GIS Programming: VBA and Applications

(3,3) 4

This course teaches the student the fundamentals of object oriented programming and how to apply it to customizing GIS software to extend its functionality and to automate repetitive tasks. The emphasis will be on Visual Basic for Applications and ArcObjects. Prerequisites: CSCI105 and EVNR231.

EVNR395 Junior Seminar
(0,2) 1

Literature searching, scientific writing, and oral presentation of scientific data. Students will be expected to listen to presentation of peers enrolled in EVNR/CHEM499 and develop a topic for their senior thesis. Prerequisite: Junior standing. Note: Also listed as CHEM395.

EVNR425 Environmental Systems Analysis

(2,3) 3 *alternate years*

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: CHEM341 or 342.

EVNR450 Laboratory Apprentice
(0,3) per credit 1-2 *credit/no credit*

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 department chair. Credits may be used as EVNR electives.

EVNR465 Geographic Databases and Web-based GIS

(3,3) 4

This course introduces database creation and management systems for GIS and the implementation of interactive map services on the Web. Projects are used to develop the student's skills in Web page design, programming, security and Web page management. Topics include database design, SQL, ArcIMS, mobile GIS, and Map Objects. Emphasis is placed on serving maps using ArcIMS software. Prerequisites: EVNR231 and CSCI211.

EVNR490 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" (*incomplete*) grades on their transcript. Independent study courses may be repeated for a maximum of eight credits. Additional information is available at the College of Natural and Mathematical Sciences office.

EVNR495 Senior Project

(0, 3-9) 1-3

This is a variable credit practicum course in which students, under the guidance of a faculty mentor, conduct a scholarly project mutually agreed upon by the student and his/her faculty mentor. Credit for the course is based upon the scope of the scholarly project. This course may not be repeated for credit. Prerequisites: EVNR395 (also listed as CHEM395), CHEM231, and CHEM226 or 220.

EVNR499 Senior Seminar

(1,0) 1

Required for seniors majoring in chemistry/environmental science. Students will present a manuscript describing the results of their scholarly research and will be required to give poster and oral presentations to the University community. Pre- or corequisite: EVNR395. Note: Also listed as CHEM499.

EXERCISE SCIENCE

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

EXER105 Program Development and Leadership

(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. EXER140 or RECS101. Also listed as RECS105.

EXER140 Health and Fitness
(3,0) 3

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.

EXER141 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.

EXER230 Athletic Injury and Illness Prevention

(3,0) 3

This is an introductory class to the field of athletic training. It will provide an overview for the student as to what an athletic trainer does. Topics to be included will be a history of athletic training, developing conditioning programs, nutrition, protective equipment in sports, the healing process, emergency plans, injury assessment, psychology of injury, environmental conditions and the use of drugs in sports. Prerequisites: BIOL121 and EXER141.

EXER232 Athletic Injury and Illness Recognition and Evaluation

(3,0) 3

This class will be a continuation of EXER230. After a general knowledge base is established in EXER230, EXER232 will elaborate on those concepts and extend them to the various extremities of the body as well as the spine and head. Prerequisites: EXER230 and BIOL122.

EXER234 Preventative Taping Techniques

(0,2) 1

To present current and comprehensive taping and wrapping techniques used in athletic training. Prerequisite: EXER232.

EXER248 Psychology of Sport and Performance and Coaching

(3,0)

3

A review of the psychological aspects related to success in sport and athletics. Emphasis will be placed on presenting techniques for improving individual and team athletic performance, as well as consideration of the psychological aspects of coaching. Specific topics will include personality and sport, attention/anxiety/arousal regulation, motivational techniques, the aggression-performance relationship, and the development of team cohesion and leadership.

EXER262 Exercise Physiology I

(3,0)

3

Introduction to biological energy systems and support systems involved in physical activity and exercise. Emphasis on energy system recruitment dynamics, acute and chronic adaptations to training, and applications to programs employing physically based activities. Prerequisites: BIOL121 and CHEM104 or 115.

EXER265 Essentials of Strength Training and Conditioning

(3,0)

3

This course will enable the student to develop knowledge and expertise in the components of sport-related fitness. Specifically, strength training, cardiovascular endurance, flexibility, reaction time, speed and agility will be explored in both traditional and non-traditional sports. Emphasis will be placed on the implementation and measurement of the above sport-related fitness components and the design of a strength training and conditioning program for the purpose of enhancing athletic performance. Prerequisites: EXER140 and 141. Corequisite: EXER262.

EXER268 Fitness Evaluation I : Field Tests

(1,2)

2

Provides theoretical background and measurement concepts specific to field tests employed in exercise science settings. Emphasis on skill, development and interpretation of results relative to normative data. Prerequisites: BIOL121 and EXER140.

EXER275 Nutrition for Sport and Exercise Performance

(2,0)

2

Extends the basic principles of nutrition presented in EXER262 and explicitly details the role of the major nutrients in their application to wellness and fitness settings, as well as athletic performance. Specifically addresses the interaction of diet and exercise in modifying the condition of the individuals with metabolic dysfunction (diabetes, obesity) or compromised cardiovascular health (hypertension, coronary heart disease). Also examines the special nutritional needs of athletes and the effectiveness of ergogenic aids in enhancing sport performance. Prerequisites: BIOL121 and EXER262.

EXER295 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 four credits. Prerequisite: Permission of instructor.

EXER301 Athletic Training Clinical Experience I

(0,4)

2

This course requires athletic training students to acquire, practice and demonstrate competency in basic clinical skills necessary to provide healthcare to a physically active population in a variety of clinical settings. Prerequisites: junior status and admission to the Athletic Training Education Program.

EXER302 Athletic Training Clinical Experience II

(0,4)

2

In this course, athletic training students are required to continue acquiring, practicing and demonstrating competency of the basic clinical skills necessary to provide healthcare to a physically active population in a variety of clinical settings. Prerequisites: EXER301 with a grade of C or better.

EXER340 Therapeutic Modalities in Athletic Training

(2,2)

3

This course will introduce the student to the theory and application of physical medicine devices commonly used in athletic training and sports medicine settings. Specific attention will be placed on the use of cryotherapy, thermotherapy, electrotherapy, ultrasound, traction, intermittent compression, and therapeutic massage in caring for physical injuries and illness. This course will focus on determining the most effective therapeutic modality for a given situation and the correct application of the selected therapeutic modality. This course is designed to present the knowledge, skills and values an entry-level certified athletic trainer must possess to plan, implement, document and assess the efficacy of therapeutic modalities in the care of physical injuries and illnesses. Prerequisites: EXER232 and BIOL122.

EXER344 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. Prerequisite: EXER141.

EXER346 Therapeutic Exercise in Athletic Training

(2,2)

3

EXER346 will introduce the student to the theory and application of commonly used rehabilitative exercises in the field of athletic training. Students will be introduced to the "10 Goals of Rehabilitation," and will then study the relationship that therapeutic exercise plays in the attainment of each goal. Students will then develop a comprehensive rehabilitation plan that will enable a physically active person to return to activity as safely as possible. Students will be exposed to current surgical techniques and the rehabilitation that is involved. Prerequisite: ES262.

EXER348 Fitness Evaluation II Laboratory Procedures

(2,2)

3

Provides theoretical background and technical aspects specific to laboratory procedures employed in clinical exercise science settings. Emphasis on developing skills with instrumentation for assessing cardiac activity, respiratory functioning, metabolic dynamics, anthropometer, and administering exercise protocols for diseased populations. Prerequisites: EXER268 and 262.

EXER349 Orthopedic 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 orthopedic education. Prerequisites: EXER230 and 232.

EXER358 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: MATH207 and EXER262.

EXER362 Exercise Physiology II

(3,0)

3

Extends the study of the physiological aspects of exercise by examining advanced topic areas. Specific topics covered are the endocrine system and exercise, effects of exercise on the immune system, exercise and altitude, exercise and thermal stress, as well as exercise physiology concerns of various clinical populations. Prerequisites: BIOL122, CHEM115 and EXER262.

EXER390 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 and instructor permission. May be repeated for a total of three credits.

EXER401 Athletic Training Clinical Experience III

(0,4)

2

In this course, athletic training students continue to demonstrate an integration of risk management skills, assessment skills, and therapeutic rehabilitation skills into the health care of a physically active population in a variety of clinical settings. Prerequisite: EXER302 with a grade of C or better.

EXER402 Athletic Training Clinical Experience IV

(0,4)

2

In this course, athletic training students continue to demonstrate an integration of risk management skills, assessment skills, therapeutic rehabilitation skills and administrative skills into the healthcare of a physically active population in a variety of clinical settings. Prerequisite: EXER401 with a grade of C or better.

EXER428 Psychological Aspects of Exercise and Athletic Rehabilitation

(3,0) 3

The acute and chronic psychological consequences that occur as a result of involvement in physically based activities will be examined as they apply to recreational exercisers and sport enthusiasts, as well as individuals with health problems. Emphasis will be placed on developing an understanding of the theoretical background for specific topic areas and investigating the support for these theories by examining original research reports on the effects of exercise and rehabilitation on adherence, chronic pain, anxiety, depression and sport injury. Prerequisites: EXER262 and 358.

EXER434 Neurological Basics of Motor Learning

(3,0) 3

An overview of how the neurological system integrates external stimuli and internal processes in the effective control of movement. Introduced are control systems, attention processes, memory, and the role of feedback and practice on motor learning. Prerequisites: BIOL122, EXER344 and 362.

EXER440 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.

EXER442 Electrocardiography in Exercise Science

(2,0) 2

Examines electrophysiological basis of ECG, cardiac anatomy and metabolism responses to rest and exercise. Prerequisite: EXER262 with a C grade or better.

EXER444 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.

EXER450 Philosophy of Human Performance and Leisure

(3,0) 3

A study of the origins and development of leisure behavior, sport, athletics and personal fitness across cultures. Ethical issues such as violence, opportunity, exploitation, role models and equity will be examined. Prerequisites: EXER262 or RECS101 and junior status.

EXER452 Allied Health Administration

(3,0) 3

This course is intended to enhance the administrative ability of allied health professionals. Students will learn to apply current management theories to administrative problems they may face. This will allow entry level allied health professionals the ability to craft creative solutions to administrative problems. Content in this course includes management strategies for the following: Program offerings, finances, human resources, facilities, information, insurance, and legal considerations. Prerequisites: EXER230 and junior standing.

EXER481 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.

EXER492 Internship

6

Comprehensive practical application of students formal academic preparation. Prerequisite: Junior status and instructor permission.

EXER496 Selected Research Topics

(1-3,0) 1-3

Student carries out approved project(s) of his/her own initiative. Prerequisite: Junior standing and instructor permission.

FINANCE

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

FINC242 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: MATH086 or equivalent/satisfactory score on ACT or Placement Exam.

FINC245 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 FINC341 may not enroll in this course. Prerequisites: ACTG132, 230, or OFFC119, and MATH086 or equivalent/satisfactory score on ACT or Placement Exam.

FINC248 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: MATH086 or equivalent/satisfactory score on ACT or Placement Exam.

FINC341 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: ACTG133, BUSN211, and pre-business core (PBC).

FINC443 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 appropriate policy selection. Prerequisites: BUSN350 and MATH086 or equivalent/satisfactory score on ACT or Placement Exam, and pre-business core (PBC).

FINC446 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. Prerequisites: FINC341 and pre-business core (PBC).

FINC448 Investment Strategy

(4,0) 4

A study of investment media and securities markets, risk and return analysis, valuation theory, portfolio construction and investment mechanics. Prerequisites: FINC341 and pre-business core (PBC).

FINE ARTS

FINE405 Independent Project

(3,0) 3

Under the direction of an appropriate supervisor, the fine arts studies student will prepare and create a project within the scope of the student's principal continuations. The project will normally integrate or synthesize aspects of the fine arts; however, its precise nature will be a matter for discussion and approval by the faculty supervisor. The project will be concluded by an appropriate presentation and written report. Prerequisites: fine arts studies major and senior standing. Must be taken both fall and spring semesters for a total of six credits.

FIRE SCIENCE

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

FIRE101 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 responders' safety and hazardous material recognition.

FIRE102 Wildland and Rural Fire Control

(3,0) 3

Class will provide the theory and practical instruction necessary to manage and control wildland fires. Prevention, back burns, grid references, fuels, firefighting methods and tactics are covered in the course. Select students may earn their "red card" which provides United States Forest Service certification.

FIRE111 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.

FIRE197 Physical Fitness for Public Safety
(0,3) 1
This course provides physical fitness and skills necessary for the law enforcement and fire science certification students. Fire science students take the course semester before FIRE220.

FIRE201 Fire Protection Construction Concepts
(3,0) 3
Impact of building construction concepts and methods on firefighting tactics and strategy, decision making and safety. Presentation of the ramifications of hostile fire on construction and building materials.

FIRE204 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: MATH086 or equivalent/satisfactory score on ACT or placement exam and FIRE101 or 102, or BIOL102, 140 or 286 as a pre- or corequisite.

FIRE206 Fire Protection Systems, Equipment and Industrial Fire Protection
(3,0) 3
Use and water supply needs of sprinkler and stand pipe systems and devices, fixed detection and control 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. Examination of fire and lifestyle hazards in business and industry. Emphasis on managing fire prevention and training private fire brigades. Prerequisites: FIRE101, 111, 204 and MATH086 or equivalent/satisfactory score on ACT or placement exam.

FIRE211 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. Prerequisite: Either FIRE101 or 102 and 204 as a pre- or corequisite.

FIRE220 Fire Science Certification
(3,3) 4
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. Prerequisites: FIRE101, 111, 197 and 204. Corequisites: FIRE205 and 211. Completion of specialized medical examination.

FIRE301 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. Prerequisites: Pre-fire science core (PFS), FIRE111, 205 and junior standing.

FIRE312 Hazardous Materials Management
(3,3) 4
Covers requirements of federal law dealing with hazardous incidents, waste management with reference to OSHA, NIOSH, NFPA, and ACGIH standards. This class can certify select students at the level of general hazard awareness, emergency response operations, and hazardous waste worker. Prerequisites: Pre-fire science core (PFS), FIRE111 or CHEM116 and junior standing.

FIRE315 Company Level Supervision and Management
(3,0) 3
This course is intended to provide a comprehensive overview of supervision and administration skills necessary to function as a company officer, which would include but not be limited to planning, budgeting, time management, training, emergency incident command, and facility maintenance and care. Pre- or corequisites: Pre-fire science core (PFS), FIRE101, 111, 204, 206 and 211.

FIRE325 Homeland Security and Emergency Services
(3,0) 3
Investigates the impact of the federal, homeland security apparatus on emergency response organizations at the state and local level. Includes a historical review of "homeland security" measures beginning in WWI and through WWII and the Korean War. Especially reviews the security situation during the Cold War. The course deals with the federal agencies usually not associated with homeland security, such as DEA, ATF, the military departments, FAA, CDC, the National Guard Bureau, and the DOD. Prerequisites: Pre-fire science core (PFS) and junior standing. *Also listed as CJUS325.*

FIRE401 Senior Seminar
(3,0) 3
Seminar and independent study course with individual student guidance by faculty on selected research topics in fire science. Prerequisites: Pre-fire science core (PFS) and senior standing.

FIRE402 Fire Service and the Law
(3,0) 3
Capstone course. Introduces the judicial system in which the fire service operates. Covers civil action, liability, labor, prevention, safety (OSHA), and environmental law. Prerequisites: Pre-fire science core (PFS) and senior level standing.

FIRE403 Fire Science Internship
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. Prerequisites: Pre-fire science core (PFS), FIRE220 and senior standing.

FIRE490 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. May be repeated up to six credits. Prerequisites: Pre-fire science core (PFS) and permission of instructor.

FRENCH

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

FREN151 First Year French I
(4,0) 4
An introductory course designed to develop the four basic language skills of understanding, reading, speaking and writing, as well as the fundamentals of grammar. A conversational and cultural approach based on everyday life situations from the Francophone world. Basic information in English with progressive emphasis put on the use of French in class.

FREN152 First Year French II
(4,0) 4
Continuation of FREN151 with further acquisition of syntax, grammar and culture with increased emphasis on speaking, reading and writing. As course progresses and the use of French becomes almost dominant in class, basic conversation and composition practice based on increased cultural awareness becomes more elaborate and refined. Prerequisite: FREN151 or equivalent.

FREN251 Second Year French I
(4,0) 4
A course designed to help students further and complete their mastery of basic spoken and written French. Review and completion of grammar information. Systemic conversation practice based on more-advanced readings dealing with current social issues within a broad historical and cultural context, as well as a more-elaborate practice of composition writing. Course largely taught in French. Prerequisite: FREN152 or equivalent.

FREN252 Second Year French II
(4,0) 4

Continuation of FREN251 with further emphasis on oral presentations, general conversation practice and writing of compositions, essays, reports and letters. Development of a more mature use of syntax, grammar and idioms within a broader cultural context which includes a first approach to French literature. Initiation to the basic principles of translation and interpretation. Course almost completely taught in French. Prerequisite: FREN251 or equivalent.

FREN351 Advanced Conversation and Composition I
(3,0) 3

Extensive reading, debating and writing related to contemporary issues within the Francophone world as they are expressed in books, films, newspapers and television. Further practice of translation and interpretation. Preparation to the examination for the **DEL**F (Dilome Elementaire de Langue Francaise) of the French Ministry of Education. Prerequisite: FREN252 or equivalent.

FREN352 Advanced Conversation and Composition II
(3,0) 3

Continuation of FREN351 and systemic practice to the examination for the **DEL**F. Prerequisite: FREN351 or equivalent.

FREN353 Business French I
(3,0) 3

An initiation into the language skills for use in business situations in a French-speaking environment. A conversational approach is used with systematic oral and written practice from authentic documents. Preparation to the examination leading to the **Certificat Pratique** from the Chamber of Commerce of Paris. May be taken concurrently with FREN351. Prerequisite: FREN252 or equivalent.

FREN354 Business French II
(3,0) 3

Continuation of FREN353. Aims to bring students to a level of proficiency in French business communication that would enable them to function in an internship situation. Visits to French-speaking companies. Further preparation to the examination leading to the **Certificat Pratique** from the Chamber of Commerce of Paris. May be taken concurrently with FREN352. Prerequisite: FREN353 or equivalent.

FREN355 Survey of French Literature I
(3,0) 3

A chronological study 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 evolution of language and literature. Text analysis and discussion. May be taken concurrently with FR351. Prerequisite: FR252 or equivalent.

FREN356 Survey of French Literature II
(3,0) 3

Continuation of FR355. Study of major works of French literature of the 19th and 20th centuries. Text analysis and discussion. May be taken concurrently with FR352. Prerequisite: FREN252 or equivalent.

FREN360 French Cultural Perspectives
(4,0) 4

This course takes place in France as students participate in a study tour with their instructor. They discover Paris, its monuments, art galleries, museums and libraries; visit ancient Roman vestiges, cathedrals of the Middle Ages and chateaux of the Renaissance, as well as actively participate in French everyday life. However, alternate on-campus version of this course on contemporary French society and culture is offered to students who do not wish to travel to France. Extensive literary, historical and audio-visual documentation provide material for stimulation analysis and discussion of typical French value orientations, family structures, educational, and cultural institutions. Assignments in French or English. Offered summers only. No prerequisite.

FREN370 The Francophone World I
(4,0) 4

This course conducted in English is designed to provide information and help understand the people of French-speaking Africa, French West Indies, South-East Asia and Polynesian Islands. It consists in a study of colonial and post-colonial history, culture and society in these different parts of the world. Participation of native guest speakers with extensive use of audio-visual materials will richly enhance participation and discussion. Prerequisite: junior standing.

FREN460 Directed Academic and Cultural Immersion
(6,1) 6

This multi-faceted course, which takes place in a French-speaking environment, allows students to reach oral and written fluency in language as well as advanced knowledge in a broad variety of areas directly related to French life and civilization. Upon completion of a specific number of courses chosen in consultation with their advisor, students will be granted upper division credits towards completion of their major requirements. Prerequisite: completion of two 300-level French courses at LSSU.

FREN490 Independent Study in French
(1-4)

Independent research or directed study under the supervision of a faculty member. May be repeated for a total of eight credits. Prerequisite: permission of instructor.

GEOGRAPHY

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

GEOG106 Physical Geography: Landforms
(3,2) 4

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 GEOG106 and NSCI107 not permitted.

GEOG108 Physical Geography: Meteorology & Climatology
(3,2) 4

Introduction to earth-sun relationships, maps and elementary principles of atmospheric science. Natural (physical) science credit given. Prerequisite: MATH086 or equivalent/satisfactory score on ACT or Placement Exam. Credit for both GEOG108 and NSCI105 not permitted.

GEOG201 World Regional Geography
(4,0) 4 alternate years

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.

GEOG302 Economic Geography
(4,0) 4 alternate years

A study of the internal and external inter-relationships of the various economic groupings of the world; i.e. North America, Europe and the emerging third world.

GEOG306 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 third world development.

GEOG321 Geography of Europe and Great Britain
(4,0) 4 alternate years

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.

GEOG322 Geography of South America, Central America and the Caribbean Region
(4,0) 4 alternate years

The study of the geographical features and 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.

GEOG323 Geography of East and Southeast Asia
(4,0) 4 alternate years

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.

GEOG325 Regional Geography of North America
(4,0) 4 alternate years

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.

**GEOG360 Historical Geography
of Eastern North America
(4,0) 4 alternate years**

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.

**GEOG490 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 12 credits.

**GEOG492 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 and permission of instructor.

GEOLOGY

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

**GEOL115 Field Excursions
in Earth Science**

(2,4) 4

A field- and project-based educational experience in which aspects of geology, including environmental geology, earth resources, tectonic processes and the interrelationships among geology and other natural sciences, will be addressed. Travel destinations will include regions with unique natural history. Credit can be earned for only one of NSCI102, GEOL115 and 121.

**GEOL121 Physical and Historical
Geology I**

(3,2) 4

The study of processes and features of the rocks and surficial materials that form the Earth's crust. Emphasis will be placed on the dynamic earth including volcanoes, plate tectonics, geologic time, catastrophic events such as earthquakes, and natural resources and their impact on society. The class requires student projects and emphasizes active problem-solving. Laboratory exercises involve minerals, rocks, topographic and geologic maps. Credit can be earned for only one of NSCI102, GEOL115 and 121.

**GEOL122 Physical and Historical
Geology II**

(3,2) 4

The study of surficial processes and landforms in the context of their historical perspective. Emphasis will be placed on evolution of the earth; stratigraphic principles, tectonic framework of North America; landforms and depositional environments; climate, weathering, surficial processes, and sea level changes; and significant events in the history of plants and animals. Laboratory exercises involve geologic maps, invertebrate paleontology, and surficial processes including environmental applications. Prerequisite: GEOL121, 115, or NSCI 102.

**GEOL218 Structural Geology
and Tectonics**

(3,6) 5

A study of the deformation of the Earth through a project-centered approach that focuses on actual tectonic problems. Emphasis will be placed on descriptive, kinematic and dynamic analysis of geologic structures, deformation mechanisms and the evolution of each in the context of the regional and global geology. Prerequisite: GEOL122.

GEOL223 Mineralogy and Petrology

(3,6) 5

A laboratory course emphasizing hand-sample techniques for identification of minerals and rocks. Major topics include: physical properties, crystalline structure, and chemical composition of minerals; classification of minerals and rocks; origins of igneous, sedimentary and metamorphic rocks; plate tectonic occurrence of minerals and rock assemblages; and societal and economic significance of minerals and rocks. Prerequisite: GEOL122 or NSCI102. Prerequisite or corequisite: CHEM115.

**GEOL280 Introduction to
Field Geology**

(0,9) 3

Introduction to field methods in geology including measurement of sections, mapping techniques, and field interpretation of outcrops. A variety of geologic provinces and environments will be examined. A supply and travel fee will be charged. Prerequisites: GEOL218 and 223.

**GEOL290 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 chair. This course may be repeated for a maximum of eight credits. Prerequisite: Sophomore standing or higher.

GEOL315 Geoenvironmental Systems

(3,6) 5 alternate years

The study of environmental issues in a geological context through local and regional field projects. Projects will examine issues such as flooding, shoreline erosion, slope stability, groundwater resources and contamination, and the environmental impact of mineral and energy resource extraction. Emphasis will be placed on the evaluation of environmental issues through the application of geological and geophysical field data such as collecting and analyzing sediments, bedrock and sediment mapping, and well log analysis. Prerequisite: GEOL280.

GEOL318 Tectonic Systems

(3,6) 5 alternate years

Study of tectonic process and how these processes affect the earth and its evolution with time. A variety of modern and ancient tectonic settings will be studied through projects and case studies. The deformational, geochemical, sedimentological and geophysical characteristics of individual tectonic settings will be evaluated and their evolution with time will be analyzed. Weekend field trips may be required. Prerequisites: GEOL218 and 223.

