



## **Appendix O**

Title IV Program Responsibilities: Satisfactory Academic Progress

<http://www.lssu.edu/hoeanotices/>



The Higher Education Opportunity Act of 2008 (HEOA) requires that postsecondary institutions participating in federal student aid programs make certain disclosures to students. The following information is disclosed to you as a student at Lake Superior State University (LSSU) in compliance with federal law. For additional information, including requesting a paper copy of any materials, please call the appropriate office or visit the indicated websites.

## Academic Programs and Accreditations

Information concerning LSSU's current educational programs and course descriptions is available at <http://www.lssu.edu/academics>. This includes information about instructional, laboratory, and other physical facilities that relate to the academic programs, as well as faculty and other instructional personnel. The University catalog, (<http://www.lssu.edu/catalog>) provides information related to institutional/program accreditations (<http://www.lssu.edu/hlc/accreditation.php>) and approvals, as well as transferring courses and credits to LSSU (<http://www.lssu.edu/admissions/transfer.php>). View the Transfer Credit Policy at <http://www.lssu.edu/cmscatalog1516/admissions.php>. University-approved articulation and consortium agreements are available for reference at [http://www.lssu.edu/equivalency/guide\\_index.php](http://www.lssu.edu/equivalency/guide_index.php). The policies and procedures related to academic governance may be accessed at <http://www.lssu.edu/provost>.

## Alcohol and Other Drug Policy

The LSSU Alcohol and Other Drug Policy can be accessed at <http://www.lssu.edu/campuslife/policies/alcohol.php>. The Annual Security Report (<http://www.lssu.edu/publicsafety/clery/>) provides information about alcohol and other drug health risks, drug alcohol laws and penalties, and campus alcohol and other drug education and counseling resources.

## Campus Security Policies, Crime Statistics and Crime Log

Information regarding public safety at LSSU is provided in the Annual Security Report (<http://www.lssu.edu/publicsafety>). The Security Report includes crime statistics for the previous three years concerning certain crimes reported to have occurred on campus; in certain off-campus buildings or property owned or controlled by LSSU; and on public property within, or immediately adjacent to and accessible from, the campus. The Security Report also includes information about police and public safety resources, reporting crimes, coordination between law enforcement agencies, fire and medical emergencies, crime prevention, victim support services, the law and LSSU policies, campus facilities, residence hall security, timely warning policy statement, the LSSU Policy on Sexual Harassment, and the LSSU Alcohol and Other Drug Policy. Pursuant to the Campus Sex Crimes Prevention Act, LSSU's statement advising the campus community about registered sex offenders is available at <http://www.mipsor.state.mi.us/>. To obtain a paper copy of the Security Report, contact the Office of Public Safety at 906-635-2100.

## Cohort Default Rate

The cohort default rate (<http://www.lssu.edu/finaid/cohortdefaultrate.php>) is calculated using actual payment records of the student borrower. A 3-year cohort default rate is the percentage of a school's borrowers who enter repayment on certain Federal Family Education Loan (FFEL) Program or William D. Ford Federal Direct Loan (Direct Loan) Program loans during a particular federal fiscal year (FY), October 1 to September 30, and default or meet other specified conditions prior to the end of the second following fiscal year. Repayment begins 6 months after a student is no longer enrolled for at least 6 credit hours. Default occurs when a student is in repayment, but fails to make their payment for 270 days or more. Data from the most recent years is provided below. The numbers below represent the 3 year cohort default rate as well as the previously calculated 2 year cohort default rate which is no longer in use.

## Copyright Infringement and Peer-to-Peer File Sharing Policies and Sanctions

Copyright infringement is the act of exercising, without permission or legal authority, one or more of the exclusive rights granted to the copyright owner under section 106 of the Copyright Act (Title 17 of the United States Code). These rights include the right to reproduce or distribute a copyrighted work. In the file-sharing context, downloading or uploading substantial parts of a copyrighted work without authority constitutes an infringement.

Penalties for copyright infringement include civil and criminal penalties. In general, anyone found liable for civil copyright infringement may be ordered to pay either actual damages or "statutory" damages affixed at not less than \$750 and not more than \$30,000 per work infringed. For "willful" infringement, a court may award up to \$150,000 per work infringed. A court can, in its discretion, also assess costs and attorneys' fees. For details, see Title 17, United States Code, Sections 504, 505.

Willful copyright infringement can also result in criminal penalties, including imprisonment of up to five years and fines of up to \$250,000 per offense. For more information, please see the website of the U.S. Copyright Office at [www.copyright.gov](http://www.copyright.gov).

## Federal Student Financial Aid Penalties for Drug Law Violations

Federal law provides that a student who has been convicted of an offense under any federal or state law involving the possession or sale of a controlled substance during a period of enrollment for which the student was receiving financial aid shall not be eligible to receive any federal or institutional grant, loan, or work assistance. The separate, written notice of the penalties for drug violations provided to students upon enrollment may be accessed at <http://www.lssu.edu/finaid/druglawviolations.php>.

## Financial Aid

The Office of Financial Aid website (<http://www.lssu.edu/finaid>) includes information about the following: need-based and non-need-based federal, state, local, private, and institutional financial assistance programs available to students; eligibility requirements and procedures for applying for aid; criteria for selecting recipients and determining amount of award; methods and frequency of disbursements of aid; financial aid terms and conditions, including terms applicable to employment provided as part of a financial aid package; rights and responsibilities of students receiving Title IV, HEA loans; the availability of

financial aid for study abroad programs; how financial aid is handled when students withdraw; and whom to contact for questions regarding financial aid. Federal notices concerning the terms and conditions of federal student loans, entrance and exit counseling information, drug violation penalties, and the code of conduct for financial aid professionals and advisory disclosure are available at [http://www.lssu.edu/finaid/pdfs/CODE\\_OF\\_CONDUCT.pdf](http://www.lssu.edu/finaid/pdfs/CODE_OF_CONDUCT.pdf).

## Graduation and Retention Rates (Student Right-to-Know Act)

Graduation data of degree-seeking, full-time undergraduate students at LSSU is available at <http://www.lssu.edu/career/PlacementReports.php>. Information concerning retention rates is available at <http://www.lssu.edu/advising>. Additional information can be found in our Common Data Set at <http://www.lssu.edu/ir/reports.php>.

## Intercollegiate Athletic Program Participation Rates and Financial Support Data (Equity in Athletics Disclosure Act)

In compliance with the Equity in Athletics Disclosure Act, information on men's and women's athletic programs at LSSU is available at [http://lssulakers.com/information/forms/EADA\\_Report\\_2015\\_-\\_LSSU.pdf](http://lssulakers.com/information/forms/EADA_Report_2015_-_LSSU.pdf). The report includes the number of participants by gender for each team, operating and recruiting expenses, coaches' salaries, revenues, and athletically related student aid. A copy of the report is available online on the U.S. Department of Education Office of Postsecondary Education Equity in Athletics Disclosure website at <http://www2.ed.gov/finaid/prof/resources/athletics/eada.html>

## Missing Student Notification Procedures

Notification procedures to be followed when a student residing in on-campus housing has been reported missing for more than 24 hours are available at <http://www.lssu.edu/publicsafety/clery/>.

## Placement of Graduates

The report (<http://www.lssu.edu/career/PlacementReports.php>) provides post-graduation outcomes of LSSU baccalaureate degree recipients, including the types of graduate and professional education programs in which graduates enrolled. The report is prepared using information obtained annually from students who received a baccalaureate degree, offering a snapshot of their progress during the transition out of college.

## Price of Attendance

Information concerning the cost of attending LSSU is available at <http://www.lssu.edu/costs>. These costs consist of tuition and fees, books and supplies, room and board, transportation, and any additional costs for a program in which the student is enrolled or expresses an interest. More information can be found at <http://www.lssu.edu/finaid/costofattendance-1516.php>. A net price calculator can be found at: <http://www.lssu.edu/netprice>.

## Privacy of Student Records (Family Educational Rights and Privacy Act)

The Family Educational Rights and Privacy Act (FERPA) is a federal law that gives students the right to review their education records, to request amendment of their records, to consent to disclosures of personally identifiable information, and to file complaints with the U.S. Department of Education. Additional information regarding student rights under FERPA is available at <http://www.lssu.edu/registrar/FERPA>. This information includes LSSU procedures for reviewing and requesting amendment of education records, notice of the types of information LSSU has designated as directory information, and students' right to opt-out of directory information.

## Refund Policy, Requirements for Withdrawal, and Return of Title IV, HEA Financial Aid

If a student withdraws or drops a course, LSSU will adhere to its refund policy as published at

[http://www.lssu.edu/scheduling/add\\_drop.php](http://www.lssu.edu/scheduling/add_drop.php). Information regarding the requirements and procedures for students seeking to withdraw officially is also available at [http://www.lssu.edu/scheduling/add\\_drop.php](http://www.lssu.edu/scheduling/add_drop.php). Requirements for return of Title IV, HEA grant or loan aid are available at <http://www.lssu.edu/finaid/withdrawalprocess.php>.

## Services for Students with Disabilities

The Disability Services provides disability-related information and referrals; documents disability and conducts needs assessments; facilitates reasonable accommodations; and provides disability-related technical assistance, auxiliary aids/services, and advocacy and training. Visit the Disability Services homepage (<http://www.lssu.edu/disability>) for additional information on services and resources available to students with disabilities.

## Student Body Diversity

Information about student body diversity, including the number of enrolled full-time students by gender and race/ethnicity, is provided in the Common Data Set found at <http://www.lssu.edu/hoeanotices/commondataset.php>. The number of undergraduate students who receive a Federal Pell Grant is available at <http://nces.ed.gov/collegenavigator>.

## Textbook Information/Required Course Materials

Detailed lists of required course materials will be made available to students through Barnes and Noble at Lake Superior State University (<http://lssu.bncollege.com>).

## Vaccination Policies

LSSU policies regarding vaccinations are available at <http://www.lssu.edu/nursing/documents/ImmunizationRequirementsFall2010.pdf>.

## Voter Registration

Information on voting in local, state, and federal elections, including a copy of the Michigan voter registration application form, may be accessed at <http://www.mi.gov/sos>.

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## Resources »

- Admissions
- Financial Aid
- Visit Campus
- Campus Life

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## Upcoming Events »

MAY	Innocademy
17	12:00PM to 10:00PM

## Additional Links

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- › [Shared Governance](#)
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## About Us

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Lake Superior State University is a personal, small-town school that provides a superior blend of liberal and technical studies in the natural setting on Michigan's Upper Peninsula. LSSU offers undergraduate degrees in 45 areas of study that attract students from every county in Michigan, more than a dozen states and provinces, and nine nations. LSSU is Michigan's most personal public university emphasizing an undergraduate experience provided by a fully-qualified faculty and a dedicated staff. [Read More...](#)

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## **Appendix P**

Title IV Program Responsibilities: Contractual Relationships

Not applicable.



## **Appendix Q**

Title IV Program Responsibilities: Consortial Relationships

Not applicable.





## **Appendix R**

Required Information for Students and the Public: Catalogs & Handbooks

University Catalog

<http://www.lssu.edu/cmscatalog1516/>

Student Handbook

<http://www.lssu.edu/campuslife/handbook/index.php>

# Lake Superior State University: Academic Catalog 2016-17

You are here: [A Look at LSSU](#) » **Course Descriptions**

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## Course Descriptions

Each course description is preceded by the following type of heading:

**CHEM999 Chemistry  
(3,3) 5**

*or*

**CHEM999 Chemistry  
(3,3,1) 5**

*or*

**CHEM999 Chemistry  
(3,3) *alternate years* 5**

The first line provides the code number (CHEM999) and the course name; see abbreviation legend below. The second line includes several pieces of information: The first two numbers in parentheses are hours of lecture-lab per week. If the course has a recitation component, it will be listed next. 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 registration or your department chair concerning scheduling of such courses.

**NOTE:** 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 if it is found during the regular add/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](#)
- [ARTS - Art](#)
- [BIOL - Biology](#)
- [BUSN - Business](#)
- [CHEM - Chemistry](#)
- [CHLD - Early Childhood Education](#)
- [CHIN - Chinese](#)
- [CJUS - Criminal Justice](#)
- [COMM - Communication](#)
- [CSCI - Computer Science](#)
- [DANC - Dance](#)
- [DATA - Data Processing](#)
- [ECON - Economics](#)

- [EDSE - Special Education](#)
- [EDUC - Teacher Education](#)
- [EGEE - Electrical Engineering](#)
- [EGEM - Engineering Mechanics](#)
- [EGET - Electrical Engineering Technology](#)
- [EGME - Mechanical Engineering](#)
- [EGMF - Manufacturing Technology](#)
- [EGMT - Manufacturing Engineering Technology](#)
- [EGNR - General Engineering](#)
- [EGRS - Robotics and Control Systems](#)
- [EMED - Emergency Medical Services](#)
- [ENGL - English](#)
- [EVRN - Environmental Science](#)
- [EXER - Exercise Science](#)
- [FINC - Finance](#)
- [FINE - Fine Arts](#)
- [FIRE - Fire Science](#)
- [FREN - French](#)
- [GEOG - Geography](#)
- [GEOL - Geology](#)
- [HIST - History](#)
- [HLTH - Health Sciences](#)
- [HONR - Honors Program](#)
- [HUMN - Humanities](#)
- [INTB - International Business](#)
- [INTD - Interdisciplinary](#)
- [JAPN - Japanese Studies](#)
- [JOUR - Journalism](#)
- [LAWS - Law](#)
- [LIBR - Library](#)
- [LING - Linguistics](#)
- [MATH - Mathematics](#)
- [MGMT - Management](#)
- [MRKT - Marketing](#)
- [MUSC - Music](#)
- [NSCI - Natural Science](#)
- [NURS - Nursing](#)
- [OFFC - Office Administration](#)
- [PHIL - Philosophy](#)
- [PHYS - Physics](#)
- [PNUR - Practical Nursing](#)
- [POLI - Political Science](#)
- [PSYC - Psychology](#)
- [READ - Reading](#)
- [RECA - Recreational Activities](#)
- [RECS - Recreation Studies](#)
- [SERV - Student Services](#)
- [SOCY - Sociology](#)
- [SOWK - Social Work](#)
- [SPAN - Spanish](#)
- [THEA - Theatre](#)

- [USEM - University Seminar](#)
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**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. Prerequisite: Two years of high school algebra and equivalent/satisfactory score on ACT/SAT or Placement Exam or MATH102 with a grade of C or better.

**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,) 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 ACTG232 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: Grade of C or higher in ACTG232.

### **ACTG332**

#### **Cost Management I**

**(4,0) 4**

An advanced study of managerial accounting as it applies to management practices. Topics include job order and process costing systems, value chain management, activity based costing and management, joint product costing, CVP analysis, cost allocations, budgeting, and financial planning models, and allocation of support activity costs. Prerequisite: ACTG133.

### **ACTG333**

#### **Cost Management II**

**(4,0) 4**

A continuation of ACTG332. Topics include strategic decision making, strategic issues in capital investment decisions, standard costing and variance analysis, performance evaluation and the balanced scorecard, responsibility accounting, investment centers and transfer pricing, target costing, theory of constraints, and strategic pricing, managing and controlling quality, management compensation, and business valuation. Prerequisite: ACTG332.

### **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.

### **ACTG350**

#### **Income 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 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.

### **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.

### **ACTG432**

#### **Advanced Accounting: Consolidations**

**(4,0) 4**

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, translation of foreign financial statements and the application/comparison of international accounting standards will also be presented. Prerequisite: ACTG233 with a grade of C or higher.

### **ACTG433**

#### **Advanced Accounting: Governmental**

**(4,0) 4**

An introduction to governmental and nonprofit accounting as applied to state and local governments and other nongovernmental not-for-profit entities including colleges and universities, and health care organizations. 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 with a grade of C or higher.

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### **ARTS109**

#### **Principles of Design and Color**

**(0,4.5) 3**

This course acquaints students with the various possibilities of working with two-dimensional space and color theory. Participants will explore line, form, shape, texture, color and the use of negative and positive space. Prerequisite: None.

### **ARTS110**

#### **Fundamentals of Drawing**

**(0,4.5) 3**

This course will introduce the participant to basic drawing techniques. Students will draw from observation, working toward the creation of a portfolio of drawings for final submission. Prerequisite: None.

### **ARTS111**

#### **Introduction to Painting**

**(0,4.5) 3**

Participants will explore fundamental painting techniques and methods. Color theory and basic compositional styles will be covered. With an emphasis on representational painting, students will build a body of self-expressive work using acrylic paint and possibly other media. Prerequisite: None.

### **ARTS115**

#### **Introduction to Ceramics**

**(0,4.5) 3**

A basic course in ceramics with emphasis on throwing and hand construction techniques, design, aesthetics and the creative development of clay objects. Prerequisite: None.

### **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.

### **ARTS220**

#### **Drawing & Painting Studio I**

**(0,4.5) 3**

In an open studio environment, through directed study, students will use aspects of drawing and painting to produce original artwork, displaying a basic level of studio work. This class combines skills learned in foundational courses into a mode of self-expression. Prerequisite: ARTS111 and either ARTS109 or ARTS110.

### **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.

### **ARTS320**

#### **Drawing & Painting Studio II**

**(0,4.5) 3**

Students will investigate a personal direction that fulfills their identity as artists, demonstrating an intermediate level of studio work. Focusing on developing each student's artistic identity, this class is composed of directed studio time and critiques. Prerequisite: ARTS220.

### **ARTS420**

#### **Drawing & Painting Studio III**

**(0,4.5) 3**

In an open studio environment, reinforced by frequent critiques, this course focuses on the individual formative process as students choose among multiple thematic possibilities in order to produce a more advanced level of studio work through directed study. Prerequisite: ARTS320.

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### **BIOL104**

#### **Survey of General Biology**

**(3,3) 4**

This course is a non-majors biology course that will cover the major units of general biology: (1) cells and energy; (2) genetics; (3) evolution; (4) organismal biology; (5) ecology. Developing a solid understanding of the fundamentals of general biology is vital to being an informed citizen about advances in the medical and food sciences, foundational and new information about the organization of life, and current issues of environmental and ecological concern. Course content is tied to the State of Michigan's benchmarks for training elementary school teachers, but any students interested in the life sciences are encouraged to take this class. The laboratory is designed to illustrate the course content as well as illustrate the principles of inquiry. Prerequisites: ENGL091, MATH086 and READ091 or equivalent test scores.

### **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: ENGL091 or equivalent.

### **BIOL106**

#### **Boat Handling and Navigation**

**(2,3) 3**

Topics related to the art of seamanship are covered, including the basics of boating and safety. Piloting and navigation are emphasized with an understanding of weather, waves, and wind, as well as the use of board electronic equipment. Pre- or corequisites: MATH102.



**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: ENGL091 or equivalent.

**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 complement 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, ENGL091 or equivalent, and MATH088 or equivalent satisfactory score on ACT or Placement Exam.

**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.

**BIOL126**  
**Interpretation of Maps and Aerial Photographs**

**(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.

**BIOL131**  
**General Biology: Cells**

**(3,3) 4**

This course is an introduction to the cellular aspects of general biology. This course will provide an overview of cellular biology and serve as a framework for further biological studies. Topics to be covered include basic chemistry of the cell, function of cellular organelles, cellular metabolism including respiration and photosynthesis, the cell cycle, mitosis, meiosis, simple transmission genetics, introduction to molecular and developmental biology. The laboratory introduces the student to inquiry based scientific method. Prerequisites: MATH088, ENGL091, or equivalent scores on the math and English placement exams.

## **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: MATH088, ENGL091, or equivalent scores on the math and English placement exams.

## **BIOL199**

### **Freshman Seminar**

**(1,0) 1**

A partial focus for this course will be on academic skills and the transition from high school to college. Topics will include time management, use of campus resources, development of critical thinking, and strengthening study skills. At other times students will meet in discipline-based groups in conjunction with BIOL299, BIOL399 and BIOL499. These meetings will include discussion of literature relevant to the discipline and progress reports from upper-class students engaged in scholarly projects.

## **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. Prerequisite: ENGL111. Pre- or corequisite: COMM101.

## **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: BIOL131 and CHEM115.

## **BIOL206**

### **Medical Laboratory Practices**

**(2,0) 2**

Covers fundamental principles of medical laboratory science including safety, specimen handling, measurement, common calculations, organization of the medical laboratory, automation, and quality control. Prerequisites: MATH111, CHEM115, BIOL131.

### **BIOL220**

#### **Genetics**

**(3,3) 4**

This course covers the three major subdivisions of the study of genetics - Mendelian or transmission genetics, molecular biology, and population genetics. Transmission genetics topics will include traditional genetics problems and modes of inheritance; mitosis, meiosis and control of the cell cycle; chromosomal structure and recombination. Molecular topics will include information on DNA structure and replication, transcription, translation, gene cloning, genomics, and current research in DNA technology. Topics in population genetics will include aspects of the Hardy-Weinberg theory. The laboratory will include exercises in both traditional and molecular genetics. Prerequisites: BIOL131, CHEM115 and (BIOL250 or sophomore statistics course).

### **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 or CHEM110 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 CHEM109 or above; NSCI103 or BIOL132; BIOL126.

### **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**  
**Biostatistics**  
**(2,2) 3**

A course in the design and analysis of biological experiments. The focus of the course is the development of a systematic method for determining an appropriate statistical technique and the interpretation of results in terms of biological science. Prerequisites: BIOL131, BIOL132, and MATH111 or Calculus.

**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 BIOL126.

**BIOL285**  
**Principles of Epidemiology**  
**(3,0) 3**

Principles, purpose and methods of descriptive and analytic epidemiology with emphasis on environmental health. Prerequisite: MATH207.

**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 and 132

### **BIOL289**

#### **Aquatic Research Sampling Methods**

**(2,3) 3**

A variety of sampling techniques are introduced as they relate to the various disciplines of aquatic science. These methods include sampling and preservation of biotic (plankton, fish, benthic invertebrates, DNA, pathogens) and abiotic (water quality, sediments, climate) data. Prerequisites: BIOL107, CHEM108/109, MATH111 and permission of instructor. Also listed as EVRN289.

### **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**

**(2,3) 3**

A study of the invertebrate groups with emphasis on morphology, phylogeny and life cycles. Prerequisite: BIOL132.

### **BIOL303**

#### **General Entomology**

**(2,3) 3**

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.

### **BIOL304**

#### **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.

**BIOL306**  
**Medical Mycology**

**(2,2) 3**

Covers fungal structure, reproduction, and classification, medically important fungi and the diseases they cause, techniques for identifying fungi in clinical specimens and for culturing fungi in the laboratory. Laboratory covers techniques for fungal culture and identification, and practice identifying fungal diseases from prepared slides and/or photographs. Prerequisite: BIOL132 and BIOL204.

**BIOL310**  
**Ichthyology**

**(2,3) 3**

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: BIOL131 and BIOL132.

**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 or BIOL330.

**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 CHEM115.

**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.

### **BIOL335**

#### **Principles of Animal Nutrition**

**(3,0) 3 alternate years**

A scientific approach to the nutritional role of water, carbohydrates, proteins, lipids, minerals, and vitamins. The course will emphasize comparative aspects of gastrointestinal anatomy and physiology for livestock, wildlife, and fish. Prerequisites: BIOL250 AND CHEM116.

### **BIOL337**

#### **General Ecology**

**(2,3) 3**

A survey of concepts and applications of plant and animal physiological, morphological, behavioral, population, community, and systems ecology. Prerequisites: BIOL131, BIOL132 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**

**(2,4) 4**

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 CHEM115.

**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.

**BIOL389**  
**Internship in Biology**  
**3-4 3-4**

A variable credit practicum course in which the students will perform research and/or gain work experience under the direction of a faculty mentor and a qualified supervisor. Students are expected to spend a minimum of 45 hours in an approved work setting for each credit earned. The course may be repeated once for a maximum of eight credits. Student interns will be required to write weekly updates or journal entries to be submitted to their LSSU faculty mentor for evaluation of what the student has learned. Prerequisites: 2.50 GPA in major and permission of faculty mentor or department chair.

**BIOL398**  
**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. Prerequisites: BIOL299.

**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.

### **BIOL405**

#### **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.

### **BIOL406**

#### **Immunoematology**

**(2,3) 3**

Fundamentals of blood banking in the ABO, Rh and other blood group systems; blood component preparation and utilization; transfusion complications; quality control and problem solving. Laboratories include techniques used in immunology/serology; blood grouping; compatibility testing; and antibody identification. Prerequisites: BIOL220, CHEM226, Junior standing and permission of instructor.

### **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**

#### **Advanced Cell & Molecular Biology**

**(3,3) 4**

This course will examine cellular structure and function with emphasis on organelle ultrastructure, cell membranes and permeability, cellular interactions, and the molecular foundations of genetic mechanisms and cell energetics. Prerequisites: BIOL220 and CHEM351.

### **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. Prerequisite: BIOL204 and BIOL220.

**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. Prerequisite: BIOL337.

**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**

**(2,3) 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: BIOL330.

**BIOL434**

**Histopathology**

**(0,3) 1**

The course is an intensive 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 or corequisite: 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: BIOL202, BIOL337 and MATH207.

**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: BIOL311 or BIOL312 and BIOL339.

**BIOL450**  
**Laboratory Apprenticeship**  
**(0,3) 1**

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. This is a credit/no credit course.

**BIOL455**  
**Body Fluids Analysis**  
**(3,2) 4**

Covers molecular analytes that are measured in blood, urine, and body fluids: the physiologic and pathologic processes that affect the levels of these analytes, correlations of analyte levels with disease, methods and instruments used to measure them, and principles and practices of quality control. Prerequisites: MATH207, CHEM226, CHEM332, BIOL330.

**BIOL460**  
**Clinical Internship**  
**3 or 9**

A six-month internship experience in a clinical laboratory. This course is open only to students in the Medical Laboratory Science Major, Clinical Concentration. Students will be placed at one of LSSU's affiliate clinical sites. There they will perform routine analyses of clinical specimens under the supervision of clinical site personnel. Students will be trained in chemical, hematological, microbiological, coagulation, and blood bank analyses. Prerequisites: BIOL380, BIOL406, BIOL423, BIOL455, BIOL480 and Permission of Course Director. Variable credits, 3 or 9; must be repeated once for a maximum of 12 credits.

**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. Prerequisite: BIOL337

**BIOL475**  
**Aquatic Entomology**  
**(2,3) 3**

Survey and identification of regional lake and stream insects, with additional emphasis on lifehistory 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**  
**(3,3) 4 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: BIOL204 and CHEM226.

**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**  
**(0,6) 2**

A practicum under the guidance of a faculty member. The student will conduct a scholarly project based on the proposal submitted by the student in BIOL399 (or an appropriate substitute). Prerequisite: BIOL399.

**BIOL497**  
**Experiential Learning Project**  
**3**

A full semester/summer practicum experience. Students 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 experience should be 12 weeks at 40 hours per week. Prerequisite: BIOL398.

**BIOL499**  
**Senior Seminar**  
**(1,0) 1**

Students meet in discipline-based, student-faculty groups in conjunction with BIOL199, BIOL299 and BIOL399. 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 or BIOL497.

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## **BUSN121**

### **Introduction to Business**

**(3,0) 3**

This course is intended to provide students a broad overview of the complex and dynamic contemporary world of business. The course will illustrate how human resources management, marketing, production, and finance are major functions that work together to help owners, employees and customers reach their objectives. Business must operate within economic, social, natural, technological, international, legal, and political environments.

## **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.

## **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.

## **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]**

**(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 achieve the school approved learning

objectives/outcomes established for the internship. Students are expected to spend a minimum of 45 hours (1 credit), 90 hours (2 credits), 135 hours (3 credits), or 180 hours (4 credits) in an appropriate work setting. This course may be repeated once for a maximum of four total credits. Prerequisites: 2.5 GPA, and approval of the Dean.

### **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.

### **BUSN350**

#### **Business Law I**

**(3,0) 3**

This portion of business law covers the law applicable to contracts, sales, personal property and bailments.

### **BUSN355**

#### **Business Law II**

**(3,0) 3**

This portion of business law covers the law applicable to commercial paper, corporations, partnerships, agency and employment.

### **BUSN399**

#### **Internship in [Discipline]**

**(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 achieve the school approved learning objectives/outcomes established for the internship. Students are expected to spend a minimum of 45 hours (1 credit), 90 hours (2 credits), 135 hours (3 credits), or 180 hours (4 credits) in an appropriate work setting. This course may be repeated once for a maximum of four total credits. Prerequisite: 2.5 GPA, junior standing or higher, employee and instructor approval of the Dean.

### **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 and junior standing.

### **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.

**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: 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. Prerequisite: Senior status.

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**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: MATH088 or equivalent. Students must receive a C (2.0) or better in this course to qualify for CHEM104, CHEM108 or CHEM115. Credit in this course does not apply toward graduation.

**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: ENGL091 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.

**CHEM110**

## **Applied Organic & Biochemistry**

**(3,2) 4**

A continuation of concepts presented in CHEM108 with an emphasis on the fundamentals of organic and biochemistry. The interrelationships between the metabolic processes of living systems are discussed along with their underlying chemical reactions. Prerequisite: CHEM108 or equivalent, with a grade of C (2.00) or better.

## **CHEM115**

### **General Chemistry I-Intro to Fundamental Principles of Chemistry**

**(4,2) 5**

Fundamental principles of chemistry with emphasis on scientific method, basic chemical reactions and acid base equilibria, stoichiometry, periodic trends of elements, an introduction to the energy of reactions, atomic structure, simple bonding models, molecular structure, intermolecular forces, and nuclear chemistry will be presented. Pre- or corequisite of MATH111 or higher and ENGL091 or equivalent. One year of high school chemistry is strongly recommended.

## **CHEM116**

### **General Chemistry II-Intro to Physical Chemistry**

**(4,3) 5**

Continuation of CHEM115 with emphasis on physical chemical concepts such as bonding, gas laws, solids and solutions, kinetics, thermodynamics, and equilibrium, including acid-base reactions and electron transfer processes. Prerequisite: CHEM115 with a grade of C (2.0) or better.

## **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 (2.0) 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 MATH111 with a grade of C (2.0) or better.

## **CHEM261**

### **Inorganic Chemistry**

**(3,3) 4**

This course will provide a foundation in Inorganic Chemistry with a focus on understanding the properties of the elements, bonding and geometries of small



molecules and their chemical re-activities. Survey of main group and transition metal chemistry and applications to bio-inorganic chemistry. The laboratory component will provide students with opportunities to observe and measure the changes that accompany inorganic reactions and to make predictions regarding these inorganic reactions. Prerequisite: CHEM116 with a grade of C or better.

### **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.

### **CHEM310**

#### **Applied Spectroscopy**

**(3,3) 4**

General principles of spectroscopy will be explored including underlying principles and theory, data acquisition and processing coupled with spectral interpretation. Different spectroscopic methods used for the structural determination of organic molecules and in chemical research are described including mass spectrometry (MS), ultraviolet and visible spectroscopy (UV-Vis), infra-red spectroscopy (IR), atomic spectroscopy, fluorescence spectroscopy, and both one-dimensional and two-dimensional <sup>1</sup>H and <sup>13</sup>C nuclear magnetic resonance (NMR) spectroscopy. Prerequisite: CHEM231 and CHEM326. (Alternate Years)

### **CHEM326**

#### **Organic Chemistry II**

**(3,3) 4**

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 advance 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 (2.00) or better.

### **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. Recommended either PHYS222 or PHYS232.

### **CHEM341**

#### **Environmental Chemistry**

**(3,3) 4 alternate years**

A study of the environmental chemistry of the hydrosphere, atmosphere,

lithosphere, and biosphere, the measurement and remediation of water and air quality problems, the toxicology of water and air pollutants, and the environmental aspects of energy use. Prerequisites: CHEM225, CHEM231. Also listed as EVRN341.

### **CHEM351**

#### **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, vitamins, 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: CHEM225.

### **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: CHEM351

### **CHEM361**

#### **Physical Chemistry I**

**(4,0) 4 alternate years**

Chemical thermodynamics with applications to both phase and chemical equilibria. Prerequisites: CHEM116, one year of physics, and either MATH112 or MATH152. Corequisite: CHEM363.

### **CHEM362**

#### **Physical Chemistry II**

**(3,0) 3 alternate years**

Traditional quantum chemistry topics will be discussed that help explain chemical phenomena and provide descriptions and applications for spectroscopy. Prerequisite: CHEM361.

### **CHEM363**

#### **Physical Chemistry Laboratory: Kinetics and Reaction Dynamics**

**(0,3) 1**

An advanced laboratory exploring reaction kinetics and dynamics with an emphasis on modern methods of physical chemistry measurement. Prerequisite: CHEM116 and one semester of calculus.

### **CHEM395**

#### **Junior Seminar**

**(1,0) 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.

### **CHEM399**

#### **Internship in Chemistry**

**1-4 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. Work hours and activities must be documented daily and approved by both the on-site supervisor and the instructor to receive credit. The course may be repeated for a maximum of four credits. Prerequisite: 2.5 GPA in major, Junior standing and permission of chair at least one semester in advance of registering for the course.

### **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**

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.

### **CHEM452**

#### **Advanced Biochemical and Molecular Techniques**

**(2,4) 4 alternate years**

A course covering advanced laboratory techniques for manipulating and analyzing bio-polymers such as proteins and nucleic acids. A brief discussion of bioinformatics will be presented. Protein expression vectors, PCR, and modern molecular techniques will be explored with potential applications for chemistry, biology, toxicology, forensic, and clinical lab science. Prerequisite: CHEM351.

### **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. Prerequisite: CHEM261.

### **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. Pre- or corequisites: CHEM461 and either CHEM310 or CHEM332.

## **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**

**(0,6) 2**

This is a 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. This course will be required for a degree certified by the American Chemical Society. This course may not be repeated for credit. Prerequisites: CHEM395 (also listed as EVRN395) and permission of instructor. Dual listed as EVRN495.

## **CHEM499**

### **Senior Seminar**

**(1,0) 1**

Required for seniors majoring in chemistry/environmental science. Students will present the results of their scholarly research. Students who have completed CHEM/EVRN495 will be required to give poster and oral presentations to the University community as part of this class. Pre- or corequisite: CHEM395 (also listed as EVRN395). Dual listed as EVRN499.

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## **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.

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### **CHLD101**

#### **Introduction to Early Childhood Education**

**(4,0) 4**

This course provides an introduction to the field of early childhood. Topics include typical and atypical developmental milestones in the social, emotional, physical, intellectual and moral development of children from birth to age 8. In addition, the history of early childhood education, types of programs and issues in the field of childcare will be addressed. Field experience is required.

### **CHLD103**

#### **Learning Environments for the Young Child**

**(4,0) 4**

This course explores the contributions of child development theorists, and the multiple integrated influences of family and community, to the design and implementation of early childhood learning environments. The use of space, materials, and routines in providing inclusive, safe environments is considered, as well as philosophical approaches to supporting young learners. Field experience is required. Prerequisite: CHLD101.

### **CHLD150**

#### **Observation and Assessment**

**(4,0) 4**

This course provides experience with the practices and tools for observation, documentation, and assessment of young children from birth through age eight. Discussion will include the use of results of assessment for planning continued developmental and learning experiences, as well as for appropriate classroom management and guidance strategies. Field experience is required.

### **CHLD210**

#### **Infants and Toddlers**

**(4,0) 4**

This course examines the design and evaluation of developmentally appropriate teaching, caregiving, and guidance practices for children from birth to 36 months. Addresses environments that provide challenging and developmentally appropriate expectations to stimulate development toward the long-term goals of autonomy, and cognitive and social-emotional growth of infants and toddlers. Field experience is required. Prerequisite: CHLD150.

### **CHLD225**

#### **Emergent Literacy**

**(3,0) 3**

This course focuses on literacy acquisition theory and language development milestones for children from birth through age 8. Factors that affect reading acquisition and techniques that assist children in developing listening, speaking, reading and writing skills are also explored. Consideration of the unique needs of English Language Learners is included. Prerequisite: CHLD210.

### **CHLD241**

#### **STEM Foundations for the Young Child**

**(4,0) 4**

This course explores basic concepts and skills in science, mathematics, engineering, and technology appropriate to early childhood education. Field experience is required. Prerequisites: MATH110 or higher; BIOL105.

### **CHLD242**

#### **Creativity & Humanities**

**(4,0) 4**

This course examines literature, visual and performing arts, and social studies topics appropriate to early childhood education. Field experience is required. Prerequisites: ENGL111, SOCY103.

### **CHLD245**

#### **Early Childhood Curriculum**

**(3,0) 3**

This course focuses on the design of developmentally appropriate practices and curriculum for young children. Emphasis is placed on planning learning activities that support positive developmental outcomes, as well as on differentiating instructional strategies for the individual child. Field experience is required. Prerequisite: CHLD150.

### **CHLD260**

#### **Practicum I**

**4**

The student will complete at least 140 hours in an early childhood setting culminating in experience as a lead teacher. Seminar meetings are included. Grading will be CR/NC. Prerequisites: CHLD150 and permission of instructor.

### **CHLD270**

#### **Administration of Early Childhood Programs**

**(2,0) 2**

This course focuses on the financial, legal, supervisory and administrative procedures used in operating early childhood programs, including applicable local, state, and national standards. Prerequisite: CHLD150.

### **CHLD310**

#### **Inclusion of Young Children with Special Needs in Early Childhood Settings**

**(3,0) 3**

This course provides resources and models for designing and implementing quality inclusive learning environments for young children who demonstrate developmental diversity birth to age 5. Includes identification of common delays, impairments and disabilities, as well as assistive technologies appropriate for supporting continued development. Field experience is required. Prerequisite: CHLD210.

### **CHLD330**

#### **Philosophical Foundations of Early Childhood Education**

**(2,0) 2**

This course expands on basic knowledge of early childhood education practices to examine and evaluate contemporary early childhood program models and philosophical foundations. Prerequisite: CHLD260

### **CHLD350**

#### **Early Childhood Facilities Management**

**(2,0) 2**

This course develops an advanced level of knowledge and skills necessary for effective management of child development centers, preschools, and other facilities. Effective leadership styles are considered. Prerequisite: CHLD270.

### **CHLD410**

#### **Practicum II**

**4**

Students complete at least 140 hours in an early childhood setting, with primary emphasis on curriculum and administrative responsibilities. Seminar meetings are included. Grading will be CR/NC. Prerequisites: CHLD350 and Permission of Instructor.

### **CHLD440**

#### **Family and Community Partnerships**

**(3,0) 3**

This course explores the multiple integrated influences that impact the development

of young children, and provides opportunities for students to develop collaborative and cooperative skills that are essential to building partnerships focused on supporting that development. The various roles of the early childhood educator as an advocate for individual children and for the community is addressed. Field experience is required. Prerequisite: CHLD310.

### **CHLD480**

#### **Directed Teaching: Seminar**

**(1,0) 1**

This seminar provides a forum for students in the CHLD Directed Teaching experience to discuss issues in early childhood education, classroom management, teaching of all students and professional development. Co-requisite: CHLD492.

### **CHLD492**

#### **Directed Teaching: Early Childhood**

**5**

This course is a full-time teaching practicum under the direction and mentoring of a cooperating teacher at the pre-primary level. Evolution from observation and facilitation of small group activities, to whole-class instruction of a full-teaching load in an area center. Emphasis is placed on full range of responsibilities, including family involvement and administrative responsibilities. Grading will be CR/NC. Prerequisite: Admission to student teaching internship. Corequisite: CHLD480.

### **CHLD495**

#### **Senior Project 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. Requires field research and oral presentation. Prerequisite: Senior Status and Instructor's approval.

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### **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.

### **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. Prerequisite: 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: CJUS101 and CJUS102.

### **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. Prerequisite: 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: CJUS101 and CJUS102.

### **CJUS325**

#### **Homeland Security and Emergency Services**

**(3,0) 3**

This course will prepare all graduates from a variety of majors to understand how homeland security impacts the US political system as a whole, but especially from the standpoint of emergency response and preparedness. 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. Prerequisite: Junior standing. Students from other majors are encouraged to enroll with permission from instructor. 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: CJUS220, CJUS240, 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. Prerequisite: 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. Prerequisite: Junior standing in criminal justice or fire science and MATH088 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: CJUS101 and SOCY214.

### **CJUS384**

#### **International and Comparative Criminal Justice Systems**

**(3,0) 3**

A survey of selected 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.

**CJUS401**  
**Senior Seminar**  
**(3,0) 3**

Seminar and independent study course with individual student guidance by faculty on selected research topics in criminal justice. Prerequisite: 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: Senior standing and permission of instructor.

**CJUS409**  
**Procedural Criminal Law**  
**(3,0) 3**

Principles, duties and mechanics of criminal procedures as applied to important areas of arrest, search and seizure. Prerequisite: 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. Prerequisite: 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: CJUS101, and junior or senior standing.

**CJUS444**  
**Criminalistics**  
**(3,3) 4**

Criminalistics 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 MCOLES mandated hours. Prerequisite: 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: 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: CJUS101 and CJUS102.

## **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. Prerequisite: Permission of instructor.

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## **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.

### **COMM399**

#### **Internship in Communication**

**(1-4) 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 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.

### **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.

### **COMM490**

#### **Senior Directed Study in Communication**

**3-4 3-4**

This course is designed to allow communication 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 a student's individual areas of interest within the communication discipline, 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).

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### **CSCI 101**



## **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.

## **CSCI 103**

### **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.

## **CSCI 105**

### **Introduction to Computer Programming**

**(2,2) 3**

An introductory course in computer programming in a graphical development environment, intended for students with no prior computer programming experience. Arithmetic, control structures and simple data structures. Sound, graphics and animation techniques. Prerequisite: MATH088 or equivalent/satisfactory score on SAT, ACT or Placement Exam.

## **CSCI 106**

### **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.

## **CSCI 107**

### **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 Expression Web.

## **CSCI 121**

### **Principles of Programming**

**(4,0) 4**

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. Introduction to classes and dynamic memory allocation. Text manipulation and parsing, binary files, and exception handling. C-style input and output. 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.