GEOL323 Geochemical Systems

(2,6) 4 alternate years

The study of high-temperature igneous, metamorphic, and hydrothermal processes in the context of their global tectonic settings. Topics include the origin and evolution of magmas, igneous crystallization and emplacement processes, hydrothermal reactions and ore deposits, the thermodynamics of metamorphic reactions, and the tectonic environments in which these processes occur. A pre-semester one-week field trip and weekend field trips may be required. Prerequisite: GEOL280.

GEOL325 Clastic Systems

(2,6) 4 alternate years

The study and interpretation of siliciclastic sediments and environments based on stratigraphic principles. Topics include clastic transport and fluid flow, sedimentary structures, lithostratigraphy, facies recognition and relationships, depositional models, diagenesis, stratigraphic diagrams and maps, and tectonics and sedimentation. A pre-semester one-week field trip and weekend field trips may be required. Prerequisite: GEOL280.

GEOL410 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: MATH112 or 151, CSCI101 or 111, PHYS221 or 231.

**GEOL411 Hydrologic Systems:
Surface and Groundwater**

(3,3) 4 alternate years

The study of hydrologic systems with an emphasis on land surface and groundwater hydrology. Topics include global climate and the hydrologic cycle, precipitation, snow processes, soil water flow, evapotranspiration, groundwater flow, groundwater-surface interactions, and steam hydraulics. Laboratory components will provide experience in hydrologic field techniques, numerical modeling, and independent research. Prerequisites: PHYS221 or 231.

GEOL431 Geophysical Systems

(3,6) 5 alternate years

The study of geologic, geophysical, and environmental problems using magnetic, electromagnetic, resistivity, gravity, and seismic geophysical techniques. Projects will involve geophysical and geologic survey design, data collection, data processing, and data interpretation and will require the integration of geophysical and geological data to solve problems. A pre-semester one-week field trip and weekend field trips may be required. Prerequisite: GEOL280. Pre- or corequisites: MATH112 or MATH151 and PHYS221 or 231.

GEOL445 Carbonate Systems

(3,6) 5 alternate years

The study and interpretation of carbonate sediments and environments based on stratigraphic principles. Topics include biostratigraphy, facies characteristics and relationships, depositional models, diagenesis, stratigraphic diagrams and maps, and invertebrate paleontology. Weekend field trips may be required. Prerequisites: GEOL280 and 431.

GEOL450 Geology Seminar I**(1,3) 2 *alternate years***

Study, discussion, and laboratory experience in specialized topics in geology. Students will collect and compile information, write papers, make presentations, and lead discussions. Prerequisites: GEOL280 and 315.

GEOL451 Geology Seminar II**(1,3) 2 *alternate years***

Study, discussion, and laboratory experience in specialized topics in geology. Students will collect and compile information, write papers, make presentations, and lead discussions. Prerequisite: GEOL431.

GEOL480 Advanced Field Geology**(0,9) 3 *alternate years***

Three weeks of advanced field methods in geology including field mapping of deformed rocks, construction of cross sections, and interpretation of depositional and deformational histories. A variety of geologic provinces and environments will be examined. A supply and travel fee will be charged. Prerequisites: GEOL280 and at least two GEOL courses at the 300 level or above.

GEOL490 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 chair. This course may be repeated for a maximum of eight credits. Prerequisites: Junior standing or higher.

GERMAN

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

GRMN141 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.

GRMN142 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: GRMN141 or equivalent.

GRMN241 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: GRMN142 or equivalent.

GRMN242 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: GRMN241 or equivalent.

HISTORY

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

HIST101 History of World Civilization I**(4,0) 4 *Fall***

A study of world civilization from earliest time through the baroque.

HIST102 History of World Civilization II**(4,0) 4 *Spring***

A study of world civilization from the baroque to the present.

HIST131 United States History I**(4,0) 4 *Fall***

A study of United States history from the colonial settlement to the end of the American Civil War in 1865.

HIST132 United States History II**(4,0) 4 *Spring***

A study of United States history from the end of the Civil War to the present.

HIST201 Classical World and Medieval Europe**(4,0) 4 *on demand***

A survey of Mediterranean civilization from the Bronze Age to the eve of the Renaissance.

HIST202 Renaissance, Reformation and Baroque Europe**(4,0) 4 *on demand***

A study of the political, institutional, religious, social, economic and cultural developments from 1400 to 1700.

HIST203 Chinese Cultural Diversity**(3,0) 3 *summer***

Designed for students interested in the diversity of Chinese culture and study abroad. Taught in English and offered at a partner university in China during the first summer session. This four-week course explores, but is not limited to, the traditional social values, classes, divergences, ethnicity, religion, and gender issues characteristic of Chinese culture. The course is conducted in a lecture format with class discussions and guided field trips.

HIST230 Survey of Native History of North America**(4,0) 4 *on demand***

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 NATV230.

HIST235 History of Applied Science and Technology**(4,0) 4 *on demand***

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, metallurgy, electromagnetism, thermodynamics and cybernetics. The impact of these developments on the marketplace and society in general will be a major concern.

HIST301 History of England: 1000 to 1714**(4,0) 4 *on demand***

These 700 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.

HIST302 England in the Modern World**(4,0) 4 *Spring, even-numbered years***

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.

HIST310 Russia: From Under-developed State to Superpower**(4,0) 4 *Fall, odd-numbered years***

A study of Russian history from Peter the Great to the present.

HIST315 Europe From Napoleon to World War I**(4,0) 4 *Fall, even-numbered years***

A study in the political and economic history of Europe in the period 1789-1914.

HIST316 Europe in the 20th Century**(4,0) 4 *Spring, odd-numbered years***

A study of Europe in the age of Nazism, Communism, World War I and II, and the Common Market.

HIST331 American Intellectual and Cultural History I**(4,0) 4 *Fall, even-numbered years***

A study of American cultural and intellectual institutions as they developed from their Elizabethan and European origins to the mid-19th 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.

HIST332 American Intellectual and Cultural History II
(4,0) 4 *Spring, odd-numbered years*

A study of American culture from the mid-19th century until the present. Often considered our finest century, the 19th 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.

HIST333 American Military History
(4,0) 4 *on demand*

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.

HIST335 American Political Parties
(4,0) 4 *on demand*

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.

HIST346 Canadian History
(4,0) 4 *on demand*

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.

HIST361 Latin America
(4,0) 4 *Fall, even-numbered years*

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: GEOG322.

HIST371 Far East Civilization: 1850 to Present

(4,0) 4 *Fall, odd-numbered years*

A study of the history of China, Japan, India and adjoining areas of Asia from 1850 to present.

HIST420 Field Methods of Archaeology

(4,4) 8 *Summer*
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.

HIST425 The Politics of U.S. Labor History

(3,0) 3
This course examines the role of organized labor in U.S. history, from colonial times to contemporary times. Attention will be given to the development of policies affecting unions. Prerequisite: Upper-division student status.

HIST440 The Declaration of Independence and the Constitution

(4,0) 4 *Spring*
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.

HIST441 Diplomatic History of the United States I

(4,0) 4 *Fall, odd-numbered years*

American diplomacy from 1775 through the 19th century to U.S. entry into World War I in 1917. May be used as political science credit.

HIST442 Diplomatic History of the United States II

(4,0) 4 *Spring, even-numbered years*

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.

HIST490 Individual Historical Research

(0,1-4) 1-4 *on demand*
Independent study under supervision of history faculty. May be repeated up to a total of six credits. Does not apply toward 300- or 400-level requirements in history. Prerequisite: Permission of the supervising faculty.

HIST496 Historical Methods

(2,0) 2 *Fall*
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.

HIST497 Senior Seminar in History

(0-6) 2 *Spring*
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. Prerequisites: HIST496 and instructor permission.

HEALTH

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

HLTH101 Introduction to Medical Terminology

(2,0) 2
This course introduces the beginning student to basic medical terminology related to all areas of health care. The focus of this course is on understanding and proper usage of medical language.

HLTH104 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.

HLTH108 Understanding Clinical Nutrition

(2,3) 3
This course is focused on the knowledge and skill practical nurses need to support the nutritional needs of people across the lifespan with a special emphasis on individuals with limited ability to meet their own nutritional needs. The basics of sound nutrition are covered along with changes that occur with specific health challenges, chronic diseases, or advancing age. Strategies of providing nutrition associated with self care deficits are covered, including effective oral feeding techniques, use of thickeners or texture to enhance swallowing, tube feedings, and the principles of enteric feeding, elemental diets, and hyperalimentation. Prerequisite: Admission to the PN program or faculty permission.

HLTH113 Introduction to Health Services

(3,0) 3
This course provides the beginning student with an overview of our health care delivery system focusing on consumers, providers, services and settings.

HLTH185 Basic Pre-Nursing Competency Skills

(0,3) 1
The purpose of this course is to introduce the beginning student to basic pre-nursing skills. The student will learn hand washing, putting on and removing gloves, linen changes, dependent positioning, independent positioning, transfers, total hygiene, ambulation, body mechanics and patient safety.

HLTH208 Principles of Human Nutrition

(3,0) 3
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: BIOL122.

HLTH209 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: BIOL122 or 105 and CHEM105.

HLTH210 Introduction to Health Care Concepts and Issues**(3,0) 3**

This course is an introduction to the health care system with analysis of the issues and trends affecting the provision of health care services. Health care topics reviewed will include both local and global issues. Required course for environmental health and healthcare and administration; may also be used as an elective course. Material supports accreditation criteria for environmental health. Prerequisite: Sophomore standing.

HLTH232 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: BIOL122.

HLTH235 Healthcare Informatics**(1,2) 2**

The purpose of this course is to gain a basic understanding of nursing informatics and its application to education, research and practice in health care professions. Topics include computer literacy skills, information literacy, and overall informatics competencies. Competencies taught will meet the American Nurses Association Scope and Standards of Nursing Informatics Practice (ANA, 2001) for beginning nurses. Prerequisites: Admission into Nursing program and basic computer skills.

HLTH328 Multicultural Approaches to Health Care**(3,0) 3**

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, assessment techniques and alternative/complementary health practices. Prerequisite: SOCY101. Also listed as NURS328.

HLTH329 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. Prerequisite: SOCY101.

HLTH330 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: HLTH208.

HLTH352 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: PSYC155. Also listed as NURS352.

HLTH354 Legal and Financial Issues in Health Care Administration**(3,0) 3**

This course is intended for students preparing for careers in management in health care fields or as health care practitioners. Students will be made aware of legal and financial issues and problems including fault liability; institutional liability; forms of organization; credentialing and appointments; staffing issues; consent and refusal of treatment; and health care financing. The student will be more aware of the need to seek professional counsel to minimize and prevent litigation. Prerequisite: Junior standing. Also listed as BUSN354.

HLTH452 Contemporary Issues in Nutrition**(3,0) 3**

Utilizing an epidemiological frame, students will learn how to research current issues and topics in nutrition for closer examination and discussion. Nutritional trends and topics such as nutraceuticals, nutrigenomics, functional foods, supplements, herbs, and advertised dietary approaches aimed at promoting wellness and health will be explored in-depth and analyzed. Prerequisites: BIOL122, CHEM105, HLTH104, 108, 208 and EXER275.

HLTH490 Independent Study in Health**(1-4,0) 1-4**

Individual investigation of topics tailored to student interest and need. Prerequisites: Junior or senior standing and instructor permission.

HUMAN SERVICES

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

HMSV204 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: BIOL105 or equivalent.

HMSV250 Human Services Practicum**(1,9 - 27) 3-9**

This course provides a field placement opportunity for students to practice skills and use knowledge gained from courses in the skill minors. Also listed as SOWK250.

HMSV292 Alcohol Abuse Prevention and Treatment**(3,0) 3**

This course examines current prevention, detection and treatment approaches for alcohol abuse and alcoholism. Prerequisite: HMSV204.

HMSV480 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. Also listed as SOWK480.

HONORS PROGRAM**HONR101 Honors First-Year Seminar (variable topics)****(1-2,0) 1-2 credits**

An intensive reading/discussion seminar of selected topics from any discipline of special interest to first-years honors students. An interdisciplinary focus is encouraged as well as the inclusion of active learning strategies that promote self-directed learning. Class size is limited to 15 to promote student and faculty interaction around the world of ideas. Prerequisites: status as an Honors candidate (freshman) or fully admitted University Honors Program student, and/or permission of the Honors coordinator. May be repeated for a maximum of four credits.

HONR202 Honors Contemporary Issues**(3,0) 3**

An interdisciplinary sophomore-level seminar for University Honors Programs students. The course is designed to accommodate a range of specific topics; the particular topics, however, will investigate some aspect of the history of intellectual ideas, the nature of intellectual inquiry, and/or the construction of knowledge. The instructor serves as a facilitator in the seminar format which is intended to encourage student-directed learning. Prerequisites: formal admission to the University Honors Program and/or permission of the Honors Program coordinator. May be repeated for a maximum of 9 credits.

HONR302 Honors Ideas Seminar**(3,0) 3**

A junior-level seminar for University Honors Program students. The course is designed to accommodate a range of special topics to be submitted by LSSU faculty under the general provision for Special Topics; the topics may evolve out of an interdisciplinary focus on some aspect of traditional disciplinary subject matter, or may be a reconfiguration of a regular course, redesigned to meet the particular needs of Honors Program students. The role of the instructor, however, would be as a facilitator, working within the seminar format to encourage student-directed learning around a topic requiring intellectual rigor. As this is a core requirement for all junior Honors students, it is expected that a given course proposal would not require prerequisites beyond those for general education. Prerequisites: formal admission to the University Honors Program, junior status, and/or permission of the Honors Program coordinator. HONR201 recommended. May be repeated for a maximum of nine credits.

HONR401 Honors Thesis
(1-4,0) 1-4

A major written work based on independent research or creative effort to be carried out under the supervision of a full-time faculty member. Research is intended to be widely interpreted and may include, but is not limited to, experiments, analysis of existing data, and a summary and integration of already completed but dispersed research. Students will make a formal presentation of their findings to the Honors Council, the thesis supervisor, junior/senior Honors students, and others in the spring of their senior year. Prerequisites: 3.5 GPA, 15 Honors credits, HONR201 and 301. Students must present a fully developed proposal to the Honors Council for approval before enrolling in HONR401 or its equivalent in their major.

HUMANITIES

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

HUMN203 Survey of Chinese Culture
(3,0) 3 summer

Designed for students interested in Chinese culture and study abroad. Taught in English and offered at a partner university in China during the first summer session. This four-week course introduces the major cultural and artistic aspects of Chinese society. Lecture topics include Chinese history, geography, language, ethos, philosophy, literature, religion, historical relics, education, medicine, architecture, etiquette, and social and economic aspects of Chinese culture. Field trips to museums, art galleries, historic sites, and places of interest are scheduled throughout the trip.

HUMN240 Native Art and Culture
(3,0) 3

An overview of traditional and contemporary Native arts including visual art, music, literature, storytelling, architecture, theater and dance within their cultural context. Relationships between historical and contemporary forms and expression of Native identity and philosophy through artistic mediums will be examined. Also listed as NATV240.

HUMN251 Humanities I
(4,0) 4 Fall, Spring, Summer

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: ENGL110.

HUMN252 Humanities II
(4,0) 4 Fall, Spring, Summer

Continuation of HUMN251, the humanities in the age of science, from the early Renaissance to the present. Prerequisite: ENGL110.

HUMN255 World Mythology
(4,0) 4

A survey of world mythology from "Gilgamesh" to "Finnegan's Wake". Prerequisite: ENGL110.

HUMN256 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. Prerequisite: ENGL110.

HUMN261 World Literature I
(3,0) 3 on demand

The Ancient World to the Renaissance. Readings in translation of significant, primarily Western texts. Selection can include the Bible and works by such authors as Homer, Virgil, Thucydides, Tacitus, Boccaccio, Montaigne, Rabelais, and others. Prerequisite: ENGL110.

HUMN262 World Literature II
(3,0) 3 on demand

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. Prerequisite: ENGL110.

HUMN490 Directed Studies in Humanities
(1,0) 1 on demand

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 or dean.

INTER-DISCIPLINARY

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

INTD300 The Human 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.

INTD301 TRECS Planning Semester
(1,0) 1

This course will function as a planning and organizational course for students who intend to be involved in the travel semester course which will be offered the following fall semester. Prerequisites: The student must be at least a second semester sophomore and be planning to enroll in the fall travel semester (TRECS).

INTD310 Foreign Study
1-16 graded

Individual extension added based on student's program.

INTD320 Foreign Study
3-16 credit/no credit

Individual extension added based on student's program.

INTD333 The Origins of Human Nature
(4,0) 4

An integrated, interdisciplinary examination of the origins of human nature from the perspective of contemporary evolutionary theory, ethology and biological anthropology. The course examines the origins of — among other phenomena — sexual behavior, marriage and family life, crime, social stratification, leadership, government, politics, patriotism, nationalism, racism, ethnocentrism, aggression, genocide, war, ideology and morality. Prerequisites: a college biology course or PSYC101, one college course from each of two social science disciplines (anthropology, economics, political science, psychology, sociology), and junior standing.

INTD380 TRECS Semester Seminar (Travel, Research, Educational, Cultural Semester)
(3,0) 3

This course will focus upon the educational opportunities which will be available through the specific sites that are visited during the travel semester. These sites include but are not limited to Washington D.C., New York City, St. Louis, MO, San Francisco, CA, various national parks, national monuments, national battlegrounds, national museums, and other regions and cities throughout the United States.

INTD398 Planning an Experiential Learning Project
(1,0) 1

A weekly seminar class for students planning a major experiential learning project, such as a capstone academic service learning project or internship. Students will work with the course instructor to define the project objectives, outline the tasks, plan the work with the host agency, plan the project assessment techniques and budget, and design the academic evaluation. The outcome of the class will be a proposal for the project. Prerequisite: Junior Standing, permission of instructor.

INTD399 Internship in [Department]
(1-4,0) 1-4

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 four 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.

INTD410 Foreign Study
3-16 graded

Individual extension added based on student's program.

INTD420 Foreign Study
3-16 credit/no credit

Individual extension added based on student's program.

INTD490 Senior Directed Study
(3-4, 0) 3-4

This course is designed to allow liberal studies majors the opportunity to develop and implement a project/paper using the skills and knowledge from their previous course work. Projects/papers should relate to the student's individual areas of study, and represent a synthesis of their previous learning under the supervision of an appropriate faculty member. Prerequisites: senior status and approval of the appropriate chair(s).

JAPANESE STUDIES

The Japan Center for Michigan Universities provides staff and resources for the courses in this minor. These courses are offered **only at the** Japan Center in Hikone, Japan. All courses require permission of coordinator.

JAPN105 Intensive Introductory Japanese Language I
(10,2) 10

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 five hours each week. The "New Jordan method" of Japanese language studies for English speakers is used in both class and lab sessions.

JAPN106 Intensive Introductory Japanese Language II
(10,2) 10

This course is designed as a continuation of JAPN105. 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.

JAPN201 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, socialization of children and political institutions.

JAPN202 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.

JAPN301 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.

JAPN302 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.

JOURNALISM

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

JOUR211 Newswriting
(3,0) 3

Gathering, processing and writing news and opinions on current matters using professional standards and formats in print and broadcast news and public relations. Prerequisite: COMM280.

JOUR220 Photojournalism
(3,0) 3

Fundamentals of 35mm camera operations with emphasis on creative and professional applications. Weekly assignments and critique. Student required to have a camera with manual controls (shutter speed and aperture setting). Assignments in color negative film (color prints) processed commercially. No prerequisites.

JOUR310 Editing and Production
(3,0) 3

Focuses on news editing, headline writing, newspaper design and layout as well as newsroom management. Prerequisite: JOUR211.

JOUR311 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; and good taste. Prerequisite: JOUR211.

JOUR410 Broadcast Newswriting
(2,3) 3

Designed to improve students' broadcast newswriting skills from the fundamental level of those developed in COMM280. 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: COMM280.

JOUR411 Broadcast Editing and Production
(2,3) 3

Designed to build upon the broadcast reporting, writing and performing skills developed in JOUR410. 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: JOUR410.

JOUR413 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; COMM280 and JOUR211. File application with the chair of the Department of English and Communication by fifth week of previous semester.

LAW

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

LAWS102 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.

LAWS125 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. Prerequisites: LAWS102 and 150.

LAWS140 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.

LAWS150 Legal Professionals and Ethical Considerations
(3,0) 3

Overview of the members of the legal team (legal assistants/paralegals, legal administrators, law office managers, attorneys, computer system specialists and others) including job qualifications and employment opportunities. Basic legal principles and terminology shall be discussed. The Michigan Rule of Professional Conduct, as well as other ethical rules and/or guidelines, and their application to various legal professionals shall be studied in detail including such areas as: confidentiality, conflict of interest, unauthorized practice of law, legal advertising, competency considerations, and legal malpractice.

LAWS202 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, preparation of memorandum of law and an appellate brief. Research skills and analysis of court opinions will be further refined. Prerequisites: LAWS102 and 125.

LAWS222 Introduction to the Legal Profession
(3,0) 3

Students will become familiar with how the law functions, how the legal profession has evolved, how to prepare for and apply to law school, how law schools differ from college (including development of various methods and techniques to study the law). In addition, students will become aware of the legal profession and its demands, opportunities, options and trends. Prerequisites: POL110, sophomore standing and/or permission of instructor. Also listed as POL1222.

LAWS250 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: LAWS202 and 125.

LAWS299 Legal Studies Internship and Professional Development Seminar
(1,3-7) 4-8

A supervised work experience as a legal assistant or legal administrator 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. Preparation of a student portfolio and professional portfolio will be required. Prerequisites: LAWS202 and 125, and permission of instructor.

LAWS300 Seminar in Legal Studies
1-4 variable

A seminar dealing with selected topics in legal studies. The content of this course may vary each time the course is offered. May be repeated with permission of advisor. Prerequisites: LAWS202, 125, and/or permission of legal studies advisor.

LAWS301 Alternative Dispute Resolution and Conflict Management
(3,0) 3

This course explores non-judicial avenues of dispute or conflict resolution such as negotiation, mediation, arbitration, as well as court-annexed alternative dispute resolution mechanisms. The procedural aspects, key elements, ethical considerations and practical applications of alternative dispute resolution are discussed as part of the dispute resolution landscape. The course will also include dispute resolution and conflict management simulations and case studies. Also listed as SOWK301.

LAWS305 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. Prerequisites: HIST230 and NATV230. Also listed as NATV305/SOWK305.

LAWS320 Real Estate Law
(3,0) 3

Various aspects of real estate law and procedures will be studied, including 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: LAWS102 and 125.

LAWS321 Family Law
(2,0) 2

Areas of family law including marriage contracts, divorce, separation, child custody, juvenile law and adoption will be explored. Prerequisites: LAWS102 and 125.

LAWS322 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: LAWS202, 125 and 320.

LAWS401 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: LAWS125, 140, 150 and 202.

LAWS405 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: LAWS125, 140, 150 and 202.

LAWS406 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: LAWS125, 140 and 202.

LAWS450 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: LAWS125, 150, 202 and senior standing.

LAWS490 Independent Study in Legal 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. May be repeated up to a total of eight credits.

LIBRARY**LIBR101 Information and Information Technology Literacy**
(1,0) 1

Introduces students to information tools and their uses, including reference books, indexes, periodicals, microforms, computer products and the Internet. Students will learn to effectively search information tools so they can more efficiently meet their information needs.

LINGUISTICS**LING403 Language Acquisition and Foreign Language Teaching**
(3,0) 3

Introduction to theories of language and language acquisition as applied to current language teaching methods and classroom practices. This course is a requirement for both the Spanish teaching major and the Spanish teaching minor. The class will be taught in English, but students will use a foreign language of their choice in teaching presentations. Prerequisites: SPAN361 and SPAN362 or FREN351 and FREN352.

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 numbered 100 and above a student's curriculum major also affects course selection. Courses numbered below 100 do not count toward graduation.

The following six courses are offered in a four-week, four meetings per week, format for one credit each.

MATH081 Pre-Algebra I
(1,0) 1

The first in the series of six modules addresses basic operations and problem solving using whole numbers and fractions. Credit in this course does not apply toward graduation. Prerequisite: None.

MATH082 Pre-Algebra II
(1,0) 1

The second in the series of six modules addresses basic operations and problem solving using decimals, percents, and ratio & proportion. Credit in this course does not apply toward graduation. Prerequisite: MATH081 or placement by examination.

MATH083 Pre-Algebra III
(1,0) 1

The third in the series of six modules addresses solving problems related to measurement, geometry and statistics. Credit in this course does not apply toward graduation. Prerequisite: MATH082 or placement by examination.

MATH084 Introductory Algebra I
(1,0) 1

The fourth in the series of six modules addresses the introduction to algebra, real numbers, algebraic expressions and solving of elementary equations. Credit in this course does not apply toward graduation. Prerequisite: MATH083 or placement by examination.

MATH085 Introductory Algebra II
(1,0) 1

The fifth in the series of six modules addresses application problems related to equations and inequalities, and polynomial manipulations. Credit in this course does not apply toward graduation. Prerequisite: MATH084 or placement by examination.

MATH086 Introductory Algebra III
(1,0) 1

The sixth in the series of six modules addresses graphing and functions, solving systems of equations, and radical expressions. Credit in this course does not apply toward graduation. Prerequisite: MATH085 or placement by examination.

MATH102 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 MATH086 or equivalent/satisfactory score on ACT or Placement Exam. This course will not count toward a major or minor in mathematics.

MATH103 Number Systems and Problem Solving
(3,2) 4

General notions of problem solving. Sets, functions, numeration systems and number theory. Properties and operations of whole numbers, integers, fractions and decimals. Prerequisite: Equivalent/satisfactory score on ACT or Placement Exam or MATH102 with a grade of C (2.00) or better.

MATH104 Geometry and Measurement
(3,2) 4

Basic notions of geometry. Constructions, congruence and similarity. Motion geometry, symmetry and Tessellations. Concepts of measurement. Coordinate geometry. Prerequisite: Equivalent/satisfactory score on ACT or Placement Exam or MATH102 with a grade of C (2.00) or better.

MATH108 Trigonometry and Vectors for Physics
(1,0) 1

Trigonometric functions, basic identities, inverse trigonometric functions and vectors. Prerequisite: equivalent/satisfactory score on ACT or Placement Exam or MATH102 with a grade of C or better.

MATH110 Explorations in Mathematics
(3,0) 3

A discovery course in mathematics which explores the varied relationships of mathematics to society and the natural world through application and enrichment. A statistics component is included, and a term project is required. This course satisfies the general education mathematics requirement. It will not count toward a major or minor in mathematics. Prerequisite: MATH086 or equivalent/satisfactory score on ACT or Placement Exam.

MATH111 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 equivalent/satisfactory score on ACT or Placement Exam *or* MATH102 with a grade of C or better. High school plane geometry also recommended. This course will not count toward a major or minor in mathematics.

MATH112 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: MATH111 with a grade of C or better. This course will not count toward a major or minor in mathematics.

MATH131 College Trigonometry
(3,0) 3

Basic theory of trigonometric functions and inverse trigonometric functions. Applications include trigonometric equations, plane trigonometry, vectors and complex numbers. Introduction to conic sections. Study of exponential functions and their connection to trigonometry functions, logarithmic functions and applications. Prerequisites: (1) Two years of high school algebra and equivalent/satisfactory score on ACT, COMPASS test or Placement Exam, or MATH102 with a grade of C or better. (2) One half-year of high school trigonometry with a grade of C or better is strongly recommended.

MATH140 Precalculus Mathematics
(5,0) 5

Basic theory of functions, including polynomial, exponential, logarithmic and trigonometric functions. Inequalities. Analytic geometry, plane trigonometry and vectors. Complex numbers. Systems of linear equations, matrices and determinants. Prerequisites: two years of high school algebra and equivalent/satisfactory score on ACT or Placement Exam, or MATH102 with a grade of C or better, and one-half year of high school trigonometry or MATH108 with a grade of C or better is strongly recommended. This course will not count toward a major or minor in mathematics.

MATH151 Calculus I
(4,0) 4

Limits, continuity and inverse functions. Logarithmic and exponential functions. Differentiation and applications of the derivative. L'Hopital's rule. Inverse trigonometric functions. Integration and the definite integral. Prerequisites: high school mathematics that includes two years of algebra, one year of plane geometry and one-half year of trigonometry and equivalent/satisfactory score on ACT or Placement Exam, *or* MATH140 with a grade of C or better.

MATH152 Calculus II
(4,0) 4

Applications of the definite integral. Techniques of integration and improper integrals. Infinite series. Conic sections, polar coordinates and parametric equations. Prerequisite: MATH151 with a grade of C or better.

MATH207 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: MATH086 or equivalent/satisfactory score on ACT or Placement Exam. This course will not count toward a major in mathematics.

MATH215 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: MATH151 or 112 with a grade of C or better.

MATH216 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: MATH215 with a grade of C or better.

MATH251 Calculus III
(4,0) 4

Three-dimensional space, vectors, vector-valued functions, partial differentiation, multiple integration, topics in vector calculus. Prerequisite: MATH152 with a grade of C or better.

MATH261 Introduction to Numerical Methods
(3,0) 3 *alternate years*
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: CSCI105 or 121 with a grade of C or better and MATH152 with a grade of C or better.

MATH290 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 instructor.

MATH305 Linear Algebra
(3,0) 3 *alternate years*
An introduction to matrix algebra, vector spaces and linear transformation, including applications to the natural and social sciences. Prerequisites: MATH112 or 151 with a grade of C or better.

MATH308 Probability and Mathematical Statistics
(3,0) 3
An introductory course in probability and mathematical statistics. Probability, probability distributions, mathematical expectation, moment generating functions and the Central Limit Theorem. Prerequisite: MATH152 with a grade of C or better.

MATH309 Applied Statistics
(4,0) 4 *alternate years*
A continuation of MATH308 including estimation of parameters, testing hypotheses, nonparametric methods, analysis of variance, multiple regression and an introduction to statistical software packages. Prerequisite: MATH308 with a grade of C or better.

MATH310 Differential Equations
(3,0) 3
Differential equations of first order, linear differential equations of second and higher orders, including Laplace transformation. Introduction to power series methods, applications. Prerequisite: MATH152 with a grade of C or better.

MATH321 History of Mathematics
(3,0) 3
Selected topics in the development of mathematics from the time of the ancient Babylonians and Egyptians to the 20th century. Prerequisites: MATH112 or 151 with a grade of C or better, and MATH215 with a grade of C or better.

MATH325 College Geometry
(2,2) 3 *alternate years*
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: MATH152 and 215 with a grade of C or better.

MATH341 Abstract Algebra I
(3,0) 3 *alternate years*
An introduction to congruences, groups, subgroups, quotient groups, fundamental homomorphism theorems, Sylow theorems. Prerequisite: MATH215 with a grade of C or better.

MATH342 Abstract Algebra II
(3,0) 3 *on demand*
A continuation of MATH341 including rings, integral domains, ideals, quotient rings, the natural homomorphism, fields and polynomial rings. Prerequisite: MATH341.

MATH351 Graph Theory
(3,0) 3 *alternate years*
Selected topics in graph theory, including connectivity, matchings, edge and vertex colorings, networks and tournaments. Prerequisite: MATH216 with a grade of C or better.

MA401 Mathematical Modeling
(3,0) 3 *alternate years*
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: junior/senior standing, a course in computer programming, and mathematical maturity at the level of MATH305, 308 or 310 with a minimum grade of C.

MATH411 Advanced Calculus
(3,0) 3 *alternate years*
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: MATH251 and 310 with a grade of C or better.

MATH413 Introduction to Complex Analysis
(3,0) 3 *on demand*
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: MATH251.

MATH421 Real Analysis I
(3,0) 3 *on demand*
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: MATH215 and 251 with a minimum grade of C.

MATH422 Real Analysis II
(3,0) 3 *on demand*
Continuation of MATH421 with emphasis on measure and integration. Prerequisite: MATH421.

MATH490 Research Topics 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. Prerequisite: Junior standing or higher and permission of instructor.

MANAGEMENT

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

MGMT360 Management Concepts and Applications
(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. Prerequisites: Junior standing and pre-business core (PBC).

MGMT365 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 studied 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. Prerequisites: Junior standing and pre-business core (PBC).

MGMT375 Introduction to Supply Chain Management
(3,0) 3
This course provides an overview of the supply chain function for an organization. The supply chain for any company is described as the continuous sequence of events and operations that add value to the firm. Topics will include purchasing and procurement, inbound and outbound logistics and transportation, operations and manufacturing planning and control, forecasting, quality control, enterprise resource planning and overall information system design for the firm. Prerequisites: BUSN211 or statistics equivalent, and pre-business core (PBC).

MGMT380 Principles of Leadership
(3,0) 3
This course provides the student with an understanding of the principles and behaviors situationally appropriate to inspire and influence others. Whether people work individually, in small teams, task forces, or other units at all organizational levels; effective leadership sustains profitability, productivity, and excellent service. Studying research findings, leadership practices, and skills helps the student understand how this knowledge can be applied to effectively lead others. Prerequisites: MGMT360 and pre-business core (PBC).

MGMT451 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. Prerequisites: Junior standing and pre-business core (PBC).

MGMT461 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. Pre- or corequisite: FINC341 and pre-business core (PBC).

MGMT464 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: MGMT360 and pre-business core (PBC).

MGMT469 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. Prerequisites: Junior standing and pre-business core (PBC).

MGMT471 Production/Operations Management
(3,0) 3

An introduction to the design and analysis of operational systems in manufacturing and service industries. Topics include manufacturing strategy, planning and control, forecasting, just in time systems, inventory models, product/process design, scheduling and simulation. Some mathematical models will be used. Emphasis will be on the role of operations within an organization and the formulation and solution of operational problems. Prerequisites: BUSN211 and MGMT360 or equivalents, and pre-business core (PBC).

MGMT476 Employee Training and Development
(4,0) 4

This course provides the student with an understanding of how to prepare and deliver effective employee training. The course is in five parts: training and development needs analysis, program design, development, delivery, and evaluation. The principles and concepts learned are applied by preparing, delivering, and evaluating a three-hour training program. Prerequisite: Senior standing and pre-business core (PBC).

MARKETING

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

MRKT281 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: ENGL110

MRKT283 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.

MRKT381 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. Prerequisites: MRKT281 and pre-business core (PBC).

MRKT383 E-Marketing
(3,0) 3

A study of the impact the Internet and other digital technologies have on the marketing of goods, services and ideas. The course will examine current e-marketing environment, strategy and management issues including consumer behavior, segmentation and targeting, differentiation and positioning, product, price, distribution, communication and customer relationship management. Ethical and legal issues will also be addressed. Prerequisite: MRKT281.

MRKT385 Services Marketing
(3,0) 3

A study of the principles and practices unique to service providers. The focus of this course is to examine how the marketing of services differs from traditional marketing principles/concepts applied to goods and the alternative strategies for service providers to improve service marketing effectiveness and customer interactions. Prerequisites: MRKT281 and pre-business core (PBC).

MRKT387 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. Prerequisites: MRKT281 and pre-business core (PBC).

MRKT388 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. Prerequisites: MRKT281 and pre-business core (PBC).

MRKT389 Entrepreneurship
(3,0) 3

A study of individual small firms: start-up, on-going management, challenges, and requirements for success. Students will apply both strategic planning and the knowledge acquired from other business courses to (a) demonstrate understanding and competence in using S.A.P. in small business decision-making and operations, (b) develop a viable business plan for a new small business, and (c) utilize problem-solving for other local small businesses, where required, in an advisory capacity. Prerequisites: Pre-business core (PBC), ACTG132 or 230, BUSN121 and MRKT281.

MRKT480 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: BUSN211, MRKT281 and 381, and pre-business core (PBC).

MRKT481 Marketing Management
(3,0) 3

A study of the essential tasks of marketing managers: (1) identifying marketing opportunities, (2) developing marketing plans, and (3) implementing these plans by introducing marketing strategies. Prerequisites: Pre-business core (PBC), MRKT281, 381, 480, and senior status.

MRKT483 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: MRKT281 and 283, and pre-business core (PBC).

MRKT486 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. Prerequisites: MRKT281, and pre-business core (PBC).

MUSIC

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

MUSC110 Orchestra
(0,3) 1

Perform regular series of concerts as a member of the Sault Symphony Orchestra.

MUSC111 Orchestra
(0,3) 1
Perform regular series of concerts as a member of the Sault Symphony Orchestra.

MUSC112 Band
(0,3) 1
Open to all University students. The concert band performs representative band and wind ensemble literature and provides a challenging musical experience.

MUSC113 Band
(0,3) 1
Open to all University students. The concert band performs representative band and wind ensemble literature and provides a challenging musical experience.

MUSC120 Introduction to Music I
(3,0) 3
An introduction to the basic vocabulary of music and to basic musicianship skills. Topics include notation, meter, rhythm, intervals, scales, chords, etc. No prerequisite.

MUSC121 Introduction to Music II
(3,0) 3
The course expands upon the musical vocabulary and skills developed in MUSC120. Topics include C-clefs, seventh chord, non-harmonic tones, cadences, etc. Prerequisite: MUSC120.

MUSC140 Chorus
(0,3) 1
Regular rehearsals and participation in various campus activities.

MUSC141 Chorus
(0,3) 1
Regular rehearsals and participation in various campus activities.

MUSC160 Jazz Ensemble
(0,3) 1
Regular rehearsals and performances during school year.

MUSC161 Jazz Ensemble
(0,3) 1
Regular rehearsals and performances during the school year.

MUSC170 Class Piano I
(0,2) 1
Beginning piano techniques. Music reading ability helpful but not required.

MUSC171 Class Piano II
(0,2) 1
To improve proficiency and techniques gained in MUSC170. Prerequisite: MUSC170.

MUSC180 Class Guitar I
(0,2) 1
Introduction to guitar playing including knowledge of musical rudiments, left and right hand techniques and ensemble performance.

MUSC181 Class Guitar II
(0,2) 1
Course emphasizes increasing technical achievement, musicianship and the development of individual musicality.

MUSC210 Applied Music I
(0,3) 1
Individual applied music instruction. For skilled musicians with admission at the discretion of the instructor. May be repeated to a maximum of eight credits per instrument or for voice.

MUSC220 History and Appreciation of Music I
(4,0) 4
A survey of music from the Middle Ages to the early 19th century with emphasis on the music of Bach, Handel, Haydn, Mozart and Beethoven. Counts as humanities credit for general education requirements.

MUSC221 History and Appreciation of Music II
(4,0) 4
A survey of music of the 19th and 20th centuries. Counts as humanities credit for general education requirements.

MUSC235 Music for Elementary Teachers
(3,0) 3
This course is designed to provide an understanding of the philosophy, theories and contemporary issues in music education in the kindergarten through sixth grade classrooms. The student will develop a practical knowledge of music skills and instructional techniques when planning a music curriculum for the elementary classroom.

MUSC250 Chamber Music I
(0,2) 1
For advanced students interested in solo and ensemble performance in a supervised program.

MUSC251 Chamber Music II
(0,2) 1
For advanced students interested in solo and ensemble performance in a supervised program.

MUSC260 History and 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.

MUSC403 Senior Recital
(0,3) 1
Public recital at conclusion of music major program. Prerequisites: music major and senior standing.

NATIVE AMERICAN STUDIES

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

NATV141, 142, 201 and 202 taught at Algoma University.

NATV141 Ojibwe I, Anishnaabemowin
(4,1) 4
Introduction to the Ojibwe language's vocabulary, phonics and grammar. This course is designed to acquaint the student with the minimum essentials of oral and written Ojibwe. This course serves as the foundation for further study in the Ojibwe language and culture. Students will begin to learn to read Ojibwe text. Students will learn to express themselves orally and gain the necessary knowledge and skill that will prepare the student for Ojibwe conversation.

NATV142 Ojibwe II, Anishnaabemowin
(4,1) 4
Further study on Ojibwe language vocabulary, phonics, grammar and elementary conversation. This course is designed to further acquaint students with the minimum essentials of oral and written Ojibwe. This course rounds out the foundation for further study in Ojibwe language and culture. Students will continue to learn to read Ojibwe text, express themselves orally; and gain the necessary knowledge, skill and practice which will prepare the student for Ojibwe conversation and elementary writing. Prerequisite: NATV141.

NATV201 Second-Year Ojibwe Conversation I, Anishnaabemowin
(4,1) 4
Further study in Ojibwe language with particular focus on Ojibwe conversation. This course will equip students with the essentials of oral and written Ojibwe. This course rounds out the foundation for further study in the Ojibwe language and culture. Students will continue to learn to read Ojibwe text, express themselves orally and gain the necessary knowledge, skill and practice which will prepare the student for Ojibwe conversation and elementary writing. Prerequisites: NATV141 and 142.

NATV202 Second-Year Ojibwe Conversation II
(4,0) 4
This course is designed for those who wish to further their understanding of the Anishinaabe (Ojibwe) language. More attention will be given to the written form, and conversation practice will be more intensive. Students will learn about the customs and culture of the Anishinaabe people as they learn about the language. Prerequisite: NATV201.

NATV210 Indigenous Peoples of Central and South America
(3,0) 3
Course is an introduction to the native peoples of the South and Central (Meso) Americas based on archaeological and traditional information. The course content will focus on the history of cultural groups prior to the arrival of the Spanish. No prerequisites.

NATV225 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 SOWK225.

NATV230 Survey of Native History of North America

(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 HIST230.

NATV235 Survey of Native Literature of North America

(3,0)

3

Students will examine various types of Native American literatures, including traditional stories, non-fiction, fiction and poetry, from authors of numerous different nations. A variety of themes, including Native American identity and the role of culture in literature, will be covered. Corequisite ENGL111 (also listed as ENGL235).

NATV240 Native Art and Culture

(3,0)

3

An overview of traditional and contemporary Native arts including visual art, music, literature, storytelling, architecture, theater and dance within their cultural context. Relationships between historical and contemporary forms and expression of Native identity and philosophy through artistic mediums will be examined. Also listed as HUMN240.

NATV301 Anishinabe Oral and Recorded Literature I

(3,0)

3

Investigation of problems of reading and writing associated with Anishnaabemowin. Regional differences will be explored, compared and analyzed. Several dictionaries will be used as illustration of some of the problems associated with writing. Students will review recorded literature, write short stories/legends, record oral literature using a writing system assigned by the instructor. Oration in Anishnaabemowin required. Prerequisite: NATV202 with a grade of C or better.

NATV302 Anishinabe Oral and Recorded Literature II

(3,0)

3

Advanced investigation of problems of reading and writing associated with Anishnaabemowin. Regional differences will be explored, compared and analyzed in depth. Several dictionaries will be used as illustration of some of the problems associated with writing. Students will review recorded literature, write short stories/legends, record oral literature using a writing system assigned by the instructor. Translation, interpretation and oration in Anishnaabemowin required. Prerequisite: NATV301 with a grade of C or better.

NATV305 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. Prerequisites: NATV230 and HIST230. Also listed as LAWS305/SOWK305.

NATV310 Seminar in Native Studies of the Americas

(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: NATV225, 230, 235, 305 and SOCY226.

NATV320 Contemporary Native Issues of North America

(3,0)

3

A study of current Native American issues, problems and concerns. Prerequisites: NATV225, 230, 235, 305 and SOCY226.

NATV401 Seminar in Advanced Language Studies I

(3,0)

3

Advanced study in grammar of Anishnaabemowin language. Oral histories, humorous stories, general stories, legends and narrative stories will be used to demonstrate the complexities of the language. As verbs make up 80 percent of the language, the verb structure will be further analyzed. Learners will compare and contrast selected linguistic articles for their accuracy and inaccuracy in representing how the language works. Written and oral assignments of various degrees of difficulty will enhance the students' command of the language. Prerequisite: NATV302 with a grade of C or better.

NATV402 Seminar in Advanced Language Studies II

(3,0)

3

Advanced study in grammar and conversation of Anishnaabemowin language. Oral histories, humorous stories, general stories, legends and narrative stories will be used to demonstrate the complexities of the language. As verbs make up 80 percent of the language, the verb structure will be further analyzed. Learners will compare and contrast selected linguistic articles for their accuracy and inaccuracy in representing how the language works. Written and oral assignments of various degrees of difficulty will enhance the students' command of the language. Practical application of language outside the campus classroom. Prerequisite: NATV401 with a grade of C or better.

NATURAL SCIENCES

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

NSCI101 Conceptual Physics

(3,2)

4

A survey of basic physical science principles emphasizing their applications in daily life. Prerequisite: MATH086 or equivalent/satisfactory score on ACT or Placement Exam.

NSCI102 Introduction to Geology

(3,2)

4

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 relationships to the physical environment. Credit can be earned for only one of NSCI102, GEOL115 and 121. Prerequisite: None.

NSCI103 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.

NSCI104 Environmental Science Laboratory

(0,2)

1

Laboratory component of environmental science. Corequisite: NSCI103.

NSCI105 Physical Geography: Earth, Sun and Weather

(3,1)

3

Study of the physical properties of the earth's surface as they relate to weather and climate. Credit for both GEOG108 and NSCI105 not permitted.

NSCI107 Physical Geography: Landforms and Soils

(3,1)

3

Study of the physical properties of the earth's surface as they relate to landforms and soils. Credit for both GEOG106 and NSCI107 not permitted.

NSCI110 Chemistry in Society

(3,2)

4

An applied topical course examining the issues, problems and challenges facing modern society with an emphasis on the underlying chemical principles and theories. Attention will be given to decision-making activities, to developing critical thinking skills, and to addressing social issues that relate to chemistry. Pre- or co-requisite of MATH102 or equivalent/satisfactory score on ACT or Placement Exam.

NSCI116 Introduction to Oceanography

(3,2)

4

A survey of the features, processes and evolution of Earth's ocean basins. The course will examine geological, physical, chemical and ecological aspects of oceanography with an emphasis on their interrelationships and their impact on humanity.

NSCI119 Descriptive Astronomy

(3,2)

4

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: MATH086 or equivalent/satisfactory score on ACT or Placement Exam.

NURSING

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

NURS211 Introduction to Professional Nursing

(3,0) 3

This course introduces the student to a theoretical foundation for professional nursing practice. It focuses on nursing's historical origin, and its development throughout the years to present. Concepts discussed include nursing and related theories, the nursing process, legal/ethical issues and other topics relevant to the practice of professional nursing. Prerequisite: permission of dean or instructor only.

NURS212 Health Appraisal

(2,6) 4

This course serves as an introduction to the nursing assessment and analysis 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 and documenting a health history, performing a nursing assessment and beginning to formulate a nursing diagnosis. Prerequisite: permission of dean or instructor only.

NURS213 Fundamentals of Nursing

(3,9) 6

This course provides a theoretical and clinical foundation upon which science is applied to clients experiencing common health stressors. Emphasis is placed upon collecting relevant data, formulating nursing diagnosis based on the data, implementation of both appropriate nursing interventions and related psychomotor nursing skills. Responsibilities as a health team member who displays caring behaviors and as a self-directed learner are also considered. Prerequisites: NURS211, 212, and HLTH208. Pre- or corequisites: HLTH232, 209 and BIOL223.

NURS222 Transition Course: Nursing Concepts

(3,0) 3

This course assists articulating students from Sault College's two-year Practical Nursing diploma program (or equivalent) who are enrolling in the pre-licensure BSN program to assimilate/integrate philosophical concepts, knowledge, skills, issues and values inherent within professional nursing and the nursing program at Lake Superior State University.

NURS290 Directed Study in Nursing

(1-2,0) 1-2

Special study of nursing topic tailored to student interest and need. Prerequisite: minimal sophomore status. May be repeated for maximum of four credits.

NURS325 Nursing of Childbearing Families

(3,6) 5

Theoretical and clinical foundation for application of the nursing process in caring for childbearing families. Focus on: Norms and complications of the childbirth experience with application of strategies to promote health and prevent complications related to pregnancy and childbirth. Prerequisites of NURS213 (or 222), HLTH209 & BIOL223.

NURS326 Nursing of Children and Families

(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, environmental influences on health and the nursing process. Prerequisites: HLTH328, 352 and NURS327 Co-requisite: NURS325.

NURS327 Adult Nursing I

(4,12) 8

Combined class and clinical experiences that apply the concepts of nursing and related theories to the care of the adult client with common health alterations in each of the basic human need areas. Nursing clinical experiences are in primary, secondary and tertiary care settings for adult clients. Prerequisites of NURS213 (or 222), HLTH209, BIOL223. Corequisite of HLTH/ NURS352.

NURS328 Multicultural Approaches to Health Care

(3,0) 3

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, assessment techniques and alternative/complementary health practices. Prerequisite: SOCY101. Also listed as HLTH328.

NURS352 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: PSYC155. Also listed as HLTH352.

NURS360 Professional Nursing Concepts

(4,0) 4

This four-credit course is the transitional course into professional nursing for the practicing registered nurse. Course emphasis: concepts of professional nursing, nursing and other related theories, health promotion, using research in nursing practice, impact of technology on profession, and economics related to nursing care. Includes: the history of nursing, ethics, culture, and critical thinking are interwoven in the exploration of concepts. Prerequisite: Permission of dean or instructor only. For Post Licensure majors (RN-BSN) only.