### **CSCI 163**

#### **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 interference as they relate to computer repair and operation. The disassembly and upgrading of a personal computer will be covered in the laboratory as well as the use of diagnostic hardware and software.

### **CSCI 201**

#### **Data Structures and Algorithms**

**(4,0) 4**

An introductory course in data structures and algorithms, with an emphasis on abstraction, implementation and analysis. Advanced class concepts, including operator overloading, Linked lists, stacks, queues, trees and binary trees. Separate compilation and third-party libraries. Application of various data structures to problems selected from the spectrum of computer science topics. Prerequisites: CSCI121 with a grade of C or better and MATH111 (or equivalent math placement) with a grade of C or better.

### **CSCI 207**

#### **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. Prerequisite: CSCI107 with a grade of C or better.

### **CSCI 211**

#### **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.

### **CSCI 221**

#### **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 with a grade of C or better.

## **CSCI248**

### **Network Operating Systems I**

**(2,2) 3**

An introduction to using and administering network operating systems. Students will also be introduced to virtualization of machines, as well as interaction between virtualized machines. Topics include: account setup, basic security, file and device sharing, and maintenance. Course topics will be presented in the context of different network operating systems. Prerequisite: CSCI221 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 CSCI103 with grade of C or better.

## **CSCI275**

### **Web Server Administration**

**(2,2) 3**

Install and configure a web server; identify the web server administrator 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. Prerequisites: CSCI221 and CSCI248, both with a C or better.

## **CSCI281**

### **Introduction to UNIX and Networking**

**(2,2) 3**

An introduction to the UNIX operating system, shell scripting, and UNIX networking from the users 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 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. Prerequisites: CSCI201 with a grade of C or better.

### **CSCI 292**

#### **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. Prerequisite: CSCI106 and 107, both with a grade of C or better, or CSCI163 and CSCI221, both with a grade of C or better.

### **CSCI 321**

#### **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.

### **CSCI 323**

#### **Routers and Switches**

**(2,2) 3**

Principles of Wide Area Networks, IP and TCP, routers, routing protocols and configurations, virtual LANs, network management, subnetting, design of LANs and WANs, and security issues. Students completing this course will be prepared to take the CCENT and CCNA certification exams. Prerequisite: CSCI221 with a grade of C or better.

### **CSCI 325**

#### **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 with a grade of C or better.

### **CSCI 326**

#### **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 with a grade of C or better.

### **CSCI 341**

#### **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.

### **CSCI 342**

#### **Advanced Programming Techniques**

**(4,0) 4 alternate years**

Advanced data structures including general trees and graphs. Advanced 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. Prerequisites: CSCI201 with a grade of C or better.

### **CSCI 348**

#### **Network Operating Systems II**

**(2,2) 3**

A continuation of using and administering network operating systems. Students will also be introduced to virtualization of servers, as well as interaction between virtualized machines. Topics include: file system and network service management, remote access, security, printing, and disaster recovery. Course topics will be presented in the context of different network operating systems. Prerequisite: CSCI248 with a grade of C or better.

### **CSCI 351**

#### **Mobile Application Development**

**(3,0) 3**

Introduction to the development of applications for smart phones and tablets; using a simulator and provisioning to mobile devices; user interfaces, touch events, data management, and graphics; interaction with camera, accelerometer, and location hardware. Prerequisite: CSCI121 with a grade of C or better.

### **CSCI 371**

#### **Multi-Platform Application Development**

**(3,0) 3**

The design and implementation of applications across multiple platforms, with a goal of a similar or identical code base between versions. The course covers a variety of programming environments, as well as a variety of platforms. Focus will be on comparison between programming languages, as well as the strengths and weaknesses of various programming environments and models for a uni-platform vs a multi-platform approach. Prerequisite: CSCI121 and either CSCI281 or CSCI201

all with a grade of C or better.

### **CSCI 411**

#### **Advanced Database and Project Management**

**(3,0) 3 alternate years**

Designing and implementing an enterprise-level database. Creating interfaces to database systems from common programming language platforms. Capturing requirements, process modeling, project scheduling, documenting, testing, delivering and maintain a system. Prerequisites: CSCI201 and CSCI211, each with a minimum grade of C.

### **CSCI 412**

#### **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.

### **CSCI 415**

#### **Computer Organization and Architecture**

**(3,0) 3**

A hardware-orientated 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. Parallel computing for both SMP and MIMD models. Prerequisite: CSCI201 and either CSCI351 or CSCI371 with a grade of C or better.

### **CSCI 418**

#### **Senior Project I**

**(1,4) 3**

This course is the first part of the two-part sequence CSCI418/CSCI419. The student will begin a two-semester capstone experience that will include one of the following: a software project; a network implementation; a co-operative education position with an external company; or a research project. The experience must include the fulfillment of customer-generated requirements. The projects/experiences will vary each year to allow students to experience work in a real-world environment. Students in CSCI418 must take CSCI419 the following semester. Prerequisite: CSCI291 or CSCI292 with a C or better and permission of instructor.

### **CSCI 419**

#### **Senior Project II**

**(1,4) 3**

The second of a two-part sequence, CSCI419 provides students with the skills necessary for completion of their two-semester capstone experience that will include one of the following: a software project; a network implementation; a cooperative education opportunity with an external company; or a research project. The experience must include the fulfillment of customer-generated requirements.

The projects/experiences will vary each year to allow students to experience work in a real-world environment. Students in CSCI418 must take CSCI419 the following semester. Prerequisite CSCI418 with a C or better and permission of the instructor.

### **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 from the exploiters 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 administered systems. Prerequisites: CSCI412 and either CSCI351 or CSCI371.

### **CSCI434**

#### **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, protection, parallel and distributed systems. Case studies of modern operating systems. Prerequisite: CSCI201 with a minimum grade of C.

### **CSCI490**

#### **Individualized 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 nine credits. Prerequisites: Junior standing or higher.

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### **DANC101**

#### **Ballet I**

**(0,4) 2**

Students explore ballet technique, vocabulary, and history. Emphasis is on placement/alignment, length of line, weight shift, and a developing sense of musicality. This course may be repeated twice for a maximum of 6 credits. No prerequisite.

### **DANC120**

#### **Jazz Dance I**

**(0,4) 2**

Students explore core concepts in jazz dance, its roots/history, and its fundamental techniques. No prerequisite. This course may be repeated once for a maximum of 4 credits

### **DANC125**

### **Modern Dance I**

**(0,4) 2**

Through embodied and academic inquiry, students will explore principles and practices in American modern dance training. Concepts focus on safe/efficient dancing, individual creative voice, and basic rhythmic patterns, among others. No prerequisite. This course may be repeated twice for a maximum of 6 credits.

### **DANC201**

#### **Ballet II**

**(0,4) 2**

Continuing their study of classical ballet, students will deepen their examination of ballet vocabulary and pedagogy. Movement sequences will become longer and more complex. Emphasis will be on increased stamina, clarity of movement, and musicality. This course may be repeated twice for a maximum of 6 credits. Prerequisite: Instructor Permission.

### **DANC212**

#### **The Business of Dance**

**(3,0) 3**

Students build the basic business skills necessary for success as an independent artist, studio owner, or dance company administrator. Topics range from financial statements to tax issues that independent (self-employed) artists face, business plans, entrepreneurship, marketing, and creating a nonprofit. Students will create a digital presence and artistic portfolio. Prerequisite: DANC101, DANC102 and Instructor Permission.

### **DANC220**

#### **Musical Theatre Styles**

**(0,4) 2**

Students investigate approaches to choreography rooted in American musical theatre traditions, with an emphasis on ballet and/or jazz based techniques. Class experiences including learning excerpts from masterworks of musical theatre dance by choreographers such as Bob Fosse, Jerome Robbins, and Michael Bennett. Prerequisite: Instructor Permission. This course may be repeated once for a maximum of 4 credits.

### **DANC225**

#### **Modern Dance II**

**(0,4) 2**

Building on Modern Dance I, students continue investigating principles and practices in American modern dance training. Movement sequences become longer, more complex, and require greater attention to detail. Prerequisite: Instructor Permission. This course may be repeated twice for a maximum of 6 credits.

### **DANC226**

#### **Dance Improvisation**

**(0,4) 2**

Dance improvisation is a performance technique involving artistic creation of original movement in the moment, working with structures and concepts to guide or prompt the development and evaluation of the materials created. Students will work with a



critical response process that will guide artistic feedback. The final includes a performance of a structured improvisation. Completion of DANC201 and DANC225 is recommended prior to taking this course. This course may be repeated twice for a maximum of 6 credits. Prerequisite: Instructor Permission.

### **DANC230**

#### **Anatomy & Environment**

**(3,0) 3**

In this introduction to experiential anatomy, students examine the body's systems in relationship to both human movement and artmaking. In the process, students will also explore the body's relationship to the environment, and how that relationship affects our movement choices as human beings, and as artists. Prerequisite: Instructor Permission. Students should have a background in some artistic practice such as dance, theatre, music, visual art, etc.

### **DANC301**

#### **Ballet III**

**(0,4) 2**

Continuing their study of classical ballet, students will deepen their examination of ballet vocabulary and pedagogy. Focus will be on speed, increased clarity of movement, and artistry. Contemporary ballet practices will be incorporated, including the use of improvisation. This course may be repeated twice for a maximum of 6 credits. Prerequisite: Instructor Permission.

### **DANC305**

#### **Dance History**

**(3,0) 3**

Students will investigate and analyze Western concert dance history and its socio-cultural contexts with an emphasis on American dance art. Attention will be paid to the impact of race, gender, identity/agency, politics, and economics on dance and its creators. Eurocentric and Africanist aesthetics will be examined. Connections to other artforms will also be examined. No prerequisite.

### **DANC310**

#### **Choreography**

**(3,0) 3**

As they explore the building blocks of dancemaking practices, students will create a series of experimental phrases, and develop (short) completed dances by semester's end. A critical response process is utilized that will guide artistic feedback. Performance of a completed work from each student constitutes the final project. Prerequisite: Instructor Permission.

### **DANC401**

#### **Senior Thesis**

**1-4 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 3 years of dance technique, courses in Choreography, Dance History, and at least 2 semesters of Dance Company with a minimum of 4 formal performances. Permission of Instructor. This course may be repeated for a total of 4 credits.

**DANC402**  
**Advanced Dance Studies**  
**(0,3) 1**

This course is designed to provide students with opportunities to explore advanced studies in ballet or modern dance and to apply their studies in production. Students will be encouraged and guided as they develop, direct, produce and/or choreograph a successful, high quality dance stage production. Prerequisite: Completion of DANC301, DANC310 and permission of instructor.

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**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.

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**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: Two years of high school algebra and equivalent/satisfactory score on ACT or Placement Exam or MATH102 with a grade of C or better.

**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: Two years of high school algebra and equivalent/satisfactory score on ACT or Placement Exam or MATH102 with a grade of C or better.

**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. Prerequisite: MATH112 or equivalent.

**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. Prerequisite: ECON201.

**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. Prerequisite: ECON201 or 202.

### **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. Prerequisite: ECON202.

### **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. Prerequisite: ECON202.

### **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. Prerequisite: ECON201.

### **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.

### **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.

### **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.

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### **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.

### **EDSE302**

#### **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.

### **EDSE320**

#### **Introduction to Learning Disabilities**

**(4,0) 4**

An examination of the educational research, characteristics, diagnostic principles and practices related to teaching students with learning disabilities. Psychological theories (e.g. developmental, behavioral, and cognitive) of teaching students with learning disabilities and associated learning strategies are reviewed. Prerequisites: EDSE301, EDSE302.

### **EDSE401**

#### **Issues and Trends Impacting Learning Disabilities & Special Education**

**(3,0) 3**

Contemporary issues in the education of students with learning disabilities and other special needs will be explored. Policies and regulations, requirements and procedures for service, curriculum adaptation and modification, delivery models relating to placement, privacy, advocacy, and family education will be discussed. Prerequisite: EDSE302.

### **EDSE403**

#### **Assessment and Diagnosis**

**(3,0) 3**

An examination of the education research and best practices related to identification, assessment, instruction, accommodation, and implementation of special education programs. Legal responsibilities of the school in the areas of assessment, diagnosis, and diversity will also be addressed. Prerequisites: EDSE301, EDSE320.

### **EDSE404**

## **Instruction and Technology: Preschool to Adult**

**(4,0) 4**

An examination of the research and best practices using assistive technologies to increase, maintain or improve the capabilities of students with disabilities.

Prerequisites: EDSE320, EDSE403.

## **EDSE480**

### **Student Teaching Seminar: Special Education**

**(1,0) 1**

A seminar for teacher candidates during a student teaching internship in a special education classroom. Corequisite: EDSE492. Prerequisites: EDSE320, EDSE403, and EDSE404, 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. Grading will be CR/NC. Corequisite: EDSE480. Prerequisites: EDSE320, EDSE403, EDSE404 and admission to student teaching. The course may NOT be repeated for credit.

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## **EDUC101**

### **Self as Learner**

**(1,0) 1**

This course introduces students to the field of education. Emphasis is placed on the application of basic learning theory to personal success in learning, successful integration into the university culture, effective time management and the development of organizational, critical thinking, and study skills required for academic success.

## **EDUC250**

### **Student Diversity and Schools**

**(4,0) 4**

This course will examine the impact of diversity on students and educational systems through the consideration of the historical and philosophical foundations of schooling, the impact of diversity on students' participation in the system, and the characteristics of effective teaching practice to meet the needs of diverse learners. Field experience in an Eastern Upper Peninsula elementary or secondary school is required. Prerequisite: ENGL111.

## **EDUC301**

### **Educational Psychology and Learning Theory**

**(3,0) 3**

This course focuses on research-based theories of learning and learning processes, the role of the teacher in supporting the process, and alternatives for evaluation of

learning outcomes. Field experience is required. Prerequisites: EDUC250 and admission to the teacher education program.

### **EDUC330**

#### **Reading in the Elementary Classroom**

**(3,0) 3**

This course examines reading as a process of constructing meaning through dynamic interaction among reader, the text, and the context of the reading situation. Content includes objectives, content, materials, organization and methods of teaching reading in the elementary school. Fieldwork required. Prerequisite: Admission to the teacher education program. Pre- or co-requisite: EDUC301.

### **EDUC350**

#### **Integrating Technology into 21st Century Learning Environments**

**(2,2) 3**

This course explores instructional technology tools, educational media, theory, and practice with the goal of designing consummate learning experiences with seamless technology integration for all students. Application of technology and learning theory to planning for instruction is included, with specific focus on setting outcomes for learning. Prerequisites: Admission to the teacher education program, EDUC301.

### **EDUC410**

#### **Corrective Reading in the Classroom**

**(3,0) 3**

This course considers methods for the classroom diagnosis of students' reading strengths and weaknesses. Techniques for planning and implementing corrective and remedial interventions based on diagnosis are presented and applied. Fieldwork required. Prerequisite: EDUC330.

### **EDUC411**

#### **Elementary Language Arts and Literacy Skills**

**(2,0) 2**

This course studies methods of teaching language arts as literate activity and the use of a research base for the social context of children's learning. Emphasis is on the emergence of literacy in elementary students. Fieldwork required. Prerequisites: EDUC415, admission to teacher education program.

### **EDUC415**

#### **General Instructional Methods**

**(1,2) 2**

This course provides opportunities to study and apply research-based instructional methodologies to facilitate effective learning with an emphasis on differentiation and authentic assessment. Fieldwork required. Prerequisites: Admission to the teacher education program, EDUC350.

### **EDUC420**

#### **Math Methods for Elementary Teachers**

**(2,0) 2**

This course studies strategies and methodologies that facilitate effective mathematics instruction. Students develop and present mathematics lessons and units using national, state and local standards in planning instruction and assessment. Emphasis is placed on effective integration of technology in learning and assessment. Fieldwork required. Prerequisites: MATH103, MATH104, EDUC415 and admission to teacher education program.

### **EDUC421**

#### **Science Methods for Elementary Teachers**

**(2,0) 2**

This course studies strategies and methodologies that facilitate effective science instruction. Students develop and present science lessons and units using national, state and local standards in planning instruction and assessment. Emphasis is placed on effective integration of technology in learning and assessment. Fieldwork required. EDUC415 and admission to teacher education program.

### **EDUC422**

#### **Social Studies Methods for Elementary Teachers**

**(2,0) 2**

This course studies strategies and methodologies to facilitate effective social studies instruction. Students develop and present social studies lessons and units using national, state and local standards in planning instruction and assessment. Emphasis is placed on effective integration of technology in learning and assessment. Fieldwork required. Prerequisites: EDUC415 and admission to 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**

#### **English Language Arts Methods for Secondary Teachers**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific language arts and English content. Students develop and present English lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC442**

#### **Math Methods for Secondary Teachers**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific mathematics content. Students develop and present math lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC443**

#### **Science Methods for Secondary Teachers**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific science content. Students develop and present science lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite:

EDUC415 or EDUC430.

### **EDUC444**

#### **Social Studies Methods for Secondary Teachers**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific social studies content. Students develop and present social studies lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC445**

#### **Teaching Computer Science in the Secondary Classroom**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific computer science content. Students develop and present computer science lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC447**

#### **Theories and Methods of Teaching World Languages**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific world language content and second language acquisition. Students develop and present lessons and units using national, state, and local standards for planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC451**

#### **Directed Study in English Language Arts Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific language arts and English content. Students develop and present English lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC441. Prerequisite: EDUC415 or EDUC430.

### **EDUC452**

#### **Directed Study in Math Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific mathematics content. Students develop and present mathematics lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC442. Prerequisite: EDUC415 or EDUC430.

### **EDUC453**

#### **Directed Study in Science Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific science content. Students develop and present science lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC443. Prerequisite: EDUC415 or EDUC430.

### **EDUC454**

#### **Directed Study in Social Studies Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific social studies content. Students develop and present social studies lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC444. Prerequisite: EDUC415 or EDUC430.

### **EDUC455**

#### **Directed Study in Computer Science Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific computer science content. Students develop and present computer science lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC445. Prerequisite: EDUC415 or EDUC430.

### **EDUC457**

#### **Directed Study in World Language Teaching Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific world language content and second language acquisition. Students develop and present lessons and units using national, state, and local standards for planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC447. Prerequisite: EDUC415 or EDUC430.

### **EDUC460**

#### **Classroom Management**

**(2,0) 2**

This course focuses on effective classroom management techniques essential to

creating a positive, democratic learning environment. Exploration of management techniques and theories leads to a development of personal classroom management system to help students become responsible for their behaviors and choices.

Prerequisite: EDUC415.

### **EDUC480**

#### **Directed Teaching Seminar**

**(2,0) 2**

This seminar provides a forum for students in the Directed Teaching experience 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.

### **EDUC492**

#### **Directed Teaching**

**10**

This course is a full-time teaching practicum under the direction and mentoring of a k-12 cooperating teacher. Evolution from observation and facilitation of small group activities, to whole-class instruction of a full-time teaching load in an area school. Emphasis is placed on maintaining classroom communities that ensure equitable access to important knowledge and skills. Grading will be CR/NC. Prerequisites: Admission to student teaching internship. Corequisite: EDUC480.

### **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.

### **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.

## **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.

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## **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. Emphasis is placed on digital circuit design and contemporary programmable logic concepts. Prerequisite: EGNR101 or EGNR103. Pre or Corequisite: MATH111 and MATH131.

**EGEE210**

**Circuit Analysis**

**(3,3) or (3,3,1) 4**

This course is an introduction to the analysis of linear circuits. Topics include: basic circuit elements and their terminal relations, Kirchoff'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 or 103.

**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 C or better grade.

**EGEE280**

**Introduction to Signal Processing**

**(4,0,0) or (4,0,1) 4**

The course introduces mathematical techniques used in the design and analysis of analog and digital signal processing systems. Topics include complex numbers, phasor representation of sinusoids, spectral representations, convolution, frequency response, sampling and reconstruction, Fourier series and Fourier transform, and the use of MATLAB as a signal processing tool. Prerequisites: MATH152 and EGNR140.

**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, EGEE280. 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 or (3,3,1) 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 and PHYS232. Pre- or corequisite: MATH310.

### **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.

### **EGEE370**

#### **Electronic Devices**

**(3,3) (3,3,1) 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 with a C or better grade, EGEE210 with a C or better grade, and MATH152.

### **EGEE411**

#### **Power Distribution and Transmission**

**(3,0) 3**

This course provides an introduction to the analysis and design of systems that carry electrical power from the point of generation to the point of use. Topics include mathematics and techniques of power flow analysis, ground-fault analysis, transient stability analysis, analysis of large power system networks, and the use of power system simulation software. Prerequisites: MATH152, EGEE210, and EGEE280.

**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.

**EGEE475**  
**Power Electronics**  
**(3,3) 4**

This course provides an introduction to electrical power processing. The general topics include various electronic power switching circuits including: AC-DC rectifiers, DC-DC converters and DC-AC inverters. Additional topics include applications of power switching circuits as well as characteristics of power semiconductor devices. Prerequisites: EGEE280, EGEE370, and MATH251.

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**EGEM220**  
**Statics**  
**(3,0) or (3,0,1) 3**

A study of theory and application of engineering mechanics principles with emphasis on vector analysis, free body diagrams, properties of areas, and problem solving. This emphasis includes applying principles of equilibrium to particles and rigid bodies. Prerequisite: EGNR140. Pre, or Corequisites: MATH152 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.

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**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: MATH111 and MATH131 each 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-an-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.

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## **EGME110**

### **Manufacturing Processes**

**(2,3) 3**

An introduction to basic manufacturing processes. Both theory and applications of various processes are covered in lecture and laboratory. Topics include: machining processes, welding and related processes, metal forming processes, and plastic forming processes. Included in machining processes is a limited scope computer aided design and computer numerical control project. The topics of measuring instruments and laboratory safety will also be addressed in the lecture and laboratory. Completion of a high school trigonometry course is expected for enrollment. Co-requisite or Prerequisite: EGME141 and MATH111 (or equivalent/satisfactory score on ACT/SAT, or Placement Exam) or Permission of Instructor.

## **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, dimensioning, assemblies, and constraining. An introduction to animation of assemblies is also included. Pre- or Corequisite: MATH102.

## **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, EGME141, MATH131 and sophomore standing.

### **EGME275**

#### **Engineering Materials**

**(3,0) 3**

A study of the 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 or (CHEM108 and CHEM109). 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 and EGME275) or (Prerequisite EGMT225 and Pre or corequisite 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 their 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 is also covered. Laboratory content includes an introduction to a commercial vehicle dynamics software package. Prerequisites: PHYS221 or PHYS231. Pre- or corequisites: EGEM220 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**

**(3,0) 3**

A study of the theory and applications of fluid statics and fluid dynamics. Topics covered include: hydrostatics, buoyancy and stability, Bernoulli and energy equations, dimensional analysis, flow in pipes, pumps, potential flow, open-channel flow, introductory gas dynamics, integral and differential analysis of flow, exact and approximate solutions of the Navier-Stokes equations, and computational fluid dynamics (CFD). Prerequisites: EGME220, MATH251, MATH310.

### **EGME350**

#### **Machine Design**

**(3,3) 4**

Design and selection of machine components and power transmission units. Selected topics in load, stress, and deflection analysis in more depth than EGME225, notably (but not exclusively) torsion of thin-walled sections, thick-walled pressure vessels, interference fits, buckling problems by eigenvalue analysis, and Castigliano's theorems. Deterministic and stochastic theories of static failure, dynamic loading, and fatigue. Performance analyses of machine components, such as shafts, bearings, gears, worms, fasteners, and belt/chain drives. Laboratory covers finite element analysis using commercial software, and involves a major group design project. Prerequisites: EGME141, 225, 275, and 276. Pre-or Corequisite: MATH310.

### **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 or (3,2,1) 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) (3,0,1) 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, EGME338 and (EGNR265 or EGNR140).

### **EGME432**

#### **Thermal and Fluids Lab**

**(1,3) 2**

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 major project in the area of power generation and dissipation. Prerequisites: EGME337 and EGME338. 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.

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### **EGMF110**

#### **EGMF110 Introduction to Machining I**

**(2,6) 4**

Students will receive instructions on shop safety, blueprint reading, measuring instruments, layout principles, and basic bench work. They will also receive instructions on grinding, lathes, drill presses, saws, and basic milling. Some metallurgical concepts are introduced. The course will make use of the Machinery's Handbook and apply the principles, concepts, and data in the handbook to industrially related projects. Information from the handbook will be used to ensure proper set-up and operation of the machinery. Students will spend several hours each week setting up, working, and familiarizing themselves with the machines.

### **EGMF130**

#### **EGMF130 Introduction to Machining II**

**(2,6) 4**

This course builds up upon the material presented in EGMF110. Students will receive additional instruction on shop safety and measuring techniques relative to the machinery introduced in this course. Additional topics on vertical and horizontal milling machines, surface grinders, metallurgy, and blueprint reading are covered. The Machinery's Handbook will continue to be used in conjunction with the machines utilized in this course. Students will spend several hours each week setting up, working, and familiarizing themselves with the machines. Prerequisite: EGMF110.

### **EGMF210**

#### **EGMF210 Advanced Machining**

**(2,6) 4**

In this course, students will write CNC programs in machine codes, and then setup and run CNC machines 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. Students will be able to describe the sequence and operations for a part program, determine the tools required for machining, calculate speeds and feeds, set-up tooling on CNC machines, develop CNC programs using standardized formats, and use CAM software to produce three dimensional parts. Prerequisites: EGMF110 or EGME110, and MATH102. Pre- or corequisite: EGMF130.

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## **EGMT142**

### **EGMT142 An Overview of Solid Modeling Techniques**

**(1,2) 2**

This course will cover an application of solid modeling software techniques to create parts and assemblies. Topics covered include creating sketches; creating parts with extrude, revolve, blend, and sweep; creating part features with round, chamfer, pattern, mirror; use of the part history tree; dimensioning of parts; building of assemblies; creation of parts from 2D drawings; creating 2D drawings from solid models of parts and assemblies; and an introduction to animation of assemblies. Prerequisites: Previous CAD course and permission or instructor.

## **EGMT216**

### **CAM with CNC Applications**

**(2,3) 3**

Writing CNC programs in machine codes, and the setup and trial runs to produce parts from these programs. Simulation of CNC machining processes to predict tool paths and cycle times. Computer-aided manufacturing (CAM) topics and applications of CAM software will also be covered. Prerequisites: EGME110, EGME141, MATH131.

## **EGMT225**

### **EGMT225 Statics and Strength of Materials**

**(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: MATH111 and MATH131 each with a C or better and PHYS221.

## **EGMT332**

### **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.

**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 Applications for Engineers****(1,3) 2**

This course covers the engineering application of concepts from applied mathematics, iterative programming and computational software packages. Applications of linear algebra are introduced. Iterative programming emphasizes loops, conditional statements and user input-output. The lab also includes instruction on commercially-available software used to perform computational tasks of applied interest. Prerequisite: MATH131. Pre- or Co-requisites: MATH112 or MATH151.

**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) 2**

A practicum in which students work in a supervised engineering capacity (on site) with industry. The student is expected to work at least 6 hours per week in an industrial setting. The student's experience must be related to his/her academic studies and thus this experience contributes significantly to his/her professional development. May be repeated for a maximum of 4 credits. 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.

### **EGNR261**

#### **Energy Systems and Sustainability**

**(3,0) 3**

The course provides an introduction to energy conversion systems and discusses issues related to the sustainability of each system. Topics include basic energy definitions, traditional energy resources and reasons for pursuing alternative energy resources, renewable and nonrenewable energy resources, energy storage, and electrical grid integration. Topics also include policy as well as social, economic, and environmental sustainability issues as they relate to energy conversion. Prerequisite: MATH102 or equivalent.

### **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: MATH111 and MATH131 and sophomore standing.

### **EGNR310**

#### **Quality Engineering**

**(3,0) 3**

Provides a coverage of classical and modern methods of quality control and quality engineering. Topics include quality control principles and terminology, classical qualitative and quantitative quality control methods, including statistical process control procedures, robust design methods as applied to product design and design of experiments, and an overview of quality management systems used in industry. Pre- or Corequisites: MATH207 or MATH308.

### **EGNR340**

#### **Numerical Methods for Engineers**

**(0,2) 1**

This course addresses numerical methods for the solution of problems in linear algebra, numerical integration, root searching, linear and non-linear regression, ordinary and partial differential equations, and eigenvalue analysis. It emphasizes proficiency in independently programming algorithms for the simulation of physical systems with engineering applications, an understanding of how these algorithms work and are structured, and an appreciation for the value of computational efficiency in numerical methods. Prerequisites: EGNR140. Pre- or Corequisites: MATH310 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.

### **EGNR361**

#### **Energy Systems and Sustainability Lab**

**(0,3) 1**

The course explores the technical and implementation aspects of sustainable energy systems. Students will design, construct, and/or analyze various energy conversion systems. They will also design and implement subsystems that can store energy and construct connections between energy sources, energy storage subsystems, and the electrical grid. Prerequisites: (CHEM108 or CHEM115), (EGET110 or EGEE210), MATH131 or higher, excluding MATH207, (PHYS221 or PHYS231); Pre/Corequisite: EGNR261.

### **EGNR362**

#### **Vehicle Energy Systems**

**(2,3) 3**

An introduction to vehicle power train energy systems and both battery and fuel cell electric/hybrid systems. Other topics include vehicle drive profile calculations, torque and speed coupling, and safety considerations. Vehicle topics also include cars, trucks, and off-road hybrid systems. Laboratory activities include CAN and other communication and information systems, and vehicle performance analysis and simulations using Excel, Simulink, and CANoe. Lab activities include using the chassis vehicle dynamometer with external instrumentation, CAN and OBD-based data acquisition. Prerequisites: (PHYS221 or PHYS231), (EGEE210 or EGET110) and pre/corequisite: EGNR265.

### **EGNR450**

#### **Cooperative Education Project I**

**(4) 4**

A practicum in which students work in a supervised engineering capacity (on site) with industry. This is the first of a two-part 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. The expectation is that at least 60% of a forty hour work week is devoted to completing the project. Prerequisite: EGNR250 Cooperative Education.

### **EGNR451**

#### **Cooperative Education Project II**

**(3) 3**

A practicum in which students work in a supervised engineering capacity (on site) with industry. This is the second of a two-part sequence that can replace the senior year Engineering Design Project II (EGNR495). The focus of this course is the completion of the co-op project. The documentation at the completion of the project includes an update presentation and a final report/final presentation. The expectation is that at least 60% of a forty hour work week is devoted to completing the project. Prerequisite: EGNR450 Cooperative Education.

### **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: senior status, EGNR260 and permission of instructor. Students who plan to take EGNR461 must complete both EGNR460 and EGNR461 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**

#### **Special Topics in Engineering: (Topic)**

**(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.

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### **EGRS215**

#### **Introduction to Robotics**

**(1,2) 2**

An introduction and orientation to the field of robotics. Challenges in robotics manufacturing, design and structure of robotic systems, classification of robots, robot geometry, power sources, robotic control systems are covered in this course. The lab part of the course will provide an overview of robotics applications in industry through videos and hands-on experiences. Applied laboratory topics will cover basic programming concepts, structures, and applications using industrial 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**

**(2,0) 2**

This course will cover topics relative to robotics and robotics 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: MATH111 and MATH131 with grade of C or better, and PHYS221.

### **EGRS381**

#### **Robotics Technology Lab**

**(0,3) 1**

Laboratory exercises will provide hands-on examples in the use of industrial robots. Focus will be on learning a structured robotics programming language. Applications and projects will simulate industrial situations as well as emphasize system integration. Prerequisites: EGNR265. 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**

**(3,3) 4**

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 EGRS385, and EGNR265 or CSCI121.

### **EGRS435**

#### **Automated Manufacturing Systems**

**(2,3) 3**

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. Prerequisites: 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, EGEM220 and EGEE210. Pre- or co-requisite: EGNR340.

### **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. 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, EGRS381 or EGRS382, and MATH112 or MATH151 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 co-requisite: 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.

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**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 pharmaco-dynamics, 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.

### **EMED490**

#### **Independent Study for Emergency Medicine**

**(1-3,0) 1-3**

This may take the form of either a research project or a program of directed reading on a specific subject. One to three 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: Permission of Instructor.

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### **ENGL091**

#### **Prep College Writing**

**(3,0) 3**

This course is designed to give students who have limited experience with writing



an opportunity to increase their confidence as writers, and to improve their command of the written language. The course is appropriate for students who find writing to be difficult or confusing. Students write weekly, with much of the instruction taking place as students learn to revise and edit their own work. Students completing the course will be able to write successful essays that represent complex approaches to different topics. 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/SAT 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 or a C or higher in ENGL091.

**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**  
**Introduction to Creative Writing**  
**(3,0) 3**

Through writing and discussion, students will study and practice introductory elements of drama, fiction, nonfiction, and poetry. Co-requisite ENGL110.

**ENGL222**  
**English Grammar & Language in Context**

**(3,0) 3**

This course requires students to master the vocabulary and principles of standard English grammar related to sentence structure and the production of meaning. Students will also analyze and evaluate prescriptive and descriptive conventions of usage, the history and cultural influences of the English language, and its regional and social variations. Prerequisites: A grade of C or higher in ENGL110 and ENGL111.

### **ENGL223**

#### **Creative Writing II**

**(3,0) 3**

Through writing and discussion, students will study and practice intermediate elements of fiction and poetry. Prerequisite: ENGL221.

### **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.

**ENGL301**  
**Creative Prose Writing**  
**(3,0) 3**

This course is a seminar and workshop for the study and practice of prose fiction, creative non-fiction, and other prose forms. Students will complete a final portfolio. Prerequisite: ENGL223.

**ENGL302**  
**Poetry Writing**  
**(3,0) 3**

This course is a seminar and workshop for the study and practice of poetry and its various forms. Students will complete a final portfolio. Prerequisite: ENGL223.

**ENGL303**  
**Performance Writing**  
**(3,0) 3**

This course is a seminar and workshop for the study and practice of writing for performance, which may include plays, film scripts, and other performance genres. Students will complete a final portfolio. Prerequisite: ENGL223.

**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.

**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.

### **ENGL335**

#### **Children's Literature**

**(3,0) 3**

This course focuses on understanding the historical, cultural, and generic dimensions of children's literature, with emphasis on critical reading, literary analysis, and the selection and evaluation of texts for children and young adults. Pre- corequisites: ENGL111 or COMM101.

### **ENGL336**

#### **Young Adult Literature and Culture**

**(3,0) 3**

This course focuses on understanding the historical, cultural, and generic dimensions of young adult literature, with emphasis on critical reading, literary analysis, and selection and evaluation of culturally diverse texts for children and young adults. Prerequisite: ENGL180.

### **ENGL345**

#### **Studies in Classic Texts**

**(3,0) 3**

Readings in literature, beyond North American traditions, that have possessed profound influence or reach throughout history, including theoretical and critical approaches to these texts, examining form, theme, and genre. Includes classic Greek drama, classic British literature from the Anglo-Saxon period through the twentieth century, Shakespeare, mythology, folklore, and world literature in translation. Prerequisites: ENGL111, ENGL180.

### **ENGL380**

#### **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. This course prepares students for advanced studies in literature. Prerequisite: Either ENGL233 and ENGL234 or ENGL231 and ENGL232.

### **ENGL398**

#### **Community Workshop Internship**

**(3) 3**

This is an internship designed to provide students with an opportunity to earn credit while obtaining meaningful work experience leading a creative writing community workshop. 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 6 credits total. Prerequisite: ENGL223, a 2.50 gpa in the major, and

permission of the instructor.

**ENGL399**  
**Publishing Internship**

**1-2 1-2**

This course is designed to provide students with an opportunity to earn credit while obtaining meaningful work experience in English or publishing 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 up to four times at 1-2 credit hours for a maximum of 3 credit hours with each LSSU publication, up to 6 credits total. Prerequisite: 2.5 GPA in major and permission of the instructor.

**ENGL409**  
**Advanced Writing Workshop**

**(3,0) 3**

This course is a workshop for advanced level writing in a variety of genres, with an emphasis on students doing sustained work in a chosen genre. Students will complete a final portfolio and projects relating to the writing life and publishing world. Prerequisites: Two courses from: ENGL301, ENGL302, or ENGL303.

**ENGL435**  
**Studies in Visual Texts**

**(3,0) 3**

Theoretical and critical approaches to visual texts, with the focus on graphic novels and film, examining form, theme, and genre and the production and interpretation of meaning in visual media. Prerequisites: ENGL111, ENGL180.

**ENGL440**  
**Advanced Studies in British Literature**

**(3,0) 3**

Examination, implementing rigorous research and critical methods, of a notable period, genre, aesthetics, or movement in British literature. Prerequisite: ENGL380.

**ENGL442**  
**Advanced Studies in American Literature**

**(3,0) 3**

Examination, implementing rigorous research and critical methods, of a notable period, genre, aesthetics, or movement in American literature. Prerequisite: ENGL380.

**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.

**ENGL480**

## **Creative Writing Portfolio I**

**(3,0) 3**

This is the first in a series of two capstone courses. Working with an English faculty member on an independent study basis, the student will create a proposal for a unified collection of creative work of literary merit in a chosen genre. Upon approval of the proposal, the student will make significant progress toward completion of the creative work. Prerequisites: Creative writing major, senior standing, and ENGL409.

## **ENGL482**

### **Creative Writing Portfolio II**

**(3,0) 3**

This is the second in a series of two capstone courses. Working with an English faculty member on an independent study basis, the student will complete a unified collection of creative work of literary merit in a chosen genre. Prerequisites: ENGL480.

## **ENGL490**

### **Senior Thesis I**

**(2,0) 2**

In consultation with an English faculty member, students will gather research and produce a bibliography and research proposal, as well as begin writing the thesis. This course is an independent study. Prerequisites: Literature or English Education major, senior standing, and ENGL380 or EDUC415.

## **ENGL499**

### **Senior Thesis**

**(2,0) 2**

Completion of the thesis with focus on revising and editing of the final project. This course is an independent study. Prerequisite: ENGL490.

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## **EVRN131**

### **Introduction to GIS and GPS**

**(2,2) 3**

This course provides a foundation in geographic information systems (GIS) such as data types, cartography, queries, classification, geoprocessing, basic editing, basic raster analysis and map overlay. The theory and operation of GPS receivers and data integration with GIS is covered in multi-week student initiated projects. Prerequisites: None.

## **EVRN231**

### **Intermediate GIS**

**(1,3) 2**

This course will survey the rapidly growing GIS industry, consider many important principles guiding GIS use and development, and provide the student with hands-on experience. Emphasis will be on geospatial analysis techniques, geodatabase, system design, remote sensing, and provide an introduction to advanced topics.

After successfully completing this course, students should come away with a clear understanding of GIS analyses, the issues affecting how a GIS is used (and misused), how to review GIS research, how GIS research is written, and an appreciation for how GIS can contribute to a wide variety of disciplines and research interests. Prerequisite: EVRN131 or equivalent.

### **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.

### **EVRN317**

#### **Environmental Health Applications**

**(3,3) 4**

A systems approach addressing the factors that contribute to illness, injury, or death, and that affect the health status of individuals and populations. Topics include: environments within buildings, food sanitation, recreation facilities, personal services, and community noise and control. The laboratory emphasizes methods of measuring and evaluating environmental health risks as well as field experience. Prerequisite: One semester of chemistry and NSCI103 or permission of instructor.

### **EVRN325**

#### **Geospatial Analysis**

**(2,3) 3 alternate years**

A project-centered course incorporating advanced GIS tools, GPS field work, and

data sources for geospatial analysis. This class focuses on a wide range of issues relating to the raster data model, and Digital Elevation Data (DEM) and satellite imagery. The majority of the class will be devoted to 1) surface derivatives including slope, aspect, and drainage; 2) modeling; and 3) error and uncertainty. This is a hands-on course, and the student will use a variety of software tools to experience model development, analysis, and visualization. There will be a semester project and a number of mini-projects. Prerequisites: EVRN131 and a 200 level or higher course in statistics.

### **EVRN341**

#### **Environmental Chemistry**

**(3,3) 4 alternate years**

A study of the environmental chemistry of the hydrosphere, atmosphere, lithosphere, and biosphere, the measurement and remediation of water and air quality problems, the toxicology of water and air pollutants, and the environmental aspects of energy use. Prerequisites: CHEM225, CHEM231. Also listed as CHEM341.

### **EVRN345**

#### **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: EVRN131 and a course in statistics.

### **EVRN355**

#### **GIS Programming and Applications**

**(3,3) 4**

This course expands the students' skills regarding object oriented programming and customization of GIS software to extend functionality and automative repetitive tasks. Emphasis will be placed on ArcObjects and object model diagrams. Prerequisites: CSCI105 and EVRN131.

### **EVRN389**

#### **Environmental Research Methods**

**(2,3) 3**

A variety of sampling techniques and laboratory methods are introduced as they relate to the environmental sciences. These methods include sampling, preservation, and analysis of biotic (plankton, fish, benthic invertebrates, DNA, pathogens) and abiotic (water quality, sediments, soil, climate) data. Topics include representative sampling, trace inorganic and organic methods, calibration, selection of analytical methods, QA/QC, data analysis, and cost comparison. This course requires travel over spring break. Prerequisites: CHEM108 and CHEM109 or CHEM116; either NSCI103, NSCI116, BIOL286 or BIOL345; and either MATH207, BUSN211 or BIOL280.

### **EVRN395**

#### **Junior Seminar**

**(1,0) 1**



Literature searching, scientific writing, and oral presentation of scientific data. Students will be expected to listen to presentation of peers enrolled in EVRN/CHEM499 and develop a topic for their senior thesis. Prerequisite: Junior standing. Note: Also listed as CHEM395.

### **EVRN399**

#### **Internship in the Environmental Sciences**

**1-4 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. Work hours and activities must be documented daily and approved by both the on-site supervisor and the instructor to receive credit. The course may be repeated for a maximum of four credits. Prerequisite: 2.5 GPA in major, Junior standing and permission of chair at least one semester in advance of registering for the course.

### **EVRN425**

#### **Environmental Systems Analysis**

**(3,3) 4 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. Discussion of solid, liquid, and hazardous wastes from a macro- and microscopic approach will be included. Prerequisite: CHEM341. Pre- or corequisite: EVRN313.

### **EVRN450**

#### **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 department chair. Credits may be used as EVRN electives.

### **EVRN465**

#### **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: EVRN131 and either EVRN231 or CSCI211.

### **EVRN490**

#### **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.

### **EVRN495**

#### **Senior Project**

**(0,6) 2**

This is a 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. This course will be required for a degree certified by the American Chemical Society. This course may not be repeated for credit. Prerequisites: EVRN395 (also listed as CHEM395), and permission of instructor. Dual listed as CHEM495.

### **EVRN499**

#### **Senior Seminar**

**(1,0) 1**

Required for seniors majoring in chemistry/environmental science. Students will present the results of their scholarly research. Students who have completed EVRN495/CHEM495 will be required to give poster and oral presentations to the University community as part of this class. Pre- or corequisite: EVRN395 (dual listed as CHEM495). Dual listed as CHEM499.

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### **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. 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 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.

### **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.

### **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: EXER262.

### **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.

### **EXER446**

#### **Exercise Prescription and Testing for Special Populations**

**(3,0) 3**

This course provides a framework for developing exercise programs for individuals with disease, disabilities, or special health issues. The course will focus on exercise prescription through management of problems created by disease of the cardiovascular, pulmonary, metabolic, musculoskeletal, neuromuscular, and immunological systems. It includes a review of the basic principles of exercise testing and exercise prescription and builds on that foundation. Also covered are methods for assessment of functional capacity of individuals with the most common health conditions presented to exercise scientists. This course fits with the new Registry for Clinical Exercise Physiologists and the American College of Sports Medicine guidelines and will provide students with the necessary skills and knowledge for employment in a clinical setting. Prerequisites: EXER358 and 444.

### **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. Prerequisites: Junior standing and instructor permission.

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### **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 and MATH111.

**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.

**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. Prerequisite: FINC341.

**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. Prerequisite: FINC341.

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## **FINE405**

### **Independent Project**

**(3,0) 3**

Under the direction of an appropriate supervisor, the student will design and execute a scholarly (academic/creative) or practical (business/management) project related to an artistic discipline. The project will culminate in a relevant performance, works of art, composition, paper, presentation, or other appropriate product. Prerequisites: Instructor approval. This course may be repeated once for a total of six credits.

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## **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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam and FIRE101 or FIRE102, or BIOL102 or BIOL140 or BIOL286 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, FIRE111, FIRE204 and MATH088 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.

## **FIRE219**

### **Firefighter Essentials**

**(3,0) 3**

This course is the first part of a two class sequence; the second part of the sequence is FIRE220. This course will cover the principles of firefighting attack skills through the practical instruction and exercises as outlined by the Michigan Firefighters Training Council (MFFTC). This course introduces the student to the application of the principles of fire attack and strategy for Firefighter I certificate and portions of Firefighter II 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 and 111. Corequisites: FIRE197, 204, and 206. Completion of special medical examination.

## **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, FIRE111, FIRE197 and FIRE204. Corequisites: FIRE206 and FIRE211. 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, formulations and its relation to fire prevention and public education efforts and responsibilities of the fire service. Prerequisites: FIRE111, FIRE206 and Junior Standing.

### **FIRE309**

#### **Fire-Related Human Behavior**

**(3,0) 3**

This course will provide students the knowledge to understand how humans behave in fire and emergency situations, and how that behavior is integrated into life safety systems development and design. Students will study past and present research on human behavior, life safety models, building design, and life safety education. Students will develop an understanding how to analyze possible outcomes as it relates to human survivability in fire and emergency situations. Pre- or Co-requisites: FIRE101, FIRE206, and FIRE301, or permission of instructor.

### **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: 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: FIRE101, FIRE111, FIRE204, FIRE206 and FIRE211.

### **FIRE325**

#### **Homeland Security and Emergency Services**

**(3,0) 3**

This course will prepare all graduates from a variety of majors to understand how homeland security impacts the US political system as a whole, but especially from the standpoint of emergency response and preparedness. 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.

Prerequisite: Junior standing. Students from other majors are encouraged to enroll with permission of instructor. 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: 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. Prerequisite: 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: 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. Prerequisite: Permission of instructor.

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### **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 DELF (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 DELF. 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 FREN351. Prerequisite: FREN252 or equivalent.

## **FREN356**

### **Survey of French Literature II**

**(3,0) 3**

Continuation of FREN355. Study of major works of French literature of the 19th and 20th centuries. Text analysis and discussion. May be taken concurrently with FREN352. 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.

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**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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam. 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: MATH088 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.

## **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.

## **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.

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## **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 GEOL121.

## **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 GEOL121.

## **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. Pre- or corequisites: GEOL121 or NSCI102 or GEOL115.

## **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: GEOL121 or NSCI102. Pre- or corequisites: GEOL122 and CHEM115.

## **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.

## **GEOL308**

### **Structural Geology Systems**

**(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. Day and/or weekend field excursions may be required. Prerequisite: GEOL122.

## **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. Prerequisites: GEOL218 and GEOL223.

**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 tectonic environments in which these processes occur. A pre-semester one-week field trip and weekend field trips may be required. Prerequisites: GEOL218 and GEOL223.

**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. Prerequisites: GEOL218 and GEOL223.

**GEOL380**

**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 GEOL223.

**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: GEOL218. Pre- or corequisites: MATH112 or MATH151 and PHYS221 or PHYS231.

**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: GEOL122, GEOL218 and one GEOL course at the 300 level or above.

**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. Prerequisite: Two GEOL courses at the 300 level or above.

**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: Two GEOL courses at the 300 level or above.

**GEOL468**  
**Tectonic Systems**  
**(3,6) 5**

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 and/or weeklong field trips may be required. Prerequisites: GEOL223 and GEOL308.

**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: GEOL380 and one additional GEOL course 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.

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**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.

**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.

### **HIST231**

#### **Natives and Newcomers**

**(3,0) 3**

This course is an introduction to the encounters between Native Americans, Europeans, and Africans in North America from the late fifteenth century to the mid-eighteenth century. Students will gain a working knowledge on how these encounters generated a variety of cultural, economic, religious, political, social, and military interactions. No Prerequisites or Co-requisites required.

### **HIST250**

#### **The Atlantic World**

**(3,0) 3**

From the late 15th through the 18th centuries, the continents bordering the Atlantic Ocean were thrust into interaction. Europeans, Africans, and indigenous peoples negotiated diverse new societies through both confrontation and cooperation. This course explores interconnections through histories of Europe, Africa, North America, and the Caribbean, demonstrating the associations between peoples and nations within a global context. Prerequisite: HIST101 or HIST131. Spring odd-numbered years.

### **HIST296**

#### **Historical Methods**

**(2,0) 2**

Survey emphasizing research aids and techniques and historical analysis. Readings, discussions and written exercises introduce students to problems, methods and techniques of historical research. Discussion of and practice in main techniques of historical method, including bibliography and documentation. Prerequisites: HIST101/HIST102 sequence or HIST131/HIST132 sequence. Fall.

### **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.

### **HIST321**

#### **History of Michigan**

**(2,0) 2**

The History of Michigan is a survey course that will include an examination of the geology, geography, and history of the state. This course will also study the role of citizens, events, issues, and their impact on the development of Michigan as well as the larger developments in the United States during the Jacksonian Period, the Civil War Period, the Period of Rapid Industrialization and Urbanization, the Period of 1914 to 1945, the Period 1950 to the Present, the Period of Industrial Expansion and Decline, and the Post-Vietnam War Period of Globalization. The major political, economic, social, and cultural movements and developments of these historic periods will be examined.

### **HIST333**

#### **American Military History**

**(4,0) 4**

This is a survey of military history that will study the inter-relationships of warfare and society in American history. It will not only investigate how political and societal changes have influenced the nature of warfare in American history, but how the composition of the military establishment and its transformations has impacted state and society.

### **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 the role in the change of problems of U.S.-Latin American relations will be an important focus of this study. Prerequisite: GEOG322 geography of South America.

### **HIST371**

#### **Far East Civilization: 1850 to Present**

**(4,0) 4 Odd numbered years**

A study of the history of China, Japan, India and adjoining areas of Asia from 1850 to present.

**HIST440**  
**American Revolutionary Era**  
**(3,0) 3**

This course examines the diversity of Colonial America in the mid 18th century. It traces the challenges faced by the British colonies in the French and Indian War, the emergence of political unity and national identity among Americans, and the achievement of American independence by 1783. Prerequisite: HIST101 and HIST102 sequence or HIST131 and HIST132 sequence; HIST296; or instructor permission.

**HIST441**  
**History of American Foreign Policy, 1776-1950**  
**(3,0) 3**

This course examines US Foreign Policy from 1776 to 1950, with some consideration to the 1607-1776 era. The course investigates US conduct in war and diplomacy, issues of cultural contact, impact of domestic politics on foreign policymaking, the organization political economy, and problems of American Imperialism. Prerequisite or Co-requisite of the HIST131, HIST132 sequence or POLI110.

**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.

**HIST497**  
**Senior Seminar in History**  
**(0-6) 2 Spring**

Students will complete a historical research project under the supervision of a faculty member; at end of term participants make oral presentation at seminar for other students and invited guests, and submit the final paper. Prerequisite: HIST496 and instructor permission.

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**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 alternate years**

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.

**HLTH185**

**Basic Health Care Skills**

**(1,3) 2**

The purpose of this course is to introduce the student to basic health care skills. Student learning will include basic concepts and skills related to medical and surgical asepsis, total hygiene, mobility, body mechanics, patient safety, phlebotomy skills, and earn a certificate in mental health first aid. Prerequisite: HLTH101.

**HLTH208**

**Principles of Human Nutrition**

**(3,0) 3**

Fundamentals of human nutrition and nutrition therapy are presented in relation to human body function in wellness and illness. With a special focus across the lifespan, content from this course begins to build a foundation for the interpretation of diet regimes and diet formulations for patients with nutritional needs. This course is required for all nursing students. Prerequisites: BIOL122 or BIOL105 with a grade of C or better.

**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**

**(2,0) 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 alternate years**

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 and junior level status. Also listed as NURS352.

### **HLTH452**

## **Contemporary Issues in Nutrition**

**(3,0) 3 alternate years**

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.

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## **HONR101**

### **Honors First-Year Seminar (variable topics)**

**(1-2,0) 1-2**

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, HONR202 and HONR302. Students must present a fully developed proposal to the Honors Council for approval before enrolling in HONR401 or its equivalent in their major.

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### **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**

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 arts, language, religion, mythology, philosophy and ancient Chinese and Indian systems of religious thought. Prerequisite: ENGL110.

## **HUMN252**

### **Humanities II**

**(4,0) 4 fall, spring,**

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, Dostoevksy, 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.

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### **INTB375**

#### **International Business Law**

**(3,0) 3**

The course provides an introduction to the environment of international business and law. It will focus on the foundations and principles of the international legal environment and international legal systems. The course covers the law on international trade. It allows the student to understand government foreign trade policies, the law concerning international business transactions, importing, exporting, transportation and logistics. This course covers a range of legal issues involved in conducting international business, surveying some of the many issues encountered in intellectual property and licensing, and the taxation of international business transactions.

### **INTB389**

#### **Competing in the Global Market Place**

**(3,0) 3**

This course presents a systematic overview of international business and provides an introduction to important issues, including international trade policy, the global monetary system, and strategies of international business. Additionally, the course will look at management practices of international business, including: organizational structure of multinational organizations, production and logistics, human resource management, and financial management.

### **INTB420**

#### **International Comparative Management**

**(3,0) 3**

This course in international comparative management will examine important trends impacting international business as well as the major and developing players in the international economy. The course will examine the stage on which international management is conducted, which includes political, legal and socio-cultural systems as a backdrop. The course will cover how firms develop and execute their international strategies and how they stay ahead of their competitions, once they do. An important aspect for the success of international companies is HR (Human Resources). The course will explore how firms can build an outstanding international workforce through selecting and motivating employees as well as dealing with a host of related human resource management issues, such as compensation, performance appraisal, training and development and labor relations from an international perspective. Prerequisites: MGMT360 or special permission of instructor.

### **INTB486**

#### **International Marketing**

**(3,0) 3**

The International Marketing course examines the scope, challenge and dynamic environment of international marketing. This course will provide an understanding of the cultural environment of global markets, global opportunities and the development and implementation of global marketing strategies. Challenging decisions must be made in international marketing objectives-strategies-policies, regional & country market selection, products that fit regions-countries, multiple distribution channels, communications to fit each global region, management models & organizations per region-country, knowledge-information-data management, exploration of cultural issues, competition, economies, and customers. Prerequisites: MRKT281 or permission of instructor.

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**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.

**INTD410**  
**Foreign Study**  
**3-16 3-16**

Individual extension added based on student's program. (Graded)

**INTD420**  
**Foreign Study**  
**3-16 3-16**

Individual extension added based on student's program. 3-16 credit/no credit

**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).

### **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.



**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.

**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.

**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.

**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 LAWS125.

## **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.

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## **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.

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## **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.

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## **MATH087**

### **Pre-Algebra**

**(3,0) 3**

Basic operations and problem solving using whole numbers, rational numbers (including decimals, ratios and percents) and integers. Solving problems related to

measurement and geometry. Credit in this course does not apply toward graduation. Prerequisite: None.

### **MATH088**

#### **Beginning Algebra**

**(3,0) 3**

An introduction to algebra, algebraic expressions and solving of elementary equations and inequalities. Manipulation and graphing of equations in two variables as well as solving systems of equations in two variables. Multiplying, factoring and manipulating polynomial expressions. Credit in this course does not apply toward graduation. Prerequisite: MATH087.

### **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 MATH088 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 for Elementary Teachers**

**(3,2) 4**

General notions of problem solving and number theory for elementary teachers including sets, functions, numeration systems, and properties and operations of whole numbers, integers, fractions and decimals, and proportional reasoning. Prerequisite: Equivalent/satisfactory score on ACT or Placement Exam, or MATH102 with a grade of C (2.00) or better.

### **MATH104**

#### **Geometry and Measurement for Elementary Teachers**

**(3,2) 4**

Basic notions of geometry for elementary teachers including constructions, congruence and similarity, motion geometry, symmetry and tessellations. Concepts of measurement, coordinate geometry, probability and data analysis. Prerequisite: Equivalent/satisfactory score on ACT, or Placement Exam, or MATH102 with a grade of C (2.00) 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: MATH088 or equivalent score on ACT or Placement Exam.

## **MATH111**

### **College Algebra**

**(3,0) 3**

This course is a study of families of functions through formulas, tables, graphs and words, emphasizing applications in business, life and social science. The function families include linear, polynomial, rational, exponential, logarithmic and power functions. Within these families, topics include problem solving, model creation, solving equations, systems of equations and inequalities, rates of change, graphing, analysis, and interpretation. Prerequisites: Two years of high school algebra and satisfactory achievement on the mathematics 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.

## **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 SAT, ACT or Placement Exam or both MATH111 and MATH131 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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam. This course will not count toward a major or minor 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 MATH151 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: MATH215 with a grade of C or better.

### **MATH341**

#### **Abstract Algebra I**

**(3,0) 3 alternate years**

An introduction to congruencies, 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.

**MATH401**

**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 Topics in 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**

**(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.

### **MATH490**

#### **Individualized 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 nine credits. Prerequisite: Junior standing or higher and Permission of Instructor.

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### **MGMT280**

#### **Introduction to Management Information Systems**

**(3,0) 3**

This course will introduce students to MIS theories including (1) Information Systems in Business and Society (information management in global society; security, privacy and ethical issues); (2) Information Technology Concepts (hardware technology, software technology, database management systems, network and internet technology); (3) Business Information Systems (automation and support systems, transaction processing systems, management information systems, decision support and expert systems, enterprise systems such as ERP); (4) Systems Development (systems investigation and analysis, systems planning development and implementation). Students will gain hands-on computer skills in advanced spreadsheet, database, and web technologies. Prerequisites: BUSN121 and ACTG132 with a grade of C or higher.

### **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. Prerequisite: Junior standing.

### **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. Prerequisite: Junior standing.

### **MGMT371**



## **Operations and Business Analytics**

**(3,0) 3**

This course introduces students to (1) Operations Management (operations strategy, operations design, operations planning & control, operations execution), (2) Supply Chain Management, and (3) Quantitative Business Analysis (linear programming, project scheduling including PERT and CPM, inventory modeling, statistical process control, queuing theory, simulation, decision analysis, time-series forecasting, advanced statistical analysis). Prerequisite: BUSN211 or equivalent.

## **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. Prerequisite: BUSN211 or statistics equivalent.

## **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. Prerequisite: MGMT360.

## **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. Prerequisite: Junior standing.

## **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.

## **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. Prerequisite: Junior standing.

**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.

**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.

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**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.

**MRKT379**

**Sports and Events Marketing**

**(3,0) 3**

A study of the theories, concepts, impacts, and contemporary issues unique to sports and events marketing, including the marketing athletes, teams, leagues, celebrities, entertainment, and special events. Prerequisite: MRKT281 or special

permission of instructor.

### **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. Prerequisite: MRKT281.

### **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. Prerequisite: MRKT281.

### **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. Prerequisite: MRKT281.

### **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. Prerequisite: MRKT281.

### **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: 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.

**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: 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.

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**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**  
**Choir**  
**(0,3) 1**

Rehearsal and performance of representative literature for mixed choir in both classical and contemporary styles of choral music. May be repeated for a total of eight credits.

**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.

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### **NSCI 101**

#### **Conceptual Physics**

**(3,2) 4**

A survey of basic physical science principles emphasizing their applications in daily life. Prerequisite: MATH088 or equivalent/satisfactory score on ACT or Placement Exam.

### **NSCI 102**

#### **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.

### **NSCI 103**

#### **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.

### **NSCI 104**

## **Environmental Science Laboratory**

**(0,2) 1**

Laboratory component of environmental science. Corequisite: NSCI103.

## **NSCI 105**

### **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.

## **NSCI 107**

### **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.

## **NSCI 110**

### **Investigations in Chemistry and Forensics**

**(3,2) 4**

An applied introductory chemistry course introduces the world of forensics focusing on the aspects of chemistry used during an investigation. This unique general education class will incorporate a criminal justice and fire science perspective while providing an introduction to chemical principles. Attention will be given to developing critical thinking skills, understanding the scientific process and to making scientifically informed decisions about every day events. Pre- or co-requisite of MATH102 (or higher) or equivalent/satisfactory score on ACT, SAT or Placement Exam.

## **NSCI 116**

### **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.

## **NSCI 119**

### **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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam.

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## **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.

## **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. Prerequisite: NURS327. Corequisite: NURS326. Pre-or Corequisite: NURS/HLTH328.

## **NURS326**

### **Nursing of Children and Families**

**(3,6) 5**

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. Prerequisite: NURS327; Corequisite: NURS325. Pre- or Corequisite: NURS/HLTH328.

### **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: NURS213 (or NURS222), HLTH209 and BIOL223.

### **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. Prerequisites: PSYC155 and junior level status. 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, NURS325, NURS327, NURS326. 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. Prerequisites: For Pre-licensure BSN Majors: HLTH328, NURS325, NURS327, NURS326. Post-licensure Majors (RN-BSN): NURS363 and NURS365.

## **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, 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, NURS325, NURS326, NURS327.

## **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. Prerequisite: NURS327, Corequisite: MATH207 or PSYC210.

## **NURS435**

### **Management in Nursing**

**(4,0) 4**

Analysis of the leadership and management roles in professional nursing; focus is leadership/management theories basic to the planning, organizing, directing and controlling or 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: HLTH328, NURS325, NURS327, NURS326, Corequisite 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. Prerequisite: For Pre-licensure BSN Majors: HLTH328, NURS325, NURS327, NURS326. For Post-licensure Majors (RN-BSN): 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.

**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.

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**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.

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**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 term 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 are 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 and worshiping 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 as 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.

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**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, sophomore standing in EET course work, and MATH140 (which may be taken concurrently).

**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.

## **PNUR102**

### **Drugs and Dosages**

**(2,3) 3**

This course introduces the practical nursing student to dosage calculations and medication administration. Calculations for conversion between systems of measurement are covered. The seven rights of medication administration are emphasized. Categories of drugs, their actions, side effects and nursing implications are covered. Prerequisite: MATH087 or equivalent placement score.

## **PNUR104**

### **Introduction to Practical Nursing**

**(2,0) 2**

Introduction to Practical Nursing provides a theoretical foundation for practicing nursing care of adults within a variety of health care settings. Concepts such as practical nursing philosophy and conceptual framework, history of nursing, nursing's Code of Ethics, the role of nursing in the health care system with emphasis on the practical nurse, the nursing process, therapeutic communication, culture, and critical thinking are explored. Prerequisites: Permission of Chair of Nursing or Instructor only.

## **PNUR107**

### **Understanding Clinical Nutrition Lab for Practical Nurses**

**(0,3) 1**

This lab 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. 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 feeding, and the principles of enteric feeding, elemental diets, IV therapy and hyperalimentation are presented. Prerequisites: BIOL105 or BIOL122 passed with a C or better; HLTH208 passed with a C or better or corequisite of HLTH208.

## **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: Co-requisite BIOL105 or Prerequisite BIOL122 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: PNUR102, PNUR104, PNUR113, all with a grade of C or better. Co-requisites: HLTH208, PNUR107.

### **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.

### **PNUR205**

#### **Maternal/Child Practical Nursing**

**(3,6) 5**

This course explores the family as the client beginning with the reproductive cycle, conception, fetal development, labor, birth and the care of the postpartum woman and newborn. At risk pregnancies and complications are identified. The course continues to address normal growth and development, immunizations, health risk factors, well-defined health problems common to children and their response to illness. Prerequisite: PNUR107, PNUR201, HLTH208, all with a grade of C or better.

### **PNUR206**

#### **Ambulatory Care Practical Nursing**

**(3,6) 5**

The efficiency of a health care agency, and the quality of health care provided, depends in large part on the staff members who supplement and support the role of the provider for provision of quality patient care services. This course stresses strong interprofessional communication skills, organizational abilities, computer knowledge, and excellent human relationship skills in the ambulatory setting across the lifespan. Prerequisite: PNUR107, PNUR201, HLTH208, all with a C or better.

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### **POLI 110**

#### **Introduction to American Government and Politics**

**(4,0) 4**

An introductory survey of American national government and politics.

### **POLI 120**

#### **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.

### **POLI 130**

#### **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.

**POLI 160**

**Introduction to Canadian Government and Politics**

**(3,0) 3**

An introductory survey of Canadian government and politics.

**POLI 201**

**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.

**POLI 211**

**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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam.

**POLI 222**

**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.

**POLI 234**

**Women and Politics Around the World**

**(4,0) 4**

This course will examine a broad range of issues involving gender and politics: the political participation of women, the history of women's movements, voting differences, political divisions among women, and the present political status of women in the United States and globally.

**POLI 241**

**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.

**POLI 247**

**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.

**POLI 290**

**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.

**POLI 301**

**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.

**POLI 325**

**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.

**POLI 331**

**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.

**POLI 334**

**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.

**POLI 342**  
**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.

**POLI 351**  
**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.

**POLI 352**  
**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.

**POLI 367**  
**Congress and the Presidency**  
**(4,0) 4**

Examines the legislative and executive branches of government as parts of the policy-making process. Prerequisite: POLI110.

**POLI 401**  
**Principles of Public Administration**  
**(3,0) 3**

Examines major issues and methods in public administration. Analysis of specific public policy issues. Prerequisite: Advanced standing.

**POLI 411**  
**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.

### **POLI 413**

#### **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.

### **POLI 420**

#### **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.

### **POLI 463**

#### **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.

### **POLI 467**

#### **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.

### **POLI 490**

#### **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.

### **POLI 491**

#### **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.

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**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.

**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: MATH088 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.

### **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.

### **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.

### **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.

### **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: PSYC212, PSYC311 and either PSYC210 or MATH207.

### **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. Co-requisite: PSYC495.



### **READ091**

#### **Preparation for College Reading**

**(3,0) 3**

Introduces reading strategies and study skills necessary for college success. Through integration of acquired knowledge and reading practice, students will develop strategies for vocabulary expansion, comprehension, critical thinking, and increase reading rate. Students must earn a minimum grade of C to pass the course. Credit received in this course does not count toward graduation. Prerequisites: none.

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### **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.

### **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.

### **RECA115**

#### **Tai Chi**

**(0,2) 1**

Tai Chi is a soft martial art that promotes \"a long life and good health\" while improving range of motion, balance, centeredness, and a quiet mind. The Tai Chi 24 Forms Set is the most practiced style throughout the world and will be taught in this class along with utilizing Chi Kung for warm up and cool down exercises.

### **RECA116**

#### **Kickboxing**

**(0,2) 1**

Kickboxing combines martial arts techniques with cardio conditioning as a high energy, total body workout. Course may be repeated twice for credit.

### **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.

### **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.

### **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.

### **RECA190**

#### **Aquatic Fitness**

**(0,2) 1**

This course will introduce students to developing cardiovascular fitness, muscular strength and muscular endurance through aquatic activities as an alternative to weight bearing forms of exercise. Water related exercises and activities will be utilized to improve physical fitness. Individuals of all fitness levels will enjoy getting fit in the water.

### **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.

### **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.

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### **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. 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.

**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.

**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.

### **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.

### **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 an 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 at 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 RECS262 or NSCI103 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**

#### **Research in 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.

### **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.

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**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.

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**SOCY101**  
**Introduction to Sociology**  
**(4,0) 4**

This course introduces students to core sociological theorists and perspectives, including functionalism, conflict and symbolic interactionism, and familiarizes them with basic research designs, terminology and findings within the context of collective behavior and social movements.

**SOCY102**  
**Social Problems**  
**(4,0) 4**

An introductory to descriptions, theories, proposed solutions, and research methods for a variety of social problems including inequality, poverty, unemployment, environmental issues, family problems, and violence.

**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.

### **SOCY214**

#### **Criminology**

**(3,0) 3**

A study of the nature and causes of crime and the results of various attempts to reduce crime.

### **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.

### **SOCY301**

#### **Social Research Methods**

**(3,0) 3**

Identification of research problems, concepts and theoretically derived hypothesis; Review of principle methods of experimental design, survey and field research and unobtrusive analysis. Prerequisite: Junior Status or Permission of Instructor.

### **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: MATH088 or equivalent/satisfactory score on

ACT or Placement Exam.

### **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: SOCY238.

### **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.

### **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 deviant behavior and the development of deviant subcultures; examination of various societal responses to control deviance and their effectiveness. Prerequisite: Junior standing or three hours of sociology and/or human services.

### **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.

### **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.

### **SOCY497**

#### **Community Action Project**

**(1,6) 3**

This is an applied course in which, under the guidance of a sociology faculty member, the student carries out a practical project designed to address a community need identified in and elaborated upon in SOCY495. Prerequisites: SOCY401 and SOCY495.

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### **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.).

### **SOWK204**

#### **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. Prerequisite or Corequisite: BIOL105 or equivalent.

### **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. Credit/No credit grade.

### **SOWK292**

#### **Substance Abuse: Prevention and Treatment**

**(3,0) 3**

This course examines current prevention, detection and treatment approaches for substance abuse and addiction.

### **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. Prerequisite: PSYC201.

### **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

### **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.

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### **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**

Acquisition of advanced skills in composition, grammar, reading and conversation, using media and readings related to the Hispanic world. Corequisite: SPAN262 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.

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### **THEA112**

#### **Acting for Beginners**

**(2,2) 3**

This course provides an exciting, fun, and safe environment to begin a college-level study of acting. These simple, doable acting techniques will help students express their ideas and thoughts more fully. Working to get students present in the moment, this course will introduce physically active games and exercises that activate all the actor's tools including breath, body, face, voice, and knees through releasing tension and embracing the imagination. Open to all majors.

### **THEA162**

#### **Practicum-Acting in Practice**

**(1,0) 1**

Practicum provides practical experience in the work of the theatre artist by acting in a production of LSSU theatre or its equivalent in the community. Students will spend a minimum of 45 hours in an approved work setting for each hour of credit and required to keep a record of such hours with the instructor of record in charge of the practicum. (May be repeated once for a maximum of 2 credits.) Prerequisite: Permission of Instructor.

### **THEA163**

#### **Practicum-Production Team**

**(1,0) 1**

Practicum provides practical experience in assisting with the various non-performance production aspects associated with LSSU productions. Students are expected to spend a minimum of 45 hours in an approved work setting for each hour of credit and required to keep a record of such hours with the instructor of record in charge of the practicum. (May be repeated once for a maximum of 2 credits.) Prerequisite: Permission of Instructor.

### **THEA164**

#### **Practicum-Healthcare Simulation**

**(1,0) 1**

Practicum provides practical experience in the work of the theatre artist in assisting LSSU's diverse healthcare programming. Students will receive acting training and 'act' in various real world scenarios for healthcare simulations associated with programs like, but not limited to, nursing and EMS training. Students will be expected to spend a minimum of 45 hours in an approved work setting for each hour of credit and required to keep a record of such hours with the instructor of record in charge of the practicum. This course is open to all students. (May be repeated once for a maximum of 2 credits.) Prerequisite: Permission of Instructor.

### **THEA212**

#### **Improvisational Acting**

**(2,2) 3**

No script. No lines. No set. Step outside the box and make the best of it! Improvisational acting gives students a creative opportunity to free the imagination, build self-confidence and let go. The course introduces the structure and training vital to successful improvisational theatre. Build ensemble, poise, and learn to trust yourself. Prerequisite: THEA112 or Permission of Instructor.

### **THEA251**

#### **Theatre History**

**(3,0) 3**

This course delves into various historic and groundbreaking movements in theatre throughout time.

### **THEA309**

#### **Survey of Great Playwrights**

**(3,0) 3**

This course is designed to study the best of the best playwrights in theatre history and the various theatrical genres and creative challenges involved in the production of their work. Prerequisite: THEA251 or Permission of Instructor.

**THEA312**  
**Acting Shakespeare**  
**(3,0) 3**

Shakespeare wrote his plays to be spoken - to be acted. This course will immerse the student in an exciting study of Shakespeare's language and its heightened structure so as to bring it to life. Prerequisite: THEA212 or Permission of Instructor.

**THEA333**  
**Play Analysis**  
**(3,0) 3**

This course will reveal techniques used by theatre artists to dissect plays so as to offer intelligent, creative, and dynamic productions by studying an exciting, diverse collection of plays. Prerequisite: THEA251 or Permission of Instructor.

**THEA412**  
**Acting Studio**  
**(3,0) 3**

Acting Studio deepens the study of the craft - providing technique to the more disciplined actor. The course explores the tools used to deliver actors to a technique that frees the self, imagination and sense of play, in other words, to what acting really feels like. Stella Adler, Stanislavski, Morris Carnovsky, and Meisner will lead our study. Our exploration will make use of monologues and scene work from various classical and contemporary playwrights. Prerequisite: THEA312 or Permission of Instructor.

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**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.

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# Lake Superior State University: Academic Catalog 2015-16

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## Course Descriptions

Each course description is preceded by the following type of heading:

**CHEM999 Chemistry  
(3,3) 5**

*or*

**CHEM999 Chemistry  
(3,3,1) 5**

*or*

**CHEM999 Chemistry  
(3,3) *alternate years* 5**

The first line provides the code number (CHEM999) and the course name; see abbreviation legend below. The second line includes several pieces of information: The first two numbers in parentheses are hours of lecture-lab per week. If the course has a recitation component, it will be listed next. 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 registration or your department chair concerning scheduling of such courses.

**NOTE:** 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 if it is found during the regular add/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](#)
- [ARTS - Art](#)
- [BIOL - Biology](#)
- [BUSN - Business](#)
- [CHEM - Chemistry](#)
- [CHLD - Early Childhood Education](#)
- [CHIN - Chinese](#)
- [CJUS - Criminal Justice](#)
- [COMM - Communication](#)
- [CSCI - Computer Science](#)
- [DANC - Dance](#)
- [DATA - Data Processing](#)
- [ECON - Economics](#)

- [EDSE - Special Education](#)
- [EDUC - Teacher Education](#)
- [EGEE - Electrical Engineering](#)
- [EGEM - Engineering Mechanics](#)
- [EGET - Electrical Engineering Technology](#)
- [EGME - Mechanical Engineering](#)
- [EGMF - Manufacturing Technology](#)
- [EGMT - Manufacturing Engineering Technology](#)
- [EGNR - General Engineering](#)
- [EGRS - Robotics and Control Systems](#)
- [EMED - Emergency Medical Services](#)
- [ENGL - English](#)
- [EVRN - Environmental Science](#)
- [EXER - Exercise Science](#)
- [FINC - Finance](#)
- [FINE - Fine Arts](#)
- [FIRE - Fire Science](#)
- [FREN - French](#)
- [GEOG - Geography](#)
- [GEOL - Geology](#)
- [HIST - History](#)
- [HLTH - Health Sciences](#)
- [HONR - Honors Program](#)
- [HUMN - Humanities](#)
- [INTB - International Business](#)
- [INTD - Interdisciplinary](#)
- [JAPN - Japanese Studies](#)
- [JOUR - Journalism](#)
- [LAWS - Law](#)
- [LIBR - Library](#)
- [LING - Linguistics](#)
- [MATH - Mathematics](#)
- [MGMT - Management](#)
- [MRKT - Marketing](#)
- [MUSC - Music](#)
- [NSCI - Natural Science](#)
- [NURS - Nursing](#)
- [OFFC - Office Administration](#)
- [PHIL - Philosophy](#)
- [PHYS - Physics](#)
- [PNUR - Practical Nursing](#)
- [POLI - Political Science](#)
- [PSYC - Psychology](#)
- [READ - Reading](#)
- [RECA - Recreational Activities](#)
- [RECS - Recreation Studies](#)
- [SERV - Student Services](#)
- [SOCY - Sociology](#)
- [SOWK - Social Work](#)
- [SPAN - Spanish](#)
- [THEA - Theatre](#)

- [USEM - University Seminar](#)
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### **ACTG132**

#### **Principles of Accounting I - JW**

**(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. Prerequisite: Two years of high school algebra and equivalent/satisfactory score on ACT/SAT or Placement Exam or MATH102 with a grade of C or better.

### **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,) 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 ACTG232 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: Grade of C or higher in ACTG232.



### **ACTG332**

#### **Cost Management I**

**(4,0) 4**

An advanced study of managerial accounting as it applies to management practices. Topics include job order and process costing systems, value chain management, activity based costing and management, joint product costing, CVP analysis, cost allocations, budgeting, and financial planning models, and allocation of support activity costs. Prerequisite: ACTG133.

### **ACTG333**

#### **Cost Management II**

**(4,0) 4**

A continuation of ACTG332. Topics include strategic decision making, strategic issues in capital investment decisions, standard costing and variance analysis, performance evaluation and the balanced scorecard, responsibility accounting, investment centers and transfer pricing, target costing, theory of constraints, and strategic pricing, managing and controlling quality, management compensation, and business valuation. Prerequisite: ACTG332.

### **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.

### **ACTG350**

#### **Income 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 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.

### **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.

### **ACTG432**

#### **Advanced Accounting: Consolidations**

**(4,0) 4**

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, translation of foreign financial statements and the application/comparison of international accounting standards will also be presented. Prerequisite: ACTG233 with a grade of C or higher.

### **ACTG433**

#### **Advanced Accounting: Governmental**

**(4,0) 4**

An introduction to governmental and nonprofit accounting as applied to state and local governments and other nongovernmental not-for-profit entities including colleges and universities, and health care organizations. 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 with a grade of C or higher.

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### **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.

### **ARTS115**

#### **Introduction to Ceramics**

**(3,0) 3**

A basic course in ceramics with emphasis on throwing and hand construction techniques, design, aesthetics and the creative development of clay objects.

### **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.

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## **BIOL104**

### **Survey of General Biology**

**(3,3) 4**

This course is a non-majors biology course that will cover the major units of general biology: (1) cells and energy; (2) genetics; (3) evolution; (4) organismal biology; (5) ecology. Developing a solid understanding of the fundamentals of general biology is vital to being an informed citizen about advances in the medical and food sciences, foundational and new information about the organization of life, and current issues of environmental and ecological concern. Course content is tied to the State of Michigan's benchmarks for training elementary school teachers, but any students interested in the life sciences are encouraged to take this class. The laboratory is designed to illustrate the course content as well as illustrate the principles of inquiry. Prerequisites: ENGL091, MATH086 and READ091 or equivalent test scores.

## **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: ENGL091 or equivalent.

## **BIOL106**

### **Boat Handling and Navigation**

**(2,3) 3**

Topics related to the art of seamanship are covered, including the basics of boating and safety. Piloting and navigation are emphasized with an understanding of weather, waves, and wind, as well as the use of board electronic equipment. Pre- or corequisites: MATH102.

## **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: ENGL091 or equivalent.

### **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 complement 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, ENGL091 or equivalent, and MATH088 or equivalent satisfactory score on ACT or Placement Exam.

### **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.

### **BIOL126**

#### **Interpretation of Maps and Aerial Photographs**

**(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.

### **BIOL131**

#### **General Biology: Cells**

**(3,3) 4**

This course is an introduction to the cellular aspects of general biology. This course will provide an overview of cellular biology and serve as a framework for further biological studies. Topics to be covered include basic chemistry of the cell, function of cellular organelles, cellular metabolism including respiration and photosynthesis, the cell cycle, mitosis, meiosis, simple transmission genetics, introduction to molecular and developmental biology. The laboratory introduces the student to inquiry based scientific method. Prerequisites: MATH088, ENGL091, or equivalent scores on the math and English placement exams.

### **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: MATH088, ENGL091, or equivalent scores on the math and English placement exams.

**BIOL199**  
**Freshman Seminar**  
**(1,0) 1**

A partial focus for this course will be on academic skills and the transition from high school to college. Topics will include time management, use of campus resources, development of critical thinking, and strengthening study skills. At other times students will meet in discipline-based groups in conjunction with BIOL299, BIOL399 and BIOL499. These meetings will include discussion of literature relevant to the discipline and progress reports from upper-class students engaged in scholarly projects.

**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. Prerequisite: ENGL111. Pre- or corequisite: COMM101.

**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: BIOL131 and CHEM115.

**BIOL206**  
**Medical Laboratory Practices**  
**(2,0) 2**

Covers fundamental principles of medical laboratory science including safety, specimen handling, measurement, common calculations, organization of the medical laboratory, automation, and quality control. Prerequisites: MATH111, CHEM115, BIOL131.

**BIOL220**

## **Genetics**

**(3,3) 4**

This course covers the three major subdivisions of the study of genetics - Mendelian or transmission genetics, molecular biology, and population genetics. Transmission genetics topics will include traditional genetics problems and modes of inheritance; mitosis, meiosis and control of the cell cycle; chromosomal structure and recombination. Molecular topics will include information on DNA structure and replication, transcription, translation, gene cloning, genomics, and current research in DNA technology. Topics in population genetics will include aspects of the Hardy-Weinberg theory. The laboratory will include exercises in both traditional and molecular genetics. Prerequisites: BIOL131, CHEM115 and (BIOL250 or sophomore statistics course).

## **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 CHEM109 or above; NSCI103 or BIOL132; BIOL126.

## **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**  
**Biostatistics**

(2,2) 3

A course in the design and analysis of biological experiments. The focus of the course is the development of a systematic method for determining an appropriate statistical technique and the interpretation of results in terms of biological science. Prerequisites: BIOL131, BIOL132, and MATH111 or Calculus.

**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 BIOL126.

**BIOL285**  
**Principles of Epidemiology**

(3,0) 3

Principles, purpose and methods of descriptive and analytic epidemiology with emphasis on environmental health. Prerequisite: MATH207.

**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 and 132

**BIOL289**



## **Aquatic Research Sampling Methods**

**(2,3) 3**

A variety of sampling techniques are introduced as they relate to the various disciplines of aquatic science. These methods include sampling and preservation of biotic (plankton, fish, benthic invertebrates, DNA, pathogens) and abiotic (water quality, sediments, climate) data. Prerequisites: BIOL107, CHEM108 and 109, MATH111 and permission of instructor. Also listed as EVRN289.

## **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**

**(2,3) 3**

A study of the invertebrate groups with emphasis on morphology, phylogeny and life cycles. Prerequisite: BIOL132.

## **BIOL303**

### **General Entomology**

**(2,3) 3**

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.

## **BIOL304**

### **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.

## **BIOL306**

### **Medical Mycology**

**(2,2) 3**

Covers fungal structure, reproduction, and classification, medically important fungi and the diseases they cause, techniques for identifying fungi in clinical specimens and for culturing fungi in the laboratory. Laboratory covers techniques for fungal culture and identification, and practice identifying fungal diseases from prepared slides and/or photographs. Prerequisite: BIOL132 and BIOL204.

### **BIOL310**

#### **Ichthyology**

**(2,3) 3**

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: BIOL131 and BIOL132.

### **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 or BIOL330.

### **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 CHEM115.

### **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.

**BIOL335  
Principles of Animal Nutrition**

**(3,0) 3 alternate years**

A scientific approach to the nutritional role of water, carbohydrates, proteins, lipids, minerals, and vitamins. The course will emphasize comparative aspects of gastrointestinal anatomy and physiology for livestock, wildlife, and fish. Prerequisites: BIOL250 AND CHEM116.

**BIOL337  
General Ecology**

**(2,3) 3**

A survey of concepts and applications of plant and animal physiological, morphological, behavioral, population, community, and systems ecology. Prerequisites: BIOL131, BIOL132 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**

**(2,4) 4**

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 CHEM115.