NURS363 Comprehensive Health Appraisal

(2,3) 3

Application of theories from nursing and related fields to appraise health of the individual throughout the lifespan. Emphasis is on comprehensive history taking, physical assessment skills and assessment of findings. For Post Licensure majors (RN-BSN) only. Pre- or corequisite: NURS360.

NURS365 Family Nursing Theory

(3,0) 3

Theoretical concepts of family development, structure and dynamics are presented. Factors influencing family health care are examined. Strategies are developed to enhance healthy family functioning. For Post Licensure majors (RN-BSN) only. Pre- or corequisites: SOCY101 and NURS360.

NURS431 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: HLTH328, 352, and NURS325, 327 and 326. Corequisite: NURS435.

NURS432 Nursing of Populations

(3,6) 5

This is a theory and clinical course applying the nursing process to populations. Content includes application of public health nursing principles, levels of prevention, epidemiology and health education. Expands the role of the nurse as a teacher, collaborator and advocate. Examines the effect of health care delivery trends and issues on the health of populations. For Pre Licensure BSN majors, prerequisites: HLTH328, 352, and NURS325, 327 & 326. For Post Licensure majors, prerequisites are: NURS363 and 365.

NURS433 Community 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 and stress adaptation theory are used to help the client achieve optimum level of mental health. Clinical experiences are provided in both the community and in the acute care settings. Prerequisites: HLTH328, 352 and NURS325, 326, 327.

NURS434 Nursing Research

(3,0) 3

This course develops appraisal skills of nursing and related research. It will enable students to think critically and ethically about providing the best possible care to clients based on evidence. Assignments and class discussion emphasize application of current research to a variety of dimensions including human beings, health, nursing and environment. Prerequisites: HLTH328, 352, and NURS325, 327 and 326, MATH207 or PSYC210.

NURS435 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 nursing model integration in management, communications, decision making and conflict resolution, resource management, legal and ethical responsibilities, employee relations, health care system design, systems appraisal, and case management. Students will formulate a personal nursing management/leadership philosophy. For Pre Licensure BSN majors, prerequisites are: HLTH328, 352 and NURS325, 327, 326. Co-requisite: NURS431.

NURS436 Contemporary Issues in Nursing (2,0) 2

Course analyzes contemporary and future issues involving the professional nurse. The course further explores role socialization from nursing student to BSN-prepared nurse. Course reviews the legal responsibilities and professional regulation of nursing practice. Selected social, ethical, political, economic and legal issues will be examined. For Pre Licensure BSN majors, prerequisites are: HLTH328, 352 and NURS325, 327, 326. For Post Licensure majors (RN-BSN), prerequisite is NURS360.

NURS437 Professional Nursing Leadership (1,3) 2

This is a seminar and clinical course where the student is expected to synthesize the roles of professional nursing in a variety of settings. Collaborative and leadership aspects of professional nursing are emphasized by the students planning their experience with the faculty member and preceptor. Integration of ethics, research, change, caring, advocacy, and approaches to ensure quality care in nursing practice are expected. For Post Licensure majors (RN-BSN) only. Prerequisites: NURS432, 434, 435.

NURS451 Critical Care Nursing (3,0) 3

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: NURS431 or graduate nurse.

NURS490 Independent Study (1-4,0) 1-4

Individual investigation of topics tailored to student interest and need. Prerequisites: Junior or senior standing and instructor permission.

OFFICE ADMINISTRATION

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

OFFC112 Keyboard Skillbuilding (0,2) 1

Improvement of keyboarding speed and accuracy (both alphabetic and numeric), using developmental programs and keyboarding drills. May be repeated once.

OFFC119 Computerized Accounting Procedures (4,0) 4

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 ACTG132.

OFFC235 Automated Office Systems (3,0) 3

Lectures and discussions about effects of new technology on the workplace 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. Prerequisites: Word processing and a grade of C or higher in ENGL111.

PHILOSOPHY

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

PHIL204 Introduction to Philosophy (3,0) 3

A study of selected philosophical problems and of methods and ways to answer them. Prerequisite: ENGL111.

PHIL205 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. Prerequisite: ENGL111.

PHIL210 Existentialism (3,0) 3

Survey of existentialist literature from a variety of authors, periods and genres: Dostoevsky, Kierkegaard, Nietzsche, Heidegger, Jaspers, Sartre, Camus, de Beauvoir, Rilke, and others. Texts include philosophical prose, biblical exegesis, fiction, drama and poetry, containing many of the definitive expressions of such current literary, philosophical and artistic themes as the varieties and sources of alienation, the creation and definition of the self, the nature and rationality of religious faith, moral responses to insoluble dilemmas, and potential individual responses to an absurd and inhuman world. Prerequisite: ENGL111.

PHIL215 Ethical Theory and Practice (3,0) 3

Certain actions seem to be demanded by morality and certain actions seem to be prohibited by morality. In addition, there are many actions in which we have difficulty extending praise or blame. The study of Ethical Theory constitutes the study of philosophers' evaluations of behavior, character, and even the terms of such evaluation (e.g., 'goodness,' 'value,' 'right,' and 'obligation'). This course will examine the ethical theories of philosophers such as Plato, Aristotle, Kant, Bentham, and Mill as well as contemporary applications of ethical theories. Topics such as terrorism, ethics in the professions, the environment, and religiously motivated behavior art timely and appropriate topics for evaluating the connections between moral reasoning and our modes of living. Prerequisite: ENGL111.

PHIL220 Biomedical Ethics (3,0) 3

Survey of contemporary issues in medical and research ethics. Topics could include abortion, euthanasia, genetic testing, reproductive technologies, doctor-patient relationships, conflicting imperatives on confidentiality and disclosure, social consequences or drug development and widespread use, concepts of health and disease, gender and medical practice, the distribution of medical resources, and the medicalization of various forms of social deviance. Prerequisite: ENGL111.

PHIL250 Philosophy of Religion (3,0) 3

This course examines the rational foundations for believing in a worshipping a Deity. In particular we will focus our inquiry on the God of Judaism, Christianity, and Islam who is thought to possess the qualities of omniscience, omnipotence, and beneficence. (We will, however, exposit the deities Hinduism and Buddhism to put our study in context.) Can we prove that God exists? What might we owe God? How can we explain the existence of evil even though God is thought to be wholly good? What place does religion have in a pluralistic society? The history of Western Philosophy is in large part unified by the common pursuit of such questions. Not only are the questions themselves fascinating and perplexing, but also, they have been answered in inventive ways by many extraordinary thinkers. The Philosophy of Religion is, therefore, a continuing search that has a much to do with human ingenuity as it does about God. Prerequisite: ENGL111.

PHIL302 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 credit for general education requirement. Prerequisite: ENGL111.

PHIL305 Modern and Contemporary Philosophy
(3,0) 3

Students will become familiar with the arguments and ideas that have sought to describe and, in many cases, to shape the consciousness of the modern and postmodern epochs. From Descartes to Kant, modern philosophy experimented with new ways to understand existence, identity, causality, and God. From Russell to Williams, contemporary philosophers grappled with new ways to understand logic, ethics, gender, and subjective experience. Students will learn to make connections between their own ways of experiencing the world and the sometimes subtle ways that philosophers since Descartes have influenced their understanding of their experiences. Prerequisite: ENGL111.

PHIL490 Directed Study in Philosophy
(1-4) 1-4

A study of philosophically engaging topic, chosen by instructor and student. Essays and tutorial session required. Prerequisites: At least six credits of philosophy courses, evidence that the student is capable of carrying out independent study, and approval of instructor. This course may be repeated for up to six credits, or three times, whichever occurs first.

PHYSICS

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

PHYS221 Principles of Physics I
(3,2) 4

General principles of rigid body mechanics (kinematics, forces, laws of motion, energy, momentum, rotation) and fluid mechanics. Prerequisites: Two years of high school algebra and one-half year of high school trigonometry with a math ACT score of 27 or better; or MATH108 and 111; or 140.

PHYS222 Principles of Physics II
(3,2) 4

Thermodynamics, vibrations and waves, electricity and magnetism, light, optics, relativity and modern physics. Prerequisite: PHYS221 with a grade of C or better.

PHYS224 Topics in Physics for Electrical Technology
(3,2) 4

Vibrations and waves, optics, relativity and modern physics (identical to PHYS222). Electricity and magnetism topics of particular relevance to electronic engineering technology. Prerequisites: PHYS221 with a grade of C or better, and sophomore standing in EET course work. Pre- or co-requisite MATH140.

PHYS231 Applied Physics for Engineers and Scientists I
(3, 2) 4

An introductory course in rigid body mechanics and fluid mechanics using calculus with emphasis on practical applications. Intended primarily for students of engineering, physical science and mathematics. Prerequisite: MATH151.

PHYS232 Applied Physics for Engineers and Scientists II
(3,2) 4

Continuation of PHYS231. Introduction to thermal physics, electricity, magnetism, electromagnetic waves, and optics. Prerequisite: PHYS231 with a grade of C or better.

PHYS290 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 chair. This course may be repeated for a maximum of eight credits. Prerequisites: Sophomore standing or higher and permission of instructor.

PRACTICAL NURSING

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

PNUR101 Introduction to Practical Nursing I
(2,0) 2

This course provides introductory information required for successful college study. Additionally, the course provides the foundational information for the practical nursing program. Concepts include practical nursing philosophy and conceptual framework, history of nursing, nursing's Code of Ethics, and the role of nursing in the health care system with emphasis on the practical nurse. Prerequisite: Permission of dean or instructor only.

PNUR102 Drugs and Dosages
(2,3) 3

This course introduces the practical nurse student to dosage calculations and medication administration. Calculations for conversion between systems of measurement is covered. The five rights of medication administration is emphasized. Categories of drugs, their actions, side effects and nursing implications are covered. Prerequisite: Admission to the Practical Nursing Program; MATH083 with a grade of C or better, or equivalent placement score.

PNUR104 Introduction to Practical Nursing II
(2, 0) 2

Introduction to Practical Nursing II provides a theoretical foundation for practicing nursing care of adults within a variety of health care settings. Concepts such as nursing process, therapeutic communication, culture, and critical thinking are emphasized. This course builds on PNUR101. Prerequisites: Permission of dean or instructor only, BIOL105 or BIOL122, PNUR101 all with a grade of C or better.

PNUR113 Fundamentals of Practical Nursing
(4, 9) 7

Students will learn the basic skills necessary to provide safe, competent care of the acute and chronically ill residents in Long Term Care/Nursing Home settings. Focus will be on the care of the elderly. Through lecture, lab simulations, and actual clinical experiences the student will learn basic nursing skills, infection control, safety/emergency procedures, nursing interventions and apply communication/interpersonal skills to promote resident's independence, to respect residents' rights, and to recognize abnormal changes in the resident. Prerequisites: MATH083 or equivalent, BIOL105 or 122, PNUR101, all with a grade of C or better.

PNUR201 Medical Surgical Practical Nursing
(6, 12) 10

This course focuses on nursing care of the adult client experiencing common stressors affecting health. Emphasis is placed on the administration of medications, collection and communication of relevant data, and implementation of basic nursing interventions. Prerequisites: PNUR113, 104, 102 and PSYC155, all with a grade of C or better. Corequisite: HLTH108.

PNUR202 Legal/Ethical Issues in Practical Nursing
(2,0) 2

This course focuses on the ethical and legal responsibilities and issues related to the safe practice of practical nursing. The role of the practical nurse and within the health care community is emphasized. Licensure responsibilities, career advancement and lifelong learning needs are incorporated. Prerequisite: PNUR201 with a grade of C or better.

PNUR203 OB Practical Nursing
(3,6) 5

This course explores the cycles of life, beginning with the reproductive cycle, conception, fetal development, labor, birth, the postpartum woman, and needs and care of the newborn. At risk pregnancies and complications are identified. Emphasis is placed on the family as the client. Prerequisite: PNUR201 with a grade of C or better.

PNUR204 Pediatric Practical Nursing
(3,6) 5

In this course, the nursing process is used to address well-defined health problems common to children. Normal child growth and development, immunization needs and health risk factors for children are emphasized. Children's responses to illness and methods of evaluating children's needs are covered. Prerequisite: PNUR201 with a grade of C or better.

POLITICAL SCIENCE

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

POLI110 Introduction to American Government and Politics
(4,0) 4

An introductory survey of American national government and politics.

**POLI120 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 the judiciary, process of litigation, influences on law, and impact and enforcement of judicial decisions.

**POLI130 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.

**POLI160 Introduction to Canadian
Government and Politics**

(3,0) 3

An introductory survey of Canadian government and politics.

**POLI201 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.

**POLI211 Political Science
Research and Statistics**

(4,0) 4

An introduction to research methods and statistical applications in political science and public administration. Among other research methods, the course examines survey research, content analysis, experimental design and analysis of existing data. Introduces students to the basics of descriptive and inferential statistics, up through correlation and regression. Prerequisite: MATH086 or equivalent/satisfactory score on ACT or Placement Exam.

**POLI222 Introduction to
the Legal Profession**

(3,0) 3

Students will become familiar with how the law functions, how the legal profession has evolved, how to prepare for and apply to law school, how law schools differ from college (including development of various methods and techniques to study the law). In addition, students will become aware of the legal profession and its demands, opportunities, options and trends. Prerequisites: POLI110, sophomore standing and/or permission of instructor. Also listed as LAWS222.

**POLI241 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.

POLI247 Model United Nations

(2,0) 2

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 four credits, but no more than two credits may be counted toward a political science major or minor. Prerequisite: Permission of instructor.

**POLI290 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.

**POLI301 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.

POLI325 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: POLI110 and junior standing.

**POLI331 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: POLI110.

**POLI333 Human Rights
and World Politics**

(4,0) 4

This course provides an introduction to the international regime for the protection of individual human rights. This course covers the basic philosophy, principles, instruments and institutions that undergird the regime, along with an overview of several current issues and debates in the literature related to the cross-cultural conflicts over domestic compliance with the relevant treaties. Prerequisite: POLI110.

POLI334 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.

POLI335 European Union Politics

(4,0) 4

The primary aim of this course is to provide in-depth knowledge of the institutions and politics of the European Union. The course provides a general overview of the "State of the Union" from an empirical (rather than theoretical) perspective. We shall use articles from the comparative and international politics literature, along with some legal materials to make sense of the institutional and policy issues facing the European Union. It should be emphasized that no knowledge of international legal processes is needed for the course. Prerequisite: POLI110.

**POLI340 Politics in
Multicultural Societies**

(3,0) 3

An examination of nationalism and other forms of political conflict arising from ethnic, racial, linguistic and religious differences in comparative perspective. Prerequisites: POLI110 or 160 and junior standing.

**POLI342 International
Environmental Policy**

(3,0) 3

This course is intended to familiarize students with the efforts of the international community to establish policy guidelines designed to begin the regulation of the global environment. The course covers basic concepts to international relations necessary to understand the general workings of the nation-state system. It then begins an exploration of significant historical international environmental issues and the ways in which these have been dealt with by the international community. The course further challenges students by investigating various alternative solutions for solving the myriad of global environmental problems faced by all of humankind in the new century.

POLI351 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: POLI110 and junior or senior standing.

POLI352 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: POLI110 and junior or senior standing.

POLI357 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. May also be used for sociology credit.

POLI364 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: POLI110.

POLI367 Congress and the Presidency
(4,0) 4

Examines the legislative and executive branches of government as parts of the policy-making process. Prerequisite: POLI110.

POLI401 Principles of Public Administration
(3,0) 3

Examines major issues and methods in public administration. Analysis of specific public policy issues. Prerequisite: Advanced standing.

POLI411 U.S. Foreign Policy
(3,0) 3

A study of the formulation and conduct of American foreign policy. Analysis of relevant factors, institutions which influence the formulation and conduct of policy; and an examination of selected foreign policies. Prerequisite: POLI110.

POLI413 The International Legal Order
(4,0) 4

The primary objective of this course is to explore the reasons for the emergence of the international legal order as a crucial constraint on the freedom of action of national governments; that is, to understand the impact of the international legal order on contemporary international relations. It also seeks to introduce the substance of international law in selected issue-areas, and to provide an overview of the nature of international legal reasoning. Throughout the course, we shall emphasize the interaction of law and politics, and of national and transnational legal processes. Prerequisite: POLI110.

POLI420 Politics of the World Economy
(4,0) 4

Power conflict at the international economic level and its impact on the politics of various nations, states, regions and interests. Prerequisites: POLI110 or 160, and junior standing, as well as either ECON201 or 202. POLI241 recommended but not required.

POLI463 Seminar in Political Science
(1-3,0) 1-3

A reading and discussion seminar dealing with selected topics in political science. Course may be repeated with permission of instructor. Prerequisite: Junior or senior standing.

POLI467 Constitutional Law and Civil Liberties
(4,0) 4

Principles of the American Constitution: separation of powers, federalism, the powers of the national and state governments, and limitations on the exercise of these powers as well as principles of the American Constitution respecting civil rights and liberties, The Bill of Rights, equal protection of the laws, citizenship and suffrage, and limitations on the exercise of those rights. Prerequisite: POLI120 or its equivalent.

POLI490 Independent Study in Political Science
(1-3) 1-3

Independent research or directed study under the supervision of a faculty member. May be repeated for a total of nine credits. Prerequisite: Permission of instructor.

POLI491 Senior Seminar I
(4,0) 4

The first course in a capstone sequence required of all political science majors. The course examines the history of political science and public administration and reviews contemporary approaches and recent research. Students prepare a research proposal to be carried out in POLI492. Prerequisites: Political science major and senior standing.

POLI492 Senior Seminar II
(4,0) 4

Completion of the research project begun in POLI491. Students will make oral presentations of their project results at the end of the course to other students, faculty and invited guests. Prerequisite: POLI491.

POLI499 Political Science/Public Administration Internship
(1,9 - 27) 3-9

Students arrange, with the assistance and approval of the instructor, a supervised work experience in a governmental, community or nonprofit organization. Students perform professional tasks under the supervision of agency personnel. The students' review and evaluation of the work experience is under the direction of the instructor. Permission of the instructor required by the seventh week of the preceding semester. Course may be repeated to a maximum of nine credits.

PSYCHOLOGY

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

PSYC101 Introduction to Psychology
(4,0) 4

A general introduction to the systematic study of behavior and mental processes in humans and animals.

PSYC155 Lifespan Development
(3,0) 3

Human psychological development from birth to death. This course covers social, emotional and intellectual development across the lifespan.

PSYC201 Communication Skills in Counseling
(2,1) 3

This course covers the essential elements of establishing a therapeutic relationship, including active listening skills, empathy and confrontation. Students both explore their potential to be congruent and authentic as counselors and demonstrate counseling skills with voluntary, involuntary and crisis counselors. No prerequisite. Also listed as SOWK201.

PSYC210 Statistics
(3,0) 3

Introduction to basic statistical methods of analyzing psychological data. Emphasis is placed on statistical inference, e.g., t-tests, F-tests and selected non-parametric tests. This course provides students with basic statistical concepts and skills necessary for laboratory and survey work, and for understanding psychological literature, and introduces them to statistical analysis on the computer. MATH207 may be used in place of PSYC210 to meet the psychology major and minor requirements. Prerequisite: MATH086 or equivalent/satisfactory score on ACT or Placement Exam.

PSYC212 Experimental Psychology
(3,2) 4

An examination of the basic research methods employed in the social sciences with emphasis on the experiment. Topics: Epistemology, laboratory experiments, field experiments, survey construction, correlational research. Students will each participate as a subject and an experimenter, collect data, analyze data, and write a laboratory report according to the editorial style of the American Psychological Association. Laboratory assignments require use of computer applications for experimental purposes, including running experiments and collecting data, analyzing results, creation of appropriate figures, and communication of results in text and oral presentations with slides. Prerequisites: PSYC101 and either PSYC210 or MATH207.

PSYC217 Social Psychology
(3,0) 3

Topics include attitude formation and change, interpersonal attraction, aggression, altruism, conformity and environmental psychology.

PSYC228 Organizational Behavior
(3,0) 3

An introduction to the theories, principles and practices of organizational behavior within the workplace. May be used for sociology credit.

PSYC240 Behavior Management
(3,0) 3

Systematic introduction to behavioral concepts and techniques. Self-management applications and behavioral assessments in applied settings serve as practical lab experiences.

PSYC259 Abnormal Psychology
(3,0) 3

This course is a systematic investigation of the identification, dynamics and treatment of deviant and maladaptive behavior.

PSYC265 Child and Adolescent Development
(3,0) 3

Psychological development of the child through adolescence. Social, emotional and intellectual development are covered, with consideration of genetic, prenatal and postnatal influences. Prerequisite: PSYC101, 155 or EDUC150.

PSYC291 Group Counseling
(3,0) 3

This course examines the theory, techniques and practice of group counseling. Students will become familiar with basic group process, theoretical perspectives and their application to group counseling. Prerequisite: PSYC201. Also listed as SOWK291.

**PSYC301 Exceptional Child
and Adolescent**

(3,0) 3

The study of physically, intellectually and socially exceptional children and adolescents, including their characteristics and unique educational needs. Prerequisite: PSYC155 or 265.

PSYC311 Learning and Motivation

(3,0) 3

An introduction to the theory and research of learning. Factors are examined that influence the acquisition and performance of behaviors in classical and instrumental learning paradigms. Prerequisite: PSYC212.

PSYC357 Personality Theory

(3,0) 3

This course surveys the major psychological theories used to conceptualize, treat and research personality issues. Prerequisite: 12 hours of psychology.

PSYC383 Industrial Psychology

(3,0) 3

The principles of human behavior in the industrial situation are studied with particular emphasis given to scientific methods of selecting, utilizing, and evaluating a work force in ways consistent with the well-being of the individual worker. Prerequisites: PSYC101 and 210.

PSYC385 Health Psychology

(3,0) 3

This course covers psychoneuroimmunology and stress as they impact on human health and disease as well as psychological interventions which promote physical well being and healing. Prerequisite: Junior standing.

PSYC391 Family Therapy

(3,0) 3

This course applies a systems framework to the understanding of family dynamics and introduces structural perspectives and modalities for family intervention. Prerequisites: PSYC101 and junior standing. Also listed as SOWK391.

PSYC396 Tests and Measurements

(3,0) 3

This course has two parts. Part one covers measurement theory, the properties of the normal curve, reliability, validity and measurement statistics. Part two reviews major tests used by researchers, educators, clinicians, counselors, addictions counselors and industrial psychologists. Prerequisite: SOCY302 or PSYC210 or MATH207 or equivalent.

**PSYC456 History and Systems
of Psychology**

(3,0) 3

An examination of persons, events, theories, schools and systems that influenced and define contemporary psychology. Prerequisite: PSYC311.

PSYC457 Cognition

(3,0) 3

A survey of recent findings on cognition in humans. Topics include learning, memory, problem solving, language and complex perceptual processes. Prerequisite: PSYC311.

PSYC459 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: PSYC311.

**PSYC490 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. May be repeated up to a total of six credits. Prerequisite: Permission of instructor.

PSYC495 Senior Research Practicum

(0,3) 3

A practicum under the guidance of a faculty mentor. The student will conduct an empirical research project based on the proposal submitted by the student in PSYC498. Prerequisite: PSYC498. Corequisite: PSYC499.

PSYC498 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: PSYC210, 212 and 311.

PSYC499 Senior Research II

(1,0) 1

Issues in the development and implementation of an empirical research project, including design, statistical analyses, ethical review, and modes of presentation. Prerequisite: PSYC498. Corequisite: PSYC495.

RECREATIONAL ACTIVITIES

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

Lake Superior State University does not offer majors or minors in physical education. However, there is a wide variety of activity courses available that may be selected as free electives.

The faculty encourage you to participate not only in these activity courses, but athletics and intramurals as well.

RECA103 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.

RECA105 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.

RECA106 Backpacking

(0,2) 1

Introduction to equipment, safety precautions, environmental concerns and skills needed to successfully backpack. Class will experience a weekend backpacking trip.

RECA107 Canoe Techniques

(0,2) 1

This course will introduce the student to the basic strokes and canoe safety associated with flat water canoeing.

RECA108 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.

**RECA109 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.

RECA110 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.

RECA114 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.

RECA119 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.

**RECA120 Downhill Skiing
and Snowboarding**

(0,2) 1

The students will be provided with an opportunity to learn the basic fundamentals of downhill skiing and snowboarding and to gain sufficient knowledge of the sport so they may continue to enjoy and improve for the rest of their lives.

RECA125 Tennis

(0,2) 1

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.

RECA127 Volleyball
(0,2) 1

This course is designed to develop basic skills and progression in power volleyball. Conditioning, drill, game tactics and rules will be practically applied.

RECA129 Basketball
(0,2) 1

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.