**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.

### **BIOL389**

#### **Internship in Biology**

**3-4 3-4**

A variable credit practicum course in which the students will perform research and/or gain work experience under the direction of a faculty mentor and a qualified supervisor. Students are expected to spend a minimum of 45 hours in an approved work setting for each credit earned. The course may be repeated once for a maximum of eight credits. Student interns will be required to write weekly updates or journal entries to be submitted to their LSSU faculty mentor for evaluation of what the student has learned. Prerequisites: 2.50 GPA in major and permission of faculty mentor or department chair.

### **BIOL398**

#### **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. Prerequisites: BIOL299.

### **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.

### **BIOL405**

## **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.

## **BIOL406**

### **Immunoematology**

**(2,3) 3**

Fundamentals of blood banking in the ABO, Rh and other blood group systems; blood component preparation and utilization; transfusion complications; quality control and problem solving. Laboratories include techniques used in immunology/serology; blood grouping; compatibility testing; and antibody identification. Prerequisites: BIOL220, CHEM226, Junior standing and permission of instructor.

## **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**

### **Advanced Cell & Molecular Biology**

**(3,3) 4**

This course will examine cellular structure and function with emphasis on organelle ultrastructure, cell membranes and permeability, cellular interactions, and the molecular foundations of genetic mechanisms and cell energetics. Prerequisites: BIOL220 and CHEM351.

## **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. Prerequisite: BIOL204 and BIOL220.

## **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. Prerequisite: BIOL337.

## **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**

**(2,3) 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: BIOL330.

## **BIOL434**

### **Histopathology**

**(0,3) 1**

The course is an intensive 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 or corequisite: 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: BIOL202, BIOL337 and MATH207.

## **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: BIOL311 or BIOL312 and BIOL339.

**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.

**BIOL455**

**Body Fluids Analysis**

**(3,2) 4**

Covers molecular analytes that are measured in blood, urine, and body fluids: the physiologic and pathologic processes that affect the levels of these analytes, correlations of analyte levels with disease, methods and instruments used to measure them, and principles and practices of quality control. Prerequisites: MATH207, CHEM226, CHEM332, BIOL330.

**BIOL460**

**Clinical Internship**

**3 or 9**

A six-month internship experience in a clinical laboratory. Students will be placed at one of LSSU's affiliate clinical sites. There they will perform routine analyses of clinical specimens under the supervision of clinical site personnel. Students will be trained in chemical, hematological, microbiological, coagulation, and blood bank analyses. Prerequisites: BIOL380, BIOL406, BIOL423, BIOL455, BIOL480. Variable credits, 3 or 9; must be repeated once for a maximum of 12 credits.

**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. Prerequisite: BIOL337

**BIOL475**

**Aquatic Entomology**

**(2,3) 3**

Survey and identification of regional lake and stream insects, with additional emphasis on lifehistory 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**  
**(3,3) 4 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: BIOL204 and CHEM226.

**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**  
**(0,6) 2**

A practicum under the guidance of a faculty member. The student will conduct a scholarly project based on the proposal submitted by the student in BIOL399 (or an appropriate substitute). Prerequisite: BIOL399.

**BIOL497**  
**Experiential Learning Project**  
**3 or 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. Prerequisite: INTD498.

**BIOL499**  
**Senior Seminar**  
**(1,0) 1**

Students meet in discipline-based, student-faculty groups in conjunction with BIOL199, BIOL299 and BIOL399. 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 or BIOL497.

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## **BUSN121**

### **Introduction to Business**

**(3,0) 3**

This course is intended to provide students a broad overview of the complex and dynamic contemporary world of business. The course will illustrate how human resources management, marketing, production, and finance are major functions that work together to help owners, employees and customers reach their objectives. Business must operate within economic, social, natural, technological, international, legal, and political environments.

## **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.

## **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.

## **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]**

**(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 achieve the school approved learning objectives/outcomes established for the internship. Students are expected to spend a minimum of 45 hours (1 credit), 90 hours (2 credits), 135 hours (3 credits), or 180 hours (4 credits) in an appropriate work setting. This course may be repeated once for a maximum of four total credits. Prerequisites: 2.5 GPA, and approval of the Dean.

## **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.

### **BUSN350**

#### **Business Law I**

**(3,0) 3**

This portion of business law covers the law applicable to contracts, sales, personal property and bailments.

### **BUSN355**

#### **Business Law II**

**(3,0) 3**

This portion of business law covers the law applicable to commercial paper, corporations, partnerships, agency and employment.

### **BUSN399**

#### **Internship in [Discipline]**

**(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 achieve the school approved learning objectives/outcomes established for the internship. Students are expected to spend a minimum of 45 hours (1 credit), 90 hours (2 credits), 135 hours (3 credits), or 180 hours (4 credits) in an appropriate work setting. This course may be repeated once for a maximum of four total credits. Prerequisite: 2.5 GPA, junior standing or higher, employee and instructor approval of the Dean.

### **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 and junior standing.

### **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.

**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: 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. Prerequisite: Senior status.

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**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: MATH088 or equivalent. Students must receive a C (2.0) or better in this course to qualify for CHEM104, CHEM108 or CHEM115. Credit in this course does not apply toward graduation.

**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: ENGL091 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.

**CHEM110**  
**Applied Organic & Biochemistry**  
**(3,2) 4**

A continuation of concepts presented in CHEM108 with an emphasis on the fundamentals of organic and biochemistry. The interrelationships between the metabolic processes of living systems are discussed along with their underlying chemical reactions. Prerequisite: CHEM108 or equivalent, with a grade of C (2.00) or better.

### **CHEM115**

#### **General Chemistry I-Intro to Fundamental Principles of Chemistry**

**(4,2) 5**

Fundamental principles of chemistry with emphasis on scientific method, basic chemical reactions and acid base equilibria, stoichiometry, periodic trends of elements, an introduction to the energy of reactions, atomic structure, simple bonding models, molecular structure, intermolecular forces, and nuclear chemistry will be presented. Pre- or corequisite of MATH111 or higher with a grade of C (2.0) or better. ENGL091 or equivalent. One year of high school chemistry is strongly recommended.

### **CHEM116**

#### **General Chemistry II-Intro to Physical Chemistry**

**(4,3) 5**

Continuation of CHEM115 with emphasis on physical chemical concepts such as bonding, gas laws, solids and solutions, kinetics, thermodynamics, and equilibrium, including acid-base reactions and electron transfer processes. Prerequisite: CHEM115 with a grade of C (2.0) or better.

### **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 (2.0) 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.

### **CHEM261**

## **Inorganic Chemistry**

**(3,3) 4**

This course will provide a foundation in Inorganic Chemistry with a focus on understanding the properties of the elements, bonding and geometries of small molecules and their chemical re-activities. Survey of main group and transition metal chemistry and applications to bio-inorganic chemistry. The laboratory component will provide students with opportunities to observe and measure the changes that accompany inorganic reactions and to make predictions regarding these inorganic reactions. Prerequisite: CHEM116 with a grade of C or better.

## **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.

## **CHEM310**

### **Applied Spectroscopy**

**(3,3) 4**

General principles of spectroscopy will be explored including underlying principles and theory, data acquisition and processing coupled with spectral interpretation. Different spectroscopic methods used for the structural determination of organic molecules and in chemical research are described including mass spectrometry (MS), ultraviolet and visible spectroscopy (UV-Vis), infra-red spectroscopy (IR), atomic spectroscopy, fluorescence spectroscopy, and both one-dimensional and two-dimensional  $^1\text{H}$  and  $^{13}\text{C}$  nuclear magnetic resonance (NMR) spectroscopy. Prerequisite: CHEM226 and CHEM261. (Alternate Years)

## **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. Recommended either PHYS222 or PHYS232.

## **CHEM341**

### **Environmental Chemistry I**

**(3,3) 4 alternate years**

A study of the environmental chemistry of the hydrosphere, atmosphere, lithosphere, and biosphere, the measurement and remediation of water and air quality problems, the toxicology of water and air pollutants, and the environmental aspects of energy use. Prerequisites: CHEM225, CHEM231, and NSCI103. Also listed as EVRN341.

## **CHEM351**

### **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, vitamins, 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. Prerequisites: CHEM116, CHEM225.

### **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: CHEM225.

### **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**

**(3,0) 3 alternate years**

Traditional quantum chemistry topics will be discussed that help explain chemical phenomena and provide descriptions and applications for spectroscopy. Prerequisite: CHEM116 and either MATH112, EGNR140 or EGNR245; or one year of equivalent calculus and numerical methods. One year of college physics preferred.

### **CHEM363**

#### **Physical Chemistry Laboratory: Kinetics and Reaction Dynamics**

**(0,3) 1**

An advanced laboratory exploring reaction kinetics and dynamics with an emphasis on modern methods of physical chemistry measurement. Prerequisite: CHEM116 and one semester of calculus.

### **CHEM395**

#### **Junior Seminar**

**(1,0) 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.

### **CHEM399**

#### **Internship in Chemistry**

**1-4 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. Work hours and activities must be documented daily and approved by both the on-site supervisor and the instructor to receive credit. The course may be repeated for a maximum of four credits. Prerequisite: 2.5 GPA in major, Junior standing and permission of chair at least one semester in advance of registering for the course.

### **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**

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.

### **CHEM452**

#### **Advanced Biochemical and Molecular Techniques**

**(2,4) 4 alternate years**

A course covering advanced laboratory techniques for manipulating and analyzing bio-polymers such as proteins and nucleic acids. A brief discussion of bioinformatics will be presented. Protein expression vectors, PCR, and modern molecular techniques will be explored with potential applications for chemistry, biology, toxicology, forensic, and clinical lab science. Prerequisite: CHEM351.

### **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**

**(0,6) 2**

This is a 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. This course will be required for a degree certified by the American Chemical Society. This course may not be repeated for credit. Prerequisites: CHEM395 (also listed as EVRN395), CHEM231, and CHEM225. Dual listed as EVRN495.

## **CHEM499**

### **Senior Seminar**

**(1,0) 1**

Required for seniors majoring in chemistry/environmental science. Students will present the results of their scholarly research. Students who have completed CHEM/EVRN495 will be required to give poster and oral presentations to the University community as part of this class. Pre- or corequisite: CHEM395 (also listed as EVRN395). Dual listed as EVRN499.

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## **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.

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## **CHLD101**

### **Introduction to Early Childhood Education**

**(4,0) 4**

This course provides an introduction to the field of early childhood. Topics include typical and atypical developmental milestones in the social, emotional, physical, intellectual and moral development of children from birth to age 8. In addition, the history of early childhood education, types of programs and issues in the field of childcare will be addressed. Field experience is required.

## **CHLD103**

### **Learning Environments for the Young Child**

**(4,0) 4**

This course explores the contributions of child development theorists, and the multiple integrated influences of family and community, to the design and implementation of early childhood learning environments. The use of space, materials, and routines in providing inclusive, safe environments is considered, as well as philosophical approaches to supporting young learners. Field experience is required. Prerequisite: CHLD101.

## **CHLD150**

### **Observation and Assessment**

**(4,0) 4**

This course provides experience with the practices and tools for observation, documentation, and assessment of young children from birth through age eight. Discussion will include the use of results of assessment for planning continued developmental and learning experiences, as well as for appropriate classroom management and guidance strategies. Field experience is required.

## **CHLD210**

### **Infants and Toddlers**

**(4,0) 4**

This course examines the design and evaluation of developmentally appropriate teaching, caregiving, and guidance practices for children from birth to 36 months. Addresses environments that provide challenging and developmentally appropriate expectations to stimulate development toward the long-term goals of autonomy, and cognitive and social-emotional growth of infants and toddlers. Field experience is required. Prerequisite: CHLD150.

## **CHLD225**

### **Emergent Literacy**

**(3,0) 3**

This course focuses on literacy acquisition theory and language development milestones for children from birth through age 8. Factors that affect reading acquisition and techniques that assist children in developing listening, speaking, reading and writing skills are also explored. Consideration of the unique needs of English Language Learners is included. Prerequisite: CHLD210.

## **CHLD241**

### **STEM Foundations for the Young Child**

**(4,0) 4**

This course explores basic concepts and skills in science, mathematics, engineering, and technology appropriate to early childhood education. Field experience is required. Prerequisites: MATH110 or higher; BIOL105.

## **CHLD242**

### **Creativity & Humanities**

**(4,0) 4**

This course examines literature, visual and performing arts, and social studies topics appropriate to early childhood education. Field experience is required. Prerequisites: ENGL111, SOCY103.

## **CHLD245**

### **Early Childhood Curriculum**

**(3,0) 3**

This course focuses on the design of developmentally appropriate practices and curriculum for young children. Emphasis is placed on planning learning activities that support positive developmental outcomes, as well as on differentiating instructional strategies for the individual child. Field experience is required. Prerequisite: CHLD150.

## **CHLD260**

### **Practicum I**

**4**

The student will complete at least 140 hours in an early childhood setting culminating in experience as a lead teacher. Seminar meetings are included. Grading will be CR/NC. Prerequisites: CHLD150 and permission of instructor.

### **CHLD270**

#### **Administration of Early Childhood Programs**

**(2,0) 2**

This course focuses on the financial, legal, supervisory and administrative procedures used in operating early childhood programs, including applicable local, state, and national standards. Prerequisite: CHLD150.

### **CHLD310**

#### **Inclusion of Young Children with Special Needs in Early Childhood Settings**

**(3,0) 3**

This course provides resources and models for designing and implementing quality inclusive learning environments for young children who demonstrate developmental diversity birth to age 5. Includes identification of common delays, impairments and disabilities, as well as assistive technologies appropriate for supporting continued development. Field experience is required. Prerequisite: CHLD210.

### **CHLD330**

#### **Philosophical Foundations of Early Childhood Education**

**(2,0) 2**

This course expands on basic knowledge of early childhood education practices to examine and evaluate contemporary early childhood program models and philosophical foundations. Prerequisite: CHLD260

### **CHLD350**

#### **Early Childhood Facilities Management**

**(2,0) 2**

This course develops an advanced level of knowledge and skills necessary for effective management of child development centers, preschools, and other facilities. Effective leadership styles are considered. Prerequisite: CHLD270.

### **CHLD410**

#### **Practicum II**

**4**

Students complete at least 140 hours in an early childhood setting, with primary emphasis on curriculum and administrative responsibilities. Seminar meetings are included. Grading will be CR/NC. Prerequisites: CHLD350 and Permission of Instructor.

### **CHLD440**

#### **Family and Community Partnerships**

**(3,0) 3**

This course explores the multiple integrated influences that impact the development of young children, and provides opportunities for students to develop collaborative and cooperative skills that are essential to building partnerships focused on supporting that development. The various roles of the early childhood educator as an advocate for individual children and for the community is addressed. Field experience is required. Prerequisite: CHLD310.

### **CHLD480**

#### **Directed Teaching: Seminar**

**(1,0) 1**

This seminar provides a forum for students in the CHLD Directed Teaching experience to discuss issues in early childhood education, classroom management, teaching of all students and professional development. Co-requisite: CHLD492.

### **CHLD492**

#### **Directed Teaching: Early Childhood**

**5**

This course is a full-time teaching practicum under the direction and mentoring of a cooperating teacher at the pre-primary level. Evolution from observation and facilitation of small group activities, to whole-class instruction of a full-teaching load in an area center. Emphasis is placed on full range of responsibilities, including family involvement and administrative responsibilities. Grading will be CR/NC. Prerequisite: Admission to student teaching internship. Corequisite: CHLD480.

### **CHLD495**

#### **Senior Project 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. Requires field research and oral presentation. Prerequisite: Senior Status and Instructor's approval.

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### **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.

### **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. Prerequisite: 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: CJUS101 and CJUS102.

**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. Prerequisite: 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: CJUS101 and CJUS102.

**CJUS325**

**Homeland Security and Emergency Services**

**(3,0) 3**

This course will prepare all graduates from a variety of majors to understand how homeland security impacts the US political system as a whole, but especially from

the standpoint of emergency response and preparedness. 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. Prerequisite: Junior standing. Students from other majors are encouraged to enroll with permission from instructor. 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: CJUS220, CJUS240, 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. Prerequisite: 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. Prerequisite: Junior standing in criminal justice or fire science and MATH088 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: CJUS101 and SOCY214.

### **CJUS384**

#### **International and Comparative Criminal Justice Systems**

**(3,0) 3**

A survey of selected 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.

### **CJUS401**



### **Senior Seminar**

**(3,0) 3**

Seminar and independent study course with individual student guidance by faculty on selected research topics in criminal justice. Prerequisite: 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: Senior standing and permission of instructor.

### **CJUS409**

#### **Procedural Criminal Law**

**(3,0) 3**

Principles, duties and mechanics of criminal procedures as applied to important areas of arrest, search and seizure. Prerequisite: 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. Prerequisite: 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: CJUS101, and junior or senior standing.

### **CJUS444**

#### **Criminalistics**

**(3,3) 4**

Criminalistics 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 MCOLES mandated hours. Prerequisite: 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: 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: CJUS101 and CJUS102.

### **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. Prerequisite: Permission of instructor.

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### **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.

### **COMM399**

#### **Internship in Communication**

**(1-4) 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 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.

### **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.

### **COMM490**

#### **Senior Directed Study in Communication**

**3-4 3-4**

This course is designed to allow communication 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 a student's individual areas of interest within the communication discipline, 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).

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### **CSCI 101**

#### **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.

**CSCI 103**  
**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.

**CSCI 105**  
**Introduction to Computer Programming**  
(2,2) 3

An introductory course in computer programming in a graphical development environment, intended for students with no prior computer programming experience. Arithmetic, control structures and simple data structures. Sound, graphics and animation. Prerequisite: MATH086 or equivalent/satisfactory score on the ACT or Placement Exam.

**CSCI 106**  
**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.

**CSCI 107**  
**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 Expression Web.

**CSCI 121**  
**Principles of Programming**  
(4,0) 4

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. Introduction to classes and dynamic memory allocation. Text manipulation and parsing, binary files, and exception handling. C-style input and output. 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.

### **CSCI 163**

#### **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 interference as they relate to computer repair and operation. The disassembly and upgrading of a personal computer will be covered in the laboratory as well as the use of diagnostic hardware and software.

### **CSCI 201**

#### **Data Structures and Algorithms**

**(4,0) 4**

An introductory course in data structures and algorithms, with an emphasis on abstraction, implementation and analysis. Advanced class concepts, including operator overloading, Linked lists, stacks, queues, trees and binary trees. Separate compilation and third-party libraries. Application of various data structures to problems selected from the spectrum of computer science topics. Prerequisites: CSCI121 with a grade of C or better and MATH111 (or equivalent math placement) with a grade of C or better.

### **CSCI 207**

#### **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. Prerequisite: CSCI107 with a grade of C or better.

### **CSCI 211**

#### **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.

### **CSCI 221**

#### **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 with a grade of C or better.

### **CSCI 223**

#### **Routers and Switches I**

**(2,2) 3 alternate years**

Principles of Wide Area Networks, IQs, routers, routing protocols and configurations; hands-on training with industry-standard routing and switching equipment. Prerequisite: CSCI221 with a grade of C or better.

**CSCI225**

**Routers and Switches II**

**(2,2) 3 alternate years**

Routing protocols, virtual LANs, network management, design of LANs and WANs. Students completing this course will be prepared to take the CCNA certification exam. Prerequisite: CSCI223 with a grade of C or better.

**CSCI248**

**Network Operating Systems I**

**(2,2) 3**

An introduction to using and administering network operating systems. Students will also be introduced to virtualization of machines, as well as interaction between virtualized machines. Topics include: account setup, basic security, file and device sharing, and maintenance. Course topics will be presented in the context of different network operating systems. Prerequisite: CSCI221 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 CSCI103 with grade of C or better.

**CSCI275**

**Web Server Administration**

**(2,2) 3**

Install and configure a web server; identify the web server administrator 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. Prerequisites: CSCI221 and CSCI248, both with a C or better.

**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. Prerequisites: CSCI201 with a grade of C or better.

## **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. Prerequisite: CSCI106 and 107, both with a grade of C or better, or CSCI163 and CSCI221, both with a grade of C or better.

## **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 with a grade of C or better.

## **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 with a grade of C or better.

## **CSCI 341**

### **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.

## **CSCI 342**

### **Advanced Programming Techniques**

**(4,0) 4 alternate years**

Advanced data structures including general trees and graphs. Advanced 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. Prerequisites: CSCI201 with a grade of C or better.

## **CSCI 348**

### **Network Operating Systems II**

**(2,2) 3**

A continuation of using and administering network operating systems. Students will also be introduced to virtualization of servers, as well as interaction between virtualized machines. Topics include: file system and network service management, remote access, security, printing, and disaster recovery. Course topics will be presented in the context of different network operating systems. Prerequisite: CSCI248 with a grade of C or better.

## **CSCI 351**

### **Mobile Application Development**

**(3,0) 3**

Introduction to the development of applications for smart phones and tablets; using a simulator and provisioning to mobile devices; user interfaces, touch events, data management, and graphics; interaction with camera, accelerometer, and location hardware. Prerequisite: CSCI121 with a grade of C or better.

## **CSCI 371**

### **Multi-Platform Application Development**

**(3,0) 3**

The design and implementation of applications across multiple platforms, with a goal of a similar or identical code base between versions. The course covers a variety of programming environments, as well as a variety of platforms. Focus will

be on comparison between programming languages, as well as the strengths and weaknesses of various programming environments and models for a uni-platform vs a multi-platform approach. Prerequisite: CSCI121 and either CSCI281 or CSCI201 all with a grade of C or better.

### **CSCI 411**

#### **Advanced Database and Project Management**

**(3,0) 3 alternate years**

Designing and implementing an enterprise-level database. Creating interfaces to database systems from common programming language platforms. Capturing requirements, process modeling, project scheduling, documenting, testing, delivering and maintain a system. Prerequisites: CSCI201 and CSCI211, each with a minimum grade of C.

### **CSCI 412**

#### **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.

### **CSCI 415**

#### **Computer Organization and Architecture**

**(3,0) 3**

A hardware-orientated 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. Parallel computing for both SMP and MIMD models. Prerequisite: CSCI201 and either CSCI351 or CSCI371 with a grade of C or better.

### **CSCI 418**

#### **Senior Project I**

**(1,4) 3**

This course is the first part of the two-part sequence CSCI418/CSCI419. The student will begin a two-semester capstone experience that will include one of the following: a software project; a network implementation; a co-operative education position with an external company; or a research project. The experience must include the fulfillment of customer-generated requirements. The projects/experiences will vary each year to allow students to experience work in a real-world environment. Students in CSCI418 must take CSCI419 the following semester. Prerequisite: CSCI291 or CSCI292 with a C or better and permission of instructor.

### **CSCI 419**

#### **Senior Project II**

**(1,4) 3**

The second of a two-part sequence, CSCI419 provides students with the skills necessary for completion of their two-semester capstone experience that will

include one of the following: a software project; a network implementation; a cooperative education opportunity with an external company; or a research project. The experience must include the fulfillment of customer-generated requirements. The projects/experiences will vary each year to allow students to experience work in a real-world environment. Students in CSCI418 must take CSCI419 the following semester. Prerequisite CSCI418 with a C or better and permission of the instructor.

### **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.

### **CSCI434**

#### **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, protection, parallel and distributed systems. Case studies of modern operating systems. Prerequisite: CSCI201 with a minimum grade of C.

### **CSCI490**

#### **Individualized 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 nine credits. Prerequisites: Junior standing or higher.

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### **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.

### **DANC110**

#### **Dance Company**

**(0,2) 1**

The Dance Company class 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 2 years dance training and instructor's permission. Course may be repeated for a maximum of 8 credits.

### **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.

### **DANC210**

#### **Movement for Actors**

**(1,4) 3**

An active study in the principles and techniques of stage form, style, and projection necessary for actors or dancers. Helping actors/dancers to move more efficiently on stage. Emphasis on the breath, tension and relaxation, improvisation, body alignment and movement skills including the elements of dance, movement qualities, posture, and physical exercise to help the body move effectively beyond

physical constraints. Prerequisite: Strong interest in theatre, or dance recommended.

### **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. 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: DANC125 or permission of instructor. This course may be repeated once for credit.

### **DANC301**

#### **Ballet III**

**(0,3) 1**

Sequential training in technique, vocabulary and performance of classical ballet. Emphasis on placement, alignment, flexibility and dance movement at a more technical, intricate and accelerated pace. Point and pre-point work. This course may be repeated two times for a maximum of 3 credits. Prerequisites: DANC101 and DANC201, or permission of instructor.

### **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 views 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.

### **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, and permission of instructor.

### **DANC401**

## **Senior Thesis**

**1-4 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 3 years of dance technique, courses in Choreography, Dance History, and at least 2 semesters of Dance Company with a minimum of 4 formal performances. Permission of Instructor. This course may be repeated for a total of 4 credits.

## **DANC402**

### **Advanced Dance Studies**

**(0,3) 1**

This course is designed to provide students with opportunities to explore advanced studies in ballet or modern dance and to apply their studies in production. Students will be encouraged and guided as they develop, direct, produce and/or choreograph a successful, high quality dance stage production. Prerequisite: Completion of DANC301, DANC310 and permission of instructor.

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## **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.

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**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: Two years of high school algebra and equivalent/satisfactory score on ACT or Placement Exam or MATH102 with a grade of C or better.

**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: Two years of high school algebra and equivalent/satisfactory score on ACT or Placement Exam or MATH102 with a grade of C or better.

**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. Prerequisite: MATH112 or equivalent.

**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. Prerequisite: ECON201.

### **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. Prerequisite: ECON201 or 202.

### **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. Prerequisite: ECON202.

### **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. Prerequisite: ECON202.

### **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. Prerequisite: ECON201.

### **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.

### **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.

### **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.

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### **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.

### **EDSE302**

#### **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.

### **EDSE320**

#### **Introduction to Learning Disabilities**

**(4,0) 4**

An examination of the educational research, characteristics, diagnostic principles and practices related to teaching students with learning disabilities. Psychological theories (e.g. developmental, behavioral, and cognitive) of teaching students with learning disabilities and associated learning strategies are reviewed. Prerequisites: EDSE301, EDSE302.

### **EDSE401**

#### **Issues and Trends Impacting Learning Disabilities & Special Education**

**(3,0) 3**

Contemporary issues in the education of students with learning disabilities and other special needs will be explored. Policies and regulations, requirements and procedures for service, curriculum adaptation and modification, delivery models relating to placement, privacy, advocacy, and family education will be discussed. Prerequisite: EDSE302.

### **EDSE403**

#### **Assessment and Diagnosis**

**(3,0) 3**

An examination of the education research and best practices related to identification, assessment, instruction, accommodation, and implementation of special education programs. Legal responsibilities of the school in the areas of assessment, diagnosis, and diversity will also be addressed. Prerequisites: EDSE301, EDSE320.

### **EDSE404**

#### **Instruction and Technology: Preschool to Adult**

**(4,0) 4**

An examination of the research and best practices using assistive technologies to increase, maintain or improve the capabilities of students with disabilities. Prerequisites: EDSE320, EDSE403.

### **EDSE480**

#### **Student Teaching Seminar: Special Education**

**(1,0) 1**

A seminar for teacher candidates during a student teaching internship in a special education classroom. Corequisite: EDSE492. Prerequisites: EDSE320, EDSE403, and EDSE404, 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. Grading will be CR/NC. Corequisite: EDSE480. Prerequisites: EDSE320, EDSE403, EDSE404 and admission to student teaching. The course may NOT be repeated for credit.

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### **EDUC250**

#### **Student Diversity and Schools**

**(4,0) 4**

This course will examine the impact of diversity on students and educational systems through the consideration of the historical and philosophical foundations of schooling, the impact of diversity on students' participation in the system, and the characteristics of effective teaching practice to meet the needs of diverse learners. Field experience in an Eastern Upper Peninsula elementary or secondary school is required. Prerequisite: ENGL111.

### **EDUC301**

#### **Educational Psychology and Learning Theory**

**(3,0) 3**

This course focuses on research-based theories of learning and learning processes, the role of the teacher in supporting the process, and alternatives for evaluation of learning outcomes. Field experience is required. Prerequisites: EDUC250 and

admission to the teacher education program.

### **EDUC330**

#### **Reading in the Elementary Classroom**

**(3,0) 3**

This course examines reading as a process of constructing meaning through dynamic interaction among reader, the text, and the context of the reading situation. Content includes objectives, content, materials, organization and methods of teaching reading in the elementary school. Fieldwork required. Prerequisite: Admission to the teacher education program. Pre- or co-rerequisite: EDUC301.

### **EDUC350**

#### **Integrating Technology into 21st Century Learning Environments**

**(2,2) 3**

This course explores instructional technology tools, educational media, theory, and practice with the goal of designing consummate learning experiences with seamless technology integration for all students. Application of technology and learning theory to planning for instruction is included, with specific focus on setting outcomes for learning. Prerequisites: Admission to the teacher education program, EDUC301.

### **EDUC410**

#### **Corrective Reading in the Classroom**

**(3,0) 3**

This course considers methods for the classroom diagnosis of students' reading strengths and weaknesses. Techniques for planning and implementing corrective and remedial interventions based on diagnosis are presented and applied. Fieldwork required. Prerequisite: EDUC330.

### **EDUC411**

#### **Elementary Language Arts and Literacy Skills**

**(2,0) 2**

This course studies methods of teaching language arts as literate activity and the use of a research base for the social context of children's learning. Emphasis is on the emergence of literacy in elementary students. Fieldwork required. Prerequisites: EDUC415, admission to teacher education program.

### **EDUC415**

#### **General Instructional Methods**

**(2,0) 2**

This course provides opportunities to study and apply research-based instructional methodologies to facilitate effective learning with an emphasis on differentiation and authentic assessment. Fieldwork required. Prerequisites: Admission to the teacher education program, EDUC350.

### **EDUC420**

#### **Math Methods for Elementary Teachers**

**(2,0) 2**

This course studies strategies and methodologies that facilitate effective

mathematics instruction. Students develop and present mathematics lessons and units using national, state and local standards in planning instruction and assessment. Emphasis is placed on effective integration of technology in learning and assessment. Fieldwork required. Prerequisites: MATH103, MATH104, EDUC415 and admission to teacher education program.

### **EDUC421**

#### **Science Methods for Elementary Teachers**

**(2,0) 2**

This course studies strategies and methodologies that facilitate effective science instruction. Students develop and present science lessons and units using national, state and local standards in planning instruction and assessment. Emphasis is placed on effective integration of technology in learning and assessment. Fieldwork required. EDUC415 and admission to teacher education program.

### **EDUC422**

#### **Social Studies Methods for Elementary Teachers**

**(2,0) 2**

This course studies strategies and methodologies to facilitate effective social studies instruction. Students develop and present social studies lessons and units using national, state and local standards in planning instruction and assessment. Emphasis is placed on effective integration of technology in learning and assessment. Fieldwork required. Prerequisites: EDUC415 and admission to 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**

#### **English Language Arts Methods for Secondary Teachers**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific language arts and English content. Students develop and present English lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC442**

#### **Math Methods for Secondary Teachers**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific mathematics content. Students develop and present math lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC443**

#### **Science Methods for Secondary Teachers**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific science content. Students develop and present science lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC444**

#### **Social Studies Methods for Secondary Teachers**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific social studies content. Students develop and present social studies lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC445**

#### **Teaching Computer Science in the Secondary Classroom**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific computer science content. Students develop and present computer science lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC447**

#### **Theories and Methods of Teaching World Languages**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific world language content and second language acquisition. Students develop and present lessons and units using national, state, and local standards for planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC451**

#### **Directed Study in English Language Arts Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific language arts and English content. Students develop and present English lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC441. Prerequisite: EDUC415 or EDUC430.

### **EDUC452**

#### **Directed Study in Math Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific mathematics content. Students develop and present mathematics lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC442. Prerequisite: EDUC415 or EDUC430.

### **EDUC453**

#### **Directed Study in Science Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific science content. Students develop and present science lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC443. Prerequisite: EDUC415 or EDUC430.

### **EDUC454**

#### **Directed Study in Social Studies Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific social studies content. Students develop and present social studies lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC444. Prerequisite: EDUC415 or EDUC430.

### **EDUC455**

#### **Directed Study in Computer Science Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific computer science content. Students develop and present computer science lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC445. Prerequisite: EDUC415 or EDUC430.

### **EDUC457**

#### **Directed Study in World Language Teaching Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific world language content and second language acquisition. Students develop and present lessons and units using national, state, and local standards for planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC447. Prerequisite: EDUC415 or EDUC430.

### **EDUC460**

#### **Classroom Management**

**(2,0) 2**

This course focuses on effective classroom management techniques essential to creating a positive, democratic learning environment. Exploration of management

techniques and theories leads to a development of personal classroom management system to help students become responsible for their behaviors and choices.

Prerequisite: EDUC415.

### **EDUC480**

#### **Directed Teaching Seminar**

**(2,0) 2**

This seminar provides a forum for students in the Directed Teaching experience 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.

### **EDUC492**

#### **Directed Teaching**

**10**

This course is a full-time teaching practicum under the direction and mentoring of a k-12 cooperating teacher. Evolution from observation and facilitation of small group activities, to whole-class instruction of a full-time teaching load in an area school. Emphasis is placed on maintaining classroom communities that ensure equitable access to important knowledge and skills. Grading will be CR/NC. Prerequisites: Admission to student teaching internship. Corequisite: EDUC480.

### **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 examine 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.

### **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.

## **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 at 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.

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## **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. Emphasis is placed on digital circuit design and contemporary programmable logic concepts. Prerequisite: EGNR101 or EGNR103. Pre or Corequisite: MATH111 and MATH131.

### **EGEE210**

#### **Circuit Analysis**

**(3,3) or (3,3,1) 4**

This course is an introduction to the analysis of linear circuits. Topics include: basic circuit elements and their terminal relations, Kirchoff'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 or 103.

### **EGEE250**

#### **Micro-Controller Fundamentals**

**(3,3) 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**

**(4,0,0) or (4,0,1) 4**

The course introduces mathematical techniques used in the design and analysis of analog and digital signal processing systems. Topics include complex numbers, phasor representation of sinusoids, spectral representations, convolution, frequency response, sampling and reconstruction, Fourier series and Fourier transform, and the use of MATLAB as a signal processing tool. Prerequisites: MATH152 and EGNR140.

### **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, EGEE280. 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 or (3,3,1) 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 and PHYS232. Pre- or corequisite: MATH310.

### **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.

### **EGEE370**

#### **Electronic Devices**

**(3,3) (3,3,1) 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 with a C or better grade, EGEE210 with a C or better grade, and MATH152.

### **EGEE411**

#### **Power Distribution and Transmission**

**(3,0) 3**

This course provides an introduction to the analysis and design of systems that carry electrical power from the point of generation to the point of use. Topics include mathematics and techniques of power flow analysis, ground-fault analysis, transient stability analysis, analysis of large power system networks, and the use of power system simulation software. Prerequisites: MATH152, EGEE210, and EGEE280.

### **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.

**EGEE475**

**Power Electronics**

**(3,3) 4**

This course provides an introduction to electrical power processing. The general topics include various electronic power switching circuits including: AC-DC rectifiers, DC-DC converters and DC-AC inverters. Additional topics include applications of power switching circuits as well as characteristics of power semiconductor devices. Prerequisites: EGEE280, EGEE370, and MATH251.

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**EGEM220**

**Statics**

**(3,0) or (3,0,1) 3**

A study of theory and application of engineering mechanics principles with emphasis on vector analysis, free body diagrams, properties of areas, and problem solving. This emphasis includes applying principles of equilibrium to particles and rigid bodies. Prerequisite: EGNR140. Pre, or Corequisites: MATH152 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.

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**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: MATH111 and MATH131 each 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-an-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.

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### **EGME110**

#### **Manufacturing Processes**

**(2,3) 3**

An introduction to basic manufacturing processes. Both theory and applications of various processes are covered in lecture and laboratory. Topics include: machining processes, welding and related processes, metal forming processes, and plastic forming processes. Included in machining processes is a limited scope computer aided design and computer numerical control project. The topics of measuring instruments and laboratory safety will also be addressed in the lecture and laboratory. Completion of a high school trigonometry course is expected for enrollment. Co-requisite or Prerequisite: EGME141 and MATH111 (or equivalent/satisfactory score on ACT/SAT, or Placement Exam) or Permission of Instructor.

### **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, dimensioning, assemblies, and constraining. An introduction to animation of assemblies is also included. Pre- or Corequisite: MATH102.

### **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, EGME141, MATH131 and sophomore standing.

### **EGME275**

#### **Engineering Materials**

**(3,0) 3**

A study of the 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 or (CHEM108 and CHEM109). Pre- or corequisite: EGME225 or EGME225.

### **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 EGME225 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 their 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 is also covered. Laboratory content includes an introduction to a commercial vehicle dynamics software package. Prerequisites: PHYS221 or PHYS231. Pre- or corequisites: EGME220 or EGME225.

### **EGME312**

#### **CAM with CNC Applications**

**(2,3) 3**

Writing CNC programs in machine codes, and the setup and trial runs to produce parts from these programs. Simulation of CNC machining processes to predict tool paths and cycle times. Computer-aided manufacturing (CAM) topics and applications of CAM software will also be covered. Prerequisites: EGME110, EGME141, MATH131.

### **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**

**(3,0) 3**

A study of the theory and applications of fluid statics and fluid dynamics. Topics covered include: hydrostatics, buoyancy and stability, Bernoulli and energy equations, dimensional analysis, flow in pipes, pumps, potential flow, open-channel flow, introductory gas dynamics, integral and differential analysis of flow, exact and approximate solutions of the Navier-Stokes equations, and computational fluid dynamics (CFD). Prerequisites: EGEM220, MATH251, MATH310.

### **EGME350**

#### **Machine Design**

**(3,3) 4**

Design and selection of machine components and power transmission units. Selected topics in load, stress, and deflection analysis in more depth than EGME225, notably (but not exclusively) torsion of thin-walled sections, thick-walled pressure vessels, interference fits, buckling problems by eigenvalue analysis, and Castigliano's theorems. Deterministic and stochastic theories of static failure, dynamic loading, and fatigue. Performance analyses of machine components, such as shafts, bearings, gears, worms, fasteners, and belt/chain drives. Laboratory covers finite element analysis using commercial software, and involves a major group design project. Prerequisites: EGME141, 225, 275, and 276. Pre-or Corequisite: MATH310.

### **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: EGEM320, EGNR340 and EGME310.

### **EGME425**

#### **Vibrations and Noise Control**

**(3,2) 4 or (3,2,1) 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, EGEM320, EGNR340, MATH251 and 310.

### **EGME431**

#### **Heat Transfer**

**(3,0) 3 or (3,0,1) 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.

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### **EGMF110**

#### **EGMF110 Introduction to Machining I**

**(2,6) 4**

Students will receive instructions on shop safety, blueprint reading, measuring instruments, layout principles, and basic bench work. They will also receive instructions on grinding, lathes, drill presses, saws, and basic milling. Some metallurgical concepts are introduced. The course will make use of the Machinery's Handbook and apply the principles, concepts, and data in the handbook to industrially related projects. Information from the handbook will be used to ensure proper set-up and operation of the machinery. Students will spend several hours each week setting up, working, and familiarizing themselves with the machines.

### **EGMF130**

#### **EGMF130 Introduction to Machining II**

**(2,6) 4**

This course builds up upon the material presented in EGMF110. Students will receive additional instruction on shop safety and measuring techniques relative to the machinery introduced in this course. Additional topics on vertical and horizontal milling machines, surface grinders, metallurgy, and blueprint reading are covered.



The Machinery's Handbook will continue to be used in conjunction with the machines utilized in this course. Students will spend several hours each week setting up, working, and familiarizing themselves with the machines. Prerequisite: EGMF110.

### **EGMF210**

#### **EGMF210 Advanced Machining**

**(2,6) 4**

In this course, students will write CNC programs in machine codes, and then setup and run CNC machines 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. Students will be able to describe the sequence and operations for a part program, determine the tools required for machining, calculate speeds and feeds, set-up tooling on CNC machines, develop CNC programs using standardized formats, and use CAM software to produce three dimensional parts. Prerequisites: EGMF110 or EGME110, and MATH102. Pre- or corequisite: EGMF130.

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### **EGMT142**

#### **EGMT142 An Overview of Solid Modeling Techniques**

**(1,2) 2**

This course will cover an application of solid modeling software techniques to create parts and assemblies. Topics covered include creating sketches; creating parts with extrude, revolve, blend, and sweep; creating part features with round, chamfer, pattern, mirror; use of the part history tree; dimensioning of parts; building of assemblies; creation of parts from 2D drawings; creating 2D drawings from solid models of parts and assemblies; and an introduction to animation of assemblies. Prerequisites: Previous CAD course and permission or instructor.

### **EGMT225**

#### **EGMT225 Statics and Strength of Materials**

**(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: MATH111 and MATH131 each with a C or better and PHYS221.

### **EGMT332**

#### **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.

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### **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 studied. Prerequisite: MATH131. Pre- or Co-requisites: MATH112 or MATH151.

### **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) 2**

A practicum in which students work in a supervised engineering capacity (on site) with industry. The student is expected to work at least 6 hours per week in an industrial setting. The student's experience must be related to his/her academic studies and thus this experience contributes significantly to his/her professional development. May be repeated for a maximum of 4 credits. 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.

### **EGNR261**

#### **Energy Systems and Sustainability**

**(3,0) 3**

The course provides an introduction to energy conversion systems and discusses issues related to the sustainability of each system. Topics include basic energy definitions, traditional energy resources and reasons for pursuing alternative energy resources, renewable and nonrenewable energy resources, energy storage, and electrical grid integration. Topics also include policy as well as social, economic, and environmental sustainability issues as they relate to energy conversion. Prerequisite: MATH102 or equivalent.

### **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: MATH111 and MATH131 and sophomore standing.

### **EGNR310**

#### **Quality Engineering**

**(3,0) 3**

Provides a coverage of classical and modern methods of quality control and quality engineering. Topics include quality control principles and terminology, classical qualitative and quantitative quality control methods, including statistical process control procedures, robust design methods as applied to product design and design of experiments, and an overview of quality management systems used in industry. Pre- or Corequisites: MATH207 or MATH308.

### **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 Corequisites: MATH310 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.

### **EGNR361**

#### **Energy Systems and Sustainability Lab**

**(0,3) 1**

The course explores the technical and implementation aspects of sustainable energy systems. Students will design, construct, and/or analyze various energy conversion systems. They will also design and implement subsystems that can store energy and construct connections between energy sources, energy storage subsystems, and the electrical grid. Prerequisites: (CHEM108 or CHEM115), (EGET110 or EGEE210), MATH131 or higher, excluding MATH207, (PHYS221 or PHYS231); Pre/Corequisite: EGNR261.

### **EGNR362**

#### **Vehicle Energy Systems**

**(2,3) 3**

An introduction to vehicle power train energy systems and both battery and fuel cell electric/hybrid systems. Other topics include vehicle drive profile calculations, torque and speed coupling, and safety considerations. Vehicle topics also include cars, trucks, and off-road hybrid systems. Laboratory activities include CAN and other communication and information systems, and vehicle performance analysis and simulations using Excel, Simulink, and CANoe. Lab activities include using the chassis vehicle dynamometer with external instrumentation, CAN and OBD-based data acquisition. Prerequisites: (PHYS221 or PHYS231), (EGEE210 or EGET110) and pre/corequisite: EGNR265.

### **EGNR450**

#### **Cooperative Education Project I**

**(4) 4**

A practicum in which students work in a supervised engineering capacity (on site) with industry. This is the first of a two-part 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. The expectation is that at least 60% of a forty hour work week is devoted to completing the project. Prerequisite: EGNR250 Cooperative Education.

### **EGNR451**

#### **Cooperative Education Project II**

**(3) 3**

A practicum in which students work in a supervised engineering capacity (on site) with industry. This is the second of a two-part sequence that can replace the senior year Engineering Design Project II (EGNR495). The focus of this course is the completion of the co-op project. The documentation at the completion of the project includes an update presentation and a final report/final presentation. The expectation is that at least 60% of a forty hour work week is devoted to completing the project. Prerequisite: EGNR450 Cooperative Education.

### **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: senior status, EGNR260 and permission of instructor. Students who plan to take EGNR461 must complete both EGNR460 and EGNR461 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.

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### **EGRS215**

#### **Introduction to Robotics**

**(1,2) 2**

An introduction and orientation to the field of robotics. Challenges in robotics manufacturing, design and structure of robotic systems, classification of robots, robot geometry, power sources, robotic control systems are covered in this course. The lab part of the course will provide an overview of robotics applications in industry through videos and hands-on experiences. Applied laboratory topics will cover basic programming concepts, structures, and applications using industrial 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**

**(2,0) 2**

This course will cover topics relative to robotics and robotics 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: MATH111 and MATH131 with grade of C or better, and PHYS221.

### **EGRS381**

#### **Robotics Technology Lab**

**(0,3) 1**

Laboratory exercises will provide hands-on examples in the use of industrial robots. Focus will be on learning a structured robotics programming language. Applications and projects will simulate industrial situations as well as emphasize system integration. Prerequisites: EGNR265. 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**

**(3,3) 4**

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 EGRS385, and EGNR265 or CSCI121.

### **EGRS435**

#### **Automated Manufacturing Systems**

**(2,3) 3**

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. Prerequisites: 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, EGEM220 and EGEE210. Pre- or co-requisite: EGNR340.

### **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. 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, EGRS381 or EGRS382, and MATH112 or MATH151 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 co-requisite: 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.

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### **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 pharmaco-dynamics, 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.

### **EMED490**

#### **Independent Study for Emergency Medicine**

**(1-3,0) 1-3**

This may take the form of either a research project or a program of directed reading on a specific subject. One to three 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: Permission of Instructor.

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### **ENGL091**

#### **Prep College Writing**

**(3,0) 3**

This course is designed to give students who have limited experience with writing an opportunity to increase their confidence as writers, and to improve their command of the written language. The course is appropriate for students who find writing to be difficult or confusing. Students write weekly, with much of the instruction taking place as students learn to revise and edit their own work. Students completing the course will be able to write successful essays that represent complex approaches to different topics. 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/SAT 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 or a C or higher in ENGL091.

**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**  
**Introduction to Creative Writing**  
**(3,0) 3**

Writing and discussion of art forms such as poetry, fiction and drama consistent with the students individual interests. Co-requisite: ENGL110.

**ENGL222**  
**English Grammar & Language in Context**  
**(3,0) 3**

This course requires students to master the vocabulary and principles of standard English grammar related to sentence structure and the production of meaning. Students will also analyze and evaluate prescriptive and descriptive conventions of usage, the history and cultural influences of the English language, and its regional

and social variations. Prerequisites: A grade of C or higher in ENGL110 and ENGL111.

### **ENGL223**

#### **Creative Writing II**

**(3,0) 3**

Through writing and discussion, students will study and practice more advanced elements of poetry, prose, and drama. Prerequisite: ENGL221.

### **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.

**ENGL301**  
**Creative Prose Writing**  
**(3,0) 3**

This course is a workshop for the study and practice of prose fiction, creative non-fiction, and other prose forms, and requires the completion of a final portfolio. Prerequisite: ENGL221.

**ENGL302**  
**Poetry Writing**  
**(3,0) 3**

This course is a workshop for the study and practice of poetry, and requires the completion of a final portfolio. Prerequisite: ENGL221.

**ENGL303**  
**Performance Writing**  
**(3,0) 3**

This course is a workshop for the study and practice of writing for performance, including plays, film scripts, and other performance genres, and requires the completion of a final portfolio. Prerequisite: ENGL221.

**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.

**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.

### **ENGL335**

#### **Children's Literature**

**(3,0) 3**

This course focuses on understanding the historical, cultural, and generic dimensions of children's literature, with emphasis on critical reading, literary analysis, and the selection and evaluation of texts for children and young adults. Pre- corequisites: ENGL111 or COMM101.

### **ENGL336**

#### **Young Adult Literature and Culture**

**(3,0) 3**

This course focuses on understanding the historical, cultural, and generic dimensions of young adult literature, with emphasis on critical reading, literary analysis, and selection and evaluation of culturally diverse texts for children and young adults. Prerequisite: ENGL180.

### **ENGL345**

#### **Studies in Classic Texts**

**(3,0) 3**

Readings in literature, beyond North American traditions, that have possessed profound influence or reach throughout history, including theoretical and critical approaches to these texts, examining form, theme, and genre. Includes classic Greek drama, classic British literature from the Anglo-Saxon period through the twentieth century, Shakespeare, mythology, folklore, and world literature in translation. Prerequisites: ENGL111, ENGL180.

### **ENGL380**

#### **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. This course prepares students for advanced studies in literature. Prerequisite: Either ENGL233 and ENGL234 or ENGL231 and ENGL232.

### **ENGL398**

#### **Community Workshop Internship**

**(3) 3**

This is an internship designed to provide students with an opportunity to earn credit while obtaining meaningful work experience leading a creative writing community workshop. 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 6 credits total. Prerequisite: ENGL223, a 2.50 gpa in the major, and permission of the instructor.

### **ENGL399**

#### **Publishing Internship**

**1-2 1-2**



This course is designed to provide students with an opportunity to earn credit while obtaining meaningful work experience in English or publishing 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 up to four times at 1-2 credit hours for a maximum of 3 credit hours with each LSSU publication, up to 6 credits total. Prerequisite: 2.5 GPA in major and permission of the instructor.

### **ENGL409**

#### **Advanced Writing Workshop**

**(3,0) 3**

This course is a workshop for advanced level writing in a variety of genres, with emphasis on students doing sustained work in a chosen genre, and requires the completion of a final portfolio. Prerequisites: Two courses from ENGL301, 302, or 303.

### **ENGL435**

#### **Studies in Visual Texts**

**(3,0) 3**

Theoretical and critical approaches to visual texts, with the focus on graphic novels and film, examining form, theme, and genre and the production and interpretation of meaning in visual media. Prerequisites: ENGL111, ENGL180.

### **ENGL440**

#### **Advanced Studies in British Literature**

**(3,0) 3**

Examination, implementing rigorous research and critical methods, of a notable period, genre, aesthetics, or movement in British literature. Prerequisite: ENGL380.

### **ENGL442**

#### **Advanced Studies in American Literature**

**(3,0) 3**

Examination, implementing rigorous research and critical methods, of a notable period, genre, aesthetics, or movement in American literature. Prerequisite: ENGL380.

### **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.

### **ENGL480**

#### **Creative Writing Portfolio I**

**(3,0) 3**

This is the first in a series of two capstone classes. Working with an English faculty member on an independent study basis, students will create proposals for book-length, unified collections of creative work of literary merit in chosen genres, and

make significant progress toward completion of the creative work. Prerequisites: Creative Writing Major, Senior standing, and ENGL409.

### **ENGL482**

#### **Creative Writing Portfolio II**

**(3,0) 3**

This is the second in a series of two capstone classes. Working with an English faculty member on an independent study basis, students will complete book-length, unified collections of creative work of literary merit in chosen genres. Prerequisites: ENGL480.

### **ENGL490**

#### **Senior Thesis I**

**(2,0) 2**

In consultation with an English faculty member, students will gather research and produce a bibliography and research proposal, as well as begin writing the thesis. This course is an independent study. Prerequisites: Literature or English Education major, senior standing, and ENGL380 or EDUC415.

### **ENGL499**

#### **Senior Thesis**

**(2,0) 2**

Completion of the thesis with focus on revising and editing of the final project. This course is an independent study. Prerequisite: ENGL490.

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### **EVRN131**

#### **Introduction to GIS and GPS**

**(2,2) 3**

This course provides a foundation in geographic information systems (GIS) such as data types, cartography, queries, classification, geoprocessing, basic editing, basic raster analysis and map overlay. The theory and operation of GPS receivers and data integration with GIS is covered in multi-week student initiated projects. Prerequisites: None.

### **EVRN231**

#### **Intermediate GIS**

**(1,3) 2**

This course will survey the rapidly growing GIS industry, consider many important principles guiding GIS use and development, and provide the student with hands-on experience. Emphasis will be on geospatial analysis techniques, geodatabase, system design, remote sensing, and provide an introduction to advanced topics. After successfully completing this course, students should come away with a clear understanding of GIS analyses, the issues affecting how a GIS is used (and misused), how to review GIS research, how GIS research is written, and an appreciation for how GIS can contribute to a wide variety of disciplines and research interests. Prerequisite: EVRN131 or equivalent.

### **EVRN289**

#### **Aquatic Research Sampling Methods**

**(2,3) 3**

A variety of sampling techniques are introduced as they relate to the various disciplines of aquatic science. These methods include sampling and preservation of biotic (plankton, fish, benthic invertebrates, DNA, pathogens) and abiotic (water quality, sediments, climate) data. Prerequisites: BIOL107, CHEM108 and 109, MATH111, and permission of instructor. Also listed as BIOL289.

### **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.

### **EVRN317**

#### **Environmental Health Applications**

**(3,3) 4**

A systems approach addressing the factors that contribute to illness, injury, or death, and that affect the health status of individuals and populations. Topics include: environments within buildings, food sanitation, recreation facilities, personal services, and community noise and control. The laboratory emphasizes methods of measuring and evaluating environmental health risks as well as field experience. Prerequisite: One semester of chemistry and NSCI103 or permission of instructor.

### **EVRN325**

## **Geospatial Analysis**

**(2,3) 3 alternate years**

A project-centered course incorporating advanced GIS tools, GPS field work, and data sources for geospatial analysis. This class focuses on a wide range of issues relating to the raster data model, and Digital Elevation Data (DEM) and satellite imagery. The majority of the class will be devoted to 1) surface derivatives including slope, aspect, and drainage; 2) modeling; and 3) error and uncertainty. This is a hands-on course, and the student will use a variety of software tools to experience model development, analysis, and visualization. There will be a semester project and a number of mini-projects. Prerequisites: EVRN131 and a 200 level or higher course in statistics.

## **EVRN341**

### **Environmental Chemistry I**

**(3,3) 4 alternate years**

A study of the environmental chemistry of the hydrosphere, atmosphere, lithosphere, and biosphere, the measurement and remediation of water and air quality problems, the toxicology of water and air pollutants, and the environmental aspects of energy use. Prerequisites: CHEM225, CHEM231 and NSCI103. Also listed as CHEM341.

## **EVRN345**

### **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: EVRN131 and a course in statistics.

## **EVRN355**

### **GIS Programming and Applications**

**(3,3) 4**

This course expands the students' skills regarding object oriented programming and customization of GIS software to extend functionality and automative repetitive tasks. Emphasis will be placed on ArcObjects and object model diagrams. Prerequisites: CSCI105 and EVRN131.

## **EVRN395**

### **Junior Seminar**

**(1,0) 1**

Literature searching, scientific writing, and oral presentation of scientific data. Students will be expected to listen to presentation of peers enrolled in EVRN/CHEM499 and develop a topic for their senior thesis. Prerequisite: Junior standing. Note: Also listed as CHEM395.

## **EVRN399**

### **Internship in the Environmental Sciences**

**1-4 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. Work hours and activities must be documented daily and approved by both the on-site supervisor and the instructor to receive credit. The course may be repeated for a maximum of four credits. Prerequisite: 2.5 GPA in major, Junior standing and permission of chair at least one semester in advance of registering for the course.

### **EVRN425**

#### **Environmental Systems Analysis**

**(3,3) 4 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. Discussion of solid, liquid, and hazardous wastes from a macro- and microscopic approach will be included. Prerequisite: CHEM341. Pre- or corequisite: EVRN313.

### **EVRN450**

#### **Laboratory Apprentice**

**(0,3) per credit 1-2**

Students will assist in laboratories, learning instructional techniques, under direction of faculty. Course may be repeated for a maximum of two credits. Students must gain approval of the faculty member in charge of the specific laboratory, and the department chair. Credits may be used as EVRN electives.

### **EVRN465**

#### **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: EVRN131 and either EVRN231 or CSCI211.

### **EVRN490**

#### **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.

### **EVRN495**

## **Senior Project**

**(0,6) 2**

This is a 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. This course will be required for a degree certified by the American Chemical Society. This course may not be repeated for credit. Prerequisites: EVRN395 (also listed as CHEM395), CHEM231, and CHEM225. Dual listed as CHEM495.

## **EVRN499**

### **Senior Seminar**

**(1,0) 1**

Required for seniors majoring in chemistry/environmental science. Students will present the results of their scholarly research. Students who have completed EVRN495/CHEM495 will be required to give poster and oral presentations to the University community as part of this class. Pre- or corequisite: EVRN395 (dual listed as CHEM495). Dual listed as CHEM499.

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## **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. 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 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.

### **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.

### **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: EXER262.

**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.

#### **EXER446**

##### **Exercise Prescription and Testing for Special Populations**

**(3,0) 3**

This course provides a framework for developing exercise programs for individuals with disease, disabilities, or special health issues. The course will focus on exercise prescription through management of problems created by disease of the cardiovascular, pulmonary, metabolic, musculoskeletal, neuromuscular, and immunological systems. It includes a review of the basic principles of exercise testing and exercise prescription and builds on that foundation. Also covered are methods for assessment of functional capacity of individuals with the most common health conditions presented to exercise scientists. This course fits with the new Registry for Clinical Exercise Physiologists and the American College of Sports Medicine guidelines and will provide students with the necessary skills and knowledge for employment in a clinical setting. Prerequisites: EXER358 and 444.

#### **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. Prerequisites: Junior standing and instructor permission.

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**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 and BUSN211.

## **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.

## **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. Prerequisite: FINC341.

## **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. Prerequisite: FINC341.

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## **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.

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### **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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam and FIRE101 or FIRE102, or BIOL102 or BIOL140 or BIOL286 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, FIRE111, FIRE204 and MATH088 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.

### **FIRE219**

#### **Firefighter Essentials**

**(3,0) 3**

This course is the first part of a two class sequence; the second part of the sequence is FIRE220. This course will cover the principles of firefighting attack skills through the practical instruction and exercises as outlined by the Michigan Firefighters Training Council (MFFTC). This course introduces the student to the application of the principles of fire attack and strategy for Firefighter I certificate and portions of Firefighter II 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 and 111. Corequisites: FIRE197, 204, and 206. Completion of special medical examination.

### **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, FIRE111, FIRE197 and FIRE204. Corequisites: FIRE206 and FIRE211. 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, formulations and its relation to fire prevention and public education efforts and responsibilities of the fire service. Prerequisites: FIRE111, FIRE206 and Junior Standing.

### **FIRE309**

#### **Fire-Related Human Behavior**

**(3,0) 3**

This course will provide students the knowledge to understand how humans behave in fire and emergency situations, and how that behavior is integrated into life safety systems development and design. Students will study past and present research on human behavior, life safety models, building design, and life safety education. Students will develop an understanding how to analyze possible outcomes as it relates to human survivability in fire and emergency situations. Pre- or Co-requisites: FIRE101, FIRE206, and FIRE301, or permission of instructor.

### **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: 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: FIRE101, FIRE111, FIRE204, FIRE206 and FIRE211.

### **FIRE325**

#### **Homeland Security and Emergency Services**

**(3,0) 3**

This course will prepare all graduates from a variety of majors to understand how homeland security impacts the US political system as a whole, but especially from the standpoint of emergency response and preparedness. 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. Prerequisite: Junior standing. Students from other majors are encouraged to enroll with permission of instructor. 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: 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. Prerequisite: 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: 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. Prerequisite: Permission of instructor.

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**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 DELF (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 DELF. 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 FREN351. Prerequisite: FREN252 or equivalent.

### **FREN356**

#### **Survey of French Literature II**

**(3,0) 3**

Continuation of FREN355. Study of major works of French literature of the 19th and 20th centuries. Text analysis and discussion. May be taken concurrently with FREN352. 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.

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## **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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam. 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: MATH088 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.

### **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.

### **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.

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### **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 GEOL121.

### **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 GEOL121.

### **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. Pre- or corequisites: GEOL121 or NSCI102 or GEOL115.

### **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: GEOL121 or NSCI102. Pre- or corequisites: GEOL122 and CHEM115.

### **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. Prerequisites: GEOL218 and GEOL223.

### **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 tectonic environments in which these processes occur. A pre-semester one-week field trip and weekend field trips may be required. Prerequisites: GEOL218 and GEOL223.

### **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. Prerequisites: GEOL218 and GEOL223.

### **GEOL380**

#### **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 GEOL223.

### **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: GEOL218. Pre- or corequisites: MATH112 or MATH151 and PHYS221 or PHYS231.

### **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: GEOL122, GEOL218 and one GEOL course at the 300 level or above.

### **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. Prerequisite: Two GEOL courses at the 300 level or above.

### **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: Two GEOL courses at the 300 level or above.

### **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: GEOL380 and one additional GEOL course 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.

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**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.

**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.

**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.

**HIST321**

**History of Michigan**

**(2,0) 2**

The History of Michigan is a survey course that will include an examination of the geology, geography, and history of the state. This course will also study the role of citizens, events, issues, and their impact on the development of Michigan as well as the larger developments in the United States during the Jacksonian Period, the Civil War Period, the Period of Rapid Industrialization and Urbanization, the Period of 1914 to 1945, the Period 1950 to the Present, the Period of Industrial Expansion and Decline, and the Post-Vietnam War Period of Globalization. The major political, economic, social, and cultural movements and developments of these historic periods will be examined.

**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.

### **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 the role in the change of problems of U.S.-Latin American relations will be an important focus of this study. Prerequisite: GEOG322 geography of South America.

### **HIST371**

#### **Far East Civilization: 1850 to Present**

**(4,0) 4 Odd numbered years**

A study of the history of China, Japan, India and adjoining areas of Asia from 1850 to present.

### **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 year**

American diplomacy from the entry of the U.S. into World War I in 1917 up through 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 minor in history.

**HIST497  
Senior Seminar in History**

**(0-6) 2 Spring**

Students will complete a historical research project under the supervision of a faculty member; at end of term participants make oral presentation at seminar for other students and invited guests, and submit the final paper. Prerequisite: HIST496 and instructor permission.

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**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 alternate years**

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.

**HLTH208  
Principles of Human Nutrition**

**(3,0) 3**

Fundamentals of human nutrition and nutrition therapy are presented in relation to human body function in wellness and illness. With a special focus across the lifespan, content from this course begins to build a foundation for the interpretation of diet regimes and diet formulations for patients with nutritional needs. This course

is required for all nursing students. Prerequisites: BIOL122 or BIOL105 with a grade of C or better.

### **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**

**(2,0) 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 alternate years**

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 and junior level status. Also listed as NURS352.

## **HLTH452**

### **Contemporary Issues in Nutrition**

**(3,0) 3 alternate years**

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.

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## **HONR101**

### **Honors First-Year Seminar (variable topics)**

**(1-2,0) 1-2**

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, HONR202 and HONR302. Students must present a fully developed proposal to the Honors Council for approval before enrolling in HONR401 or its equivalent in their major.

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## **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**

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 arts, language, religion, mythology, philosophy and ancient Chinese and Indian systems of religious thought. Prerequisite: ENGL110.

**HUMN252**

**Humanities II**

**(4,0) 4 fall, spring,**

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.

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### **INTB375**

#### **International Business Law**

**(3,0) 3**

The course provides an introduction to the environment of international business and law. It will focus on the foundations and principles of the international legal environment and international legal systems. The course covers the law on international trade. It allows the student to understand government foreign trade policies, the law concerning international business transactions, importing, exporting, transportation and logistics. This course covers a range of legal issues involved in conducting international business, surveying some of the many issues encountered in intellectual property and licensing, and the taxation of international business transactions.

### **INTB389**

#### **Competing in the Global Market Place**

**(3,0) 3**

This course presents a systematic overview of international business and provides an introduction to important issues, including international trade policy, the global monetary system, and strategies of international business. Additionally, the course will look at management practices of international business, including: organizational structure of multinational organizations, production and logistics, human resource management, and financial management.

## **INTB420**

### **International Comparative Management**

**(3,0) 3**

This course in international comparative management will examine important trends impacting international business as well as the major and developing players in the international economy. The course will examine the stage on which international management is conducted, which includes political, legal and socio-cultural systems as a backdrop. The course will cover how firms develop and execute their international strategies and how they stay ahead of their competitions, once they do. An important aspect for the success of international companies is HR (Human Resources). The course will explore how firms can build an outstanding international workforce through selecting and motivating employees as well as dealing with a host of related human resource management issues, such as compensation, performance appraisal, training and development and labor relations from an international perspective. Prerequisites: MGMT360 or special permission of instructor.

## **INTB486**

### **International Marketing**

**(3,0) 3**

The International Marketing course examines the scope, challenge and dynamic environment of international marketing. This course will provide an understanding of the cultural environment of global markets, global opportunities and the development and implementation of global marketing strategies. Challenging decisions must be made in international marketing objectives-strategies-policies, regional & country market selection, products that fit regions-countries, multiple distribution channels, communications to fit each global region, management models & organizations per region-country, knowledge-information-data management, exploration of cultural issues, competition, economies, and customers. Prerequisites: MRKT281 or permission of instructor.

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## **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.

### **INTD410**

#### **Foreign Study**

**3-16 3-16**

Individual extension added based on student's program. (Graded)

### **INTD420**

#### **Foreign Study**

**3-16 3-16**

Individual extension added based on student's program. 3-16 credit/no credit

### **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).

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### **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.

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### **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.

## **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.

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## **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.

## **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 LAWS125.

## **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.

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## **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.

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**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.

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**MATH087**

**Pre-Algebra**

**(3,0) 3**

Basic operations and problem solving using whole numbers, rational numbers (including decimals, ratios and percents) and integers. Solving problems related to measurement and geometry. Credit in this course does not apply toward graduation. Prerequisite: None.

**MATH088**

**Beginning Algebra**

**(3,0) 3**

An introduction to algebra, algebraic expressions and solving of elementary equations and inequalities. Manipulation and graphing of equations in two variables as well as solving systems of equations in two variables. Multiplying, factoring and manipulating polynomial expressions. Credit in this course does not apply toward graduation. Prerequisite: MATH087.

**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 MATH088 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 for Elementary Teachers**

**(3,2) 4**

General notions of problem solving and number theory for elementary teachers including sets, functions, numeration systems, and properties and operations of whole numbers, integers, fractions and decimals, and proportional reasoning. Prerequisite: Equivalent/satisfactory score on ACT or Placement Exam, or MATH102 with a grade of C (2.00) or better.

### **MATH104**

#### **Geometry and Measurement for Elementary Teachers**

**(3,2) 4**

Basic notions of geometry for elementary teachers including constructions, congruence and similarity, motion geometry, symmetry and tessellations. Concepts of measurement, coordinate geometry, probability and data analysis. 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: MATH088 or equivalent score on ACT or Placement Exam.

### **MATH111**

#### **College Algebra**

**(3,0) 3**

This course is a study of families of functions through formulas, tables, graphs and words, emphasizing applications in business, life and social science. The function families include linear, polynomial, rational, exponential, logarithmic and power functions. Within these families, topics include problem solving, model creation, solving equations, systems of equations and inequalities, rates of change, graphing, analysis, and interpretation. Prerequisites: Two years of high school algebra and satisfactory achievement on the mathematics 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.

**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, or both MATH111 and 131 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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam. This course will not count toward a major or minor 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 MATH151 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 congruencies, 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.

**MATH401**

**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 Topics in 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**

**(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.

**MATH490**

**Individualized 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 nine credits. Prerequisite: Junior standing or higher and Permission of Instructor.

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## **MGMT280**

### **Introduction to Management Information Systems**

**(3,0) 3**

This course will introduce students to MIS theories including (1) Information Systems in Business and Society (information management in global society; security, privacy and ethical issues); (2) Information Technology Concepts (hardware technology, software technology, database management systems, network and internet technology); (3) Business Information Systems (automation and support systems, transaction processing systems, management information systems, decision support and expert systems, enterprise systems such as ERP); (4) Systems Development (systems investigation and analysis, systems planning development and implementation). Students will gain hands-on computer skills in advanced spreadsheet, database, and web technologies. Prerequisites: BUSN121 and ACTG132 with a grade of C or higher.

## **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. Prerequisite: Junior standing.

## **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. Prerequisite: Junior standing.

## **MGMT371**

### **Operations and Business Analytics**

**(3,0) 3**

This course introduces students to (1) Operations Management (operations strategy, operations design, operations planning & control, operations execution), (2) Supply Chain Management, and (3) Quantitative Business Analysis (linear programming, project scheduling including PERT and CPM, inventory modeling, statistical process control, queuing theory, simulation, decision analysis, time-series forecasting, advanced statistical analysis). Prerequisite: BUSN211 or equivalent.

## **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. Prerequisite: BUSN211 or statistics equivalent.

### **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. Prerequisite: MGMT360.

### **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. Prerequisite: Junior standing.

### **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.

### **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. Prerequisite: Junior standing.

### **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.

### **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.

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### **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.

### **MRKT379**

#### **Sports and Events Marketing**

**(3,0) 3**

A study of the theories, concepts, impacts, and contemporary issues unique to sports and events marketing, including the marketing athletes, teams, leagues, celebrities, entertainment, and special events. Prerequisite: MRKT281 or special permission of instructor.

### **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. Prerequisite: MRKT281.

### **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. Prerequisite: MRKT281.

### **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. Prerequisite: MRKT281.

### **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. Prerequisite: MRKT281.

### **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: 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.

**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: 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.

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**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**  
**Choir**  
**(0,3) 1**



Rehearsal and performance of representative literature for mixed choir in both classical and contemporary styles of choral music. May be repeated for a total of eight credits.

### **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.

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### **NSCI 101**

#### **Conceptual Physics**

**(3,2) 4**

A survey of basic physical science principles emphasizing their applications in daily life. Prerequisite: MATH088 or equivalent/satisfactory score on ACT or Placement Exam.

### **NSCI 102**

#### **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.

### **NSCI 103**

#### **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.

### **NSCI 104**

#### **Environmental Science Laboratory**

**(0,2) 1**

Laboratory component of environmental science. Corequisite: NSCI103.

### **NSCI 105**

#### **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.

### **NSCI 107**

#### **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.

### **NSCI 110**

#### **Investigations in Chemistry and Forensics**

**(3,2) 4**

An applied introductory chemistry course introduces the world of forensics focusing on the aspects of chemistry used during an investigation. This unique general education class will incorporate a criminal justice and fire science perspective while providing an introduction to chemical principles. Attention will be given to developing critical thinking skills, understanding the scientific process and to making scientifically informed decisions about every day events. Pre- or co-requisite of MATH102 (or higher) or equivalent/satisfactory score on ACT, SAT or Placement Exam.

### **NSCI 116**

#### **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.

### **NSCI 119**

#### **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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam.

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### **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.

### **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. Prerequisite: NURS327. Corequisite: NURS326. Pre-or Corequisite: NURS/HLTH328.

### **NURS326**

#### **Nursing of Children and Families**

**(3,6) 5**

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. Prerequisite: NURS327; Corequisite: NURS325. Pre- or Corequisite: NURS/HLTH328.

### **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: NURS213 (or NURS222), HLTH209 and BIOL223.

### **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. Prerequisites: PSYC155 and junior level status. 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, NURS325, NURS327, NURS326. 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. Prerequisites: For Pre-licensure BSN Majors: HLTH328, NURS325, NURS327, NURS326. Post-licensure Majors (RN-BSN): NURS363 and NURS365.

### **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, 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, NURS325, NURS326, NURS327.

### **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, NURS325, NURS327, NURS326, MATH207 or PSYC210.

### **NURS435**

#### **Management in Nursing**

**(4,0) 4**

Analysis of the leadership and management roles in professional nursing; focus is leadership/management theories basic to the planning, organizing, directing and controlling or 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: HLTH328, NURS325, NURS327, NURS326, Corequisite 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. Prerequisite: For Pre-licensure BSN Majors: HLTH328, NURS325, NURS327, NURS326. For Post-licensure Majors (RN-BSN): 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.

### **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.

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### **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.

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### **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 term 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 are 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 and 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 as 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.

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### **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, sophomore standing in EET course work, and MATH140 (which may be taken concurrently).

### **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.

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### **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 nursing student to dosage calculations and medication administration. Calculations for conversion between systems of measurement is covered. The seven rights of medication administration are emphasized. Categories of drugs, their actions, side effects and nursing implications are covered. Prerequisite: MATH086 or equivalent placement score. Admission to Practical Nursing program required or permission of instructor.

### **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.

### **PNUR107**

#### **Understanding Clinical Nutrition Lab for Practical Nurses**

**(0,3) 1**

This lab 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. 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 feeding, and the principles of enteral feeding, elemental diets, IV therapy and hyperalimentation are presented. Prerequisites: BIOL105 or BIOL122 passed with a C or better; HLTH208 passed with a C or better or corequisite of HLTH208.

### **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: MATH086 or equivalent, BIOL105 or BIOL122, and 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: HLTH208.

### **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.

**PNUR205**

**Maternal/Child Practical Nursing**

**(3,6) 5**

This course explores the family as the client beginning with the reproductive cycle, conception, fetal development, labor, birth and the care of the postpartum woman and newborn. At risk pregnancies and complications are identified. The course continues to address normal growth and development, immunizations, health risk factors, well-defined health problems common to children and their response to illness. Prerequisite: PNUR107, PNUR201, HLTH208, all with a grade of C or better.

**PNUR206**

**Ambulatory Care Practical Nursing**

**(3,6) 5**

The efficiency of a health care agency, and the quality of health care provided, depends in large part on the staff members who supplement and support the role of the provider for provision of quality patient care services. This course stresses strong interprofessional communication skills, organizational abilities, computer knowledge, and excellent human relationship skills in the ambulatory setting across the lifespan. Prerequisite: PNUR107, PNUR201, HLTH208, all with a C or better.

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**POLI 110**

**Introduction to American Government and Politics**

**(4,0) 4**

An introductory survey of American national government and politics.

**POLI 120**

**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.

**POLI 130**

**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.

### **POLI 160**

#### **Introduction to Canadian Government and Politics**

**(3,0) 3**

An introductory survey of Canadian government and politics.

### **POLI 201**

#### **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.

### **POLI 211**

#### **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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam.

### **POLI 222**

#### **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.

### **POLI 234**

#### **Women and Politics Around the World**

**(4,0) 4**

This course will examine a broad range of issues involving gender and politics: the political participation of women, the history of women's movements, voting differences, political divisions among women, and the present political status of women in the United States and globally.

### **POLI 241**

#### **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.

### **POLI 247**

### **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.

### **POLI 290**

#### **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.

### **POLI 301**

#### **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.

### **POLI 325**

#### **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.

### **POLI 331**

#### **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.

### **POLI 334**

#### **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.

### **POLI 342**

#### **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.

**POLI 351**  
**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.

**POLI 352**  
**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.

**POLI 367**  
**Congress and the Presidency**  
**(4,0) 4**

Examines the legislative and executive branches of government as parts of the policy-making process. Prerequisite: POLI110.

**POLI 401**  
**Principles of Public Administration**  
**(3,0) 3**

Examines major issues and methods in public administration. Analysis of specific public policy issues. Prerequisite: Advanced standing.

**POLI 411**  
**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.

**POLI 413**  
**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.

**POLI 420**  
**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.

**POLI 463**  
**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.

**POLI 467**  
**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.

**POLI 490**  
**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.

**POLI 491**  
**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.

**POLI 492**  
**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.

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**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.

**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: MATH088 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.

**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.

**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.

### **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.

### **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: PSYC212, PSYC311 and either PSYC210 or MATH207.

### **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. Co-requisite: PSYC495.

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### **READ091**

## **Preparation for College Reading**

**(3,0) 3**

Introduces reading strategies and study skills necessary for college success. Through integration of acquired knowledge and reading practice, students will develop strategies for vocabulary expansion, comprehension, critical thinking, and increase reading rate. Students must earn a minimum grade of C to pass the course. Credit received in this course does not count toward graduation. Prerequisites: none.

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## **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.

## **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.

## **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.

## **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.

### **RECA190**

#### **Aquatic Fitness**

**(0,2) 1**

This course will introduce students to developing cardiovascular fitness, muscular strength and muscular endurance through aquatic activities as an alternative to weight bearing forms of exercise. Water related exercises and activities will be utilized to improve physical fitness. Individuals of all fitness levels will enjoy getting fit in the water.

### **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.

### **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.

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### **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. 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.

### **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.

**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.

**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.

**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 an 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 at 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 RECS262 or NSCI103 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**  
**Research in 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.

**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.

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## **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.

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## **SOCY101**

### **Introduction to Sociology**

**(4,0) 4**

This course introduces students to core sociological theorists and perspectives, including functionalism, conflict and symbolic interactionism, and familiarizes them with basic research designs, terminology and findings within the context of collective behavior and social movements.

## **SOCY102**

### **Social Problems**

**(4,0) 4**

An introductory to descriptions, theories, proposed solutions, and research methods for a variety of social problems including inequality, poverty, unemployment, environmental issues, family problems, and violence.

## **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.

## **SOCY214**

### **Criminology**

**(3,0) 3**

A study of the nature and causes of crime and the results of various attempts to reduce crime.

### **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.

### **SOCY301**

#### **Social Research Methods**

**(3,0) 3**

Identification of research problems, concepts and theoretically derived hypothesis; Review of principle methods of experimental design, survey and field research and unobtrusive analysis. Prerequisite: Junior Status or Permission of Instructor.

### **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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam.

### **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: SOCY238.

**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.

**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 deviant behavior and the development of deviant subcultures; examination of various societal responses to control deviance and their effectiveness. Prerequisite: Junior standing or three hours of sociology and/or human services.

**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.

**SOCY497**  
**Community Action Project**

**(1,6) 3**

This is an applied course in which, under the guidance of a sociology faculty member, the student carries out a practical project designed to address a community need identified in and elaborated upon in SOCY495. Prerequisites: SOCY401 and SOCY495.

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**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.).

**SOWK204**

**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. Prerequisite or Corequisite: BIOL105 or equivalent.

**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. Credit/No credit grade.

**SOWK292**

**Substance Abuse: Prevention and Treatment**

**(3,0) 3**

This course examines current prevention, detection and treatment approaches for substance abuse and addiction.

**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. Prerequisite: PSYC201.

### **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

### **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.

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### **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**

Acquisition of advanced skills in composition, grammar, reading and conversation, using media and readings related to the Hispanic world. Corequisite: SPAN262 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.

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**THEA101**  
**Acting I**  
**(3,0) 3**

This course is designed to provide an introduction into the basics of stage acting. The students will gain basic skills in acting, character development, improvisation, projection, pacing, movement, and breathing, as well as a working vocabulary of theatre terms.

**THEA161**  
**Theatre Practicum**  
**(1-6,0) 1-6**

Provides practical experience in the production of a theatrical performance. Requires participation in acting, publicity, costuming, stage crew or set construction. May be repeated for a total of six credits. Prerequisite: Permission of Instructor.

**THEA201**  
**Acting II**  
**(3,0) 3**

This course builds upon the skills of Acting I, with emphasis on script analysis, scene work, and character development. Students will become familiar with basic approaches to realistic acting and will become more familiar with Stanislavski's method and the Meisner system. Prerequisite: THEA101.

**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**  
**Theatre Studies: (Topic)**  
**(3,0) 3**

Practical problems in the development and production of theatre, tournaments and festivals. Course may be repeated one time (for a total of six credits) with a change in focus. Prerequisite: Permission of Instructor.

**THEA333**  
**Studies in the Drama: The Genre and Theater in Context (Topic)**  
**(3,0) 3**

Students will examine theatre of a specific genre or genres in its social, cultural, political, and personal contexts. Course may be repeated one time (for a total of six credits) with a change of focus. Prerequisite: Junior or Senior standing or Permission of Instructor.

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**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.

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## Campus Life Office

# LSSU Student Handbook

[Click here for PDF version](#)

*(Updated August 2015)*

## Mission and Vision Statement

Our principal 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.

## Academic Information

Here is some information about common academic procedures and issues. If you have specific questions, check with your advisor, your school's dean/chair or academic assistant, or the Registrar's Office.

Choosing Majors and Courses - You most likely declared a major when you submitted your application for admission to Lake Superior State University. If you did not declare a major at that time, your major would be listed as "Liberal Arts-Undecided."

You will be assigned to an academic advisor based on your major. It is important to communicate with your academic advisor often. Academic advising will help you:

- identify and clarify your academic, career and life goals;
- assess the role that higher education can play in achieving your goals;
- develop educational plans consistent with your goals, interests and abilities;
- select appropriate courses and other educational experiences;
- evaluate your progress toward earning a degree and reaching your goals;
- adapt to the demands of college life and become an active member 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.

If you declared a major, you will be assigned an academic advisor in the department in which your major

belongs. If you did not declare a major, you will be assigned to an advisor in Liberal Studies. You can view your advisor assignment in Anchor Access.

Every semester, you must meet with your assigned academic advisor before you can register for courses. Your advisor will help you with class selection, degree progress, and career advice, and will remove your Web Advisor Hold.

If you decide to change your major, you may do so by completing and signing a Major Change Request Form and submitting it to the Registrar's Office for processing. This will officially change your major on your University record. During this process, you will be assigned to a new academic advisor in the School of your new major. It is important that you keep your University record up to date for proper academic advising, awarding of financial aid, authorization/verification of student visa's, and more.

## Academic Integrity Policy

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 tolerate 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 for Enrollment Services and 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.
- *Theft:* Everyone is expected to show respect for University and individual property. Theft of any kind, whether of money, property, or services, violates the entire community and will not be tolerated. Destruction or mutilation of books, magazines, or other library material is considered a form of theft. Theft, damage or destruction of University property, or the property of others, is considered a serious offense against the University community and may result in penalties including the issuance of fines, removal from the campus, dismissal from the University, and/or criminal prosecution. If you have anything stolen while on University property, please notify the Public Safety Department by calling 635-2100 as soon as possible.

## Academic Procedures

### Add/Drop Classes

*Adding/Dropping courses through the sixth day of the fall or spring semesters, or fourth day of the summer semester:* Students can add or drop courses on-line using Anchor Access through the sixth day of the fall or spring semesters. (Students attending during the summer semester can add or drop courses on-line through the fourth day of the summer semester.) Students wishing to add courses that are full, or students wishing to add courses without having the necessary prerequisites, must contact the instructor of the course to request permission. If the instructor approves the request, the instructor will complete an Instructor Override for the student. The student must then go on-line and register for the course. Courses dropped through the sixth day (fourth day for the summer semester) will not appear on the student's academic transcript.

*Adding Courses after the sixth day of the fall or spring semesters, or after the fourth day of the summer semester:* On-line registration ends on the sixth day of the fall and spring semesters (summer semester on-line registration ends on the fourth day). Students wishing to add into a course after this date must have the instructor's permission. Students need to complete a Schedule Adjustment Form, have the instructor sign it giving permission, then process the form at the Registrar's Office, located in the Fletcher Center for Student Services. Instructors may also complete an Instructor Override in Anchor Access as permission to add. Payment of any additional tuition and fees is due at the time of registration.

*Dropping Courses after the sixth day of the fall or spring semesters, or the fourth day of the summer semester:* The time period for dropping a course will be approximately equal to one-half of the course instructional period. Students dropping courses will receive an N grade on their academic transcripts. N

grades are counted in students attempted credits, but not counted in the academic GPA. Please check the Important Dates Sheet in Anchor Access or go on-line to: [www.lssu.edu/scheduling/important\\_dates.php](http://www.lssu.edu/scheduling/important_dates.php) for the official drop dates.

## **Anchor Access (my.lssu.edu)**

Anchor Access is part of the My.LSSU portal and is used to access your student information. You will use Anchor Access to register for your courses, view your grades and transcripts, pay your tuition, change your address, view and update your financial aid information, and view your textbook information, etc. You will be given your user-name and log in information in your LSSU acceptance letter. [www.lssu.edu/catalog/](http://www.lssu.edu/catalog/).

## **Application for Graduation**

Complete a Graduation Application. If you are planning to graduate with more than one degree, complete a Graduation Application for each degree.