RECA130 Intercollegiate Sports Skills
(0,2) 1

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.

RECA150 Individualized Physical Fitness
(0,2) 1

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.

RECA151 Jogging and Walking for Fitness
(0,2) 1

Introduction to jogging and walking as means of developing physical and mental fitness. Development of an activity ideal for lifetime leisure involvement.

RECA152 Orienteering
(0,2) 1

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.

RECA153 Weight Training
(0,2) 1

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.

RECA154 Yoga
(0,2) 1

This course will cover the history, theory principles and benefits contraindications and methods of yoga as well as the application of yoga asanas, breathing techniques and relaxation method.

RECA160 Adapted Activities
(0,2) 1

Leisure activities adapted to meet the needs of students with disabilities. Emphasis on walking, jogging and aquatics. (May be repeated for credit.)

RECA173 Social Dance
(0,2) 1

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.

RECA174 Aerobic Dance
(0,2) 1

This course will provide the student with an opportunity to become 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.

RECA175 Step Aerobics
(0,2) 1

A step workout is a high-intensity, low-impact aerobic workout for all fitness levels. The principle is to step up and down on a platform while simultaneously performing upper-body exercises. The program will work every major muscle group in the lower body, while training the upper body.

RECA180 Beginning Skating
(0,2) 1

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.

RECA194 Scuba
(0,2) 1

This course is designed to introduce the student to the appropriate and safe use of self-contained underwater breathing apparatus.

RECA195 Beginning and Advanced Beginning Swimming
(0,2) 1

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.

RECA196 Intermediate and Advanced Swimming
(0,2) 1

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.

RECA210 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, RECA211. Prerequisite: Red Cross intermediate swimming certificate or equivalent skills.

RECA211 Water Safety and Lifeguard Instructor
(0,4) 2

Course meets four hours a week, 70 percent of the time in the pool and 30 percent 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 STUDIES

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

RECS101 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.

RECS105 Program Development and Leadership
(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: RECS101 or EXER140. Also listed as EXER105.

RECS212 Instructional Methods in Adapted Aquatics
(1,2) 2 alternate years

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.

RECS220 Methods in Arts and Crafts
(3,0) 3 alternate years

A variety of arts and crafts media are studied and applied to specific recreation settings with concentration on leading and programming. Prerequisites: RECS101 and 105.

**RECS240 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. Prerequisites: RECS101 and 105.

RECS262 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. Prerequisite: RECS105.

RECS270 Sports Management
(3,0) 3 *alternate years*

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: RECS101 and 105.

**RECS280 Readiness in Games,
Activities and Sports**
(3,0) 3 *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.

RECS295 Practicum
(1-2,0) 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. Prerequisite: Instructor permission

**RECS320 Dance and Rhythmic
Activities for Recreation**
(3,0) 3 *alternate years*

Study of dance in social and therapeutic settings; developing skills to lead programs and adapt a variety of rhythmic activities for individuals and groups: Creative movement, improvisation, variety of social dance, historical significance to actual implementation. Prerequisites: RECS101 and 105.

**RECS340 Program Development
in Therapeutic Recreation**
(3,0) 3

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: RECS240.

**RECS344 Adapted Sports
and Recreation**
(3,0) 3

A study of specialized recreational and athletic opportunities available to individuals with illnesses and disabilities. Related associations, equipment, rules and classifications, resources and research will be encountered for a wide range of activities and conditions. When available, practical opportunities will be included as part of the learning process. Prerequisite: junior standing.

**RECS346 Clinical Issues and Practice
in Therapeutic Recreation**
(2,4) 3

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: RECS340 and 440.

**RECS360 Facilitation and
Interpretation Techniques**
(2,2) 3

This course is designed to serve recreation students who are interested in facilitating outdoor or adventure based programs, and/or become interpreters in and outdoor or parks environment. The course will expose the student to a wide variety of facilitation/interpretation methodologies. The student will be involved in both learning and practicing these techniques. Examples of these techniques would include such things as: utilization of the metaphor, and Haiku. This class will also travel to different outdoor facilities, such as outdoor education centers and state historical sites. This will enable the students to facilitate experiences in an environment unavailable to LSSU (example, a High Ropes Course) and to interface with individuals who provide facilitation and interpretation as a part of their professional responsibilities. Prerequisites: RECS105, RECS262.

**RECS362 Land Management
for Recreation Purposes**
(3,0) 3

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: RECS101 and 262, or NSC 1103 and EVRN131.

RECS365 Expedition Management
(2,2) 3

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: RECS262.

**RECS367 National Parks,
National Monuments
and National Culture**
(3,0) 3 *alternate years*

This course will focus on the historical development of national parks and the affiliated National Land Ethic. Included in the presentation will be a study of the social, cultural, aesthetic and economic history which fostered the development of a national attitude that favored the "national park" concept. The course will also emphasize the emergence of national parks in this country as a representative of our national cultural history. The course will trace the historical development of a land ethic. It will also trace an emerging aesthetic awareness of land among people who arrived to this continent from Central Europe during the 1600s. This Central European land ethic will be compared to the land ethic of Native Americans. Both of these will be traced through this country's history and will serve as a basis for anticipating future land management trends and issues.

RECS370 Recreation for the Elderly
(3,0) 3 *alternate years*

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. Prerequisites: RECS101, 105 and 200-level recreation electives; or NURS290 and HLTH352.

RECS375 Commercial Recreation
(3,0) 3 *alternate years*

An introduction to the scope, characteristics and management aspects of the commercial recreation industry. Substantial coverage of entrepreneurial strategies, economic concepts applied to commercial recreation, steps for creating feasibility studies, and operation management. An in-depth study of specific commercial recreation programs including travel, tourism, hospitality, club, and the entertainment industry will be included with emphasis on present and future trends and career opportunities. Prerequisites: RECS105 or BUSN121, ACTG230, ECON202 and FINC245.

RECS390 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 and instructor permission. May be repeated for a total of three credits.

RECS397 Recreation Studies Junior Research Seminar**(1,0) 1**

Introduces the concepts, purpose, methods and function of scholarly research and scientific inquiry. Prerequisites: junior standing, and majoring in recreation management or parks and recreation.

RECS435 Problems, Issues and Research in Therapeutic Recreation and Leisure Sciences**(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. Prerequisites: RECS397 and MATH207, or PSYC210 or comparable statistics course.

RECS437 Recreation Studies Senior Research Seminar**(1,0) 1**

The focus of this course is to provide instruction and experience relative to data analysis and presentation methodologies affiliated with conducting research. The students will apply the procedures and methodologies discussed in class directly to their research projects. Prerequisite: RECS435.

RECS440 Disabilities Seminar**(3,0) 3**

This class provides students with the opportunity to become familiar with a wide range of disabling conditions and illnesses. Emphasis will be placed on trends/issues, incidence, characteristics, etiology, restrictions to involvement, and most current research. The student research-presentation format will be used extensively in this class. Prerequisite: junior standing.

RECS450 Philosophy of Human Performance and Leisure**(3,0) 3**

A study of the origins and development of leisure behavior, sport, athletics and personal fitness across cultures. Ethical issues such as violence, opportunity, exploitation, role models and equity will be examined. Prerequisites: EXER262 or RECS101 and junior status. Also listed as EXER450.

RECS481 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.

RECS482 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: RECS105 and junior standing.

RECS492 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 and instructor permission.

RECS496 Selected Research Topics**(1-3,0) 1-3**

Student carries out approved project(s) of his/her own initiative. Prerequisite: junior standing and instructor permission.

STUDENT SERVICES

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

SERV100 University Success Strategies**(1,0) 1**

Based on assessment of student inventories, students are provided the opportunity to improve their study skills, methods of time management, modes of memorization, note-taking techniques, and university examination preparation. Emphasis is placed on making the transition to university life by focusing on various academic strategies and exposing students to basic information on LSSU programs, policies and procedures.

SERV125 Career Planning and Decision Making**(1,1) 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. Prerequisites: student must be fully admitted for enrollment at LSSU and currently enrolled in six (6) credits.

SERV150 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.

SERV205 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.

SOCIOLOGY

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

SOCY101 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 and social forces.

SOCY102 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.

SOCY103 Cultural Diversity**(3,0) 3**

This course introduces the student to racial, ethnic, gender and social class variation within the United States and the global community to enable the student to better understand, live with, and appreciate diversity.

SOCY113 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.

SOCY202 Social Research Methods**(3,0) 3**

Introduction to basic methods of social research. (Also listed as SOWK202.)

SOCY213 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.

SOCY214 Criminology**(3,0) 3**

A study of the nature and causes of crime and the results of various attempts to reduce crime.

**SOCY225 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 NATV225.

SOCY226 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.

SOCY227 Population and Ecology

(3,0) 3

Study of the basic issue of the world's population increase and distribution in relation to natural resources, standards of living, political systems, changes in physical and cultural environments.

SOCY238 Social Psychology

(3,2) 4

This course examines the social nature of humans, exploring both the influence of social structures upon behavior and the process by which people create social structures; explains symbolic interactionist theory; and introduces qualitative research methods which are applied in a field study conducted by the student. Prerequisite: SOCY101 with a grade of C or better, ENGL110, with a grade of C or better.

SOCY242 Sociology of Sex

(3,0) 3

Socio-psychological study of the impact of human sexuality upon human behavior.

SOCY299 Inuit Art and Culture

(3,0) 3

An examination of Inuit art and culture in the prehistoric, historic and contemporary periods.

SOCY302 Statistics for Social Science

(4,0) 4

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: MA086 or equivalent/satisfactory score on ACT or Placement Exam.

SOCY308 The Failure of Liberalism

(3,0) 3

A study of the impact of liberalism on issues such as education, poverty and crime. The course will focus on the United States.

**SOCY310 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. Prerequisite: SOCY238.

**SOCY311 Contemporary
Sociological Theory**

(3,0) 3

Critical analysis of major sociological theories of the 20th and 21st centuries. Prerequisite: SOCY310.

SOCY313 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.

SOCY314 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.

SOCY321 Sociology of Women

(3,0) 3

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.

SOCY325 Social Stratification

(3,0) 3

Class, caste, status, power, general concept of stratification and consequences of stratification will be related to social institutions.

**SOCY326 The Sociology of Aging
and the Aged**

(3,0) 3

Examines aging and the aged in American society from the sociological perspective.

**SOCY327 The Sociology of Dying
and Death**

(3,0) 3

Sociological examination of dying and death.

SOCY338 Deviance

(3,0) 3

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. Also listed as SOWK338.

SOCY339 Culture and Personality

(3,0) 3

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.

**SOCY399 Sociology Junior Seminar
(1,0) 1**

Students will develop a proposal for their senior project through lecture and discussion, mentoring by seniors, and collaboration with colleagues. Prerequisites: SOCY238, 304, 302, and SOCY/SOWK202.

SOCY401 Sociology Seminar I

(1,0) 1

Meetings provide instruction for the senior project covering locating sources, moving from theory to research, constructing a review of literature and designing methods. Prerequisite: SOCY399.

SOCY402 Sociology Seminar II

(1,0) 1

Class meetings provide instruction for the senior project, focusing upon designing and conducting research, analyzing data, completing final report, preparing poster and formal presentation. Prerequisites: SOCY401 and 495.

**SOCY405 Seminar: Current
Sociological Issues**

(3,0) 3

Contemporary issues in sociology, to vary from year to year. Extensive reading, writing, and discussion expected. Prerequisites: Junior standing and 12 hours in sociology. This course may be repeated when content varies.

**SOCY490 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. May be repeated to a total of six credits. Prerequisite: Permission of instructor.

SOCY495 Senior Project I

(0, 6) 2

In this practicum, under the guidance of a Sociology faculty member, the student prepares a review of literature and research plan for an independent research project in Sociology. Prerequisite: SOCY399.

SOCY496 Senior Project II

(0, 6) 2

In this practicum, under the guidance of a Sociology faculty member, the student refines the research plan prepared in SOCY495, gathers data, completes an analysis, writes up the findings, presents the study in a public forum and prepares a poster. Prerequisites: SOCY401 and 495.

SOCIAL WORK

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

**SOWK110 Introduction
to Social Work**

(3,0) 3

A general introduction and overview of the social work profession including its philosophy, values, professional roles, current trends and models in different practice settings (i.e. public welfare, child and family services, mental health, medical settings, etc.).

**SOWK201 Communication Skills
in Counseling**

(2,1) 3

This course covers the essential elements of establishing a therapeutic relationship including active listening skills, empathy and confrontation. Students both explore their potential to be congruent and authentic as counselors and demonstrate counseling skills with voluntary, involuntary and crisis counselors. No prerequisite. Also listed as PSYC201.

SOWK202 Social Research Methods
(3,0) 3

Introduction to basic methods of social research. Also listed as SOCY202.

SOWK250 Social Work Practicum
(1,9-27) 3-9

This course provides a field placement opportunity for students to practice skills and use knowledge gained from courses in skill minors. Prerequisite: Permission of instructor. Also listed as HMSV250.

SOWK291 Group Counseling
(3,0) 3

This course examines the theory, techniques and practice of group counseling. Students will become familiar with basic group process, theoretical perspectives and their application to group counseling. Prerequisite: PSYC201. Also listed as PSYC291.

**SOWK301 Alternative Dispute
Resolution and
Conflict Management**
(3,0) 3

This course explores non-judicial avenues of dispute or conflict resolution such as negotiation, mediation, arbitration, as well as court-annexed alternative dispute resolution mechanisms. The procedural aspects, key elements, ethical considerations and practical applications of alternative dispute resolution are discussed as part of the dispute resolution landscape. The course will also include dispute resolution and conflict management simulations and case studies. Prerequisite: LAWS202 or junior standing. Also listed as LAWS301.

**SOWK305 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. Prerequisites: HIST230 and NATV230. Also listed as LAWS305/NATV305.

**SOWK310 Clinical Practice
and Diagnosis**
(3,0) 3

Student will learn skills in developing psychosocial history, treatment plans, becoming familiar with diagnostic criteria and categories, and appreciating the uses and limitations of various diagnostic schemes. Prerequisites: Senior standing and completion of PSYC/SOWK201.

SOWK338 Deviance
(3,0) 3

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 or social work. Also listed as SOCY338.

SOWK341 Addiction
(3,0) 3

Study of the nature of drug dependency with emphasis on social and cultural variations in patterns and consequences of use. Prerequisites: either junior standing or sophomore standing together with HMSV204.

SOWK344 Social Welfare Systems
(3,0) 3

Analysis of social welfare systems in the U.S. including history, philosophy, cross-cultural comparisons, and current issues. Prerequisites: Junior standing or completion of SOWK110 or completion of HMSV204

SOWK391 Family Therapy
(3,0) 3

This course applies a systems framework to the understanding of family dynamics and introduces structural perspectives and modalities for family intervention. Prerequisites: PSYC101 and junior standing. Also listed as PSYC391.

SOWK480 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. Also listed as HMSV480.

SPANISH

Special topics courses will be available as need and interest develop. Consult the semester course schedule for these.

SPAN161 First-Year Spanish I
(4,1) 4 *Fall*

Introduction to basic Spanish grammar and vocabulary, designed to acquaint the student with the essentials of oral and written Spanish.

SPAN162 First-Year Spanish II
(4,1) 4 *Spring*

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: SPAN161 or equivalent.

SPAN165 Spanish for Public Safety
(4,1) 4 *on demand*

A continuation of SPAN161, with emphasis on vocabulary relevant to work in criminal justice. Prerequisite: SPAN161 or equivalent.

SPAN261 Second-Year Spanish I
(3,1) 3 *Fall*

Intensive review of grammar and further vocabulary development. Emphasis on composition and conversation based on the reading of Spanish texts and newspapers. Prerequisite: SPAN162 or equivalent.

SPAN262 Second-Year Spanish II
(3,1) 3 *Spring*

Conducted as much as possible in Spanish with the primary aim of dealing fluently with basic conversation situations. Prerequisite: SPAN261 or equivalent.

SPAN301 Study Abroad
(8,0) 8 *Summer*

Students admitted by the faculty of the Spanish Department will take a variety of classes at an accredited institution in a Spanish-speaking country. Students will spend a minimum of 30 hours per week in class. They will also be required to visit sites for archaeological, historical and cultural importance. The students' work and progress will be monitored and evaluated by the LSSU Spanish Department in cooperation with the foreign institution. Prerequisite: Students must have completed a minimum of two courses of Spanish at LSSU and obtain the professor's permission. *Credit for this course may be applied to fulfill the requirements for a Spanish major or a Spanish minor. This course cannot be repeated.

**SPAN361 Advanced Spanish
Grammar**
(3,0) 3

Acquisition of advanced skills in composition, grammar, reading and conversation, using media and readings related to the Hispanic world. Corequisite: SPAN262 or equivalent.

**SPAN362 Advanced Spanish
Composition**
(3,0) 3

This course is designed to improve writing skills in Spanish through extensive and intensive reading of Spanish and Spanish-American fiction. Prerequisite: SPAN262. Corequisite: SPAN361.

**SPAN368 Selected Topics
in Conversation**
(2,0) 2

Class assignments and readings provide the basis for in-class discussion at post-intermediate level. Students will be given the opportunity to practice vocabulary and grammar structures in life-like situations and contexts. Prerequisites: SPAN361 and 362.

**SPAN380 Survey of Spanish-
American Literature I**
(3,0) 3

Class is a survey course of Spanish-American literature from the Spanish Conquest to 1880. It will cover readings from diverse genres and periods, beginning with an examination of precolumbian indigenous texts and ending with an overview of the development of *modernismo*. Prerequisites: SPAN361 and 362.

SPAN381 Survey of Spanish-American Literature II

(3,0) 3

Elective survey course of Spanish-American literature from 1880 to present day. It will cover readings from diverse genres and periods, beginning with an examination of *modernismo*, and culminating with selections from prominent recent literary works. Prerequisites: SPAN361 and 362.

SPAN401 The Spanish Novel

(3,0) 3

The class will focus on the study of selected 19th and 20th Century Spanish peninsular novels. Theme and content of course may vary from semester to semester. With the instructor's permission, this course may be repeated, and students may acquire up to six hours of credit for SPAN401. Prerequisites: SPAN361 and 362.

SPAN402 The Spanish-American Novel

(3,0) 3

This class will focus on the study of selected Spanish-American novels. Theme and content of course may vary from semester to semester. With the instructor's permission, this course may be repeated, and students may acquire up to six hours of credit for SPAN402. Prerequisites: SPAN361 and 362.

SPAN410 Spanish-American Civilization

(3,0) 3

This course will focus on the study of the history and culture of Spanish-America. The textbook will be supplemented with additional collateral readings; students will prepare both oral and written reports in Spanish on various assigned topics throughout the semester. Prerequisites: SPAN361 and 362.

SPAN411 Spanish Civilization

(3,0) 3

This course will focus on the study of the history and culture of Spain. The textbook will be supplemented with additional collateral readings; students will prepare both oral and written reports in Spanish on various assigned topics throughout the semester. Prerequisites: SPAN361 and 362.

SPAN412 Hispanic Literature of the Southwest

(3,0) 3

This course will examine the post-WWII development of Chicano culture in the southwestern United States as reflected through literature and the fine arts. Students will read a broad spectrum of popular Mexican-American literary works from 1945 to present day. Prerequisites: SPAN361 and 362.

SPAN490 Topics in Hispanic Literature

(1-4,0) 1-4

The content of this elective course will vary from semester to semester. Students may repeat SPAN490 once, and in so doing, acquire up to six hours credit for their degree plan with this class. Areas of study will include, but not be limited to, specific genres, periods, authors and literary movements. Prerequisites: SPAN361 and 362.

THEATRE

THEA161 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: COMM101.

THEA251 History of Drama and Theatre I

(3,0) 3

The study of the historical and esthetic drama and theatre from the Greek period to the European Renaissance. Prerequisite: ENGL110.

THEA252 History of Drama and Theatre II

(3,0) 3

The study of the historical and esthetic drama and theatre from the Renaissance to current theatre and drama. Prerequisite: ENGL110.

THEA309 Speech and Drama Productions

(3,0) 3

Practical problems in the development and production of dramatic works, forensics workshops, tournaments and festivals. Prerequisite: COMM101 and permission of instructor.

THEA333 Studies in the Drama: The Genre and Theater in Context

(3,0) 3

Students will examine major plays in the context of theater and literary history from the beginning to the present, including European, British and American development. Prerequisite: ENGL180.

UNIVERSITY SEMINAR

USEM101 University Seminar I: Foundations for Success

(1,0) 1

This course focuses on academic skills and critical thinking, on knowledge of the institution and the role of higher education, and on personal skills for living, which together are requisite for student success and lifelong learning. Seminar I - Foundations for Success places emphasis on incorporation into university culture, time management, use of campus resources, written and oral presentations, development of critical thinking skills, and strengthening study skills for academic success.

USEM102 University Seminar II: Developing Critical Thinking

(1,0) 1

Seminar II: Developing Critical Thinking continues the goals of Seminar I while placing emphasis on the application of critical thinking skills to the academic setting. A reading anthology is used as the basis for regular written, and oral communication and a term research paper. While continuing to apply skills and techniques used in Seminar I, students additionally develop cultural literacy and incorporate greater computer usage, and explore campus organizations, community events and community service.

USEM103 University Seminar III: Thinking About the Discipline

(1,0) 1

Seminar III: Thinking about the Discipline begins a more focused examination of the applications of critical thinking to the student's discipline. Each school selects a reading anthology suitable for analysis and discussion by its majors in order to examine such as current critical issues, social responsibility, ethics and cultural diversity from the perspective of the student's discipline. Continuing the activities of earlier seminars this course promotes ongoing participation in community events, application of academic success skills and writing in the discipline.

USEM104 University Seminar IV: Professional Seminar

(1,0) 1

Seminar IV: Professional Seminar serves as the fourth and final in the series and focuses on introducing the student to their discipline with special emphasis on interviews with professional, examinations of career options, and overviews of the literature and research of their discipline. This course focuses attention on the skills and knowledge base of the profession, features of the work environment, development of resume and career developing activities. Activities of earlier seminars continue as students apply critical thinking skills to the examination of the current literature of their field, participate in written and oral presentations, and hear presentations from working professionals.

Board of Trustees

Lake Superior State University is governed by an eight-member Board of Trustees. Appointed by the governor and confirmed by the Michigan Senate, these volunteers serve an eight-year term.

Meetings are open to the public with times and locations posted by LSSU.



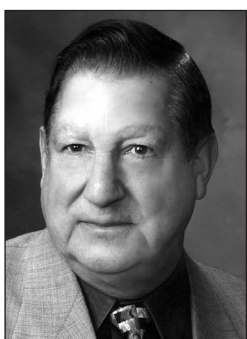
Mr. Patrick Egan
Brimley
Term Expires: 1/27/16



Ms. Cindy N. Dingell
Trenton
Term Expires: 1/27/12



Ms. Jenny Kronk
Petoskey
Term Expires: 1/27/14



Mr. W.W. "Frenchie" LaJoie
Sault Ste. Marie
Term Expires: 1/27/12



Mr. Charles Schmidt
Rochester Hills
Term Expires: 1/27/10



Mr. Gary Toffolo
Sault Ste. Marie
Term Expires: 2/27/14



Scot A. Lindemann
Holland
Term Expires: 1/27/16



Tony McLain, President
(ex officio member)
Sault Ste. Marie

Distinguished Teacher

The Distinguished Teacher Award recognizes excellence in the classroom and commitment to Lake Superior State University as a whole. Nominations for the award are submitted by campus faculty, staff and students. A committee of graduating senior with the highest grade point averages and faculty who have previously received the award determine each year's honoree. The following are recipients of this singular distinction.

1957-58	Raymond Chelberg	1982-83	Paul Wilson	1995-96	Carole Connaughton
1963-64	C. Ernest Kemp	1983-84	Michael Flynn	1996-97	Paul Duesing
1971-72	Margaret Howe	1984-85	Margaret Malmberg	1997-98	Gary Johnson
1972-73	David Blair	1985-86	Robert Money	1998-99	John Erkkila
1973-74	Gerald Samson	1986-87	Rosa Kavanaugh	1999-2000	Karl J. Sherman
1974-75	Thomas Mickewich	1987-88	Dimitri Diliiani	2000-01	Kevin Schmaltz
1975-76	Arthur Duwe	1988-89	David Behmer	2001-02	Barbara Keller
1976-77	Thomas Kelly	1989-90	Susan Ratwik	2002-03	Deborah Stai
1977-78	Larry Schneider	1990-91	William Haag	2003-04	Richard Conboy
1978-79	Steven Person	1991-92	James Madden	2004-05	Sherilyn Duesing
1979-80	Bernard Arbic	1992-93	Sally Childs	2005-06	James Moody
1980-81	Edeltraute Vialpando	1993-94	Carol Campagna	2006-07	MaryAnne Shannon
1981-82	Timothy Sawyer	1994-95	Madan Saluja	2007-08	Kathy Berchem
				2008-09	Tom Allan

Employee of the Year

Each year, the University community honors one recipient for two awards: Administrative/Professional Employee of the Year and Educational Support Personnel of the Year. Nominations are gathered from the entire campus. The following individuals exemplify the service LSSU offers to students and the community.