Submit the Graduation Application(s) AND the Official Degree Audit(s) to the Registrar's Office by the date indicated on the Graduation Application.

## **Attendance Policy**

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 your 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, specifically, 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 and Vice President for Academic Affairs. You will not be penalized for such participation. You are responsible for work missed and must confer with your instructor on this matter.

## **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 withdraw during the 100% refund period you may be eligible to retain a portion of your financial aid. A special withdrawal form is required at the Financial Aid Office.

If you receive all F grades for any semester, it will be assumed that you have attended only 50% of your classes and your federal financial aid eligibility will be affected. For more information, go to [www.lssu.edu/finaid/attendancepolicy.php](http://www.lssu.edu/finaid/attendancepolicy.php).

## **Audit Courses**

You will need to complete an Application for Auditing a Course Form and register in person at the Registrar's Office to audit a course. No credit is granted for auditing a course, and the cost is the same as courses for credit.

## Cheating and Plagiarism

It is assumed that you will do your own academic work. Students who are found cheating will face appropriate action from the faculty member involved, which could include receiving a failing grade for the entire course. If, in the opinion of the faculty member involved, dismissal from the University is warranted, he or she will notify the chairman of the Scholastic Standards Committee and the student to that effect in writing. The Scholastic Standards Committee will then conduct a hearing in which the student is given due process. If the committee decides that dismissal is warranted, the student will have five school days to appeal the decision to the provost of the University.

## Class Cancellation/University Closing Policy

During severe inclement weather or in an emergency situation it may be necessary to close the University, cancel classes or change the schedule for University operations. In the event inclement weather or an emergency occurs, public announcements will be made on local radio and television stations (listed below) on the University website and through My.LSSU. In addition, students and LSSU employees are encouraged to sign up for text alerts for campus emergencies at [www.lssu.edu/alerts](http://www.lssu.edu/alerts).

<u>Announcements</u>	<u>Means</u>
University closed	A total University closure is in effect. All University business activities, classes, events, games, etc., are canceled for the entire day and evening (6 a.m.-10 p.m.). Personnel do not report to work, except for those employees designated as essential personnel. University entrances will be closed to allow essential employees to operate.
University opens late	A temporary University closure is in effect until the announced time. Students and University personnel must report to classes or work at the opening time noted. University personnel designated as essential personnel should report as scheduled. All University events, activities and classes are canceled for the period of time noted. University entrances will be closed during the noted time to allow emergency crews to operate.
University closes early	A temporary University closure is in effect at the time announced. Students and University personnel are to leave their classes or work stations at the noted time. <u>The continuation of events, activities or special functions at the University will be made as part of the announcement.</u> Personnel designated as essential should report to work as scheduled. University entrances will be closed during the noted time to allow emergency crews to operate.
Class cancellation for a	The University cancels classes, but business activities, events, games, etc.

specified time period	remain open. Students and faculty do not report for classes. University personnel report to, or remain at work as normal.
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Every effort will be made to have public announcements about closures or late openings made by 5:30 a.m. and other closure or cancellation decisions made as early as possible throughout the day. Radio and television stations carrying the announcement are shown below.

***Please note:*** An announcement about LSSU closures or cancellations remains in effect for the hours noted for the Sault Ste. Marie campus. If it is necessary to close or change the operating schedule of a specific activity or facility, the announcement will be specific in that regard. Classes or activities at off-campus or Regional Centers will follow the schedule of the host institution.

**In the event of hazardous weather or other emergencies, the following radio and TV stations will carry University schedule change information:**

<u>Radio Stations/AM</u>	<u>Radio Stations/FM</u>	<u>TV Stations and on-line outlets</u>
WKNW – 1400	YES FM – 99.5	TV 9/10
WSOO - 1230	WSUE – 101.3	TV 29/8
WNBY - 1450	Q104/EZRock – 104.3/100.5	TV 7/4
	WCMZ – 98.3	EUPNews.com
	WLSO – 90.1	SooToday.com
	WMKC 102.9	

Internet: [www.lssu.edu/](http://www.lssu.edu/) (Updates as necessary). Please also check out social media sites of LSSU and the above stations.

***This procedure is in effect seven days a week except holidays when the University is closed.***

## Closed Courses

A closed course has no more openings available. You can contact the instructor to request an override and then add the course.

## Course Cancellation

If a course is canceled for insufficient enrollment, a refund will be given or you may use the amount you

paid as credit toward the cost of another course. If you need a course that is not offered this semester, contact the academic school and/or department to determine when the course will be offered again. Departments decide to offer courses based on past enrollment, so they need to know that there are students who need to take the course. Our scheduling website contains a list of classes planned for the following semester. If a course will not be offered prior to your graduation, discuss a course substitution with your advisor and/or dean of your academic college.

## **Credit for Work Experience/Military**

Possible credit for work experience is reviewed by the dean of the college or by the chair of the appropriate school. University credit may also be granted for educational training programs and for passing CLEP tests. Credit for military experience is also reviewed by the dean of the college or by the chair of the school. You will need a military transcript-either an AARTS, Dantes or DD294-in order to have your military experience reviewed by the Registrar's Office. Two years of active military service and an honorable discharge are required for recreational activity credit to be granted.

## **Full-Time/Part-Time Students**

A full-time student is enrolled in 12 or more credits; a part-time student takes fewer than 12 credits. If you drop to part-time student status, you should check with the Financial Aid Office to determine whether this affects your financial aid package and to confirm that you are meeting the satisfactory progress policy required for continued eligibility. Canadian/Foreign students must contact the Registrar's Office prior to dropping to part-time status. You should also notify the Residential Life Office, if you are an on campus student, and your academic advisor.

## **General Education Courses**

The general education curriculum is designed to provide a broad base of knowledge across a full range of areas. For further information on Lake Superior State University's general education requirements, refer to the University Catalog, the Online Degree Audit and/or consult with your advisor, school chair or college dean.

## **Grade Changes**

It is your instructor's responsibility to determine your grade for a course. A Change of Grade form is sent to the registrar if your instructor decides that a grade change is necessary. You have 30 days to appeal a grade. (See Grade Appeal Policy in the Academic Catalog).

## **Grade Types**

An 'I', or incomplete, grade may be given when students, because of circumstances beyond their control, cannot complete part of a course. 'I' grades are also given in those special courses where work is planned to extend beyond a single course. An 'I' must be made up by the date specified by the instructor, which must be within a minimum of two semesters (excluding summer), or it becomes a failure grade. An 'I' grade is given only with the instructor's written approval. An 'N', or no grade, is recorded on the transcript when a course is dropped during the first eight weeks of the semester. A 'W', or late withdrawal, grade will be given for each course officially dropped after the eight-week drop period due to extenuating circumstances and with the permission of the Dean or Chair of the department, or Registrar.

## Graduation Requirements

A minimum of 124 credits (at the 100 level or higher) is required for a bachelor of arts or bachelor of science degree, and a minimum of 62 (at the 100 level or higher) is required for an associates degree. Some academic programs require more. Bachelor's degree candidates must earn a minimum of 30 credits and at least 50 percent of their departmental required 300/400-level credits in courses offered by LSSU. Associate degree candidates must earn a minimum of 15 credits and at least 50% of their departmental required credits in courses offered by LSSU.

## LSSU Student Ombudsman

The LSSU ombudsman is a senior faculty member appointed by the President and Provost to assist students in resolving student conflicts or disputes within the University. The ombudsman carries out these duties in a neutral, impartial, confidential, informal and independent manner. Please note: confidentiality does not apply for Title IX purposes, refer to Policy 1.5.2 on page 45 for more information. To contact the student ombudsman or to find out more, visit this website [www.lssu.edu/ombudsman/](http://www.lssu.edu/ombudsman/).

## Number of Credits Needed to Graduate

One academic credit is generally earned for each contact hour in a week. You need a minimum of 62 credits (at the 100 level or higher) to obtain an associates degree and a minimum of 124 credits (at the 100 level or higher) to earn a bachelor's degree. An associates degree takes about two years of full-time course work to complete; a bachelor's degree takes about four years. Since credit requirements vary by degree, you should verify the degree requirements with your academic advisor.

## Online Degree Audit

The Online Degree Audit is available in Anchor Access and displays all of the requirements needed to earn your degree at LSSU. Please run your Online Degree Audit frequently; before you meet with your advisor each semester; after registering to verify your courses are correct; and at the end of each semester after final grading to verify GPA information. If you have questions regarding requirements displaying on the Online Degree Audit, please contact your advisor. If you have questions regarding how to use the Online Degree Audit, please contact the Registrar's Office.

## Prerequisites

If you do not have the prerequisite for a course you want to take, you need to get the instructor's approval. The instructor can determine whether you have the necessary background and experience to complete it successfully. You must have the instructor's permission to waive the prerequisite course.

## Refunds/Withdrawal

Please visit the LSSU Academic Catalog ([www.lssu.edu/catalog/](http://www.lssu.edu/catalog/)) and search "refunds" or "withdrawal" in the newest catalog. You may also visit [www.lssu.edu/scheduling/add\\_drop](http://www.lssu.edu/scheduling/add_drop) for more information.

## Repeating a Course



If you repeat a course, the grade you receive when repeating it is used to compute your grade point average. However, both grades remain on your transcript. It is University policy not to remove a grade from a transcript.

## Second Degree

*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 degree in accounting and business administration.

*Multiple Degrees:* If you desire to earn more than one degree, you must complete all program requirements of the additional degree(s) as certified by the school chair, comprising a minimum of 30 additional LSSU credits for each additional baccalaureate degree, or a minimum of 15 additional LSSU credits for each additional associate degree from Lake Superior State University.

## Information on Activities and Resources

### Introduction

You'll find many opportunities to become involved with campus life during your time at Lake Superior State University, whether you live on or off campus. We strongly encourage you to take advantage of as many of them as possible. Involvement on campus can help you meet more people, learn more skills and have a wonderful time here. If you ever have any questions about any aspect of campus life or student activities, please stop by the Campus Life Office or call ext. 2236. If we don't know the answers to your questions, we'll find them for you!

- *Activities Board:* Activities Board (AB) is a student driven board dedicated to planning a variety of activities on campus from small bands and comedians to formal events. If you would like to know more about AB or how to become a member, call ext. 2756. AB has weekly meetings at 9 pm, every Wednesday.
- *Athletics/James Norris Center:* Lake State offers the following varsity sports: men's and women's basketball, men's and women's cross country, men's and women's track, men's and women's tennis, women's volleyball, women's softball, men's and women's golf and men's ice hockey. Even if you don't play an organized sport, you are encouraged to use the many other services in the James Norris Center. Hours for the weight room, racquetball court, pool and gym are posted in the center and circulated at the beginning of each school year. All students pay a one-time \$125 athletic fee. The athletic fee is a one-time fee charged to all new, undergraduate, degree-seeking students (excluding teacher education interns, students with an internship/practicum off-campus, dual enrolled students and Regional Center and other distance education students). The fee is assessed once and permits access to all regular session athletic events based on space available for up to six years as long as the student is enrolled.
- *Campus Ministry:* Campus ministry is provided through different spiritual organizations. Contact the Campus Life Office at x2236 or [campuslife@lssu.edu](mailto:campuslife@lssu.edu) for more information.
- *Clubs and Organizations:* Students are strongly encouraged to participate in the many clubs that highlight special interests. The Presidents' Council is comprised of all the club presidents. This structure encourages the exchange of information and ideas so student groups can make better use of their resources, increase scheduling compatibility and encourage cooperation. The Council along with Campus Life, is also responsible for recognition of new clubs. A list of clubs and

organizations can be found at [www.lssu.edu/campuslife](http://www.lssu.edu/campuslife) We encourage every student to at least PICK ONE organization or activity to get involved with in their time at LSSU.

If you would like more information about a group or have an interest in developing your own, contact the Campus Life Office in the Cisler Center at ext. 2236.

- *Campus Recreation:* Campus Recreation offers a variety of athletic events that are offered all year long. If you like to stay active and have a semi-competitive edge, then you should sign up today. Call ext. 2637 or ext. 2236 to find out more information. Campus Recreation information can be found at [www.lssu.edu/campusrec](http://www.lssu.edu/campusrec). Also check out the offerings at the Regional Outdoor Center (ROC) where you can get access to various day and overnight trips and rental equipment. Call 906-635-2890 or visit [www.lssu.edu/campusrec/RegionalOutdoorCenter](http://www.lssu.edu/campusrec/RegionalOutdoorCenter) for more information.
- *Greek Life:* The Greeks participate in a number of fund-raisers, community service projects, self-improvement seminars and campus activities. The Inter-Greek Council is the central point for communication between the fraternities, sororities, and co-ed organizations that represent the collegiate Greek culture. To find out more about Greek Life call ext. 2236. A list of Greek organizations can be found at [www.lssu.edu/campuslife/assembly/igc](http://www.lssu.edu/campuslife/assembly/igc).
- *Student Government:* Student Government is the student voice. Student representatives act on behalf of the full student body to address concerns and suggest ideas throughout the University community. Student Government is comprised of 12 representatives (9 elected in the spring, 3 elected in the fall) and four executive positions (elected in the Spring). If you have interest in either campaigning for a position or participating on one of the many University committees, contact the Student Government Office at ext. 2550 for more details. Information on Student Government can be found at [www.lssu.edu/stugov/](http://www.lssu.edu/stugov/).
- *Student Media:* LSSU offers two media venues for student enjoyment. WLSO is the University radio station. Student DJs offer a wide variety of programming throughout the day and well into the evening. The station dial number is 90.1 FM. The request line is 635-2863 (ext. 2863). If you have interest in hosting your own radio program call ext. 7504. The Compass is the student-facilitated newspaper. If you have interest in writing for the paper or have any questions, call ext. 2551.

Please refer to the Campus Life Handbook for governing policies of the Student Assembly/Student Organizations on the Campus Life website at [www.lssu.edu/campuslife/](http://www.lssu.edu/campuslife/).

## ATM

ATMs are located in three buildings for your convenience. One is located on the main floor in the Cisler Center, the second is located in the Norris Center across from the ticket window, and the third is located in the Barnes & Noble Campus Shoppe.

## Alumni

*Anticipations and Expectations of Alumni of Lake Superior State University:* Being an alumna or alumnus of Lake Superior State University is not really about your diploma. It is a state of mind. It is about that Lake State spirit and attitude. The minute you chose to become a part of Lake State's present by enrolling, you also become a part of our history and of our future. The Alumni Association of Lake Superior State University offers several benefits to current students including career and mentoring programs, leadership and organizational training through Laker Ambassadors and the opportunity to go to your high school and talk to students about the Lake State experience. Your Alumni Association consists of more than 30,000 former students of the Sault Branch of Michigan Tech, Lake Superior State

College and LSSU. Our sole purpose is to strengthen the relationship between the University and our alumni. For information about your Alumni Association, call ext. 6219, email [alumnirelations@lssu.edu](mailto:alumnirelations@lssu.edu) or visit the web at [alumni.lssu.edu](http://alumni.lssu.edu). The Lou and Mae Lukenda Alumni House is located on the Ryan Street side of campus, next to the President's house. Feel free to stop by and say "hello".

As other members and friends of this University have done before you, it is our expectation and anticipation of our Alumni to:

- Be ethical in your work and in your life
- Be successful, however you choose to define success, in your profession, whatever shape or form it may take
- Serve voluntarily in some way in your community
- At some point in your career, serve LSSU as a volunteer
- Point others to all the possibilities of education at Lake Superior State University
- Contribute annually an unrestricted gift to the University
- Join with your class to endow a scholarship in the college or program in which you hold a degree
- Contribute a major gift to the University sometime in your career
- Keep your will current, and after making arrangements for your family and faith, give an estate gift to LSSU

## Bookstore

The Barnes & Noble at Lake Superior State University, a Barnes & Noble college bookstore, is the place to go to RENT or buy your books, school supplies and top of the line Lake Superior State University spirit wear and souvenirs. Refer to the Barnes & Noble at Lake Superior State University web site [lssu.bkstore.com](http://lssu.bkstore.com) for hours of operation or call ext. 2227.

## Campus Dining

The Campus Meal Plan is a comprehensive dining program that combines the flexibility of a computerized meal card system with dining at various locations on campus. Lake Superior State's dining service offers diverse menus and convenient hours at a great price. All on-campus students are required to select one of the meal plans highlighted in the Housing Handbook.

The following dining options are available on campus:

- The Quarterdeck dining hall, features unlimited seconds and a wide variety of choices, located in the Cisler Center ;
- The Grill 155, a fast food type of eatery with healthy options, located in the Cisler Center.
- The Galley Convenience Store, located on the ground level of the Cisler Center;
- Cafe' a la Carte; features premade salads, sandwiches and snacks, located in the west end of Crawford Hall; and
- The Cappuccino Corner, a snack area on the main floor of the Library.

<p><u>Quarterdeck Dining Hall:</u></p> <p>Monday - Friday</p> <ul style="list-style-type: none"> <li>• Breakfast (full) 7:15 a.m. - 9:00 a.m.</li> <li>• (continental) 9:00 a.m. - 10:15 a.m.</li> </ul>	<p><u>Galley Hours:</u></p> <ul style="list-style-type: none"> <li>• Monday – Thursday 7:30 a.m. - 11:00 p.m. <ul style="list-style-type: none"> <li>◦ Grill closed at 9:00 p.m.</li> </ul> </li> <li>• Friday 7:30 a.m. - 11:00 p.m. <ul style="list-style-type: none"> <li>◦ Grill closed at 3:00 p.m.</li> </ul> </li> </ul>
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<ul style="list-style-type: none"> <li>• Lunch 11:00 a.m. - 1:00 p.m.</li> <li>• Dinner 4:30 p.m. - 6:15 p.m.</li> <li>• Friday Dinner 4:30 p.m. - 6:00 p.m.</li> </ul>	<ul style="list-style-type: none"> <li>• Saturday 1:00 p.m. - 11:00 p.m. <ul style="list-style-type: none"> <li>◦ Grill closed from 4:00 p.m. to 8:00 p.m.</li> </ul> </li> <li>• Sunday 1:00 p.m. - 11:00 p.m. <ul style="list-style-type: none"> <li>◦ Grill open 6:00 p.m. – 10:00 p.m.</li> </ul> </li> </ul>
<p>Saturday &amp; Sunday :</p> <ul style="list-style-type: none"> <li>• Brunch 11:30 a.m. - 1:00 p.m.</li> <li>• Dinner 4:30 p.m. - 6:00 p.m.</li> </ul>	<p><u>Galley Plus Hours:</u></p> <ul style="list-style-type: none"> <li>• Monday - Friday 1:15 p.m. - 2:30 p.m.</li> <li>• Monday - Thursday 4:00 p.m. - 9:00 p.m.</li> </ul>
<p><u>Cappuccino Corner:</u></p> <ul style="list-style-type: none"> <li>• Monday - Thursday 7:30 a.m. - 7:00 p.m.</li> <li>• Friday 7:30 a.m. - 2:00 p.m.</li> </ul>	<p>*Hours may vary</p>
<p><u>Cafe' a la Carte</u></p> <ul style="list-style-type: none"> <li>• Monday - Friday 9:30 a.m. - 2:00 p.m.</li> </ul>	

## Campus Employment

If you are looking for a part-time job, Lake State has approximately 600 employment opportunities for full-time students in places such as laboratories, offices, the Library, the physical plant and Auxiliary Services. If you're interested in campus employment, you need to access the LSSU JOB Board in the employee tab of Anchor Access at my.lssu.edu.. If you have any special needs or accommodation requests, please notify the Human Resources Office by calling ext. 2213.

The Center for Career Development has information about off-campus employment. It is located in the lower level of the KJS Library and can be reached at extension 2898.

## Career Development

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

All students (not just undecided students) are encouraged to visit Career Development, located in the lower level of the KJS Library.

Services include:

- *Career Counseling* - Licensed Professional Counselors are available to discuss your career counseling needs. Counselors also interpret the results of various assessments you complete and assist you in determining which fields of study and career options would be best.
- *Vocational Assessments* - Assessments are designed to measure those characteristics which seem most helpful to consider when selecting a career goal. They include interests, abilities, work values and personality traits.
- *SIG13* - A web-based career exploration program. Stop by our center to get a password which allows you to complete on-line assessments and research occupations, job outlooks, salaries and

college majors.

- *Career Resource Library* - Located in the lower level of the KJS Library, come browse through books, journals, newsletters and handouts on various career topics.
- *Workshops* - Watch for workshops available throughout the year regarding a variety of career issues such as resume' writing, interviewing skills, and career planning.

Contact Information: The Center for Career Development, Library, lower level - Lake Superior State University - [tweaver@lssu.edu](mailto:tweaver@lssu.edu) - 906-635-2898

## Cisler Student and Conference Center

Fall/Spring Semester Hours:

- Monday – Friday 8:00 a.m.-midnight
- Saturday and Sunday 11:00 p.m.-midnight

The Cisler Student and Conference Center is the center of on-campus life. These services are available to you in the Cisler Center:

The ID/Service Center is located on the upper level. Faxes, copies, ID cards, Laker Gold Debit Program, and meal plan information are provided here.

The ID/Service Center hours:

- 8:30 a.m.-11:00 p.m., Monday through Friday.
- 11:00 pm - midnight, Saturday and Sunday.

The Quarterdeck dining hall is also located on the upper level. Our resident students eat most of their meals here. This “unlimited seconds” dining hall allows you to eat all you want. There are monthly specials and Taste Changers (weekly) that add to the variety of the program.

The Grill 155 located on the lower level, features daily specials, salads, sandwiches, hamburgers, beverages and other tempting snacks. Most commuter students and guests dine here.

The Galley Convenience Store, located on the lower level, offers snacks, beverages and sundries. Laker Bucks may also be used here. Cards and board games can be signed out with your student ID card. Monday-Wednesday nightly events that offer fun activities by way of The Galley MTW.

The Peacock Cove is also on the lower level, and offers a relaxing space to study or watch television and also features live entertainment at various times throughout the year. It is also open during the day and is a convenient place to study or socialize with friends.

The Student Organization Center is available for all student organization members to come and relax or work on a project. Stop by if you want to learn how to get involved!

The Rathskellar room in the Cisler Center is comprised of a computer lounge with 4 stand alone computers and printer, a collaboration station with 42' television for group projection work, meeting room for up to 18 people, offices for LSSU Summer Edventures and AV storage.

## Communication

Our associates and managers are interested in student comments, so feel free to let us know how we are doing. Communication boards are maintained at all locations for comments or ideas. We also hold Dinner with the Director about every three weeks. During these meetings we enjoy a nice dinner and talk about Food Service. We encourage you to get to know our associate staff and managers in our dining areas.

## Commuter Lockers

Lockers are available free of charge to commuter students in the Peacock Cove, in the lower level Cisler Center. For more information visit the Cisler Center info counter or call ext. 2020.

## Commuter Student Meal Plan Offerings

The Laker Gold Commuter Debit Program is the most flexible meal program of all. With this program, you can purchase meals in the Quarterdeck. You can also make purchases at the Cappuccino Corner, Galley Snack Bar and the Corner Pocket convenience store.

The Laker Gold Debit Card is a “student advantage” program that works like a pre-paid credit card. It allows you to use your current ID card at various locations. Laker Gold also gives you a discount on the cost of a meal at the Quarterdeck Dining Hall. As you use your Laker Gold Debit Card, your purchases will be deducted from your balance. Deposits are accepted at the ID/Service Center in the Cisler Student and Conference Center. Deposits may also be mailed directly to the ID office. A minimum of \$25 is needed to open your Laker Gold Debit Card. (All deposits will be posted by 3 p.m. the following business day.) If you would like to save even more the Laker Platinum is available. It works the same as the Laker Gold but we ask for a bigger deposit. This requires a deposit of \$150.00 for each semester but it gives a much bigger discount in the Quarterdeck as you can see in the chart below.

	<u>Cash Rate</u>	<u>Gold</u>	<u>Platinum</u>
Breakfast	\$6.89	\$5.20	\$3.90
Cont Breakfast	\$4.51	\$3.45	\$2.60
Lunch/Brunch	\$9.01	\$6.65	\$4.95
Dinner	\$11.71	\$8.55	\$6.45

Account balances may be checked at any card reader or a statement may be requested at the ID office. This program is not only a convenience, but is safe and easy to use!

## Counseling Services

LSSU Counseling Services offers a variety of FREE services to enrolled students. Services include individual therapy, light box treatment, massage chairs, biofeedback, consultation, outreach/education, and a resource library. Strict standards of confidentiality are maintained.

Many students use the center's services during their time here for a variety of reasons. Common concerns confronting students include: anxiety or stress; low self-confidence; problems sleeping; relationship difficulties; self-defeating behaviors; academic problems; self harm; sexual identity concerns; decision-making dilemmas; feelings of sadness or depression; and home sickness.

Located on the corner of Easterday and Meridian (next to the Health CARE Center), students are encouraged to stop by the front desk to schedule an appointment or to call us at 906-635-2752. Counseling Services is open 8:00 am-4:30 pm during the academic calendar year which includes the summer semester.

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

Disability Services and the Ability Center for Exceptional Students are located in the KJS Library. Disability Services is responsible for ensuring appropriate accommodations and services for disabled students in the academic and University environment. In order for students to receive such accommodations, students must be registered with the Disability Services Office. To be registered, the student must provide current and relevant verification of a disabling condition (all documentation is kept confidential); upon receipt and review of the documentation, appropriate accommodation(s) will be determined and with the student's consent, appropriate faculty and/or staff will be notified regarding necessary accommodations. It is the responsibility of the student and the faculty to work together, with Disability Services serving as a liaison, to make sure all parties' needs are addressed.

Services are not limited to those who are physically, visually or hearing impaired, but covers a wide range of disabilities, which includes disorders such as emotional or psychological impairments, learning or cognitive impairments, attention deficit disorders, memory or processing impairments, dyslexia and other reading impairments, seizure disorders, and many other medical conditions (such as asthma, cerebral palsy, cystic fibrosis, and so on).

Below is a list of commonly used accommodations that may be provided:

- Use of a test reader and/or oral testing;
- Note taking and/or transcription services;
- Extended time for testing;
- Computer access and/or scribes for essay testing;
- Alternative formats for class and testing materials;
- Assistive technologies which provide access to class materials;
- Appropriate testing environments;
- Permission to audio record course lectures.

The Ability Center for Exceptional Students is an accommodated computer lab for students with disabilities. Here students can access alternative formats, assistive software, and other assistive equipment. The lab also produces audio books for students, enlarged print materials, and accessible electronic or digital media.

Contact Disability Services at 1-906-632-6841 ext. 2355 or 906-635-2235 - ACES Lab ext. 2454 or 906-635-2454 - Fax: 906-635-6222 - [vfox@lssu.edu](mailto:vfox@lssu.edu)

## **Financial Aid**

Once you are admitted, your scholarship eligibility is automatically reviewed and offers of scholarship are sent. If you retake your ACT or SAT test prior to May 1st, your scholarship may be increased based

on a higher test score. If you file a Free Application for Federal Student Aid (FAFSA), you may be contacted to submit additional information. After all forms are received, you will be sent an “Official Offer of Award” from the Financial Aid Office. Your offer may include grants, scholarships, loans and Federal work study. You should accept your grants and scholarships promptly, but give serious consideration to how much money you must borrow before accepting any loan offers. For help, use the handy loan/cost estimator tool at [www.lssu.edu/finaid/calculator.php](http://www.lssu.edu/finaid/calculator.php) or call the Financial Aid Office.

## Guest Speakers

If you have a suggestion for a speaker or other event on campus, please contact the Campus Life Office, ext. 2236 or the Activities Board Office, ext. 2756. Reservations for rooms or lecture halls for guest speakers can be made through the Campus Life Office.

## Help Wanted

Would you like to find a good way to meet other students and earn some extra spending money? Campus Dining Services has a spot for you. Positions are available at the Quarterdeck, Catering, Grill 155, Galley and the Cappuccino Corner. Hurry! The positions fill fast. Contact the Dining Services Office at ext. 2541 for more information.

## Health Services

Health care services are available on campus at the LSSU Health Care Center. The Health Care Center is located at 621 W. Easterday Avenue across from Brady Hall. 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 through Friday from 8:00 a.m. to 4:30 p.m. Hours of operation are reduced during the summer semester and University breaks. Appointments are appreciated but walk-ins are accepted as time permits. For an appointment, call 635-2110 or on campus, ext. 2110.

The Health Care Center does bill and accept most insurance plans for services rendered at the Health Care Center. We do ask that students present an insurance card at the time of service. For students who maintain three or more credit hours, LSSU has created a student health fund to cover services rendered at the Health Care Center. The majority of on-site services are provided at **no out-of-pocket expense** to the student.

An insurance plan is available (go to: [www.sas-mn.com](http://www.sas-mn.com)) for the uninsured student which may be purchased; this is separate from the student health fund. Lake Superior State University does not endorse this plan but simply makes it available to the student. Information regarding this plan is available at the Health Care Center.

The staff of the Health Care Center makes the following recommendations to all students attending LSSU:

- It is advisable to carry health insurance, keep the policy or identification cards readily available, and know what your policy covers.
- Get immunized and keep a copy of your immunization record on file.



You will be asked to complete a Health History Questionnaire form when you first come to the center. We encourage you to be familiar with your medications, environmental allergies, personal and family health history, as well as past provider name(s) and addresses in case records are needed. If you have health insurance please provide this along with the subscribers date of birth. Once again, it is important for you to know what your policy covers and how to access it for benefits and payments.

## **Housing/On-Campus Guests**

Living on campus is the best way to meet new people and learn how to live with others. Another big bonus to residing on campus: you are at the heart of all of the action with the Taffy Abel Arena on one side and the Cisler Center on the other—fun is just a few steps away! Contact the Campus Life and Housing Office at ext. 2411.

Please refer to the Housing website ([www.lssu.edu/housing](http://www.lssu.edu/housing)) for the guidelines pertaining to living on-campus. There are a variety of potential penalties for failing to comply with these rules, including possible separation from the housing system or separation from the University itself. Guests of campus residents are subject to the same guidelines as those who live in the residence halls.

## **ID Cards**

Students will be issued a Lake Superior State University ID card. This ID card is valid until graduation. Your ID card is your admittance to use the library, cash checks, vote in campus elections, attend sporting events, use the Student Activity Center, and admit students to the cafeteria if you are on a room and board plan. It is also your Laker Gold Debit card and Commuter Block Plan card. To obtain an ID card or have a replacement card, please go to the ID office in the Cisler Center. A fee for replacement ID cards will be charged. Any misuse or alteration of the ID card, whether it is current or expired, is considered a serious offense and is subject to disciplinary action. Call ext. 2552 if you have any questions.

## **Information Technology Services**

LSSU offers a variety of information technology services and programs for students. A general use computer lab is located in the Library room 211. The Library has computers available on the main floor for student and patron use. Various departmental labs are maintained across campus. The Learning Center (located in the first floor of the Library building) has computer labs available for student use, and provides assistance with software utilized in the classroom. Wireless Internet access is available campus wide. Students in dormitories are provided Internet access via a wireless or hard wired connection. Students are provided a unique LSSU ID (user@lssu.edu) allowing email, calendar, docs/drive, and other Google Apps services free of charge. IT Technical Service Desk (located on the first floor of the Administration Building) provides assistance to students with general computing problems or questions related to any of the above services. Service desk hours are 7:00am - 7:00pm Monday thru Thursday, and 7:00am - 5:00pm on Fridays.

## **Learning Center**

The Learning Center (LC), located in rooms 112-114 and 127 of the KJS Library, provides the following services free of charge: Tutoring for one-on-one and small-groups, Supplemental Instruction (SI) and Structured Learning Assistance (SLA) in numerous courses across the disciplines; Math Walk-in Center for students who need assistance with math problems; the Writing Center; Student Success Seminars like time management, study skills and test preparation; access to up-to-date computers with Internet access,

scanning and printing; discipline-specific tutorial software; ALEKS®, a computer-based course-ware for Math; presentation support areas and quiet study space.

The LC's tutors and student staff can give you personal and academic support to help guide your college career. The staff is also available to assist you with University success strategies, basic computer/software and word-processing skills and general University information.

The Learning Center is open during the following hours (extended hours during finals weeks):

- Monday-Thursday 8 a.m. - 9 p.m.
- Friday 8 a.m. - 5 p.m.
- Saturday Closed
- Sunday 5 p.m. - 9 p.m.

The Writing and Math Center's hours vary each semester. Stop by the LC for current hours.

If you have any questions or concerns, please contact the Learning Center at ext. 2849 or the Learning Center Director at ext. 2228 or visit our website at [www.lssu.edu/lc/](http://www.lssu.edu/lc/).

## Library

The Kenneth J. Shouldice Library is the research hub for informational resources for the students and employees of LSSU, and members of the community and region. Its primary mission is to provide services and resources to meet the present and future scholarly and information needs of the University, and to extend these services and resources to its regional center sites. A highly trained staff is available to help you meet diverse informational and computing needs. On campus the Library's website [www.lssu.edu/library](http://www.lssu.edu/library) provides access to books, periodicals, and databases. Off-campus access is available with your My.LSSU user name and password. The library features 30 computers for your computing needs and study space with seating for 350 is spread out over three floors. Wireless access is available throughout the library.

## Lost and Found

Lost & Found is located in the Public Safety Office in the Administration Building. If you have lost or found something, please report it to the Public Safety Office at ext. 2100.

## Maintenance

Maintenance is provided through the Physical Plant. They strive to provide excellent service to everyone on campus from keeping the buildings clean and running efficiently to plowing the parking lots and keeping the grounds in good condition. For more information, call ext. 2371.

## Native American Center/Eskoonwid Endaad House

The Native Center provides a place for all students to come together to study, socialize and find friendship and support from staff and fellow students. It is the meeting place for some student organizations on campus. Services offered at the Center include academic advising, tutoring, mentoring, and resource location, and assistance with general questions about Lake Superior State University. There is also a computer lab available for all students. The Native American Center continues to reinforce its activities to promote the retention of Native American students attending Lake Superior State University

and to promote diversity awareness on campus. In addition, the Native Center also provides support for a state-funded program - the King/Chavez/Parks College Day/GEARUP Program - which provides opportunities for career exploration and college preparation activities for underrepresented students in grades 6 - 12. For more information, call ext. 6664 or visit the website at [nac.lssu.edu](http://nac.lssu.edu).

## **Parking and Vehicle Registration**

All vehicles must be registered to park on campus. Parking permits may be purchased at the Fletcher Center for Student Services - Student Service Counter. If you have a guest visiting, you will need to have them register their vehicle with Public Safety located in the Administration Building. Ticket appeals are handled through the Parking Ticket Hearing Committee. Appeals are to be done on-line using Anchor Access. You will need your ticket to appeal on-line, once into your Anchor Access click on LSSU Vehicle Registration and Ticket Information, you may then click on Ticket history or Appeal Ticket. The appeal must be done within 10 days of receiving the ticket. Contact Public Safety to make arrangements by calling ext. 2100. For further information regarding parking rules and regulations, visit their website at [www.lssu.edu/parking](http://www.lssu.edu/parking).

## **Public Safety Department**

The Public Safety Office provides 24-hour service for the convenience of students. The office is located at the west end of the Administration Building. Staff may be reached anytime on campus by dialing ext. 2100. Public Safety staff can also be reached by phone from off campus any time by dialing 906-635-2100. In case of extreme crisis, medical emergency or if you are unable to contact Public Safety, please dial 911, for Chippewa County Emergency Services.

Public Safety encourages all students and employees to sign up for Emergency Alert messages. This may be done by visiting [www.lssu.edu/alerts](http://www.lssu.edu/alerts).

## **Ride Board**

A Ride Board is provided for people to offer sharing rides and giving rides to others traveling in the same direction located on the first floor of Cisler Center.

## **Student Activity Center (SAC)**

The Robert D. Arbuckle Student Activity Center (SAC) offers many services for students and faculty/staff. With the four multi-purpose courts, six-lane 200 meter track and state of the art weight and cardiovascular equipment, there is always something to do. So, whether it is volleyball, basketball, or weight training you are interested in, the SAC has it. The hours for the SAC are posted in the Norris Center. Call ext. 2029 for questions or reservations.

## **Sustainability**

Lake Superior State University is committed to reducing our carbon foot print as much as we possibly can. We are currently composting organic materials that are used on campus as fertilizer. We recycle cans, bottles, plastic, paper and cardboard. We have reduced the number of deliveries by our suppliers each week which reduces the amount of fuel used. We have reduced the amount of waste going down the drain by changing our cleaning chemicals. We have gone tray-less in the Main dining hall to reduce the amount of waste that is thrown away. We are currently increasing the amount of locally grown products.

(Local would be from within the state of Michigan.) Visit [www.lssu.edu/sustainability/](http://www.lssu.edu/sustainability/) for more information.

## **Technical Services (Audio-Visual Center)**

Technical Services offers a variety of services to faculty, staff and students. Located on the main floor of the library, the center maintains a diverse collection of materials and equipment. Faculty may check out materials from the collection for use on campus, or arrange to have materials and equipment brought to a classroom. Reservations can be made by calling ext. 2400 (off campus 635-2400) or by completing the on-line reservation form: [www.lssu.edu/av/res/index.php](http://www.lssu.edu/av/res/index.php).

Students and other library patrons may only use audiovisual materials in the library. Students needing materials and/or equipment for a class may arrange to have them delivered to the classroom.

Other services available in Technical Services during normal hours include making transparencies (both black and color), scanning material, compact disk duplication, video and audio editing, and videocassette or DVD duplication.

As a service for students and faculty, the Technical Services sells scantrons, bluebooks, audio and video tapes, markers and pens, headphones, CD's and DVD's, etc.

For more information about Technical Services please consult our website: [www.lssu.edu/av/](http://www.lssu.edu/av/).

## **University Policy Information**

Lake Superior State University believes that students are adults who will act in a mature and responsible manner. However, it is still necessary for the University to establish certain guidelines designed to protect the rights of all students and to promote a safe, healthful, and studious environment on campus.

When you become a member of the University community, you gain both privileges and responsibilities. It is your responsibility to behave at all times like a member of an academic community, with respect and concern for your fellow students and for University personnel. The following regulations are designed to maintain an appropriate academic environment on campus and to protect the rights of all students. Rules specific to individual residence halls are distributed at the beginning of the semester.

### **Administrative Policy**

#### **Lake Superior State University Procedures Manual**

**Section: General Administration Section Number: 1.5.4**

**Subject: Prohibited Discrimination Policy Page: 1 of 1**

**Date of Present Issue: 07/01/15**

**Date of Previous Issues: Replaces policy 1.5.1**

#### **POLICY:**

Lake Superior State University and its Board of Trustees subscribe to the principles of equal opportunity

and non-discrimination and comply with all applicable Federal and State laws and regulations prohibiting discrimination, including harassment. Therefore, 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, including harassment, in employment, in education, or in any program or activity for which the University is responsible, on the basis of race, color, religion, national origin or ancestry, age, sex, height, weight, sexual orientation, marital status, disability, or veteran status. The University is committed to the protection of the rights of all individuals in the University community, to equal and fair treatment of all individuals, and to elimination of barriers that would prevent individuals from reaching their highest potential of human excellence.

It is the responsibility of all employees, students and members of the University community to uphold these commitments in the daily activities of University life. Sexual harassment is a form of discrimination based on gender, and as such falls under the University's commitment to non-discrimination, and allegations of gender-based discrimination are dealt with under Interim Policy 1.5.2 Gender-Based Discrimination and Sexual Misconduct Policy.

Individuals have the right under the law to seek remedies from the Michigan Department of Civil Rights, the Equal Employment Opportunity Commission, the Office for Civil Rights, Department of Education or by Court action. Individuals may file complaints of illegal discrimination on the basis of sex (Title IX) or disability (Section 504 or ADA) with the Office for Civil Rights, Department of Education, at the same time a grievance is filed under the University's procedure, during or after the use of the grievance process, or without using the grievance process at all. A Title IX, Section 504, or 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. If any person believes that Lake Superior State University, or any part of the University organization, has inadequately applied the principles and/or regulations as stated in the various laws barring discrimination in employment or education, he or she may bring forward a complaint, which shall be referred to hereinafter as a grievance, to the University grievance officer designated by the Board of Trustees:

Procedural steps are outlined in Interim Policy 1.5.3 Discrimination and Prohibited Conduct Policy. All harassment or discrimination claims or ADA accommodation requests and ADA discrimination complaints should be filed with the University EEOC Officer: Philip Espinosa, 906-635-2213, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783, Administration Building, Room 114

## **Alcohol Policy**

Unauthorized possession, use, manufacture, distribution or sale of alcoholic beverages on or in University property is forbidden.

- The sale of/or providing alcoholic beverages to minors is illegal.
- Possession or consumption of alcohol is not permitted on campus by any person who is under 21 years of age.
- Furnishing alcohol to an obviously or visibly intoxicated person, regardless of age, is prohibited.
- Consumption of alcohol by those 21 years of age or older is permitted only in accordance with University Housing policy.
- Outside alcoholic beverages are not permitted at athletic events, concerts or any other event open to the campus community or general public, without prior authorization.
- Student organization funds will not be used for the purchase of alcoholic beverages.

Violations of the above regulations will constitute a violation of the Lake Superior State University Alcohol Policy.

Brady, Osborn and Student Village are alcohol-free halls. This means, regardless of age, alcohol is NOT permitted in these building at anytime. Residents and guests may not store or possess alcohol, or empty containers of alcohol; this includes containers used as decorations. Kegs (even empty) are not allowed in any residences on campus, as is any alcohol paraphernalia (i.e. beer bong, sign-age, etc.) Manufacturing any type of alcohol, such as beer or wine making, is not allowed at anytime in University housing.

Alcohol is permitted in other residential units providing that all occupants and guests are at least 21 years of age. Residential units in the Townhouses, Apartments, and Row Houses are defined as individual bedrooms, unless all occupants are over 21 (please note living learning communities housed in Row Houses may be subject to stricter policies). Empty alcohol bottles are not permitted and must be disposed of in a timely manner. Empty bottles and cans will be confiscated during inspections, break periods, or at any time a resident is violation the alcohol policy. If at any time the policy is violated, all students present, regardless of age will be subject to disciplinary action.

Violations of the alcohol policy or state law will be subject to disciplinary action, including fines, documentation, relocation or removal from housing and parent notification. Below is an outline of possible sanctions to expect if you are in violation of the alcohol policy.

## **Alcoholic Beverage Policy for Approved University Functions**

Information is available from LSSU's Walker Cisler Student and Conference Center.

- Consumption of alcohol is permitted by those 21 years of age or older on campus during an approved University function.
- Non-profit organizations that receive a special liquor license may serve alcohol.
- Alcohol must be served by LSSU Food Service personnel. Activity participants are not permitted to supply their own beverages.
- Outside alcoholic beverages are not permitted at athletic events, concerts or any other event open to the campus community or general public, without prior authorization.
- Kegs of any size or any common source of alcoholic beverages are not permitted on campus without University approval.
- University funds will not be used for the purchase of alcoholic beverages.
- The use of alcohol in the teaching of LSSU courses is permitted when the instruction occurs in an academic building of the University. The course must be under the supervision of a faculty member, the purpose must be solely educational, and the beverage must be a legal one as defined by the Michigan Liquor Control Act.
- Advertising in University publications or publicized notice on or off campus of the availability of alcoholic beverages at any event sponsored by a University group or individual must be approved by the Campus Life Office.

## **University Housing Policy**

- Brady Hall, Osborn Hall and the Student Village are alcohol-free living areas; no intoxication, consumption or possession of alcohol or alcohol containers is permitted.
- Possession or consumption of alcohol is permitted by those residents 21 years of age or older in Moloney, and Neveu, Row Houses and Townhouses where all residents are at least 21 years of age. Alcohol is not to be consumed when underage guests are present. Possession or consumption of alcohol is not permitted in rooms or apartments where any resident is under 21 years of age. (Living Learning Communities may differ, follow rules established in Living Learning Communities guidelines that at minimum must follow University Housing policies).

- Social events, (parties, large gatherings, etc.) allowing alcohol are not permitted in any University Housing facility where minors are present.
- Students in possession of alcohol containers will be considered in violation whether or not the containers contain an alcoholic beverage.
- Possession of open alcohol beverage containers outside living units is not permitted.
- Alcoholic beverages in factory sealed containers may be transported by individuals (21 years or older) from off campus directly to approved residences.
- A common source of alcohol (kegs, trash cans, etc.) or quantities of alcohol determined to be excessive by University personnel is not permitted on campus grounds.
- Residents are responsible for the actions of their guests.
- All provisions of state law pertaining to possession and use of alcohol, furnishing of alcoholic beverages to minors, and falsification of an I.D. for the purchase of alcoholic beverages will be enforced.
- Social events (parties, large gatherings, etc.) may be terminated at any time at the discretion of University staff.
- Intoxication, disruptive behavior and/or damage related to the consumption of alcohol are in violation of University policy and will be treated under the University's Code of Student Conduct and/or criminal laws.

## Alcohol Disciplinary Sanctions

Sanctions may be imposed upon a student for an infraction of the LSSU Alcohol Policy. These sanctions do not preclude criminal prosecution resulting from violations of federal, state or local laws. Students are cautioned that significant and timely sanctions will be imposed for all alcohol violations. Sanctions will include fines, alcohol education, suspension from the residence halls and/or suspension from the University. In addition, parents or legal guardians may be notified of sanctions at the conclusion of a disciplinary case.

Any of the following constitute a violation of LSSU's alcohol policy:

- Underage consumption of alcohol or possession of alcohol or alcohol containers regardless of their contents (containing any liquid or no liquid)
- Intoxication
- Open container of alcohol in public areas
- Hosting a party or guests involving the illegal use of alcohol
- Dispensing alcohol to minors
- Driving while under the influences of alcohol or in possession of alcohol

## Sanctions for Students Violating Alcohol Policy

<u>First Offense</u>	<u>Second Offense</u>	<u>Third Offense</u>	<u>Fourth Offense</u>
Alcohol Education	Alcohol Education	Counseling Referral	University Suspension for a minimum of one year
Documentation Filed	Counseling Referral	University Probation or Suspension (min. 1 yr.)	Counseling and additional developmental

			requirements for reinstatement
\$50 fine	\$100 fine	\$200 fine	\$250 fine
Possible Relocation or Removal from Housing	Possible Relocation or Removal from Housing	Removal from University Housing	Parent Notification
Parent Notification	Parent Notification	Parent Notification	Documentation Filed
	Documentation Filed	Documentation Filed	
Possible Community Service	Possible Community Service	Possible Community Service	Possible Community Service

## Alcohol and Other Drugs - Health Related Risks

Drug use can start out as experimentation or casual use and can progress into problem use and dependence. The abuse of alcohol and other drugs can erode the foundation of the University's goals and objectives and diminishes the personal attainment of intellectual, social, physical and moral growth and development.

This includes:

- Psychological and/or physical dependence.
- Impaired learning ability, memory loss, inability to solve complex problems.
- Inability to perform sexually, infertility problems.
- Increased risk of sexually transmitted diseases (including AIDS).
- Complications due to the combination of prescription medication and other drugs or alcohol.
- Death, coma or toxic reactions especially when combining alcohol with any other drug, including over-the-counter medicine or prescriptions.
- Guilt/regret over activities performed while under the influence of alcohol/drugs, i.e., regretting sexual encounters, fighting, risk-taking, legal difficulties.
- Damage to brain, cardiovascular system, liver, etc.
- Increased risk of cancer.
- Fetal alcohol syndrome, birth or genetic defects.
- Psychosis (hallucinations, loss of contact with reality, extreme changes in personality).
- Diet deficiencies.
- Other physiological, psychological or interpersonal problems.

Alcohol consumption causes a number of marked changes in behavior. Even low doses significantly impair the judgment and coordination required to drive a car safely, increasing the likelihood that the driver will be involved in an accident. Low to moderate doses of alcohol also increase the incidence of a variety of aggressive acts, including assaults and spouse and child abuse. Moderate to high doses of



alcohol cause marked impairments in higher mental functions, severely altering a person's ability to learn and remember information. Very high doses cause respiratory depression and death. If combined with other depressants of the central nervous system, much lower doses of alcohol will produce the effects just described.

Repeated use of alcohol can lead to dependence. Sudden cessation of alcohol intake is likely to produce withdrawal symptoms, including severe anxiety, tremors, hallucinations and convulsions. Alcohol withdrawal can be life-threatening. Long-term consumption of large quantities of alcohol, particularly when combined with poor nutrition, also can lead to permanent damage to vital organs such as the brain and the liver.

## **Alcohol - Other Liability**

Civil (Dram Shop) Liability - Students should also be aware that civil liability may be incurred when the sale or furnishing of alcoholic beverages to a visibly intoxicated person is found to be the proximate cause of damage, injury or death of an innocent person. Such liability may arise independently of any University sanctions or prosecution under local, state or federal laws.

## **Assembly**

Everyone needs to respect the rights of other members of the University community to move around freely, conduct normal University business, and use University buildings and facilities in a free and normal way. No one may obstruct any of these normal functions in any way.

## **Compliance with University Officials**

Everyone is expected to comply with the directions of University officials who are acting in accordance with the performance of their duties. Failure to do so is considered a serious disciplinary violation.

## **Dangerous or Improper Driving & Ignoring of Traffic Signs**

All vehicles present on campus property are expected to adhere to the driving and traffic rules and regulations of the State of Michigan. Students are expected to follow all posted traffic signs and signals on campus. Vehicles should not travel through campus at a high rate of speed at any time. Improper driving (high rates of speed, disregarding signs, etc.), non-compliance with Public Safety Officers (i.e. parking for hockey games), and risky behaviors (i.e. doing "donuts", endangering the lives of others, etc...) are expressly not allowed. Any individuals found driving in a dangerous fashion will be subject to the laws of the State of Michigan and the campus judicial system.

## **Defacement of University Property**

Any student found defacing, damaging, or destroying University property or the property of a University official will be held accountable for their actions. Students will be sent through the campus judicial system, which will determine further appropriate sanctions. Criminal prosecution may also result. In cases when damage is done by the guest of a student, the student will be held responsible for the actions of the guest. Students will be expected to pay the full cost of labor, repair and/or replacement of any damage done to such property or belongings.

## **Disciplinary Procedures**

*The Judicial Process:* The steps followed at Lake Superior State University to resolve formal disciplinary matters are called the judicial process. This process exists to assure that basic due process is granted to all students of our community who find themselves in conflict with the community's standards. All such conflicts are resolved by members of the Lake Superior State University community in a system which, though avoiding the formalities and complexities of a legal process, nevertheless aim to respect the dignity of the individual as well as personal and community rights. With heavy reliance on the honesty of all participants, it is assumed that reasonable people, properly informed, can and will make judgments in the best interest of the University community. See section on 'Sexual Assault' for specific procedures that may vary depending on the nature of the incident and investigation. Please refer to the Public Safety website [www.lssu.edu/publicsafety/clery/](http://www.lssu.edu/publicsafety/clery/) for more information on the 'Violence Against Women Act.'

The following judicial structures and procedures have been set in place and are to be considered binding on all parties:

The formal responsibility for discipline rests with the Campus Life Office. All possible disciplinary matters begin with a complaint filed by a member of the Residential Life staff (Director, Area Coordinator, Resident Assistant) or by any member of the University community. Each complaint is reviewed and, if formal disciplinary action seems called for, then the student or group alleged to have violated University policy is notified by a staff member that the matter is being referred to an appropriate judicial body or hearing agent.

*Hearings and Adjudications:* The Student Judicial Committee will have primary authority for all cases involving infractions of policy by students on the LSSU campus. During those times when the Student Judicial Committee does not function, all cases will be heard by the Director of Campus Life and Housing or a designated official with appeals going to the appropriate administrator.

*The Student Judicial Committee:* This body will be established at the end of each academic year for the subsequent year. Membership will be composed of up to ten students at large whom have a vested interest in the judicial system at Lake Superior State University.

*Rights and Responsibilities of Students Subject to Disciplinary Hearings:* Regardless of whether a student or group has the disciplinary issue heard by a staff member acting as a hearing agent or by either Judicial Committee, they are assured the following rights:

Student(s) shall be presented the charges brought against him/her/them in writing at least twenty-four hours before the hearing is scheduled. Any such notice shall also state that if the student fails to appear without just cause, the hearing shall be heard in his/her/their absence.

- The student shall be entitled to a hearing by an impartial hearing agent.
- The student shall be entitled to be present at the hearing during the presentation of any matter on which a decision may be based.
- The student shall be entitled to present his or her case through statements, questions, witnesses, and other forms of evidence.
- The decision of the hearing agent shall be made only on the basis of matters presented at the hearing.
- If the student's continued presence on campus is viewed as disruptive or dangerous, the Director of Campus Life and Housing and/or the Vice President for Enrollment Services and Student Affairs may ask the student to leave the University Campus during the period of time that the hearing/appeal is being processed.
- The student shall have the right to appeal the decision of the hearing agent.
- All disciplinary hearings are closed to the public. Persons in attendance at closed hearings shall be

limited to (a) the hearing agent or members of the Judicial Committee, (b) the student and (c) witnesses. Witnesses may be asked to leave after their statements have been received.

If a student or group of students is asked to appear before a judicial hearing agent and, if he/she/they fail to appear for the hearing or investigation without just cause, this will be considered a violation of University policy and such students will be subject to further disciplinary action.

*Standards of Proof:* The Judicial Process places a strong emphasis and is dependent upon the candor and honesty of all parties involved. In most hearings strong, clear evidence and testimony is presented to indicate the student's level of involvement and guilt in the case. Sometimes, however, testimony is ambiguous or conflicting. As in a court of law, a student is innocent until proven otherwise; however, unlike a court, the standard of proof is less stringent and is known as a 'preponderance of evidence'.

*Sanctions:* The Board of Trustees authorizes the sanctions set forth below for any violation of University policy. More than one sanction may be imposed. In addition, the student or student organization may also be subject to the penalties related to the violation of any federal, state or local law.

When determining sanctions the Student Judicial Committee will take into consideration the following:

- The seriousness of the offense
- The intent of the student
- The actual consequences of the behavior
- The needs of the community and individual(s) involved
- The attitude of the student involved
- The student's past record

The following sanctions may be applied to incidents of disruptive behavior:

- *Formal reprimand* - a formal notice that the law or this policy has been violated and that future violations will be dealt with more severely.
- *Fines* – Fines may be assessed for certain infractions. The amount of the fine will be determined by the severity of the violation. In cases involving theft, damage or destruction of property, appropriate disciplinary action will include payment of restitution and/or service.
- *Service* – performance of one or more tasks designed to benefit the community and help the student or student organization understand why such behavior was inappropriate.
- *Educational Project* - completion of a project specifically designed to help the student or student organization understand why the behavior was inappropriate.
- *Referral to Counseling Services or Classes* – A student may be directed to meet with the Counseling Center and/or attend an informative class relative to a disciplinary issue.
- *Restriction from Employment at the University* - prohibition or limitation of University employment.
- *University Housing Transfer or Removal* - placement in another room or housing unit or removal from University housing
- *Disciplinary Probation/Last Chance Clause* – The student is notified in writing that any further violation of rules may result in immediate suspension or dismissal without an opportunity of appeal. Probation may carry with it withdrawal of certain student privileges.
- *Suspension/Expulsion* – Suspension is an action taken by the University, which prohibits participation in any activity of the institution for a fixed period of time. The student will be required to leave campus and not be permitted to return until the time of the suspension has elapsed. Expulsion is a permanent forced withdrawal from the University. In both situations, if the action requires or results in academic withdrawal, the student will lose credit for subjects carried

that semester. Fees and tuition will be forfeited according to the normal withdrawal policy.

The University may also implement the provisions of Public Act No. 26 of 1970 which provides that it is a misdemeanor, punishable by fine and/or incarceration in the county jail when a person: violates a University rule and such person fails to vacate the premises when directed by the University and such person constitutes a clear and substantial risk of physical harm or injury to other persons, or an unlawful disruption of the functions of the University by remaining by use of force or by threat of force; or enters the institution's premises or structures with the intent to, and does in fact, constitute a clear and substantial risk of physical harm or injury to others or of damage or destruction of University property, or prevents or disrupts the customary and lawful function of the University by occupying institutional space by force or the threat of force.

*The Appeals Process:* Appeals of disciplinary decisions are reviewed only if they are submitted in writing. Three types of appeals are possible: (1) appeals seeking a review of the procedures, (2) appeals seeking a review of penalties or 3) appeals based on new evidence not presented at original hearing.

All appeals must:

- Be submitted to the Director of Campus Life and Housing no later than 48 hours after the student(s) or group has been notified of a decision.
- Specify whether the appeal is seeking a review of procedures and/or the severity of the penalty or presenting new evidence.
- Provide the necessary detailed information to support a position.

The appropriate disciplinary appeal agent may, based upon a thorough review: (1) confirm the original decision; (2) return the case to the original judicial officer or hearing board for a new hearing; or (3) change the sanction(s) and/or the condition(s) originally imposed.

**Disciplinary Records:** Disciplinary records are kept in compliance with the Family Educational Rights and Privacy Act of 1974, as amended. Thus, disciplinary actions are recorded on the student's "personal record" and are not placed on the student's transcript. These disciplinary records are retained for a period of one academic year after the student graduates or after the student withdraws from the University. After such time all disciplinary records are destroyed. At all times, these personal records are confidential and are not available to outside investigation agencies unless permission has been granted in writing by the student whose record has been requested or when records are subpoenaed by a court of law.

## **Lake Superior State University - Discrimination and Prohibited Conduct Investigation Process - Policy Number: 1.5.3 – Interim Policy - Effective: July 1, 2015**

[www.lssu.edu/procedures/1.5.3DiscriminationAndProhibitedConductInvestigationPolicy](http://www.lssu.edu/procedures/1.5.3DiscriminationAndProhibitedConductInvestigationPolicy)

### ***1. Policy Statement***

1. Lake Superior State University campus is committed to providing an educational and working environment free of all forms of discrimination and harassment.
2. This policy defines the process the University will follow to determine whether policy violations have occurred regarding allegations and reports of discrimination, harassment, sexual misconduct and other forms of prohibited conduct. The University is committed to providing opportunities for concerns to be reported in a safe manner, to assess and investigate concerns, and, when necessary, to impose sanctions and/or remedies.

3. All members of the campus community are expected to conduct themselves in a manner that does not infringe upon the rights of others. When an allegation of misconduct is brought to an appropriate responsible employee's attention and a responding party is found to have violated this policy, sanctions may be used to reasonably make sure similar actions do not occur in the future.

## ***2. Reporting Concerns***

1. All reports of discrimination, misconduct, sexual misconduct, prohibited conduct, or harassment shall be promptly reported as noted below, or brought to the attention of an immediate supervisor, Public Safety, Human Resources, or other responsible employee, who shall follow up and report as noted below.
2. Reports or allegations of sexual misconduct and associate prohibited conduct shall be immediately reported to the Title IX Coordinator (TIXC) or designee. In the case of matters involving sexual misconduct, investigators must have specific training investigating allegations of prohibited conduct.
3. Reports or allegations of student misconduct shall be reported to the Vice President for Enrollment Services and Student Affairs or designee.
4. Reports or allegations of academic misconduct or related to other academic concerns shall be reported to the Provost & Vice President of Academic Affairs or designee.
5. Reports or allegations related to employment / employee matters, harassment or discrimination shall be reported to the Associate Vice President of Human Resources, who serves as the University EEO officer, or designee.
6. Collectively, the Title IX Coordinator, the Vice President for Enrollment Services and Student Affairs, the Provost & Vice President of Academic Affairs, the Associate Vice President of Human Resources, their respective designees, or issue/event investigators, are referred to in this policy as designated administrators or individually as designated administrator.
7. All reports shall be assessed and, where appropriate, result in an informal or voluntary remedy or a formal investigation with associated follow up. This policy outlines the University's assessment, investigation, determination, and appeal process.

## ***3. Investigation Timeline***

1. The University will use its best efforts to complete its investigation within 60 calendar days of the commencement of a formal investigation, although this time frame may be extended for good cause. Good cause may include, but is not limited to the complexity of each allegation, a request to coordinate or cooperate with external law enforcement, the availability of witnesses, University breaks or vacations, or to address other legitimate reasons.
2. In the event a time frame is extended, both the reporting party and responding party will be notified of an extension.

## ***4. Initial Assessment***

1. When a report is made the designated administrator will conduct an initial assessment to determine whether an informal/voluntary resolution or initial investigation is appropriate. The University will assess the facts and circumstances and consider the reporting party's expressed preference for manner of resolution.
2. When possible, the University will seek action consistent with the reporting party's request.

## ***5. Informal/Voluntary Resolution***

1. Informal/voluntary resolution is designed to eliminate a hostile environment through alternative

actions that do not involve disciplinary action against a responding party.

2. Where an informal/voluntary resolution is appropriate, the University will take immediate corrective action through the imposition of individual and community remedies designed to maximize the reporting party's access to the educational, extracurricular, employment, and other activities at the University and to eliminate any hostile environment.
3. Participation in informal/voluntary resolution by a reporting party is voluntary, and a reporting party can request to end informal/voluntary resolution at any time.
4. Complaints or allegations that involve sexual violence cannot be mediated through informal/voluntary resolution.

## ***6. Initial Investigation***

1. As part of the initial investigation, the University will (1) assess the nature and circumstances of the report; (2) address immediate physical safety and emotional well-being concerns; (3) notify the reporting party of the right to contact or decline to contact law enforcement if the conduct is criminal in nature, and if requested, assist the reporting party with notifying law enforcement; (4) notify the reporting party of the availability of medical treatment to address physical and mental health concerns and to preserve evidence; (5) notify the reporting party of the importance of the preservation of evidence; (6) assess the reported conduct for any necessary actions under Clery, including inclusion in the daily crime log, annual security report, or issuance of a timely warning; (7) provide the reporting party and responding party, if notified, with information about on- and off-campus resources, the range of interim accommodations and remedies, and an explanation of the procedural options; (8) inform the reporting party and responding party each may have one advisor of their choosing attend meetings and interviews with them, which may include an attorney (at their own expense), colleague, or other person they identify (where appropriate, consistent with applicable collective bargaining agreement); the advisor may not be a witness or a material party in the investigation; the advisor is limited to advising the reporting or responding party, and may not speak for the party they are advising; their role is to provide support and assistance; (9) consider whether the facts indicate a pattern of similar conduct by responding party; (10) discuss the reporting party's expressed preference for manner of resolution and any barriers to proceeding; and (11) explain the University's policy prohibiting retaliation.
2. The initial investigation will proceed until the designated administrator has sufficient information to make a reasonable assessment of the safety of the individual and of the campus community can be made, and determine the best course of action. The findings of an initial investigation may result in an informal/voluntary resolution or a formal investigation.

## ***7. Formal Investigation***

1. The designated administrator may initiate a formal investigation to determine if there has been a policy violation, and if so, whether sanctions are warranted. The designated administrators have the discretion to consolidate multiple reports involving a responding party into one investigation and resolution if the evidence related to each incident would be relevant and probative in reaching a determination on the other incident.
2. The University will designate an investigator(s) of its choosing. The investigator chosen to conduct the investigation must be impartial and free of any conflict of interest.
3. During the formal investigation, both the reporting party and the responding party will have the opportunity to present witnesses and evidence. For sexual misconduct investigations, a reporting party's relationship history with those other than a responding party is not allowable evidence.
4. The investigators will update both the reporting party and responding party regarding the status of the investigation at reasonable, regular intervals.

## ***8. Investigation Report***

1. At the conclusion of the formal investigation, the investigator will prepare a written report that summarizes the complaint, details of the information gathered, identifies the potential policy violations, synthesizes the area of agreement and disagreement between the parties, and includes supporting information or accounts.
2. The investigator presents a summary of findings and recommended remedies and sanctions, as appropriate, to the designated administrator.

## ***9. Review of Investigation Report***

1. The written investigation report will be reviewed for consistency and completeness. This review process will be completed within five (5) business days of receipt of the investigation report.
2. Based on this review, the investigation report may be returned to the investigators for clarification or additional information, or be submitted to the designated administrator for a final determination.

## ***10. Summary of Findings and Notice of Final Determination***

1. The designated administrator will prepare a summary of findings and notice of final determination, which contains the outcome and the rationale for the outcome finding regarding responsibility for alleged misconduct and any violation. The final determination will be made within five (5) business days of receipt of the final investigation report.
2. Both the reporting party and responding party will be sent this notification concurrently, using email notification, which serves as a method for documenting distribution.

## ***11. Determining Appropriate Sanctions***

1. When determining the proper sanction, the following factors will be considered: (1) the nature and violence of the conduct at issue; (2) the impact of the conduct on the reporting party; (3) the impact or implications of the conduct on the community or the University; (4) prior misconduct by the responding party, including the responding party's relevant prior disciplinary history both at the University or elsewhere, and any criminal convictions; (5) whether the responding party has accepted responsibility for the conduct; (6) maintenance of a safe and respectful environment conducive to learning; (7) protection of the university community; and (8) any other mitigating, aggravating, or compelling circumstances in order to reach a just and appropriate resolution in each case.
2. Other University offices may be consulted when determining or implementing sanctions.

## ***12. Sanction Process for Employees (Faculty and Staff) as Responding Party***

1. Sanctions for responding parties, who are employees, will be determined by the designated administrator in coordination with Human Resources, with input from other offices as appropriate.
2. *Represented Employees*: For represented employees, sanctions will be imposed in accordance with the applicable collective bargaining agreement and University policy.
3. *Unrepresented Employees*: For unrepresented employees, sanctions shall be determined in accordance with University policies and procedures, individual contracts, and/or appointment letters.
4. *Potential Employee Sanctions*: The potential sanctions for an employee may include training, referral to counseling, no contact order, no trespass, loss of privileges, written warning, reprimand, withholding of a promotion, reassignment, temporary suspension without pay, or separation from the University.

### ***13. Sanction Process for Students as Responding Party***

1. Sanctions for responding parties, who are students, will be determined by the designated administrator.
2. *Potential Student Sanctions:* Sanctions may be imposed upon any student found to be responsible for violation of University policy. Sanctions may include, but are not limited to, training, referral to counseling, written warning, no contact order, no trespass order, reprimand, behavior contract, probation, loss of privileges, community service, suspension, expulsion, withholding degree, or revocation of degree.
3. More than one sanction may be imposed for any single violation; previous violations of University policy, the Student Code of Conduct or Athletic or Academic program codes of conduct, may increase the severity of sanctions applied. Sanctions may be used independently or in combination depending on the particular circumstances of the violation.
4. Other University offices may be consulted when determining or implementing sanctions.

### ***14. Appeals Process for Sexual Misconduct Reports / Allegations***

1. *Written Appeal:* The reporting party or responding party may submit written notice of appeal to the TIXC within five (5) business days of receiving the summary of findings and notice of determination. Grounds for an appeal are limited to conflicts of interest, introduction of evidence not previously available, requests to mitigate sanctions, or other considerations that are directly related to alleged violations, facts or findings of the case.
2. *Response to Appeal:* The receipt of the appeal will be acknowledged by the TIXC in writing, which may be by email. Prior to an appeal review, the appealing party or parties may be asked to submit additional information supporting the basis for the appeal, if not previously submitted. To complete an appeal request, any additional material requested must be submitted within five (5) business days in order to form a completed appeal request. Failure to respond will result in an incomplete appeal. Incomplete appeals will not be reviewed.
3. *Notification of Appeal:* Each party will be notified of any complete appeal request.
4. *Appeal Review:* Appeal requests shall be reviewed by the chairperson of the hearing panel, and a determination will be made to proceed or to deny the appeal. Consideration will be given to whether or not the basis for the appeal could substantially impact the original findings or sanctions.
5. *Notification:* Parties will be notified in writing of the filing and status of appeals.
6. **Appeal Hearing Panel**
  1. The Vice President for Finance, or other as designated, will be the chairperson for a hearing panel and will conduct the hearing. If the Vice President for Finance is a party to the case a substitute chairperson shall be appointed. Two other employees will be appointed to the three person hearing panel.
  2. The TIXC will send a notice of hearing and a copy of a request for hearing to the reporting and responding parties, and to the hearing panel members.
  3. The chairperson will schedule the hearing no later than five (5) business days of notice from the TIXC, with the hearing to convene no later than fifteen (15) business days from notice from the TIXC, unless the chairperson provides otherwise and so notifies those involved.
  4. At the hearing the reporting and responding parties are allowed to give their own testimony, present the testimony of witnesses, and present relevant evidence to the panel. During the hearing, the reporting party and responding party may not directly question or cross-examine each other. The complainant and respondent may have an attorney or other advisor present for support and advice. The TIXC or designee will present the findings and determination of the investigation. At the chairperson's discretion, the panel hearing may be conducted as an open or a closed proceeding, based on the allegations, facts and findings of the case, and the desire for privacy or anonymity on the part of one or more of the participating parties.



1. Based on the nature of the complaint or allegations, the reporting party's presence at the hearing is not a prerequisite for the hearing to proceed.
5. Within fifteen (15) business days after completion of the hearing, the chairperson will issue a hearing panel determination to include sanctions and follow up actions, as appropriate. The hearing panel determination will be forwarded to the TIXC for concurrent distribution to the reporting and responding parties.
6. The hearing panel determination is final and binding.

### ***15. Appeals Process for Other Reports / Allegations:***

1. Appeals for academic reports or allegations should be directed to the Provost for follow up.
2. Appeals for student life reports or allegations should be directed to the Vice President for Enrollment Services and Student Affairs.
3. Appeals for employment or employee reports or allegations should be directed to the Associate Vice President for Human Resources.

### ***16. Investigation Documentation***

1. Individuals involved in the investigation and appeal process will adequately document the testimony of the parties and witnesses, completed forms and relevant investigation documents, all facts and evidence reviewed, the rationale for determinations, and interim and final remedies and sanctions imposed, if any.

### ***17. Resources***

1. *Title IX Coordinator(s)*: Philip Espinosa, Title IX Coordinator; Jen Constantino, JD, Deputy Title IX Coordinator; 906-635-2213, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783, Administration Building, Room 114
2. *EEOC Officer*: Philip Espinosa, Associate Vice President Human Resources; 906-635-2213, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783, Administration Building, Room 114
3. *Campus Public Safety*: 906-635-2100, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783, Administration Building
4. *Campus Student Life*: 906-635-2236, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783, Cisler Center, Room 125
5. *Campus Housing*: 906-635-2411, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783, Cisler Center, Room 125
6. *Counseling Center*: 906-635-2752, 623 W. Easterday Ave., Sault Ste. Marie, MI 49783, Counseling Center
7. *Student Health Center*: 906-635-2110, 621 W. Easterday Ave., Sault Ste. Marie, MI 49783, Health Care Center
8. *Student Against Sexual Assault*: Campus Student Life, 906-635-2236, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783, Cisler Center, Room 125
9. *Dianne Pepler Center (Advocacy/Women's Shelter)*: 906-635-0566, PO Box 698, Sault Ste. Marie, MI 49783
10. *War Memorial Hospital ER*: 906-635-4460, 500 Osborn Blvd., Sault Ste. Marie, MI 49783
11. *Sault Ste. Marie Police*: 906-632-5745, 225 East Portage Ave., Sault Ste. Marie, MI 49783
12. *Emergency*: 911 (if on campus 9911)
13. U.S. Department of Education, Office for Civil Rights, Regional Office, 1350 Euclid Avenue, Suite 325, Cleveland, OH 44115, 216-522-4970, FAX: 216-522-2573, Email: OCR.cleveland@ed.gov
14. U.S. Department of Education, Office for Civil Rights, Lyndon Baines Johnson Department of Education Building, 400 Maryland Avenue, SW, Washington, DC 20202-1100, Telephone: 800-

421-3481, FAX: 202-453-6012; TDD: 800-877-8339, Email: OCR@ed.gov

15. Michigan Department of Civil Rights, Marquette Office, 234 W. Baraga Avenue, Marquette, MI 49855, 906-226-6393, FAX: 906-226-3974

16. Equal Employment Opportunity Commission (EEOC), Detroit Field Office, Patrick V. McNamara Building, 477 Michigan Avenue, Room 865, Detroit, MI 48226, 800-669-4000, FAX: 313-226-4610, TDD: 800-669-6820

## Dress

In accordance with local health codes, shoes and shirts are to be worn in the dining rooms, academic areas and public buildings.

## Drugs

The possession, use, sale, distribution or manufacture of any illegal or controlled substance is prohibited at all University events and in any building or property owned and/or facilitated by LSSU. Violators will be subject to disciplinary and/or legal action (including arrest), which may result in dismissal from Lake Superior State University.

## FERPA (Family Educational Rights & Privacy Act)

The Family Educational Rights and Privacy Act of 1974 (FERPA), also known as the “Buckley Amendment”, is a federal law which provides that Colleges and Universities will maintain the confidentiality of student educational records. The law basically states that no one outside the University shall have access to students’ educational records nor will the University disclose any information from those records without the written consent of students. There are exceptions, such as allowing certain personnel within the University with a legitimate educational interest to see the records, or releasing the records in an emergency in order to protect the health or safety of students or other persons.

Under the Family Educational Rights and Privacy Act, the University can release directory information about you without your prior authorization. LSSU considers the following directory information: name, address, telephone number, email address, place of birth, enrollment status (e.g., undergraduate or graduate, full-time or part-time) major field of study, participation in officially recognized activities and sports, height and weight of members of the athletic teams, dates of attendance, degrees, honors and awards received (including scholarships), and most recent previous educational agency or institution attended by the student.

You have the right to refuse to permit the release of any or all of your directory information. If you would like to prohibit or restrict the use of your information, please complete and sign a Directory Restriction Request and submit it to the Registrar’s Office.

*Word of Warning:* When you restrict your name, you are telling us that you do not want us to acknowledge you as a student in any way. Your name will not appear in any official University publications nor will we be able to verify your enrollment to any outside source. This also means we will not be able to provide service to you by telephone, nor will we be able to help you in person without proper picture identification. A restriction that you place on your record remains in place until you request, in writing, that the restriction be removed.

If you do not want your directory information to be included in the Student Directory that LSSU publishes each year, your written request needs to be received before the end of the sixth day of the fall

semester.

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. They are:

The right to inspect and review the student's education records within 45 days of the day the University receives a request for access. Students should submit to the Registrar, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

The right to request amendment of the student's education records that the student believes are inaccurate or misleading. Students may ask the University amend a record that they believe is inaccurate or misleading. They should write the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading.

If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent. One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

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 address of the Office that administers FERPA is:

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

## **Financial Obligations**

Your fees, loans, fines, driving and parking penalties, etc., are your responsibility and must be paid when due. Delay in meeting your financial obligations means that you may face all or some of the following consequences: your transcripts may be withheld, you may not be able to register for future semesters, your registration may be canceled for the current semester, you may be denied financial aid, and, in severe cases, you may face legal action from an outside agency (including the state of Michigan).

## **Firearms, Explosives and Weapons (See Official Weapons Policy below)**

You are allowed to bring firearms and weapons to campus for classroom and sporting purposes. However, having a weapon on campus is a serious responsibility and you must follow these guidelines to ensure everyone's safety. Please see complete guidelines below.

If you bring a weapon to campus, you must register it immediately with the Public Safety Office in the Administration Building. This includes all firearms, ammunition, bows, arrows, knives, paint-ball guns, BB and pellet-type guns, and any other dangerous weapons. Information regarding manufacturer, caliber, model and serial number will be needed to register firearms, as well as a safety inspection certificate.

All weapons and ammunition must be stored in the designated area by the Public Safety Office and may not be stored anywhere else on campus. Any exceptions to this policy, such as weapons used in class (including any criminal justice student activity), must be authorized by the Public Safety Office.

You should provide a lock to secure the locker in which your weapon will be stored. Weapons may be removed or returned at any time. Student IDs are required when checking out weapons. Firearms and ammunition must never be taken to any room or apartment. Cleaning firearms is permitted only in the designated area set by the Public Safety Office.

Explosives, firecrackers, concealed weapons and similar items are not permitted on campus, except by a certified law enforcement officer in accordance with their duties.

Any failure to comply with these regulations will result in severe disciplinary action and/or dismissal from Lake Superior State University, as well as possible criminal prosecution.

## **Lake Superior State University - Gender-Based Discrimination and Sexual Misconduct Policy - Policy Number: 1.5.2 – Interim Policy - Effective: July 1, 2015**

[www.lssu.edu/procedures/1.5.2Gender-BasedDiscriminationandSexualMisconductPolicy1](http://www.lssu.edu/procedures/1.5.2Gender-BasedDiscriminationandSexualMisconductPolicy1)

### ***1. Policy Statement***

1. Members of the Lake Superior State University campus community are entitled to an educational and working environment free of all forms of gender-based discrimination and sexual misconduct. All members of the campus community are expected to conduct themselves in a manner that does not infringe upon the rights of others. When an allegation of prohibited conduct, as later defined, is brought to an appropriate responsible employee's attention and a responding party is found to have violated this policy, sanctions will be used to reasonably make sure similar actions do not occur in the future.
2. This policy applies to all Lake Superior State University students, faculty, staff, administrators, board members, consultants, vendors, others engaged to do business with the University, guests and visitors (collectively or individually referred to as "covered individuals," as defined in the policy). The policy also applies to other third parties under circumstances within the University's control.
3. This policy is intended to define community expectations, to establish a process for determining when those expectations have been violated, and to set guidelines for follow up and action, as appropriate. The University is committed to providing safe opportunities for concerns to be reported, appropriately investigated, the taking of appropriate action to end prohibited conduct, to educate and increase awareness in order to prevent the reoccurrence of prohibited conduct, and to

remedy the impact on the campus community.

## 2. Summary of Policy

1. This summary highlights key parts of this policy for easy reference.
2. The University has obligations under Title IX, a federal law that prohibits gender-based discrimination in education. The law requires that sexual misconduct must be reported and investigated and that follow up action be taken. The full policy language provides greater detail.
3. Gender-based discrimination includes sexual misconduct. Sexual misconduct includes non-consensual sexual contact with others.
4. Consent is given when each person in a sexual situation articulates an affirmative decision to engage in sexual activity. Consent is not body language or dress: The way a person dresses or looks is not consent. Consent is not silence: If a person does not verbally say “no” it does not mean they are saying “yes” – only “yes” means “yes.” Consent is not a dating relationship or previous sexual activity; a current or prior relationship does not constitute consent. Consent to one behavior does not mean consent has been given to other behaviors. Consent cannot be given by a person who is incapacitated or unconscious, asleep or under the age of sixteen (16). Consent cannot be given under threat or coercion. Consent is only a conscious, articulated, affirmative decision.
5. Compliance with the law states that employees, faculty and staff, have a duty to report sexual misconduct. If you know, or reasonably should know, of sexual misconduct you are expected to report it, since the University has an obligation to promptly investigate and take appropriate action. When reports are made the University is able to provide assistance to individuals affected by sexual misconduct and also helps ensure the safety of the campus community.
6. Reports should be made to the Title IX Coordinator at 906-635-2213. Reports may also be made to Public Safety, Student Life, the Provost’s Office, your immediate supervisor or a faculty member. As responsible employees, with a duty to report, these individuals or offices will forward reports to the Title IX Coordinator.

## 3. Definitions

1. *Prohibited Conduct*: Prohibited conduct includes sexual and gender based discrimination, sexual and gender-based harassment, sexual assault, non-consensual sexual contact, sexual exploitation, stalking, cyber stalking, intimate partner violence, retaliation, and prohibited relationships by persons in authority. The University will treat attempts to commit any prohibited conduct as if those attempts had been completed.
  1. *Sexual or Gender Based Discrimination*: This prohibited conduct includes any distinction, preference, advantage for, detriment to, or adverse treatment of an individual compared to others that is based on that individual’s actual or perceived gender, gender identity, genetic information, marital status, pregnancy, sex or sexual orientation. This policy covers sexual and gender based discrimination in employment and in access to educational opportunities. Discrimination against any employee, applicant for employment, student or applicant for admission is prohibited.
  2. *Sexual and Gender Based Harassment*: This prohibited conduct includes any unwelcome sexual advance, request for sexual favors, or other unwelcome verbal or physical conduct of a sexual nature when (1) submission to or rejection of such conduct is made, either explicitly or implicitly, a term or condition of an individual’s employment, evaluation of academic work, or participation in any aspect of a University program or activity; or (2) submission to or rejection of such conduct is used as a basis for decisions affecting the individual; or (3) such conduct has the purpose or effect of unreasonably interfering with an individual’s work or academic performance. (For example, the conduct forms a pattern, is sufficiently serious, pervasive or persistent as to create an intimidating, hostile, humiliating, demeaning, or

sexually offensive working, academic, residential, or social environment under both a subjective and objective standard.) A single isolated incident of sexual harassment may create a hostile environment if the incident is sufficiently severe. The more severe the conduct, the less need there is to show a pattern or a repetitive series of incidents to create a hostile environment, particularly if the harassment is physical. This also includes gender-based harassment, which may include acts of verbal, non-verbal, or physical aggression, intimidation, or hostility based on sex or sex stereotyping, even if those acts do not involve conduct of a sexual nature.

3. *Sexual Assault*: This prohibited conduct includes having or attempting to have sexual intercourse, or to engage in other forms of sexual activity such as inappropriate touching, with another individual (1) by force or threat of force; (2) without consent; or (3) where the individual is incapacitated and lacks capacity to give affirmative consent. Sexual intercourse includes vaginal or anal penetration, however slight, with a body part (e.g. penis, tongue, finger, hand) or object, or oral penetration involving mouth to genital contact.
4. *Non-Consensual Sexual Contact*: This prohibited conduct includes having sexual or intimate or socially unacceptable contact with another individual (1) without affirmative consent; (2) by force or by threat of force; and / or (3) when that individual is incapacitated and lacks capacity to give affirmative consent. For example, sexual contact includes, but is not limited to, intentional contact with the intimate parts of another, causing another to touch one's intimate parts, or disrobing or exposure of another without permission, or other contact of a sexual or intimate nature. Intimate parts may include the breasts, genitals, buttocks, groin, mouth, legs, back, or any other part of the body that is touched in a sexual manner.
5. *Sexual Exploitation*: This prohibited conduct includes taking non-consensual or abusive sexual advantage of another for one's own advantage or benefit, or to benefit anyone other than the one being exploited. Examples of sexual exploitation include, but are not limited to: (1) surreptitiously observing another individual's nudity or sexual activity or allowing another to observe consensual sexual activity without the knowledge and consent of all parties involved; (2) non-consensual sharing or streaming of images, photography, video, or audio recording of sexual activity or nudity, or distribution of such without the knowledge and consent of all parties involved; (3) exposing one's genitals or inducing another to expose their own genitals in non-consensual circumstances; (4) knowingly exposing another individual to a sexually transmitted disease or virus without their knowledge; (5) sexually-based bullying; and (6) inducing incapacitation for the purpose of making another person vulnerable to non-consensual sexual activity.
6. *Stalking*: This prohibited conduct includes physical or verbal conduct (generally demonstrated by two or more events) directed at another individual in a manner that could be reasonably regarded as likely to alarm, intimidate, control, coerce, harass, cause fear of harm or injury to that person or to a third party. The feared harm or injury may be physical, emotional, psychological, or related to the personal safety, property, education, or employment of the individual. For example, failure to comply with a no contact order may be construed as stalking behavior.
7. *Cyber-Stalking*: This prohibited conduct is stalking through the use of electronic media such as the Internet, social networks, blogs, cell phones, texts, or other similar devices or forms of contact are used as the manner of contact.
8. *Intimate Partner Violence*: This prohibited conduct includes violence towards an intimate partner (also known as dating violence, domestic violence or relationship violence) which includes any act of violence or threatened act of violence against a person who is, or has been, involved in a sexual, dating, domestic or other intimate relationship with the responding party. Intimate partner violence can encompass a broad range of behavior including, but not limited to, physical violence, sexual violence, emotional violence, and

economic abuse. It may involve one act or an ongoing pattern of behavior. Intimate partner violence may take the form of threats, assault, property damage, violence or threat of violence to one's self, one's sexual or romantic partner, or to the family members or friends of the sexual or romantic partner. Sexual harassment, sexual assault, sexual exploitation, harm to others, stalking, and retaliation may all be forms of intimate partner violence.