Year	Administrative/Professional	Classified Personnel
1990-91	Conrad A. Schmitgal	M. Kathy Person
1991-92	Beverly E. White	Trinda M. Pontus
1992-93	Margaret E. Olson	Jeanne E. Thompson
1993-94	Susan K. Camp	Terri D. Peller
1994-95	Robbin S. Manor	Donna M. Payment
1995-96	Karen Schackleton	Judy V. Jones
1996-97	Cheri Castner	Pauline Killips
1997-98	Roger Greil	Patricia Roe
1998-99	Suzette Olson	Donald S. Jones
1999-2000	Kahler Schuemann	Janine Murray
2000-01	Kari Jastorff	Theresa Weaver
2001-02	Holly Johnson	Laurie DeNeve-Ewing
2002-03	Thomas A. Pink, III	Cherilyn Hoornstra
2003-04	Colleen Rye	Donna White
2004-05	Heather Ferguson	Kathy Danielkiewicz
2005-06	Mary St. Antoine	Nora Izzard
2006-07	Sharon Dorrity	Deborah Pietrangelo
2007-08	Jerry Stephens	Colleen Barr
2008-09	Allen Case	Judy Bawks

Faculty

Allan, Thomas A., Associate Professor, Biological Sciences; BS 1973, Central Michigan University; MS 1978, Michigan Technological University; PhD 1984, University of Maine

Andary, Carol S., Professor; Coordinator of Legal Studies and Prelaw Advisor; BS 1977, Western Michigan University; JD 1980, Wayne State University

Arend, Kristin K., Assistant Professor, Biological Sciences, BA 1996, Oberlin College; MS 2002, The Ohio State University; PhD 2008, Cornell University

Aryal, Bijaya, Assistant Professor, Geology and Physics; BS 1992, Tribhuvan University; MS 1994, Tribhuvan University; MS 2005, Kansas State University; PhD 2007, Kansas State University

Attie, Paulette M., Associate Professor, Education; BS 1972, MEd 1987, PhD 1990, University of Toledo

Barbisan, M. Angel, Instructor, Nursing; BS 1982, University of Waterloo; BSN 1986, Laurentian University

Barbour, Chad A., Assistant Professor, English; BA 1994, University of North Carolina; MA 1996, University of North Carolina; PhD 2004, University of Kentucky

Barbour, Julie B., Instructor, English; BA 1996, University of North Carolina; MFA 1999, University of North Carolina

Baumann, David C., Professor, Electrical and Computer Engineering; BS 1987, MS 1989, PhD 1991, MS 1992, University of Wisconsin - Madison

Beckham, Adrienne L., Instructor, Nursing; LPN 1967, ADN 1977, BSN 2001, Lake Superior State University

Beckon, Susan E., Assistant Professor; Accounting and Management Information Systems; BA 1985, MBA 1996, Michigan State University, CPA

Been, Mary D., Associate Professor, English; BA 1990, Queens College; PhD 2005, City University of New York Graduate School and University Center

Belanger, Krista N., Instructor, Communication Studies; BA 1999, Luther College; MA 2005, University of Colorado, Boulder

Berchem, Kathy A., Assistant Professor, Nursing; BA 1993, University Of Windsor; BS 1997, Lake Superior State University; MS 2003, Michigan State University

Blanchard, Roger D., Assistant Professor, Chemistry and Environmental Sciences; BS 1979, Eastern Michigan University; PhD 1986, University of Akron

Boger, Thomas M., Associate Professor/Chair, Mathematics and Computer Science; BS 1973, MS 1974, Michigan State University

Brown, Lewis M., Professor, Geology and Physics; BA 1965, Cornell College; MS 1967, University of Iowa; PhD 1973, University of New Mexico

Brunt, Christopher S., Assistant Professor, Finance and Economics; BS 2004, Eastern Michigan University; MA 2006, Wayne State University; PhD 2009, Wayne State University

Castner, David H., Associate Professor, Counseling Services; BS 1972, MS 1974, University of Wisconsin-Stout; Doctor of Ministry 2007, The Pillsbury College and Graduate School; Licensed Professional Counselor

Childs, Sally A., Professor, Recreation Studies and Exercise Science; BS 1971, Eastern Michigan University; MS 1978, Northern Michigan University; PhD 1986, Ohio State University

Choszczyk, Deborah A., Instructor, Fine and Performing Arts; AA 1997, Kirtland Community College; BA 1998, Alma College; MAEd 2003, Hamline University

Conboy, Richard T., Professor, Political Science/Coordinator of the Center for Social Research; BA 1967, MPA 1969, University of Dayton; PhD 1984, The American University

Copenhaver, Melissa A., Instructor, Nursing, BSN 1997, Northern Michigan University; MSW 2005, Grand Valley State University

Coullard, Collette R., Professor, Mathematics and Computer Science; BS 1980, Lake Superior State University; MS 1981, PhD 1985, Northwestern University

Crandall, Richard C., Professor, Sociology; BS 1967, MA 1969, Central Michigan University; PhD 1974, University of Michigan

DeLap, Ronald A., Assistant Professor, Electrical and Computer Engineering; BSEE 1983, MSEE 1986, Michigan Technological University; PhD 1994, University of Michigan

Denger, George H., Associate Professor, Communication Studies; BS 1980, MA 1986, Eastern Michigan University; PhD 1998, Wayne State University

Devaprasad, Jim, Professor, Engineering Technology and Management; BS 1983, University of Madras, India; MS 1986, University of New Mexico

Disney, Louann, Associate Professor, Language Studies; BA 1984, MA 1991, Southwest Texas State University; PhD 2007, Texas Tech University

Dobbertin, Leslie A., Professor/Chair, Sociology--Social Sciences; BA 1965, Central Michigan University; MA 1972, Iowa State University; PhD 1989, Michigan State University

Dorrity, Daniel T., Professor, History; BA 1966, MA 1967, Wayne State University; PhD 1973, University of Michigan

Duesing, Paul R., Associate Professor, Mechanical Engineering; BSME 1971, MSME 1973, University of Michigan; Licensed professional engineer for Michigan and Ohio

Duesing, Sherilyn R., Assistant Professor, Mathematics and Computer Science; AS 1971, North Central Michigan College; BS 1976, Central Michigan University; MS 1998, Northern Michigan University

Duggan, Rosemary H., Assistant Professor, Nursing; BS 1969, Boston College of Nursing; MS 1979, University of Texas Health Science Center

Duncan, David N., Instructor, Criminal Justice, Fire Science and EMS; RN 1998, University of the State of New York, Albany; BS 1990, MA 2009, Liberty University

Engel, Manfred, Assistant Professor, Geology and Physics; Technical University Clausthal/Germany 1964

England, Thomas R., Assistant Professor, Management, Marketing, and Entrepreneurship; BS 1991, University of Illinois; MS 1993, Eastern Illinois University

Evans, Barbara I., Professor, Biological Sciences; BS 1980, University of Ottawa, Canada; PhD 1986, University of Kansas

Evans, B. Chantelle, Assistant Professor, Nursing; RPN 2000, Sault College of Applied Arts & Technology; RN 2002, Sault College of Arts & Technology; RN-BSn 2004, Lake Superior State University; MSN 2007, Athabasca University, Alberta

Fields, Polly S., Professor, English; BA 1978, Vanderbilt University; MA 1989, University of Mississippi; PhD 1992, Louisiana State University, Baton Rouge

Filek, Valerie C., Assistant Professor/Chair; Management, Marketing, and Entrepreneurship--Business; B.Comm 1980, MBA 1984, McGill University

Gadzinski, Eric, Associate Professor/Chair; English and Language Studies--English; BA 1977, Lafayette College; MA 1990, PhD. 1995, Temple University

Garvon, Jason M., Assistant Professor, Biological Sciences; BS 1998, Northern Michigan University; MS 2001, Northern Michigan University; PhD 2005, Texas A&M University-Kingsville

Gerrie, Jaimee L., Instructor, Nursing; BS 1994, Lake Superior State University

Gregory, H. Lorraine, Assistant Professor, Mathematics and Computer Science; BS 1972, BEd 1984, University of Saskatchewan; MSEd 1997, EdD 2001, Duquesne University

Henderson, Herbert D., Instructor, Criminal Justice, Fire Science and EMS; BS 1994, 1998, Lake Superior State University; MPA 2001, Northern Michigan University

Heyns, Terry L., Professor, Criminal Justice, Fire Science and EMS; AB 1965, Saint Louis University; MA 1967, University of Kansas; PhD 1989, Kansas State University; National Certification as a Fire Service Instructor; Professional Fire Service

Hildebrand, Robert L., Assistant Professor, Mechanical Engineering; BS 1990, University of Michigan; MS 1994, University of Nebraska; PhD 2001, Royal Inst. of Technology KTH

Hook, Kristina J., Assistant Professor, Psychology; AA 1991, Cosumnes River College; BS 1993, University of Maryland; MA 1996, Eastern New Mexico University; PhD 2002, University of Washington

Hronek, Beth C., Assistant Professor/Public Services Librarian, Library; BM 1983, University of Iowa; MM 1985, University of Tennessee; MLS 1990, University of Iowa

Hutchins, Ronald S., Assistant Professor, Nursing; ADN 1977, BSN 1978, Lake Superior State College; MSN 1995, Northern Michigan University

Iretski, Alexei, Associate Professor, Chemistry and Environmental Sciences; BS 1981, PhD 1984, St. Petersburg Institute of Technology, Russia

Janjua, Mohammad Mansoor, Assistant Professor, Mechanical Engineering; BS 2000, Ghulam Ishaq Khan Institute of Technology, Pakistan; MS 2003, City College of City University; PhD 2008, New Jersey Institute of Technology

Jastrzebski, Ronald J., Assistant Professor; Accounting and Management Information Systems; BS 1981, MBA 1994, Loyola University of Chicago

Jensen, Raymond W., Instructor, Mathematics and Computer Science; BS 1992, Indiana University of Pennsylvania; MS 2000, Carnegie Mellon University; BS 2002, University of Pittsburgh; PhD 2008, University of Notre Dame

Johnson, Gary R., Professor, Political Science; BA 1972, Augustana College; MA 1975, PhD 1979, University of Cincinnati

Jones, Andrew H., Assistant Professor, Electrical and Computer Engineering; BS 1991, University of Texas at Austin; MS 1993, PhD 2002, Purdue University

June, Mary M., Assistant Professor/Librarian, Library; BA 1978, MLS 1980, University of Wisconsin-Milwaukee

Kabke, Lynn M., Assistant Professor, Nursing; BSN 1989, Lake Superior State University; MSN 1994, Northern Michigan University

Kalata, Kathleen M., Instructor, Mathematics and Computer Science; BS 1988, Saint Francis College; MS 1991, MBA 1994, University of Illinois at Chicago

Kelso, Paul R., Professor, Geology and Physics; BS 1986, Lake Superior State College; MA 1990, PhD 1993, University of Minnesota

Kerr, Nicole D.M., Assistant Professor, Nursing; BSN 2003, Lake Superior State University; MSN 2009, Athabasca University, Alberta

Kirkpatrick, Nancy S., Associate Professor/Chair, Biological Sciences; BS 1972, Miami University; MS 1979, PhD 1993, Miami University-Oxford, OH

Land, Roger J., Assistant Professor, Criminal Justice, Fire Science and EMS; BS 1972, Brigham Young University; MS 1974, University of Utah

Li, Jun, Assistant Professor, Biological Sciences; BS 1992, Wuhan University, China; MS 1995, Institute of Hydrobiology, Chinese Academy of Sciences; PhD 2002, The Chinese University of Hong Kong

Madden, James P., Professor, Criminal Justice, Fire Science and EMS; BA 1971, William Carey College; MS 1975, University of Southern Mississippi

Marinoni, Ann B., Professor; Management, Marketing and Entrepreneurship; BS 1975, Lake Superior State College; MBA 1977, Central Michigan University; PhD 1992, Michigan State University

Marsh, Nancy G., Assistant Professor/Counselor, Counseling Services; BS 1980, University of Connecticut; MS 1986, Yale

Mauldin, R. Kirk, Associate Professor, Sociology; BIS 1995, Weber State University; MS 1997, Utah State University; PhD 2001, Utah State University

McDonald, David M., Professor, Electrical and Computer Engineering; BS 1969, MS 1971, Michigan Technological University

McLaurine, Jr., William D., Assistant Professor, Criminal Justice, Fire Science and EMS; BS 1983, Eastern Kentucky University; MA 1995, Wichita State University; PhD 2006, Capella University

McPherson, Debra K., Assistant Professor/Chair, Recreation Studies and Exercise Science; Lake Superior Elders Coordinator; BS 1974, MA 1982, Northern Michigan University

Meehan, Mary Jo, Assistant Professor/Counselor, Career Services; BA 1977, MA 1981, Northern Michigan University; Licensed Professional Counselor

Merkel, Dennis M., Associate Professor, Biological Sciences; BS 1977, MS 1983, State University of New York-Syracuse; PhD 1988, Michigan State University

Moerke, Ashley H., Associate Professor, Biological Sciences; BS 1996, University of Minnesota Duluth; MS 2000, PhD 2004, University of Notre Dame

Molenaar, Amy J., Instructor, Recreation Studies and Exercise Science; BS 2007, Lake Superior State University

Money, Robert M., Professor, History; BA 1953, Northern Michigan University; MA 1958, University of Michigan

Moody, James W., Professor, History; BA 1959, Greenville College; MA 1960, Michigan State University

Muller, Kimberly O., Associate Professor, Mathematics and Computer Science; BS 1994, Hardin-Simmons University; MS 1997, PhD 2004, University of North Texas

Murray, Reinette P., Assistant Professor, Nursing; AD 1992, Schoolcraft Community College; BA 2000, Sienna Heights University; MS 2006, Eastern Michigan University

Myton, David M., Professor, Chemistry and Environmental Sciences; BS 1980, George Fox College; MST, PhD 1991, Portland State University

Neveu, Ruth A., Assistant Professor/Librarian, Library; BA 1977, Lake Superior State College; MLS 1983, University of Michigan

Nudurupati, Sai C., Assistant Professor, Mechanical Engineering; BS 2003, Osmania University; PhD 2009, New Jersey Institute of Technology

O'Shea, Maureen J., Assistant Professor, Nursing; Nursing Program 1976, Sault College of Applied Arts and Technology; Nursing Certification 2000, George Brown College, Toronto, ON; 2003 BSN, Lake Superior State University; MSN 2006, Michigan State University

Ouimette, Sarah L., Instructor, Recreation Studies and Exercise Science; BS 2005, MEd 2006, University of Wisconsin Eau Claire

Orm, Jodi L., Instructor, Nursing; BSN 1992, Lake Superior State University; MSN 2008, Saint Joseph's College of Maine

Paquet, Erayna, Assistant Professor, Nursing; BSN 1999, Lake Superior State University; MSN 2007, Saint Joseph's College

Payment, Donna M., Assistant Professor, Accounting and Management Information Systems; BS 1990, MBA 1993, Lake Superior State University

Pichot, Marcel E., Professor, Language Studies; BA 1967, Andrews University; MA 1969, Western Michigan University; PhD 1975, University of Michigan; MA 1998, Hartford Seminary

Poliski, Mindy S., Assistant Professor, Accounting and Management Information Systems; BA 2000, Western Michigan University; MB 2005, Lawrence Technological University

Ranson Olson, Britton D., Assistant Professor, Biological Sciences; BS 1999, Lake Superior State University; MS 2001, Michigan Technological University; PhD 2007, Oakland University

Ratwik, Susan H., Professor, Psychology; BA 1969, University of Minnesota; MS 1975, PhD 1978, University of Notre Dame

Roose, John H., Professor, Biological Sciences; BSF 1982, MS 1984, Stephen F. Austin State University; PhD 1989, Texas A&M University; Certified Wildlife Biologist

Root, Gerald R., Assistant Professor, Finance and Economics; BA 1967, Washington State University; MBA 1973, University of Michigan; CFA 1973

Rose, Jillena, Instructor, English; BA 2003, Lake Superior State University; MFA 2006, Warren Wilson College

Saluja, Madan, Professor, Management, Marketing, and Entrepreneurship; BA 1960, University of Delhi; LLB 1962, BA 1964, MA 1966, Macalester College; PhD 1977, University of Minnesota

Schaefer, James J., Assistant Professor, Criminal Justice, Fire Science and EMS; BS 1995, Lake Superior State University; MA 2000, University of Toledo; PhD 2006, University of Toledo

Schemm, Evan L., Associate Professor, Mathematics and Computer Science; BS 1995, MS 1998, PhD 2002, Michigan Technological University

Schirer, Thomas E., Professor, Humanities and Philosophy; BA 1973, MA 1976, University of California; PhD 1983, Friedrich-Alexander-University

Schmeisser, Jennifer M., Assistant Professor, Chemistry and Environmental Sciences; BS 1999, University of Waterloo; PhD 2008, Simon Fraser University

Schmitigal, Linda S., Associate Professor, Management, Marketing, and Entrepreneurship; BS 1982, Lake Superior State College; MBE 1990, MBA 1993, Central Michigan University

Schoenemann, Shirley A., Associate Professor; Early Childhood Education; BA 1966, Western Michigan University; MAT 1986, Oakland University; Elementary Teaching Certificate with Early Childhood Endorsement and Secondary Teaching Certificate in English

Searight, H. Russell, Associate Professor, Psychology; BA 1979, Butler University; MS 1982, Saint Louis University; MPH 2003, Saint Louis University; PhD 1984, Saint Louis University

Shingler, Paula Jo, Instructor, Nursing; LPN 1985, Alpena Community College; BS 1992, Mercy College; MSN 2008, Michigan State University

Smart, Shirley, Assistant Professor, English; AND 1967, St. Clair County Community College; BA 1991, Northern Michigan University; MA 1996, Central Michigan University; Professional Certificate 2003, Developmental Education

Snyder, Brian A., Assistant Professor, Mathematics and Computer Science; BS 1992, University of California, Santa Barbara; MS 1994, PhD 1999, Ohio State University

Somme, Cecile M., Associate Professor, Education; BA 1972, BE 1981, Laurentian University; MEd 1974, Ontario Institute of Studies in Education; MA 1976, Northern Michigan University; MBA 1991, Lake Superior State University; PhD 1988, Michigan State University

Spencer, Matthew K., Assistant Professor, Geology and Physics; BS 1994, Lake Superior State University; MS 1999, Penn State University; PhD 2005, Penn State University

Stai, Deborah K., Professor, Biological Sciences; BS 1974, BS 1978, Mankato State University; MA 1980, PhD 1989, Union Institute

Steinhart, Geoffrey B., Assistant Professor, Biological Sciences; BS 1993, University of Wisconsin-Madison; MS 1997, Utah State University; PhD 2004, Ohio State University

Suggitt, Randall G., Assistant Professor, Mathematics and Computer Science; BS 1976, Lake Superior State College; MA 1979, University of Montana

Susi, Jody A., Assistant Professor, Recreation Studies and Exercise Science; BS 1998, Lake Superior State University; M.S.S. 2004, United States Sports Academy

Susi, Joseph D., Associate Professor, Recreation Studies and Exercise Science; BA 1988, Ohio Northern University; MS 1989 Indiana University

Swedene, Jason K., Associate Professor, Humanities and Philosophy; Director, Honors Program; BA 1997, Le Moyne College; MA 1999, PhD 2002, State University of New York at Buffalo

Szlag, David, Associate Professor, Chemistry and Environmental Sciences; BS 1985, Wayne State University; MS 1987, PhD 1997, University of Colorado

Terwilliger, Mark G., Professor, Mathematics and Computer Science; BS 1988, Lake Superior State University; MS 1990, Michigan State University; PhD 2006, Western Michigan University

Thomas, Susan S., Assistant Professor, English; BA 1984, University of Manitoba; MA 1991, University of Manitoba; PhD 1997, Louisiana State University

Varnakovid, Pariwate, Assistant Professor, Chemistry and Environmental Sciences; BS 1998, MS 2001, Mahidol University

Voutsadakis, George A., Assistant Professor, Mathematics and Computer Science; Diploma 1993, University of Patras, Greece ; MS 1995, PhD 1998, Iowa State University

Weber, Paul J., Assistant Professor, Electrical and Computer Engineering; BS 2003, MS 2005, PhD 2006, Michigan Technological University

Werner, R. Marshall, Associate Professor, Chemistry and Environmental Sciences; BS 1993, Cornell University; PhD 1998, University of Maryland College Park

Westrick, Aaron J., Associate Professor, Criminal Justice, Fire Science and EMS; BA 1982, Michigan State University; MS 1986, PhD 1998, Wayne State University

Westrick, Judy, Associate Professor, Chemistry and Environmental Science; BS 1985, Wayne State University; PhD 1989, University of Colorado

Wilhelms, Ralf, Assistant Professor, International Business; Vor-Diplom 1983, Fachhochschule Köln, Germany; MIBA 1990, United States International University; DBA 2008, Alliant International University

Wright, Derek D., Assistant Professor, Chemistry and Environmental Sciences; BS 2001, Lake Superior State University; PhD 2008, Rutgers University

Yang, Guidi, Associate Professor; Education; MA, University of Warwick, Great Britain; PhD, State University of New York at Buffalo

Zimmerman, Gregory M., Professor, Biological Sciences; BS 1977, Fort Hays State University; MS 1981, Oklahoma State University; MS 1983, North Dakota State University; PhD 1987, Colorado State

Zinser, Brian A., Assistant Professor, Management, Marketing, and Entrepreneurship; AB 1981, University of Illinois at Urbana-Champaign; MM 1986, Northwestern University

Zukowski, James, Associate Professor, English; BA 1986, Saint Vincent College; MA 1991, PhD 1998, University of Pittsburgh

Emeriti Faculty

Anderson, Melvin L., Professor of Chemistry (1969-1993); BS 1953, MS 1955, Michigan Technological University; PhD 1965, Michigan State University (deceased)

Anderson, Roland A., Associate Professor of Office Administration (1969-1986); BA 1953, Wisconsin State University-Whitewater; MA 1961, Northern Colorado University-Greeley

Arbic, Bernard J., Professor of Mathematics (1967-2000); BS 1962, Massachusetts Institute of Technology; MA 1967, Bowdoin College; PhD 1972, University of Wyoming

Behmer, David J., Professor of Biology (1967-1996); BS 1963, Wisconsin State College; MS 1965, PhD 1966, Iowa State University

Bruce, Russell D., Professor of Physical Education and Recreation (1976-1987); BA 1953, Cornell College; MA 1956, University of Michigan; PhD 1966, University of Wisconsin

Carlson, Arthur F., Associate Professor of Physics (1947-1970); BS 1935, University of Minnesota. (deceased)

Carlson, Delphine, Associate Professor of Mathematics (1947-1969); BA 1934, MA 1938, University of Michigan. (deceased)

Campagna, Carol A., Associate Professor of Nursing (1984-2001); BSN 1964, D'Youville College; MSN 1969, University of Colorado

Castor, William N., Professor of Political Science (1971-1994); BA 1951, Middlebury College; MA 1952, Columbia University; PhD 1975, University of Denver

Chandra, Purna, Professor of Microbiology (1967-1994); BS 1949, MS 1951, Agra University; PhD 1958, Oregon State University

Chelberg, Raymond R., Professor of Chemistry (1946-1970); BS 1926, Gustavus Adolphus College; MS 1931, University of Minnesota. (deceased)

Cole, Wallace, Associate Professor of Mathematics (1955-1969); BS 1926, MA 1928, University of Wisconsin. (deceased)

Connaughton, M. Carole, Professor of Nursing (1984-1999); BSN 1956, Saint Mary's College; MSN 1967 and PhD 1974, Indiana University

Cooper, Ronald R., Professor of Physical Education (1956-1986); Director of Intercollegiate Athletics and James Norris Physical Education Center (1976-1986); BS 1951, MA 1958, Central Michigan University (deceased)

Cullen, John C., Professor of Spanish (1967-2001); BA 1963, MA 1965, Michigan State University; PhD 1973, Interamerican University. (deceased)

Curtis, Robert W., Professor of Engineering Technology (1955-1986); BSME 1948, Michigan Technological University; BSEd 1950, Northern Michigan University; MA 1954, University of Michigan. (deceased)

Dahlman, Marvin, Associate Professor of Mechanical Engineering Technology (1952-1985); BS 1947, MS 1952, University of Minnesota

Duwe, Arthur E., Professor of Biological Science (1968-1991); BS 1949, Alma College; MS 1950, PhD 1953, Ohio State University. (deceased)

Flynn, Michael, Professor of English (1961-1986); BA 1954, Central Michigan University; MA 1964, Northern Michigan University

Francisco, Wayne H., Assistant Professor of Criminal Justice (1973-1983); BS 1950, Eastern Michigan University; MA 1967, MS 1971, Michigan State University

Gaertner, Georgegeen P., Associate Professor of English (1965-2000); BA 1959, Michigan State University; MA 1963, University of Michigan (deceased)

Gaertner, Robert C., Associate Professor of Finance (1965-2000); BBA 1964, University of Notre Dame; MBA 1965, Michigan State University

Gleason, Gale R., Professor of Biology and Department Head of Biology and Chemistry (1965-1986); BS 1950,

Central Michigan University; MS 1951, PhD 1960 Michigan State University

Gleason, Gilbert J., Professor of Biology (1961-1988); BS 1958, MA 1960, Central Michigan University. (deceased)

Gutowski, Mieczyslaw, Associate Professor of Mathematics (1984, 1990); MS 1965, University of Lodz, Poland; PhD 1973, University of Gdansk, Poland.

Haag, William L., Professor of Chemistry (1984-2001); BS 1961, Loras College; MS 1965, PhD 1971, University of Nebraska

Halsey, Alice I., Associate Professor of Nursing (1963-2000), BSN 1962, University of Michigan; MSN 1977, Wayne State University

Harris, Earle B., Associate Professor of English (1976-1987); AB 1946, University of Michigan; BD 1947, ThM 1964, Princeton Theological Seminary (deceased)

Howe, Margaret, Associate Professor of Humanities (1969-1981); AB 1932, Northwestern University; MA 1965, Northern Michigan University (deceased)

Hudson, John S., Associate Professor of Accounting (1970-2002); BA 1963, MA 1965, Michigan State University; MBA 1967, Western Michigan University

Jemison, Eugene F., Associate Professor of Humanities (1969-1986); BA 1946, Washburn University; MFA 1948, Kansas City Art Institute (deceased)

Jennings, Richard P., Professor of Speech (1970-December 1998); BA 1950, University of Michigan; Master of Divinity 1953, Virginia Theological University; MA 1970, Central Michigan University

Jones, Charles W., Professor of Chemistry (1970-2001); AB 1954, Western State College of Colorado; MS 1957, PhD 1973, Oklahoma State University

Kelly, Thomas M., Professor of Sociology (1971-1992); BA 1952, St. Mary of the Lake University; STL

1956, Gregorian University, Rome; MA 1964, University of Notre Dame; MEd 1979, Loyola University

Kemp, C. Ernest, Associate Professor of Geology (1944-1980); Honorary Title "Dean Emeritus" of Lake Superior State University; BS 1949, Michigan Technological University (deceased)

Kennedy, Robert E., Associate Professor of Engineering (1948-1971); BS 1932, MS 1939, University of Michigan (deceased)

Knowles, David M., Professor of Geology (1969-1994); BS 1954, MS 1955, Michigan Technological University; PhD 1967, Columbia University

Knudson, Vernie A., Associate Professor of Natural Resources Technology (1971- 1994); BS 1954, Bethany College; BS 1958, University of Kansas; MS 1959, Fort Hays State College; PhD 1970, Oklahoma State University (deceased)

Lehman, John W., Professor of Chemistry (1966-2001); BS 1960, McPherson College; PhD 1969, University of Colorado

Linderoth, Leon W., Professor of English (1968-2000), BA/BS 1958, Central Michigan University; MA 1960 and PhD 1966, Florida State University

Madl, John T., Associate Professor of Mechanical Engineering (1967-2002); BSME 1965, MSME 1967, Michigan Technological University

Marken, Marzale, Associate Professor of Engineering Technology (1955-1984); BS 1948; MA 1956, University of Minnesota. (deceased)

Matheson, John M., Professor of Journalism and Secretary, Board of Control (1969-1984); BA 1948, Michigan State University; MA 1965, PhD 1967, Southern Illinois University

McCabe, John C. III, Professor of English (1970-1987); PhB 1947, University of Detroit; MFA 1948, Fordham University; PhD 1954, Shakespeare Institute, University of Birmingham, England. (deceased)

Mickewich, Thomas, Professor of Mathematics (1967-2002); BA 1964, MA 1967, University of Maine

Person, Steven J., Professor of Biology (1974-1989); B.S. 1966, MS 1968, Iowa State University; PhD 1976, University of Alaska.

Poisson, Joseph A., Associate Professor of Physical Education (1963-1976); SS 1940, Northern Michigan University; MA 1957, University of Michigan. (deceased)

Reilly, Raymond, E., Professor of Biology and Chemistry, (1966-1990); BS 1951, MS 1951, MS 1963, PhD 1970, Michigan State University

Samson, Gerald, Professor of Mathematics (1966-1990); BA 1952, University of Michigan; MA 1955, MS 1966, Texas A & M University

Sawczak, George J., Assistant Professor of English (1965-1982); BA 1952, Alliance; MA 1954, Kent State University

Sawyer, Timothy J., Professor of Psychology (1976-1989); BA 1972, Northern Michigan University; MA 1974, PhD 1976, University of Nevada.

Sherman, Karl J., Associate Professor of Accounting (1971-2000); BS 1965, Northern Michigan University; MS 1967, Southern Illinois University

Shouldice, Kenneth J., Professor of Business Administration and President (1965-1982); BS 1949, Marquette; MS 1951, Northwestern; PhD 1969, Iowa. (deceased)

Smith, Bernard M., Professor of Behavioral Science (1966-1980); BA 1947, MA 1949, University of Louisville; MA 1956, University of Kentucky; PhD 1960, Iowa. (deceased)

Smith, Bryce E., Professor of Biology (1970-1995); BS 1952, MA 1957, University of Michigan; PhD 1965, University of Wisconsin

Stough, Bessie, Associate Professor of Mathematics (1947-1963); BA 1923, MA 1929, University of Michigan. (deceased)

Thesing, Gary L., Professor of Mathematics (1971-1999), BA 1969, Saint Mary of the Plains College; MS 1964, University of Notre Dame; EdD 1971, Oklahoma State University

Thomsen, Viggo, Associate Professor of Biological Sciences (1947-1973); BA 1932, University of Michigan. (deceased)

Toffolo, E. Gary, Professor of Humanities (1970-2001); BS 1958, Northwestern University; MA 1961, University of Chicago

Truckey, John, Associate Professor of Counseling (1966-1986); BS 1958, MA 1964, Northern Michigan University

Vialpando, Edeltraute, Professor of Foreign Languages (1967-1988); PhD 1944, Charles University, Prague, Czechoslovakia (deceased)

Ward, Louis R., Professor of English (1961-1981); BA 1939, MA 1940, University of Colorado; PhD 1959, Purdue University (deceased)

Weber, Charles L., Associate Professor of Electrical Engineering (1970-1999), BS 1964 and MSEE 1970, Michigan Technological University

Wilson, Paul W., Professor of Mathematics (1963-2000), BS 19621 and MA 1963, Central Michigan University

Youngs, Stephen P., Professor and Psychometrist (1947-1968); BS 1930, Northern Michigan University; MEd 1941, Colorado. (deceased)

Administrative Staff

Aho, David, Programmer Analyst, Information Technology; BS 1986, Central Michigan University

Allen, Diana., Assistant Sports Information Director, Athletics; BS 2009, Lake Superior State University

Bachman, Glenn, , Field Representative, Charter School Office; BS 1969, MA 1970, EdS 1984, Central Michigan University

Balfantz, Gary, Dean/Professor, College of Arts, Letters and Social Sciences; BA Ed 1973, Southeastern Louisiana University; MA 1975, Western Kentucky University; PhD 1987, Wayne State University

Balinski, Joseph R., Director , Petoskey Regional Center; AA 1996, St. Clair County Community College; BS 2000, Central Michigan University; MAED 2004, Grand Valley State University

Barrs, Joseph A., Admissions Officer-Technical Operations; BA 1996, BS 1997, MBA 1998, Lake Superior State University

Batho, Kaye M., Executive Secretary, President's Office and Board of Trustees Office, President's Office; AD 1995, BS 2000, Lake Superior State University

Becks, Eric R., Engineering Projects Manager, Prototype Development Engineer, Department of Engineering; BS 1976, MS 1981, Michigan State University

Belanger, Jeremy, Admissions Advisor, Admissions; BA 1999, Luther College

Besteman, Paul A., Assistant Director, Physical Plant

Boger, Carol A., Director, Testing Services; BS 1978, Lake Superior State College

Bouvet, Linda L., Sports Information Director, Athletics; BA 1985, Indiana University

Buckley, Bruce L., Technical Support Specialist, Information Technology; AS, BS, Lake Superior State University

Burdett, F. John, Web Analyst, Information Technology

Camp, Susan K., Director, Admissions; BS 1985, MBA 1992, Lake Superior State University; CPP (Certified Program Planner)

Carhoun, Scott, Assistant Track Coach, Athletics; BS 2005, Northern Michigan University

Carlson, Mark E., Learning Center Supervisor, School of Nursing; BA 1976, BSN 1989 Northern Michigan University

Case, Allan R., Assistant Director, Admissions; BA 2002, Lake Superior State University; MA 2007, Michigan State University

Chase, Wallace A., Network/Telecommunications Administrator, Information Technology

Chesebro, Jodi L., Accountant, Business Operations; BS 2006, Lake Superior State University

Christian, Timothy A., Assistant Hockey Coach, Athletics; BS 1995, Ferris State University

Clarady, Kathleen M., Admissions Advisor-Transfer Specialist, Admissions; BS 1982, M.A. 1995, Central Michigan University

Coates, Thomas W., Executive Director, Foundation; BS 1986, Lake Superior State College

Cook, Deb L., Director, Graphics; BFA 1989, Kendall College of Art and Design

Coullard, Jon M., Mechanical Laboratory Engineer, Engineering and Technology; BS 1990, Lake Superior State University

Cox, Georgiana M., Accountant, Business Operations; BS 1979, Lake Superior State College; MBA 1988, Lake Superior State University

Cox, Juliana L., Accountant, Business Operations; AS 1983, BS 1983, Lake Superior State College; BS 1987, Lake Superior State University

Davis, Thomas J., Building and Technical Manager, Art Center; BA 1975, University of Wisconsin-Green Bay; MBA 2002, Western Michigan University

Davison, James, Golf Coach, Athletics

DeMaestri, Ashley B., Accountant, Business Operations; BS 2006, Lake Superior State University

DeNeve-Ewing, Laurie A., Services Coordinator, Upward Bound; BS 1985, Lake Superior State College; AD 2003, Lake Superior State University

DePlonty, Stella R., Assistant to the Provost for Academic Records, Provost's Office

Devaprasad, Sara, Information Technology Specialist, Information Technology; BS 1990, Seattle Pacific University

Doornbos, Cindy,

Dorrity, Sharon L., Director, Constituent Relations, Foundation; AD 1987, BS 1987, Lake Superior State University

Dunbar, Kristin L., Director, Athletics; BA 1992, Lake Superior State University; MA 1997, Elmira College

Eggers, Shannon, Assistant Women's Basketball Coach, Athletics; BS 2006, University of Wisconsin

Eles, Stephen, Head Men's and Woman's Cross Country and Track and Field Coach , Athletics; BS 2003, Lake Superior State University; MBA 2005, Tiffin University

Engle, Mark W., Head Women's Volleyball Coach, Athletics; BS 1974, Grand Valley State University

Ferrill, Nicate', Admissions Advisor, Admissions; BA 2002, Grand Valley State University; MEd 2008, Cambridge College

Faust, Deborah J., Director, Financial Aid; AD 1985, Lake Superior State College; BS 1997, MBA 2001, Lake Superior State University

Fitzpatrick, Susan L., Director, Alumni; BA 1987, Lake Superior State University

Formolo, Renee M., Licensed Practical Nurse/Medical Assistant, Health CARE Center; Ross Medical Education 1981

Fox, Vicki, Manager of Resource Center for Students with Disabilities, Counseling and Disability Services

Furtaw, Celia, Food Service Worker, Food Services

Garee, Sherri, Secretary, Social Sciences;

Garlock, Stacy, Food Service Worker, Food Services

Goos, Michael, Lead Teacher, Child Development Center; BA, Lake Superior State University

Gordier, Paige, Dean, College of Professional Studies; BS 1988, Lake Superior State University; MA 1989, PhD 1992, Sam Houston State University

Gray, Nicola., Athletic Trainer, Athletics; BS 2006, Lake Superior State University

Gregory, Steven J., Grounds/Rink Manager, Physical Plant; AD 1985, Michigan State University

Greil, Roger W., Aquatic Laboratory Manager, Natural Sciences; AD 1988, Lake Superior State University

Gustafson, Charles J., Media Specialist, Audio Visual; AD 1968, Lake Superior State College

Haines, Earlene M., Food Service Worker, Food Services

Hammond, Tracey, Development Assistant, Alumni/Foundation; AS 2006, Bay Mills Community College; BS Management 2009, BS Marketing 2009, Lake Superior State University

Hampton, Thomas C., Admissions Advisor-Regional Recruiter, Admissions; BA 1995, Western Michigan University

Harger, Bruce T., Director of PSA Operations; Provost's Office; BA 1966, MA 1967, PhD 1991, Michigan State University

Hemming, Ken, Director of Grants and Contracts, Provost's Office; BA 1972, Michigan State University

Hendricks, Jim, SMART Zone

Hettinga, Steve J., Head Men's Basketball Coach, Athletics; BA 1993, MA 2003, Olivet College

Hill, Gary L., Manager of Custodial Operations, Physical Plant

Hinshaw, Trevor, Assistant Men's Basketball Coach, Athletics; BS 2008, Grand Valley State

Hober Julie, Support Specialist, Information Technology; AD 1999, Baker College

Holmes, Joshua, Area Coordinator/Assistant Director, Campus Life; BS 2006, West Chester University; MS 2009, Michigan State University

Hope, Sandra G., Food Service Worker, Food Services

Izzard, Martin, Food Service Worker, Food Services

Jenkins-Ball, Marcia A., Food Service Worker, Food Services; BBA 1982; Western Michigan University

Johnston, Karen M., Director, Retention, Advising and Orientation; AD 1994, BS 1996, Lake Superior State University

Jones, Deborah, Financial Aid Officer, Financial Aid

Kelderhouse, Glory G., Food Service Worker, Food Services; AD 1987, Sault College of Applied Arts and Technology

Keller, Barbara J., Dean/Associate Professor, Natural, Mathematical and Health Sciences; BS 1977, BS 1978, BS 1986, Idaho State University; PhD 1995, Montana State University

Kellerman, Jackie L., Technical Operations Manager, Financial Aid; BS 1988, Lake Superior State University

Kendrick, Kristen, Regional Center Director, Escanaba Regional Center; BA 1996, Central Michigan University

Kerfoot, James V., Field Placement Director, Education; BS 1972, Wayne State University; MSA 1999, Central Michigan University

Kester, Sarah, Lead Teacher, Child Development Center

King, Jeff H., Electrical/Computer Laboratory Engineer, Engineering and Technology; BS 1996, Lake Superior State University

Kinghorn, Colleen, Cashier/Checker, Food Services

Korb, Scott A., Director of Residential Life; BS 1991, Grand Valley State University; MA 2005, University of Phoenix

Kott, Gail, Food Service Worker, Food Services

Leach, David., Prototype Development Engineer, Department of Engineering; BS 2008, Michigan Technological University

Lindquist, Larry, Field Representative, Charter School Office; BS 1968, MA 1973, Central Michigan University

Linhart, Thomas, Director of Intramurals/Tennis Coach, Athletics; BS 2006, St. John Fisher College; MS 2009, Elmira College

MacPherson, Arlene K., Payroll Coordinator, Human Resources; AD 1984, BS 2006, Davenport College of Business

Markstrom, Michelle A., Loan Officer, Financial Aid; BGS 1983, University of Michigan

Mason, Kristeen M., Food Service Worker, Food Services

McLeod, Mary C., Nurse Practitioner, Health CARE Center; AD 1978, BSN 1979, Lake Superior State College; NP Planned Parenthood 1986, University of Wisconsin Milwaukee

Merkel, Cynthia F., Institutional Research Analyst, President's Office; BS 1979, Syracuse University

Metro, Rich, Assistant Hockey Coach, Athletics; BA 2008, Lake Superior State University

Michels, Fredrick A., Dean, Division of Academic Services, Library; BS 1968, University of Wisconsin; MLS 1971, EdD 1976, Western Michigan University

Mick, Rick A., Athletic Trainer, Athletics; BS 1999, Lake Superior State University

Murdock, Douglas D., Food Service Worker, Food Services

Myers, Donald H., Women's Softball Coach, Athletics; BS 1957, University of Tulsa; BA 1980, University of Delaware, Mercy

Narkierwicz, GERALYN, Learning Specialist, Learning Center; BS 1980, Wayne State University; MA 2002, George Mason University

Nethery, Nancy, Banner Analyst, Information Technology; BS 1986, Lake Superior State College

Neve, Nancy A., Registrar, Registrar's Office; BS 1983, Lake Superior State College

Olson, Scott A., Acting Director / Network Specialist, Information Technology

Olson, Suzette M., Administrative Assistant, Provost's Office; AD 1986, AD 1987, Lake Superior State University; BS 2004, Lake Superior State University

Parry, Robert L., Systems Analyst, Information Technology

Pascoe, Diane, Administrative Assistant, Escanaba Regional Center; AD 1993, Bay de Noc Community College

Pewinski, Jamie L., Head Women's Basketball Coach, Athletics; BS 1999, Saginaw Valley State University; MBA 2002, Lake Superior State University

Pink, Thomas A., Director, Public Relations; BA 1984, Lake Superior State College

Rajewski, Carolyn S., Director, Learning Center, Academic Services; BS 1986, Fort Hays State University

Rice, Pauline G., Food Service Worker, Food Services

Rigotti, Brenda L., Interactive Television Technician, Audio Visual; BA 1999, Lake Superior State University

Roque, James D., Head Hockey Coach, Athletics; BS 1987, Lake Superior State University

Roque, Julia, Camp Coordinator, Student Affairs; BS, Michigan Technological University

Rye, Colleen M., Buyer, Purchasing;

Sabatine, Stephanie J., Director of Native American Center and Campus Diversity, Native American Center; AD 1996, 1998, 2000, BS 2000, Lake Superior State University

Sabisch, Julie, Chemical Technician, Chemistry; AS 1988, Lake Superior State University; BS 2004, Lake Superior State University

Schmidt, Gregory, Assistant Track Coach, Athletics; BA 2004, Lynchberg College; MeD 2007, St. Lawrence University

Schmitgal, Carol A., Secretary, Public Safety Office; Secretary, Campus Life;

Schopp, Jody A., Administrative Assistant, Office of Advising, Retention, and Orientation; AD 1994, Lake Superior State University

Schupp, Mari J, Learning Specialist Instructor, Learning Center

Schwartz, Alfred., Systems Admin, Information Technology

Searight, Barbara K., Associate Dean, Education; BS 1982, Wayne State University; MA 1988, PhD 1999, St. Louis University

Shannon, MaryAnne P., Associate Dean/Professor, Nursing; BSN 1975, University of Michigan; MSN 1979, Wayne State University; PhD 2005, Michigan State University; Advanced Practice Nurse, Board Certified in Gerontological Nursing since 1991.

Shibley, Jeanne M., Administrative Assistant to the Dean, Engineering and Technology; Staff Assistant, Public Relations and Graphics; BS 1982, Northern Michigan University

Shibley, John R., Photographer/Staff Writer, Public Relations

Simpson, Sheila, Regional Center Director, Gaylord Regional Center; MA 1978, Michigan State University

Southwell, Benjamin J., Instrumentation Chemist; BS 2004, Lake Superior State University

Spencer, Kathleen C., Banner Analyst, Information Technology; BS 1994, Lake Superior State University

St. Antoine, Mary A., Science Laboratory Manager, Natural Sciences; AD 1987, BS 1990, Lake Superior State University

Stephens, Jerry A., Database Administrator, Information Technology; BS 1986, Lake Superior State College

Stevens, Priscilla A., Director, Public Safety; BS 1984, John Brown University

Storey, Karen C., Administrative Director, Health CARE Center

Storey, Nicole L., Administrative Assistant, Human Resources; BS 2004, Lake Superior State University

Swanson, Stacey L., Facility Director, Norris Administration; BS 1997, Lake Superior State University

Sylvester, Jamie, Residential Life Coordinator, Housing; AS 2006, BS 2008, Baker College

TenEyck, Cheryl J., Food Service Worker, Food Services

Thalacker, Michelle D., Director of Purchasing/Risk Management, Purchasing; BA 1995, University of Wisconsin-Whitewater; MS 1997, University of Nebraska

Trumbley, Paul, Facilities Engineer, Physical Plant; BS 1999, Michigan Technological University; MS 2003, University of Massachusetts, Lowell

Wallis, Lynn, Testing Assistant, Testing Services

Walworth, Maurice., Associate Professor/Dean, Engineering, Technology, and Economic Development, Director of Intellectual Properties and Economic Development; BSEE 1981, MSEE 1983, Michigan Technological University

Weaver, Theresa M., Director, Career Services; AD 1998, AD 2003, BS 2003, Lake Superior State University

Webb, Luanne, Student Service Center Manager, Registrar's Office; Certificate 1975, Lake Superior State College

Wells, Trisha, Admissions Advisor, Admissions; BM 2007, DePauw University

Wenglikowski, Jason A., Webmaster, Public Relations; BS 1993, University of Michigan

White, Beverly E., Director of Human Resources/Affirmative Action Officer, Human Resources; BS 1988, MBA 1996, Lake Superior State University

Whitley, Janice, Food Service Worker, Food Services

Witucki, Heidi L., Director, Upward Bound; BA 1982, Secondary Teaching Certificate 1983, Northern Michigan University; Compliance Assistance Trainer, Region V, Department of Education

Wood, Sharmay M., Associate Director of Campus Life; BA 2007, BS 2007, Lake Superior State University

Wooley, Shelley, KCP/Gear Up Coordinator, Native American Center; BS 1990, University of Houston; MA 2008, Lake Superior State University

Worsham, McKinley James, Medical Assistant, Health Care Center; EMT 1977, Lake Superior State University; Paramedic 1979, Midland Community College; LPN 1988, Bay de Noc Community

Yeadon, Daretha M., Accountant, Business Operations; BS 1990, Lake Superior State University

Young, Jennifer, Administrative Assistant, Registrar's Office; AA 2006, Cochise College

Officers of Administration

Eilola, William T., Vice President, Enrollment Services; MBA 1990, Grand Valley State University; BS 1984, Michigan Technological University

Blose, Anthony, Interim Provost and Vice President for Academic Affairs; BS 1997, Manhattan College; MS 1982, PhD 1985, University of Chapel Hill

Brooks, Sherry L., Interim Vice President for Finance, MBA 1990, BS 1983, AS 1981, Lake Superior State University

McLain, Tony, President, President's Office; PhD 1986, Michigan State University; MA 1971, BS 1969, Western Michigan University

Peress, Kenneth, Vice President, Student Affairs; BA 1970, SUNY Binghamton; MS 1972, University of Bridgeport; PhD 1998, Pennsylvania State University

Emeriti Staff

Adams, Ray, Dean, College of Engineering and Mathematics; MS 1978, BS 1975, Nicholls State College

Arbuckle, Robert D., President, Professor of History (1992-2002); BS 1964, Clarion State University; MA 1966, PhD 1972, Penn State University

Bugbee, Thomas R., Vice President for Student Affairs/Secretary to the Board of Trustees; BA 1973, Michigan State University; MA 1974, Eastern Michigan University (deceased)

Fenlon, Paul T., Director of Employment Services; BS 1964, Western Michigan University

Harger, Bruce T., Vice for Academic Affairs and Provost (1967-2007); BA 1966, MA 1967, PhD 1991, Michigan State University

Markstrom, Mae E., Dean of the School of Health and Human Services (1968-1997); Nursing Diploma 1959, Grace Hospital of Nursing; BA 1970, Lake Superior State University; MSN 1977, Wayne State University; PhD 1991, Michigan State University

Munsell, William T., Financial Aid Director (1967-1998)

Pike, Harry E., Vice President for Student Programs and Services (1969-1997); BA 1957, University of Washington; PhD 1969, Michigan State University

Tomlinson, Earl C., Director of Financial Planning and Investments (1972-1980; 1984-1997); BS, Ferris State College; MA, Central Michigan University

Youngblood, Betty J., President (2002-2007); BA 1965, Oakland University; MA 1966, PhD 1970, University of Minnesota



University Calendar

2009-2010

Fall Semester • 2009

Instruction begins	Monday	August 31
Labor Day recess	Monday- Tuesday	September 7-8
Classes resume	Wednesday	September 9
Thanksgiving recess	Tuesday	November 24 at 10:00 p.m.
Classes resume	Monday	November 30
Regular Classes end	Friday	December 11
Final Exam Week	Monday-Friday	December 14-18
Semester Ends	Friday	December 18 at 6:00 p.m.

Spring Semester • 2010

Instruction begins	Monday	January 11
Spring Break begins	Friday	February 28 at 10:00 p.m.
Classes resume	Monday	March 8
Regular Classes End	Friday	April 23
Final Exam Week	Monday-Friday	April 26-30
Semester Ends	Friday	April 30 at 6:00 p.m.
Commencement Ceremony	Saturday	May 1

Summer Semester • 2010

Instruction Begins for		
First 6-week and 12-week Classes	Monday	May 10
Memorial Day (no classes)	Monday	May 31
Instruction Ends for First 6-week Classes	Friday	June 18
Instruction Begins for Second 6-week Classes	Monday	June 21
Independence Day (No Classes)	Monday	July 5
Semester Ends	Friday	July 30

Index

A

Academic Administration 85
Advising 10, 69
Advising, Retention and Orientation 69
Academic Policies 11-21
 Credit 10, 11, 12
 Policies 11
 Probation 10
 Services, Division of 59-64
 Standing 14
 Transcript 10
 Year 10, 11
Accounting
 Baccalaureate 84, 86, 94-94
 Accounting (ACTG) Courses 252
 Accounting-Finance, Minor 87, 242
 Accreditation 6-9, 10
 Athletic Training 6
 Business Administration
 —Legal Management 6
 Computer Engineering 6-7
 Electrical Engineering 6, 7-8
 Environmental Health 6
 Fire Science 6
 Legal Studies 6
 Manufacturing Engineering
 Technology 6, 8-9
 Mechanical Engineering 6, 8
 Nursing 6
ACT 25
Adding courses 12-13
Admission 10, 24-30
 Early 26
 Former Students 26
 Freshmen 24
Advanced Placement (AP) 29
Advising/Advisor 10, 11, 71
ALEKS 62
Anishnaabemowin/Ojibwe Language and
 Literature Minor 87, 242
Applied Geographic Information
 Science 86, 96-97
Art
ARTS courses 252-253
 Minor 87, 242
Associate degree 10, 72
 Degrees listing 86
 Degrees by subject 212-236
Athletic Training Baccalaureate 86, 98-99
Athletics 65
Attendance 13

Audio-Visual Center 59

Auditing a Class 16

B

Bachelor degree 10, 72, 86
 Degree listing 86
 Degrees by subject 94-211
Bachelor of Arts 72
Bachelor of Education, Post-Baccalaureate
 86, 90-91
Bachelor of Science 72
Biology
 Baccalaureate
 Biology 86, 100-101
 Secondary Teaching 86, 100-101
 Minor
 Biology 87, 242
 Secondary Teaching 87, 242
 BIOL courses 253-256
Blackboard 60
Board of Trustees 297
Board of Trustees Grant Program 54
Bureau of Indian Affairs Scholarship
 Grant 57
Bureau of Indian Affairs Vocational
 Training Assistance 58
Business Administration
 Baccalaureate
 Business Education 86, 102
 International Business 86, 103
 Legal Management 86, 104-105
 Management 86, 106
 Marketing 86, 107
 Associate 86, 212
 General Business Minor 86, 244
 Business (BUSN) Courses 256-257
Business French Minor 87, 242

C

Café a la Carte 65
Calendar, Academic 10, 309-311
Campus Employment 57
Campus Map 2
Canada Student Loan 57
Canadian Students 26
Cappucino Corner 65
Career Services 60
Certificate 10, 72
 Listing 87

Certificate programs 237-241

Cheating 15

Chemical Technology Associate 86, 213

Chemistry

 Baccalaureate 86, 108-110

 Chemistry Pre-Professional 86, 108, 110

 Secondary Teaching 86, 108-110

 Associate 86, 214

 Minor

 Chemistry 87, 242

 Secondary Teaching 87, 242

 CHEM courses 257-258

Child Development Center 66

Child Development Minor 87, 242

Chinese (CHIN) Courses 259

CLEP Examinations 28, 30

Clinical Laboratory Science

 Baccalaureate 86, 111

Code of Ethics 4

Cognate 10

College(s) 10, 80-87

 Arts, Letters and Social Sciences 77-78

 Eng, Tech & Econ Development 79

 Natural, Mathematical & Health

 Sciences 80-82

 Professional Studies 83-84

Communication

 Baccalaureate 86, 112

 Professional Communication

 Minor 87, 242

 COMM courses 261

Computer and Mathematical Sciences

 Baccalaureate 86, 113

Computer Engineering 86, 114-115

 Baccalaureate

 Control Systems option 86, 114-115

 General option 114-115

 Robotics & Automation option 114-115

Computer Information Systems

 Baccalaureate 86, 116

Computer Networking

 Baccalaureate 86, 117-118

Computer Science

 Baccalaureate

 Computer Science 86, 119

 Secondary Teaching 86, 119

 Associate 86, 215

 Minor

 Computer Science 87, 242

 Teaching 87, 242

 CSCI Courses 261-264

Computer Services 68

- Conservation Biology 86, 120-121
- Conservation Leadership 86, 122-123
- Consumer Information 39-40
- Continuing Education 60
- Corequisite 10
- Costs 31-34
- Counseling Services 60
- Counseling Minor 87, 243
- Course Descriptions 251-306
- Course Placement 63
 - English 63
 - LSSU 63
 - Math 63
- Courses 10
- Credit 10, 15, 16
 - By Examination 16, 29, 32
 - Evaluations 25
 - Provisional 25
 - Credit/No Credit 15
- Criminal Justice
 - Baccalaureate
 - Criminal Justice 86, 124-127
 - Corrections emphasis 86, 124-125
 - Criminalistics emphasis 86, 124-125
 - Generalist emphasis 86, 124-125
 - Law Enforcement emphasis 86, 124-126
 - Law Enforcement Certificate 86, 124-126
 - Loss Control emphasis 86, 124-127
 - Public Safety emphasis 86, 124-127
 - 3-year Plan for a BS following NRT degree 86, 124-126
 - Associate
 - Corrections emphasis 86, 216
 - Corrections minor 87, 242
 - Law Enforcement emphasis 86, 216
- CJUS Courses 259-261
- Cum Laude 79
- Cumulative Grade Point Average 14
- Cumulative Grade Point Average Hours 14
- Curriculum 10
- Curriculum and Instruction Master of Arts 86, 88-89

D

- Dance Minor 87-243
- Dance Courses 264-265
- Data Processing (DATA) courses 265
- Dean's List 15
- Declaration of Candidacy for Degree 75
- Degree Audit 75
- Degree Candidacy Procedure 75
- Degree Requirements 72-74
- Degrees, additional 72
- Delinquent Accounts 34, 76
- Departmental Degree Audit 75
- Departmental Exams 30
- Departments 10

- Departments, Academic
 - Biological Sciences 80
 - Chemistry & Environmental Sciences 82
 - Electrical & Computer Engineering 86
 - English and Communication 80
 - Geology and Physics 83
 - History, Humanities and the Arts 80
 - Mathematics and Computer Science 80
 - Mechanical Engineering and Manufacturing Engineering Technology 86
 - Nursing 81
 - Political Science 81
 - Psychology 81
 - Recreational Studies & Exercise Science 82
 - Sociology and Human Services 81
- Dining Services 65
- Diplomas 76
- Disability Services and the ACES, Ability Center for Exceptional Students (formerly RCSD) 67
- Discipline 10
- Distance Education Fee 32
- Division of Academic Services 59, 85
- Dropping Courses 12-13
- Dual Enrollment 28

E

- Early Childhood Education
 - Baccalaureate 86, 128
 - Associate 86, 217
 - Teaching Minor 87, 243
 - CHLD courses 258-259
- Earth/Space Science—Secondary Teaching Minor 87, 243
- Economics
 - Minor
 - Economics 87, 243
 - Economics-Finance 87, 243
 - Teaching 87, 243
- ECON Courses 265-266
- Education
 - Baccalaureate
 - Elementary Teaching 86, 133-135
 - Secondary Teaching 86, (degree area is major) 86,
 - EDUC Courses 266-270
- Elective 10, 72
- Electrical Engineering
 - Associates 86, 218
 - Baccalaureate
 - Digital Systems option 86, 129-130
 - Electrical/Mechanical option 86, 129-130

- Robotics and Automation option 86, 129-130
- Minor 86, 243
- EGEE Courses 270-271
- Electronics Engineering Technology 86, 131-132 (EGET) Courses 271
- Engineering Management Baccalaureate 86, 138
- Elementary Education, Special Education, Learning Disabilities Courses 136-137
- Engineering Mechanics (EGEM) Courses 271
- EMED Courses 275
- English (ENGL) Courses 276-277
- English Language and Literature Baccalaureate
 - English Language and Literature 86, 139-140
 - Elementary Teaching 86, 139-140
 - Secondary Teaching 86, 139-140
- Minor
 - English Language and Literature 87, 243
 - Elementary Teaching 87, 243
 - Secondary Teaching 87, 243
- Enrollment Fee 32
- Enrollment Services 69
- Environmental Chemistry Baccalaureate 86, 141-142
- Environmental Health Baccalaureate 86, 143-144
- Environmental Management Baccalaureate 86, 145
- Environmental Science Baccalaureate 86, 146
- Minor 87, 244
- EVRN Courses 277-278
- Equal Opportunity 23-24
- Execptions, Graduation Requirements 73
- Exercise Science Baccalaureate 86, 147
- EXER Courses 278-280
- Expectations for Student Learning 5

F

- FAFSA (Free Application for Federal Student Aid) 56
- Failed Classes 73
- Family Education Rights & Privacy Act (FERPA) 16-21
- Federal Academic Competitiveness Grant (ACG) 53
- Federal Direct PLUS Loan, Parent 56
- Federal Direct Stafford Loan, Student 56
- Federal Nursing Loan 56
- Federal Occupational Education Grant Program 54

Federal Pell Grant 54
 Federal Perkins Loan 55
 Federal Science & Mathematics Access to
 Retain Talent Eligibility Grant
 (SMART) 53
 Federal Supplemental Educational
 Opportunity Grant (FSEOG) 54
 Federal TEACH Loan Forgiveness
 Program 56-57
 Federal Work Study 57
 Fees
 Activity Course Fee 32
 Administrative Fee 32
 Diploma Charge 76
 Distance Education Fee 32
 Enrollment Fee 32
 Parking Registration Fee 32
 Program Fees 32
 Regional Center Fee 32
 Special Course Fee 32
 Student Activity and Media Fee 32
 Transcript Fee 34
 Vehicle Registration Fee 32
 Field Placement 10
 FINC Courses 280
 Finance and Economics
 Baccalaureate 86, 148-149
 Financial Aid 10, 35-38
 Application 35
 150% Completion Rule 36
 Federal Recipients 33
 Reinstatement 36
 Return Policy 33
 Rights to Appeal 36
 Satisfactory Academic Progress 35
 Suspension 36
 Fine Arts (FINE) Courses 280
 Fine Arts Studies Baccalaureate 86, 150-158
 Fire Science
 Baccalaureate 85, 159-160
 Engineering Technology
 emphasis 86, 159-160
 Generalist emphasis 86, 159-160
 Hazardous Materials
 emphasis 86, 159-160
 Associate 86, 219
 Minor 87, 244
 FIRE courses 280-281
 Fish Health 86, 161-162
 Fisheries and Wildlife Management
 Baccalaureate
 Fisheries and Wildlife
 Management 86, 163-164
 Fisheries Management concentration
 86, 163-164
 Wildlife Management concentration
 86, 163-164
 Foreign Student Services 70

Foreign Students (excluding Ontario) 26-27
 Forensic Chemistry Baccalaureate 86, 165
 French
 Baccalaureate
 French Studies 86, 166-167
 French Studies-Elementary Teaching
 86, 166-167
 French Studies-Secondary Teaching
 86, 166-167
 Minor
 Francophone Cultures 87, 244
 French Language & Literature
 87, 244
 French Teaching 87, 244
 FREN Courses 281-282
 Freshmen 24
 Full-Time Student 10

G

Gallery, Library 62
 Galley and Grill 155° 65
 GED Examinations 10
 General Education 74
 Mission Statement 74
 Requirements 10, 74
 Communication 74
 Humanities 74
 Mathematics 74
 Natural Sciences 74
 Social Science 74
 General Engineering (EGNR) Courses
 272-274
 General Engineering Associate 86, 220
 General Engineering Technology Associate
 86, 221
 Geography
 Minor
 Geography 87, 244
 Geographic Information Systems
 Minor 87, 244
 Geographic Information Science 26, 244
 GEOG Courses 282-283
 Geology
 Baccalaureate
 Geology 86, 168-169
 Earth/Space Science-Secondary
 Teaching 86, 168-169
 Environmental Geology 86, 168-169
 Minor
 Geography 87, 245
 Teaching 87, 245
 GEOL Courses 283-284
 German (GRMN) Courses 284
 Gerontology Minor 245
 Goals and Objectives, University 3
 Grade Change 15
 Grade Point Average (GPA) 10, 14

Grading System 13-15
 Graduation Procedures 75-76
 Graduation with Honors 76
 Grant Program 54
 Grievance Officer 22
 Grievance Process 22-23
 Guest Students 26

H

Health (HLTH) Courses 285-286
 Health Care Administration Minor 87, 245
 Health CARE Center 65-66
 Health Care Provider Associate 86, 222
 Health Record 30
 Health Service 65-66
 Health/Fitness Specialist Associat 86, 223
 History
 Baccalaureate
 History 86, 170-171
 Elementary Teaching 86, 170-171
 Secondary Teaching 86, 170-171
 Minor
 History 87, 245
 Teaching 87, 245
 (History) HIST Courses 271-272
 Homeland Security 87, 245
 Home Schooled 25
 Honors 76
 Honors Program (HONR) Courses 286-287
 Housing 34, 65
 Housing Deposit 34
 Housing Regulations 34
 Human Nutrition 87, 245
 Human Resource Management
 Minor 87, 245
 Human Services (HMSV) Courses 286
 Human Services Administration
 Minor 87, 245
 HUMN courses 287
 Humanities Minor 87, 246

I

I (incomplete) Grade 13
 Individualized Studies Baccalaureate
 86, 172
 Industrial Technology Baccalaureate 86, 173
 Information Processing Certificate 237
 Information Technology 68
 Institutional Loss Control Minor 87, 246
 Integrated Science
 Baccalaureate
 Elementary Teaching 86, 174-175
 Secondary Teaching 86, 174-175
 Minor, Elementary Teaching 87, 246
 Inter-Disciplinary (INTD) Courses 287-288
 International Baccalaureate 30

International Studies 70
Certificate 70, 238
Minor 70, 86, 246
International University College Division 71
Internet/Network Specialist
Associate 86, 224
Internship 10
IPASS 60

J

Japanese Studies (JAPN) Courses 288
Japanese Study Minor 87, 246
Journalism (JOUR) Courses 288

L

Law Enforcement Minor 87, 246
Learning Center 61
Leaving School 33
Legal Studies
Post-Baccalaureate Certificate 86, 92-93
Baccalaureate
Legal Studies 86, 176-178
Labor Law specialty 86, 176-178
Legal Technology specialty 86, 176-178
Legislative/Constitutional Law
specialty 86, 176-178
Personal Injury specialty 86, 176-178
Client Advocacy specialty 86, 176-178
Criminal Law specialty 86, 176-178
Environmental Law & Policy
specialty 86, 176-178
Legal Administration specialty
86, 176-178
Associate 86, 225-226
Minor 87, 246
Law (LAWS) Courses 288-289
Liberal Arts
Baccalaureate 86, 179
Associate 86, 227-228
Liberal Arts-Undeclared/Undeclared
Student Program 61
Library (LIBR) Courses 289
Library, Kenneth J. Shouldice 61
Linguistics (LING) courses 289
Loans 54-57
Look at LSSU, A 5
Loss Control Minor 87, 246

M

MACRAO Agreement 25
Magna Cum Laude 79
Major 10
Majors, multiple 72
Make-up Testing, LSSU 63
Management (MGMT) Courses 291-292

Manufacturing Engineering Technology
Baccalaureate
General option 86, 180-181
With Robotics Technology Minor
86, 180-181
Associate 86, 229
EGMT Courses 272
Marketing (MRKT) Courses 292
Marketing Minor 87, 246
Mathematics
Baccalaureate
Actuarial and Business Applications
86, 182-184
Mathematics 86, 182-184
Elementary Teaching 86, 182-184
Secondary Teaching 86, 182-184
Minor
Elementary Teaching 86, 247
Mathematics 87, 247
Secondary Teaching 87, 247
Mathematics (MATH) Courses 289-291
Mechanical Engineering
Baccalaureate
General option 86, 185-186
Mechanical Design option 86, 185-186
Robotics & Automation option
86, 185-186
Vehicle Systems option 86, 185-186
Minor 87, 247
EGME Courses 271-272
Michigan Adult Part-Time Grant (APTG) 56
Michigan Competitive Scholarship 55
Michigan Educational Opportunity
Grant (MEOG) 56
Michigan Nursing Loan 54
Michigan Promise Scholarship 55
Michigan Residency 31
Michigan Tuition Incentive Program
(TIP) 54
Michigan Work Study 57
MI-LOAN Program 54
Minor(s) 10, 72, 242-250
Minors listing 87
Minors, additional 73
Mission Statement
School of Business, Economics & Legal
Studies 83
University 3
General Education 76
Music (MUSC) Courses 280-281

N

N grade 15
National Testing Services 62
Native American Studies (NATV) Courses
293-294
Native American Tuition Waiver 58

Native Studies of the Americas
Minor 87, 247
Natural Resources Technology Associate
86, 230
Natural Sciences (NSCI) Courses 294
Norris Snack Shack 65
Nursing
Baccalaureate 86, 187-190
Pre-Licensure Track 86, 187-190
Post-Licensure Track (RN completion)
86, 187-190
NURS Courses 295-296

O

Office Administration
Associate 86, 231
Minor 87, 247
OFFC Courses 296
Ontario Students 26
Orientation 69

P

Paramedic Technology Associate 86, 232
Paramedic Technology Minor 87, 247
Paramedic Training, Certificate 239
Parking Registration Fee 32
Parks and Recreation Baccalaureate 86, 191
Part-Time Student 10, 27
Personal Computer Specialist
Associate 86, 233
Certificate 240
Minor 87, 247
Philosophy Minor 87, 247
Philosophy (PHIL) Courses 296-297
Physical Science—Secondary Teaching,
Baccalaureate 86, 192
Physics (PHYS) Courses 297
Placement Testing 29
Plagiarism 15
Political Science
Political Science (POLI) Courses 297-299
Baccalaureate 86, 193-195
Political Science 86, 193-195
General emphasis 86, 193-195
Prelaw emphasis 86, 193-195
Public Administration emphasis
86, 193-195
Secondary Teaching 86, 193-195
Minor
Political Science 87, 247
Teaching 87, 247
Practical Nursing
Certificate 241
PNUR Courses 297
Practicum 10, 25
Pre-Business Core Courses (PBC) 84

- Pre-Criminal Justice Core Course (PCJ) 123
- Pre-Fire Science Core Courses (PFS) 157
- Prelaw program 196
- Prelaw Minor 87, 248
- Pre-Pharmacy program 197
- Prerequisite 10, 12
- President 3, 297, 308
- Privacy Act 16-21
- Professional Communication 87, 248
- Program 10
- Program Fees 32
- Programs for Native American 57
- Programs Listing 86-87
- Proof of English Proficiency 27
- Prototype Development Center 79
- Psychology
 - Baccalaureate
 - Psychology 86, 198
 - Secondary Teaching 86, 198
 - Minor 84, 248
- Psychology
 - PSYC Courses 299-300
- Public Administration Minor 87, 248
- Public Relations Minor 87, 248
- Public Testing 63

Q

- Qualitative Standards 36
- Quantitative Standards 36
- Quarterdeck Dining Hall 65

R

- Recreation Studies Minor 87, 248
- Recreational Activities (RECA) Courses 300-301
- Recreational Studies (RECS) Courses 301-303
- Refunds 32-34
- Regional Center Fee 32
- Regional Center Library Services 62
- Registration 10, 12-14
- Repeats 12
- Required Courses 10
- Residency Requirement 26, 72
- Resident Regulations 34
- Retention 69
- Robotics and Control Systems (EGRS) Courses 274
- Robotics Technology Minor 87, 248
- Room and Board 34
 - Applications 34
 - Regulations 34

S

- SAT 25
- Satisfactory Academic Progress
 - Requirements for Retention of

- Financial Aid 36
- Sault College Agreement 25
- Sault Ste. Marie SmartZone 79
- Scholarship Renewal Requirements, General 37
- Scholarship Requirements, New for Current Students 38
- Scholarships and Grants 41-58
- Scholarships
 - by Curriculum 46-53
 - Current Students 46
 - Incoming Freshmen (in-state) 41
 - Incoming Freshmen (out-of-state and foreign) 41
 - Incoming Freshmen (Ontario) 41
 - Incoming Students 42-46
 - Transfer Students 41-42
- School(s) 10
 - School of Biological Sciences 80
 - School of Business 83
 - School of Communication Studies and the Fine and Performing Arts 77
 - School of Criminal Justice, Fire Science and EMS 84
 - School of Education 77
 - School of English and Language Studies 78
 - School of Engineering, Technology and Economic Prototype Development Center 79
 - School of Mathematics and Computer Science 80
 - School of Nursing 81
 - School of Physical Sciences 81
 - School of Recreation Studies and Exercise Science 82
 - School of Social Sciences 78
- Secondary Teaching Bachelors 86, 199-200
- Semester 10
- Sexual Harassment 22
- Short-Term Educational Loan 57
- Social Science Baccalaureate 86, 201
- Social Studies
 - Baccalaureate
 - Elementary Teaching 86, 202-203
 - Secondary Teaching 86, 202-203
 - Elementary Teaching Minor 87, 249
- Social Work
 - Associate 86, 234
 - Minor 87, 248
 - Social Work (SOWK) Courses 304-305
- Society and Environment Minor 87, 249
- Sociology
 - Baccalaureate
 - General 86, 204-205
 - Elementary Teaching 86, 204-205
 - Secondary Teaching 86, 204-205
 - Social Services 86, 206-207

- Minor
 - General 87, 249
 - Teaching 87, 249
- SOCY Courses 303-304
- Spanish
 - Baccalaureate 87, 208-209
 - Spanish Language, Literature and Culture Minor 87, 249
 - Teaching Minor 87, 249
- SPAN Courses 305-306
- Special Course Fee 32
- Speech and Drama Minor 87, 249
- Sport and Recreation Management
 - Baccalaureate 86, 210-211
- Student Activity and Media Fee 32
- Student Emergency Fund 57
- Student Government 64
- Student Life 64-67
- Student Organizations 64-67
 - Academic 64
 - Greek (fraternities & sororities) 64-65
 - Music/Theatre 65
 - Professional 64
 - Recreation 64
 - Religious 64
 - Special Interest 65
 - Student Assembly 65
- Student Responsibilities 39-40
- Student Rights 39
- Student Services 64-67
- Student Services (SERV) Courses 303
- Student-Faculty Relations Committee, Appeals 64-67
- Study Abroad 70
- Substance Abuse Counseling Minor 87, 249
- Substance Abuse Prevention and Treatment
 - Associate 86, 235
- Substitutions 12
- Summa Cum Laude 79
- Supplemental Educational Opportunity Grant, Federal 54

T

- Teaching Education
 - Associate 86,
 - Minor
 - Elementary 87, 249
 - Secondary 87, 249
 - EDUC Courses 266-270
- Technical Accounting Associate 86, 236
- Tech-Prep 27
- Term 10
- Test Scores 12
- Testing Services 62
- Theatre (THEA) Courses 306
- Theatre, minor 87, 250
- TOEFL 28

Transcript 10, 16
Transcript Fee 34
Transcript, Official 10, 17
Transfer Student 25
Tuition/Fees Policy 32

U

University Seminar (USEM) Courses
306
University Seminars, New Students 65
University Talk 10
Upward Bound 66

V

Vehicles 32
Verification of Ability to Pay 27
Veterans Educational Benefits 58
Video Conferencing/Interactive
Television (IATV) 60
Vision Statement, University 3
Vocational Rehabilitation 56

W

W grade 15
Web Development minor 87, 250
Withdrawal 10, 13, 32-34
Work Study 57

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Notes

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