9. *Retaliation*: This prohibited conduct includes actions, behaviors, words, or attempts to take adverse action against the reporting party, responding party, or any individual or group of individuals because of their good faith complaint or participation in an investigation or resolution of an allegation of prohibited conduct. Retaliation can be committed by an individual or group of individuals, including, but not limited to a reporting party or responding party. Retaliation can take many forms, including threats, harassment, intimidation, pressuring, continued abuse, violence, or other forms of harm to others. Retaliation has significant potential to interfere with a person's ability to file a complaint or participate in an investigation, and to interfere with or limit the University's ability to investigate, stop, prevent and remedy allegations of prohibited conduct, such that any allegations of retaliation will be assessed and promptly investigated.
10. *Prohibited Relationships by Persons in Authority*: This prohibited conduct includes sexual or other intimate relationships between persons occupying asymmetrical positions of power (or perceived positions of power), even when both consent. Such relationships raise suspicions that the person in authority has violated the standards of professional conduct. Romantic or sexual relationships between individuals in unequal positions may be less consensual than perceived by the individual whose position confers power. Therefore, relationships in which one party maintains a direct supervisory or evaluative role over another party are prohibited. In general, this includes all sexual or other intimate relationships between students and their employers, supervisors, professors, coaches, advisors, or other non-student University personnel. Similarly, University employees who supervise or otherwise hold positions of authority over others are prohibited from having a sexual or other intimate relationship with an individual under their direct supervision. The effect of such a relationship may render an individual's work, academic, or social environment intimidating, offensive, or hostile. Persons with direct supervisory or evaluative responsibilities who contemplate beginning or are involved in such relationships are required to promptly (1) discontinue any supervising role or relationship over the person; and (2) report the circumstances to their direct supervisor. *This includes RAs and students over whom they have direct responsibility.*
2. *Covered Individuals*: This policy applies to all Lake Superior State University students, faculty, staff, administrators, board members, consultants, vendors, others engaged to do business with the University, guests and visitors (collectively or individually covered individuals). The policy also applies to other third parties under circumstances within the University's control.
3. *Title IX Coordinator or designee*: The term Title IX Coordinator or designee (TIXC) refers to University employees designated as the Title IX Coordinator, Deputy Title IX Coordinator, Assistant Title IX Coordinator, and may also refer to those employees designated to investigate, review or adjudicate complaints, allegations and appeals based on this policy. These individuals participate in mandatory training.
4. *Student*: The term student or students includes all persons taking one or more courses at Lake Superior State University. This includes both full-time and part-time students taking undergraduate, graduate, professional studies, or continuing education courses. Anyone who withdraws from the University after a charge for an alleged violation of this policy, or who is not officially enrolled for a particular term, is still considered a student if they have a continuing relationship with the University as a student. For example, a student who is on a summer break or a student on a leave of absence, remains identified as a student under this policy. Student also refers to any student who is visiting the University from another school, college or university.

5. *Responsible Employees*: The term responsible employee refers to (1) any employee who has the authority to take action to redress the prohibited conduct; (2) any employee who has the duty to officially report prohibited conduct by students or employees; or (3) any employee a student could reasonably believe has the authority or responsibility to take action (such as a member of staff or faculty). A responsible employee has a duty to report a violation.
6. *Confidential Employee*: A confidential employee is a campus or community professional who, when acting in the capacity of his or her professional role (the role for which they are actively employed in by the University), can hold a legally-privileged conversation. For example, a licensed nurse employed by the university as a licensed nurse in a caregiver capacity is a confidential employee. However, a licensed nurse who is employed by the university in a non-caregiver capacity is not a confidential employee (since they are not employed as a clinical care giver); this person is a responsible employee with a duty to report.
  1. These individuals include those employees who are actively employed by the University as medical providers, mental health professionals, ordained clergy/pastoral counselors, or rape crisis counselors. Confidential employees are prohibited from breaking confidentiality without express permission of the individual seeking services, unless there is an imminent threat of harm to self or others or the conduct involves suspected abuse of a minor.
  2. If you believe a reporting party or person seeking advice or assistance erroneously considers you to be a confidential employee (and you are not officially employed in such a role), you have a duty to inform that person that, in your role, you are not a confidential employee. You must let them know you have a legal duty to report.
  3. When a report involves suspected abuse of a minor under the age of 18, these confidential employees are required by state law to notify child protective services and/or local law enforcement.
7. *Privacy*: All University employees who are involved in LSSU's Title IX response, including the Title IX Coordinator, Deputy Title IX Coordinator, Assistant Title IX Coordinator, and Title IX Investigators, receive instruction about respecting and safeguarding private information. Throughout the process, every effort will be made to protect the privacy interests of all individuals involved in a manner consistent with the need for a thorough review of the report. Information related to the report of prohibited conduct will only be shared with a small circle of individuals on a need to know basis. The use of this information is limited to those University employees who are directly involved in the resolution of a report under this policy. While not bound by legally-privileged confidentiality, these individuals will be discreet and respect the privacy of all individuals involved in the process. Reporting and responding parties are asked to keep details private. Privacy violations may result in corrective action. Reporting, responding parties and witnesses are not restricted from sharing or discussion information related to a complaint or allegation with others who may support them or assist them during an investigation process.
8. *Confidentiality*: Confidentiality means that information shared by an individual with designated campus or community professionals cannot be revealed to any other individual without express permission of the individual (for example, a licensed therapist employed by the University to serve as a licensed therapist). Those campus and community professionals who are employed by the University to perform such functions, can hold legally-privileged conversations recognized by law, this includes: medical providers, health care providers, mental health professionals, ordained clergy/pastoral counselors, and rape crisis counselors. These individuals are prohibited from breaking confidentiality without express permission of the individual seeking services, unless there is an imminent threat of harm to self or others, or the conduct involves suspected abuse of a minor. When a report involves suspected abuse of a minor under the age of 18, these confidential resources are required by state law to notify child protective services and/or local law enforcement.
9. *Reporting Party*: Any person, including a visitor, may initiate a complaint. The University may initiate a complaint on its own initiative. The reporting party is the person who reports an event, is



the subject of prohibited conduct, the person who files a complaint or the person who makes an allegation. The University reserves the right to take action or pursue a complaint even if criminal charges are pending, reduced, or dismissed. All complaints shall be referred to the University's Title IX Coordinator (TIXC) or Deputy Title IX Coordinator (DTIXC), who can assist in supporting the reporting party, identifying university and external reporting options, and implementing reasonably available interim measures.

10. *Responding Party*: Any person, including a visitor, may be named in a complaint or an allegation. The responding party is the person or persons about whom a complaint is filed, an allegation is made, or are named in a report of prohibited conduct.
11. *Location of Prohibited Conduct*: This policy applies to prohibited conduct that (1) takes place on or near any LSSU campus or LSSU location; (2) takes place in the context of any educational program or any activity supported by or sponsored by the University, regardless of location; (3) takes place in the context of any service learning activities, study abroad program, internship programs, or community program in which the University participates; (4) takes place between persons where the reporting party or responding party are members of the LSSU community, regardless of location; or, (5) takes place off-campus when the conduct has continuing adverse effects on any person's participation in any on campus or off-campus education program or activity.
12. *Timing of Prohibited Conduct*: This policy may be applied to conduct that takes place from the time a person applies for admission as a student and continues while the person maintains a continuing relationship with the University as a student, including semester breaks and the periods between semesters. For faculty, staff, administrators, and other non-student covered individuals, this policy may be applied to conduct that takes place from the time the person accepts employment at the University, or initiates a relationship with the University, and continues as long as the individual maintains that relationship with the University. This policy covers conduct that occurs during the time a person has a relationship with the University, and is applicable even if a report or allegation is filed after a person leaves or severs their relationship with the University, so long as the reported violation occurred during the time the responding party had a relationship with the University. For example, if a student transfers to another university or if an employee resigns, any allegation of misconduct reported for behavior while that person was with the University continues to be covered by this policy.
13. *Online Conduct*: Online and/or social media conduct may also violate this policy if the conduct meets the definition of any form of prohibited conduct. Blogs, web page entries on sites such as Instagram, Facebook, and Twitter and other similar online postings are in the public sphere and are not private. Therefore, these postings can be subject to allegations of conduct violations. The University does not regularly search for information but may take action if and when such information is brought to the attention of University officials.
14. *Consent, Force, Coercion, and Incapacitation*: For all forms of prohibited conduct covered by this policy, the terms consent, force, coercion, and incapacitation are defined as follows:
  1. *Consent*: Consent consists of an affirmative, conscious decision by each participant to engage in mutually agreed-upon sexual activity. Participants must act freely and voluntarily and have knowledge of the nature of the act or transaction involved. The following are essential elements of consent: (1) Informed and reciprocal. All parties must demonstrate a clear and mutual understanding of the nature and scope of the act to which they are consenting and a willingness to do the same thing, at the same time, in the same way; (2) Freely and actively given. Consent must be an affirmative action or communication that is freely, actively and voluntarily given. Consent cannot be obtained through the use of force, coercion, threats or intimidation, or by taking advantage of the incapacitation of another individual; (3) Mutually understandable. Communication regarding consent consists of mutually understandable words and/or actions that indicate a willingness to engage in sexual

activity. Consent must be clearly communicated or outwardly demonstrated; therefore, consent cannot be inferred from silence, passivity, lack of resistance, or lack of active response. An individual's choice of clothing cannot be considered demonstrated consent to a sexual activity; (4) Not indefinite. Consent may be withdrawn by either party at any time. Withdrawal of consent can be an verbally expressed statement, such as "no" or "stop", or can be based on an outward demonstration that conveys that an individual is hesitant, confused, uncertain, or is no longer a willing participant; and (5) Is limited. Each participant in a sexual encounter must consent to each form of sexual contact with each participant. Consent to one form of sexual contact does not constitute consent to all forms of sexual contact, nor does consent to one sexual activity with one person constitute consent to activity with any other person.

2. *Force*: Force is the use of, or threat of, physical violence or intimidation to overcome an individual's freedom of will to choose whether or not to participate in sexual activity. To demonstrate the use of force, the reporting party does not have to resist the sexual advancement or request; however, resistance by the reporting party will be viewed as a clear demonstration of non-consent. Force can include a wide range of behaviors, including, but not limited to intimidation, manipulation, threats, and blackmail. A person's words or conduct are sufficient to constitute force if they wrongfully impair another individual's freedom of will and ability to choose whether or not to engage in sexual activity.
3. *Coercion*: Coercion is the improper use of pressure to compel another individual to initiate or continue sexual activity against the individual's will. Coercion can include a wide range of behaviors, including, but not limited to intimidation, manipulation, threats, and blackmail. A person's words or conduct are sufficient to constitute coercion if they wrongfully impair another individual's freedom of will and ability to choose whether or not to engage in sexual activity.
4. *Incapacitation*: Incapacitation is a state during which an individual lacks the ability (mentally or physically) to make an informed and rational decision to engage in sexual activity because the individual lacks conscious knowledge of the nature of the act (e.g. to understand the who, what, when, where, why, or how of the sexual interaction) and/or is physically helpless. Incapacitation may result from the use of alcohol, medication, and/or drugs. The impact of alcohol and drugs varies from person to person. Alcohol consumption, medication usage, and/or use of other drugs can affect a person's ability to consent. To determine whether a party should have known about the incapacitation, consider the position of a sober, reasonable person. Being intoxicated or impaired by drugs, medication, or alcohol is never an excuse for failing to obtain consent from another person. An individual is also considered incapacitated, and therefore unable to give consent, when asleep, unconscious, or otherwise unaware that sexual activity is occurring. Incapacitation may also exist because of a mental or developmental disability that impairs the ability to consent to sexual contact.

#### 4. Policy Violations

1. Engaging in any prohibited conduct, as defined in this policy, is a policy violation and a deemed violation of the university community standards. Violations should be reported, in accordance with this policy, and will be reviewed and investigated, in accordance with this policy. Specific examples of behaviors that may violate this policy are provided below.
  1. *Physical Contact*: Prohibited conduct includes unwelcome, non-consensual touching, sexual assault, physical assault, and/or impeding, restraining, or blocking movements.
  2. *Verbal Contact*: Prohibited conduct includes unwelcome derogatory comments, epithets, slurs or humor, verbal abuse of a sexual nature, graphic verbal commentaries, sexually degrading or other degrading words used to describe an individual, language designed to control or intimidate others, and/or suggestive or obscene letters, notes, or invitations.

3. *Visual Contact*: Prohibited conduct includes leering, making sexual gestures, displaying of suggestive objects or pictures, cartoon or posters in a public space or forum, or severe, persistent, or pervasive visual displays of suggestive, erotic, or degrading sexually oriented images that do not serve a legitimate educational purpose.
  4. *Written Contact*: Prohibited conduct includes letters, notes, or communications (whether written, printed, electronic or in other form) containing comments, words or images in a public space or forum, or severe, persistent, or pervasive written displays of suggestive, erotic, or degrading sexually oriented images that do not serve a legitimate educational purpose.
  5. *Quid Pro Quo Conduct*: Prohibited conduct includes direct propositions of a sexual nature between those for whom a power imbalance or supervisory or other authority relationship exists, offering employment benefits in exchange for sexual favors, making submission to sexual advances an actual or implied condition of employment, work status, promotion, grades, or letters of recommendation, including subtle pressure for sexual activity, an element of which may be repeated requests for private meetings with no academic or work purpose, or making or threatening reprisals after a negative response to sexual advances.
2. Prohibited conduct may be evident based on these examples or it may be evident based on other behaviors not explicitly mentioned in this policy, however, which clearly violate the intent of this policy.

### **5. Reporting of Policy Violations**

1. Any person, at any time, may report a concern to the Title IX Coordinator or designee, to Public Safety, to a responsible employee, who in turn will report to the Title IX Coordinator or designee.
2. All University responsible employees (faculty, staff, and administrators) are expected to report actual or suspected violations of this policy to the TIXC / DTIXC. Failure of a non-confidential employee to report an incident or incidents of prohibited conduct is a violation of this policy.
3. Reporting parties can expect to have complaints followed up on by the University when reported, and to have those incidents investigated and resolved through the procedures within this policy.
4. Responding parties can expect to be provided notice of allegations and shall have an opportunity to respond to the allegations before a determination is made.
5. Complaint information may be shared with investigators, witnesses, the responding party, and appropriate university officials on an as needed basis. Employees with access to this information are required to respect the privacy of those involved.

### **6. Responsible Employee Duties**

1. Responsible Employees are required by the University to share known details of an incident, the names of the parties involved, and a brief description of the incident with the TIXC or designee in person, by telephone, or by email. This connects a reporting party to information and resources and enables the University to take appropriate action to eliminate, prevent, and address prohibited conduct.

### **7. Reporting Options**

1. All individuals are encouraged to promptly report conduct that may violate this Policy to the University. In addition, all individuals are encouraged to report conduct that may also violate criminal law to both the University and local law enforcement. These processes are not mutually exclusive. Any University student, employee, or third party who seeks to make a complaint or report may (1) make an internal complaint to the TIXC; (2) contact Public Safety for assistance in filing a criminal complaint or preserving physical evidence; and/or (3) contact local law

- enforcement to file a criminal complaint. Reporting parties may pursue some or all of these steps at the same time; and/or (4) contact a responsible employee. Reports made to a responsible employee (other than the TIXC) will in turn be forwarded by that responsible employee to the TIXC.
2. *Constructive Notice:* An individual has received constructive notice of prohibited conduct when the individual knew or should have known about the prohibited conduct. Therefore, an individual or responsible employee cannot avoid reporting obligations by deliberately choosing to avoid hearing or learning about the potential prohibited conduct. If an individual believes they may have received constructive notice, that individual has an obligation to report this to the TIXC / DTIXC for follow up.
  3. *Timeliness and Location of Incident:* All individuals are encouraged to report prohibited conduct as soon as possible in order to maximize the University's ability to respond promptly and effectively. Promptly, as referred to within this policy, generally indicates an action that is taken within 24 hours. However, no victim or recipient of prohibited conduct is forced to report if they are not comfortable or ready to do so. If the responding party is not a member of the Lake Superior State University community at the time of the report, the University will still seek to meet its Title IX obligations by providing reasonably available support for the reporting party, but its ability to investigate and/or take action may be limited. The University will assist a reporting party in identifying external reporting options.
  4. *Coordination of Reporting:* The University will share information as appropriate and as needed, to be in compliance with other regulatory requirements, such as those enumerated by the Clery Act and VAWA. Such coordination is the responsibility of the TIXC or designee.

## **8. *Amnesty for Alcohol and Other Drug Use***

1. Lake Superior State University encourages the reporting of prohibited conduct under this policy. It is in the best interest of the campus community that as many individuals as possible choose to report and that witnesses come forward to share what they know.
2. To encourage reporting, individuals who in good faith report conduct prohibited by this policy, either as a reporting party or a witness, will not be subject to disciplinary action by the University for their own personal consumption of alcohol or drugs at or near the time of the incident, provided that any such violations did not and do not place the health or safety of any other person at risk.
3. The University may initiate non-punitive remedies, such as attendance at an educational session.

## **9. *Investigation and Appeal***

1. When a report is made, the Title IX Coordinator or designee will conduct an initial assessment and determine whether an informal or a formal investigation is required. If the matter can be resolved with an informal approach and an informal approach is warranted given the facts of the case and the safety interest of the University community, this may be done.
2. The University will take steps to investigate and respond to complaints consistent with a reporting parties request for privacy. The University's ability to respond may be limited by such a request. However, privacy does not take primacy over protecting an individual or the campus community from harm. Parties are notified in writing of the complaint and have an opportunity to respond.
3. After completion of an investigation, findings are reviewed and a determination with sanctions or remedies, if appropriate, is made. Parties are notified of their rights to appeal the determination, sanctions or remedies.
4. Conflicts of interests or perceived conflicts of interest involving investigators and others involved during the resolution of a complaint or allegation should be brought to the attention of the TIXC, or designee, as soon as possible.
5. Details regarding the process followed for an investigation are addressed by the Misconduct and Prohibited Conduct Investigation Policy (Interim Policy #1.5.3.).

## ***10. Coordination and Cooperation with Law Enforcement***

1. The University encourages reporting parties and responding parties to pursue their rights under Michigan law regarding claims of prohibited conduct that may also violate state law. The University will offer assistance to involved parties by directing them to law enforcement agencies regarding criminal reports and cooperate with these law enforcement agencies. A reporting party has the right to notify, or decline to notify, law enforcement.
2. At the request of law enforcement, the University may agree to defer its Title IX fact gathering until after the initial stages of a criminal investigation. The University will nevertheless communicate with the reporting party regarding Title IX rights, procedural options, and the implementation of interim measures to assure safety and well-being. The University will promptly resume its Title IX fact gathering as soon as it is informed that law enforcement has completed its initial investigation.

## ***11. Reports Involving Minors or Suspected Child Abuse***

1. Under federal and Michigan law, certain school administrators, school counselors, and school teachers are required to file a report of suspected child abuse when they have reasonable cause to suspect abuse or neglect. University employees are also required to report, in good faith, suspected criminal acts against minors to the Lake Superior State University Department of Public Safety. The source of the suspected crime does not need to be known in order to file a good faith report.
2. It is not the responsibility of any employee, student, or volunteer to investigate suspected child abuse or other criminal acts; rather, this is the role of the Michigan Department of Human Services (DHS) and law enforcement authorities. Confidential employees are also required to report to the DHS.

## ***12. Interim Measures***

1. Upon receipt of a report, the University will impose reasonably available interim measures designed to protect the parties involved. The provision of interim measures may be imposed at any time regardless of whether the reporting party or University is seeking disciplinary action. Interim measures are initiated based on information gathered during a report and are not intended to be permanent resolutions; hence, they may be amended or withdrawn as additional information is gathered.
2. The Title IX Coordinator and/or Title IX Investigator, in consultation with other administrators, will maintain consistent contact with the parties so that safety (physical and emotional) concerns can be reasonably addressed.
3. Interim measures will be kept private to the extent that maintaining that privacy does not impair the ability of the University to provide the interim measures. Interim measures are provided, to the extent possible, with no cost or undue burden to the reporting party.
4. Specific interim measures implemented and the process for implementing those measures will be case and fact specific. Lake Superior State University will consider the following factors in determining which interim measures to take: (1) the specific needs expressed by the reporting party; (2) the age of the individuals involved; (3) the severity or pervasiveness of the allegations; (4) any continuing effects on the reporting party; (5) whether the reporting party and responding party share the same residence hall, dining hall, class, transportation, or job location; and (6) whether other judicial measures have been taken to protect the reporting party (e.g. civil protection orders). Interim measures will be imposed in a way that minimizes the burden on the reporting party to the extent possible, while still balancing the rights of the responding party.

## ***13. Communication and Education***

1. The University is committed to the prevention of prohibited conduct through education and awareness programs. Prevention and education programs include an overview of the University's policies and procedures, relevant definitions, including prohibited conduct, discussion of the impact of alcohol, medication, and illegal drug use, effective consent, safe and positive options for bystander intervention, and information about risk reduction.
2. Incoming first year students and new employees will receive primary prevention and awareness training as part of orientation.
3. All educational programs include a review of resources and reporting options available for students, faculty, and staff.

#### ***14. Publication of Policy***

1. As part of the University's commitment to provide an educational and work environment free of prohibited conduct, this policy will be disseminated widely to the University community through email communication, publications, websites, new employee orientations, student orientations, and other appropriate channels of communication.

#### ***15. References***

1. *Overview of Title IX of the Education Amendments of 1972*: On June 23, 1972, the President signed Title IX of the Education Amendments of 1972, 20 U.S.C. §1681 et seq., into law. Title IX is a comprehensive federal law that prohibits discrimination on the basis of sex in any federally funded education program or activity. The principal objective of Title IX is to avoid the use of federal money to support sex discrimination in education programs and to provide individual citizens effective protection against those practices. Title IX applies to federally funded education programs or activities. In addition to traditional educational institutions such as colleges, universities, and elementary and secondary schools, Title IX also applies to any education or training program operated by a recipient of federal financial assistance. The Department of Education has issued regulations on the requirements of Title IX, 34 C.F.R. § 106.1 et seq. The Title IX common rule published on August 30, 2000 covers education program providers/recipients that are funded by other federal agencies. Additional compliance requirements are published by the Department of Education in the form of as periodically issued "Dear Colleague Letters" which provide regulatory guidance. This policy takes guidance from "Dear Colleague Letters" and from the Association of Title IX Administrators.
2. *Violence Against Women Reauthorization Act of 2013 (VAWA)*: VAWA, enacted on March 7, 2013, improves and expands legal tools and grant programs addressing domestic violence, dating violence, sexual assault, and stalking. VAWA 2013 reauthorizes critical grant programs created by the original Violence Against Women Act and subsequent legislation, establishes new programs, and strengthens Federal laws.
3. *Clery Act*: The federal Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (Clery Act). 20 U.S.C. § 1902(f), requires colleges and universities, both public and private, participating in federal student aid programs, to disclose campus safety information, and imposes certain basic requirements for handling incidents of sexual violence and emergency situations. Disclosures about crime statistics and summaries of security policies are made once a year in an Annual Security Report (ASR) and information about specific crimes and emergencies is made publicly available on an ongoing basis throughout the year. Requirements for implementing the Clery Act are contained in the U.S. Code of Federal Regulations at 34 C.F.R. 668.46.

#### ***16. Resources***

1. *Title IX Coordinator(s)*: Philip Espinosa, Title IX Coordinator; Jen Constantino, JD, Deputy Title

- IX Coordinator; 906-635-2213, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783, Administration Building, Room 114
2. *EEOC Officer*: Philip Espinosa, Associate Vice President Human Resources; 906-635-2213, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783, Administration Building, Room 114
  3. *Campus Public Safety*: 906-635-2100, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783, Administration Building
  4. *Campus Student Life*: 906-635-2236, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783, Cisler Center, Room 125
  5. *Campus Housing*: 906-635-2411, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783, Cisler Center, Room 125
  6. *Counseling Center*: 906-635-2752, 623 W. Easterday Ave., Sault Ste. Marie, MI 49783, Counseling Center
  7. *Student Health Center*: 906-635-2110, 621 W. Easterday Ave., Sault Ste. Marie, MI 49783, Health Care Center
  8. *Student Against Sexual Assault*: Campus Student Life, 906-635-2236, 650 W. Easterday Ave., Sault Ste. Marie, MI 49783, Cisler Center, Room 125
  9. *Dianne Peppler Center (Advocacy/Women's Shelter)*: 906-635-0566, PO Box 698, Sault Ste. Marie, MI 49783
  10. *War Memorial Hospital ER*: 906-635-4460, 500 Osborn Blvd., Sault Ste. Marie, MI 49783
  11. *Sault Ste. Marie Police*: 906-632-5745, 225 East Portage Ave., Sault Ste. Marie, MI 49783
  12. *Emergency*: 911 (if on campus 9911)
  13. U.S. Department of Education, Office for Civil Rights, Regional Office, 1350 Euclid Avenue, Suite 325, Cleveland, OH 44115, 216-522-4970, FAX: 216-522-2573, Email: [OCR.cleveland@ed.gov](mailto:OCR.cleveland@ed.gov)
  14. U.S. Department of Education, Office for Civil Rights, Lyndon Baines Johnson Department of Education Building, 400 Maryland Avenue, SW, Washington, DC 20202-1100, Telephone: 800-421-3481, FAX: 202-453-6012; TDD: 800-877-8339, Email: [OCR@ed.gov](mailto:OCR@ed.gov)
  15. Michigan Department of Civil Rights, Marquette Office, 234 W. Baraga Avenue, Marquette, MI 49855, 906-226-6393, FAX: 906-226-3974
  16. Equal Employment Opportunity Commission (EEOC), Detroit Field Office, Patrick V. McNamara Building, 477 Michigan Avenue, Room 865, Detroit, MI 48226, 800-669-4000, FAX: 313-226-4610, TDD: 800-669-6820

## ***17. University Commitment***

1. The University is committed to the protection of the rights of all individuals in the University community and to the elimination of barriers that would prevent individuals from realizing their highest potential.
2. All members of the Lake Superior State University community share a responsibility for upholding this policy as we strive to attain our goal of creating a safe community.

## **Good Samaritan Practice**

The welfare of our students is of the highest importance to Lake Superior State University. There will be times when individual students, both on and off campus, may be in critical need of assistance from medical or other professional personnel. LSSU wants to minimize any hesitation that students or student organizations might have in obtaining help due to concern that their own behavior might be a violation of University policy.

While policy violations cannot be overlooked, the University will consider the positive impact of reporting an incident on the welfare of students when determining the appropriate response for policy

violations by the reporter of the incident. Any possible negative consequences for the reporter of the problem will be evaluated against the possible negative consequences for the student who needed intervention. At a minimum, LSSU hopes that a student or student organization would make an anonymous report that would put the student in need in touch with professional assistance.

Examples where the Good Samaritan Policy may influence educational sanctions are:

1. A female student is reluctant to report that she has been sexually assaulted because she had been smoking marijuana prior to the assault.
2. A student is reluctant to call for medical assistance when a friend becomes unconscious following excessive consumption of alcohol because the reporting student is under the age of 21 and was also consuming alcohol.
3. A member of a student organization is reluctant to report a possible suicide attempt by a prospective member because prospective members have been required to perform activities that might be considered hazing.

In all three of these examples, a student's physical and/or psychological well being is in serious jeopardy. Immediate action is required to assist the individual.

If you or someone you know needs help, contact Public Safety at 635-2100 or ext. 2100.

## **Hazing and Initiation**

Policy: No person or group shall conduct hazing activities under any circumstance. Hazing is defined as: "Any intentional, knowing or reckless action taken or situation created, whether on or off campus, to produce mental or physical discomfort, embarrassment, harassment or ridicule. Such activities may include but are not limited to the following: Use of alcohol; paddling in any form; creation of excess fatigue; physical and psychological shocks; inappropriate non-academic quests, treasure hunts, scavenger hunts, road trips or any other such activities either on or off-campus; wearing of public apparel which is conspicuous and not normally in good taste; engaging in public stunts; morally degrading or humiliating games and activities; and any other activity which is not consistent with the regulations and policies of Lake Superior State University, or the State of Michigan and National/International policies."

Reporting Procedure: Alleged hazing incidents should be immediately reported to the Campus Life Office. With respect to confidentiality, staff will inform the individual(s) of their options. The Campus Life Office may choose to utilize the Student Judiciary Committee and/or Inter-Greek Council in the process of adjudication and or sanctioning. Hazing has no place in an academic community and will be treated severely. Both individuals and organizations involved in hazing will be subject to disciplinary action that may include removal from the institution.

All events for any student organization must be reviewed by the Campus Life Office prior to the event taking place. Any event that takes place without the prior review of the Campus Life Office may result in disciplinary action for the individuals and/or organization.

## **Indecent Behavior**

Public urination and indecent exposure of any means is expressly not allowed on the campus of Lake Superior State University. These behaviors are unacceptable and considered a serious offense.

## **Information Technology Policy**



In order to carry out its educational, research and public services missions, Lake Superior State University (LSSU) strives to create an intellectual environment with access to information resources and technology in which faculty, students and staff may create, work and collaborate with each other and with colleagues at other institutions, without fear that the products of their efforts will be violated by any inappropriate use, taking or destruction.

This policy and the guidelines herein set forth the conditions for the use of information technology resources, including the University Local Area Network (ULAN) computer technology equipment, software and digital media. Lake Superior State University, as a state constitutionally created body, has a public trust to maintain with regard to its mission, activities, services and property. Computing and information resources, services, activities and property must therefore be used by all members of the University community with respect for the public trust through which these state resources are provided.

Access to, and use of, LSSU computing networking and information technology resources is a privilege extended to faculty, students and staff and is subject to compliance with this and other related LSSU policies, rules and regulations; laws; all applicable contracts, including those pertaining to computers and software; and all associated ethical principles and standards adopted by the University community.

Compliance with these provisions is required for continued use and access to information technology resources.

This policy is applicable to all members of the LSSU community whether at the University or off campus and this policy covers all information resources and equipment even if owned by an individual or shared, or networked.

Every individual user who has access to University information technology resources systems and other resources such as services, equipment, and programs is required to protect the rights of the entire University community. Any individual who without authority accesses, appropriates, changes, destroys or tampers in any way with the ULAN system or any University information resources system, equipment or program, or that of a third party, is acting in violation of this policy and prejudices the intellectual environment of the University community. In order to preserve the integrity of the information resources systems and programs, the University will take appropriate action for any violation of its policies, the law or any applicable contract provision. The full range of disciplinary actions, including dismissal and legal action, may be used. Violations will be processed in accordance with University policies, employment contracts and the law.

The following list, while, not exhaustive, provides some examples and guidelines on what constitutes inappropriate, unacceptable or illegal use of information technology, computing and networking resources and would be the just cause for taking disciplinary and/or legal action:

- Destruction of, or damage to, equipment, software, or data belonging to LSSU;
- Disruption of, unauthorized access or seeking such access, or monitoring of electronic communications;
- Violations of computer system security, including menuing systems;
- Unauthorized use of computer accounts, access codes, or network identification numbers assigned to others;
- Use of computer and/or network facilities in ways that may unduly impede the performance of a computer system, or deprive authorized personnel of resources or access to any University computer system resource;
- Use of computing facilities for personal or business purposes unrelated to the mission of the University;

- Violation of University or third party copyrights, patents, licenses, authorizations and contracts;
- Violation of usage policies and regulations of the networks that LSSU is a member of or has authority to use;
- Violation of another user's privacy;
- Academic dishonesty (plagiarism or cheating);
- Harassment or libelous conduct of other individuals or users as defined by law; and
- Engaging in any action in violation of the law or University policies.

The University considers electronic mail and computer files private to the extent permitted by law. Generally, access requires the permission of the sender or recipient of a message, or the owner of the file, or such access must be based on a court order or some other statutory or legal basis. The law governing the privacy of electronic mail is in a developing stage, and the limits of privacy are not clearly defined. Users of electronic mail should utilize this service with the understanding that such mail may be disclosed without consent because of a statutory provision or a court ruling.

As in the use of other institutional resources, electronic mail should be used for the institutional purposes set forth in this policy related to the community's need to create, work and collaborate with each other and colleagues in the sharing of knowledge and information related to the mission of the University.

The University reserves the right to monitor its computing resources property to ensure the integrity of the system and compliance with its policies, rights, the law and its contractual agreements. In the course of a University review or investigation for alleged misuse or misconduct, e-mail or files may be locked or copied to prevent destruction or loss of information.

LSSU is not liable for damages of any nature or losses, including lost revenues, or for any claims or demands against the user by any other party. In no event can LSSU be held liable for consequential damages even if LSSU has been advised of the possibility of such damages. LSSU cannot be held responsible for any damages due to the loss of output, loss of data, time delay, system performance, software performance, incorrect advice from a consultant, or any other damages arising from the use of LSSU's computer facilities.

Requests for the disclosure of information subject to a court order or the provisions of the Family Educational Rights and Privacy Act or the Freedom of Information Act shall immediately be referred to the designated University employee responsible for processing these inquiries.

## **Infractions of State Law**

Students may be prosecuted under state and local laws pertaining to alcohol consumption, use, possession, manufacture or furnishing to minors. University policy does not supersede such action.

## **Insurance**

**Personal Property Insurance:** The University is not liable for the loss of money or valuables by any person or for the loss of, or damage to, any resident's property, or bodily injury sustained on the premises. Your parents' homeowners insurance policy may cover private property away from home or you can have a rider attached. If not, you may wish to obtain renters' insurance.

## **Medical Marijuana**

We are anticipating that there will be some LSSU students who will be registered qualifying users of

medical marijuana or registered primary care givers (marijuana growers) for those qualified users. To prepare for the issues involved, we propose the following:

*Given the requirements and parameters of several federal laws, the use or possession of marijuana, including marijuana prescribed for medicinal purposes, is not permitted on the campus of Lake Superior State University.*

The federal Controlled Substances Act prohibits the possession, manufacturing, dispensing, and distribution of marijuana. The federal Drug-Free Workplace Act of 1988 and the Drug-Free Schools and Communities Act Amendment of 1989 prohibit the use or possession of marijuana on campus. As a condition of receiving funds or any other form of financial assistance under any federal program, an institution of higher education must certify that it has adopted and implemented a program to prevent the possession, use, or distribution of illicit drugs and alcohol on campus in order to comply with the Drug-Free Schools and Campuses Regulations. There is no “medical necessity” exception for marijuana under federal law. Federal law supersedes state law where they are in conflict.

## **Non-Discrimination Policy**

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, sex, age, disability, sexual preference, religion, height, weight, marital status or veteran status. The following person has been designated to handle inquiries regarding the nondiscrimination policies: Applicants for admission, employment, employees, public and ADA concerns, and students.

Associate Vice President, Human Resources - Administration Building - Lake Superior State University - Sault Ste. Marie, MI 49783 - 906-635-2213

*Grievance Procedure:* The Associate Vice President, Human Resources is the designated grievance officer for students, applicants for admission, employees, applicants for employment and the public community.

The University encourages 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 procedure may be outlined in writing. Individuals may discuss concerns they have regarding possible discrimination or harassment with the grievance officer and learn what options are available.

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 employee or student believes he or she has been retaliated against for exercising his or her rights under this policy, this complaint procedure should be used.

All matters discussed in this process will be kept as confidential as possible.

Individuals have the right under the law to seek remedies from the Michigan Department of Civil Rights, the Equal Employment Opportunity Commission, the Office for Civil Rights, Department of Education

or by court action. Individuals may file complaints of illegal discrimination on the basis of gender (Title IX) or disability (Section 504 ADA) with the Office for Civil Rights, Department of Education, at the same time a grievance is filed under the University's procedure, during or after the use of the grievance process, or without using the grievance process at all. A Title IX, Section 504, or 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. This is the process to investigate and resolve complaints alleging discrimination:

**Step 1: *Informal Complaint:*** If you have a discrimination or harassment complaint as outlined above, you may contact the grievance officer in person. He or she will speak with you and try to resolve the matter on an informal basis. Any 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 you first contacted the grievance officer, you (the complainant) may submit a written complaint on a form provided by the grievance officer. He or she will help you complete the form if you wish.

Within five (5) working days of receiving 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 a completed response within five (5) working days from the date he or she receives the complaint.

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 30 days from receipt of the written complaint to investigate the matter.

Within ten (10) working days of completion of the investigation, the grievance officer will give you 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 the Hearing Panel for a hearing by submitting a form. The request for a hearing must be submitted in writing to the grievance office 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 as appropriate. To ensure the privacy of those involved, witnesses (other than the complainant and respondent) will be allowed into 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 the grievant wish to pursue the matter further, they may file with the outside agencies listed earlier in this procedure.

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.

## **Off-campus Activities**

The University accepts no responsibility for the use or distribution of alcoholic beverages at off-campus social functions sponsored by University-related organizations or individuals.

All persons planning or attending such an off-campus activity should be aware of the alcoholic beverage laws that apply to the situation. Each person participating in the activity assumes responsibility for his or her own actions. Violations of pertinent alcoholic beverage laws may result in disciplinary action by both the University and the civil authorities.

## **Parental/Guardian Notification**

In October of 1998, Congress passed an amendment to the Family Education Rights and Privacy Act (FERPA) which allows an institution of higher education to disclose to parents or legal guardians of a student, information involving a violation of federal, state or local law, or a rule or policy of the institution governing the use or possession of alcohol and/or other drugs if the student is under the age of 21 and the institution has determined that a disciplinary violation occurred. In response to the recent alcohol-related tragedies in the State of Michigan and across the country, LSSU has adopted this Parental Notification policy.

LSSU reserves the right to inform a student's parent/guardian of information regarding any violation of any Federal, State, or local law, or of any rule or policy of the institution governing the use or possession of alcohol or a controlled substance if the student is under the age of 21.

## **Parking**

You need to register your vehicle on-line in Anchor Access each year you are enrolled. To register, you need to pay a registration fee and present your valid driver's license. You'll receive a sticker for your vehicle; you can then park in designated areas only. Public Safety enforces parking and driving ordinances and you may be assessed fines or have your on-campus driving privileges revoked if you do not comply. Disputes regarding parking citations should be brought to the Parking Committee. If you need to make special parking arrangements for health or personal reasons, you may do so at the Public Safety Office in the Administration Building. Parking and driving violations are also civil infractions that may be referred to the 91st District Court. For further information regarding parking rules and regulations visit their website at [www.lssu.edu/parking](http://www.lssu.edu/parking).

## **Parking Ban**

The city of Sault Ste. Marie requires that all vehicles are removed from city streets, alleys, and parking lots between 3 a.m. and 6 a.m. from December 1 through April 1 to allow for snow removal. This includes Meridian Avenue (adjacent to the Norris Center). The Sault Area Police Department will ticket

vehicles violating this policy.

## **Payment Information (Tuition, Fees, and Housing)**

*Payment Plans:* Lake Superior State University offers two primary options for paying your total semester charges--traditional full payment and monthly payment plan.

*Traditional Full Payment Option:* If you select this option you will need to pay the full amount of your total charges for the semester by the due date listed on the invoice.

*Monthly Payment Plan:* The University offers a 4-month payment plan for educational expenses.

There is a \$60 per semester service charge for all plans. To sign up for the payment plan, log in to the Bill and Payment Suite through Anchor Access. For more information on using the Bill and Payment Suite, go to [www.lssu.edu/costs/payment.php#How](http://www.lssu.edu/costs/payment.php#How). LSSU accepts Visa, MasterCard, Discover, and American Express. Credit card payment can be made on-line at [my.lssu.edu](http://my.lssu.edu)

*Penalties:* If you do not make your payment by the due date, you will be charged a 1.5% late penalty fee and your classes may be subject to cancellation. For each month thereafter, you will be charged an additional 1.5% late fee for any outstanding balance and a hold will be placed on your student account until the full payment is made. The hold will not allow you to register for classes for the following semester or receive a copy of your University transcript. If your balance is still outstanding by the third billing, your account will be turned over to collections. Failure to receive an invoice is not a basis for non-payment. The Business Office staff is available to work with students who have special financial needs. You may visit the Business Office in the Fletcher Center or call (906)635-2276.

## **Posting Policy**

The University encourages the promotion of activities and opportunities. This policy is designed to encourage posting consistency throughout campus while alleviating damage and inappropriate promotion. All postings must first be approved by the Campus Life Office, located in the Cisler Center. Postings must bear the most recent stamp of approval. Postings can only be placed in designated areas. Legitimate posting areas will be indicated as such. Postings cannot be attached to walls, doors, ceilings, windows or University staff boards, nor are they to be slid under doors or placed on vehicles without the prior written permission of the Campus Life Office. Postings deemed offensive, sexist, vulgar, discriminatory or suggestive will not be approved. Failure to comply with this policy will result in the removal and disposal of the postings in addition to possible future posting denial and/or disciplinary sanctioning of the individual(s) involved. Please contact ext. 2236 with any questions.

## **Public Relations**

Unless a written statement to the contrary is filed with the Division of Student Affairs, all students give implicit permission and authorization to Lake Superior State University to use any still photograph of themselves that is taken or is authorized by a LSSU staff member for instructional or promotional purposes. By granting permission, students release any and all claims for damages for libel, slander, or invasion of right of privacy.

## **Records**

You need to give honest and complete replies to all of the information requested in the University's

application, financial aid forms, and other documents. Your registration can be canceled if the information you give on these forms is not correct and complete. Forgery or other alteration of any University document or record can result in separation from the University.

## Sharps Disposal (HCC)

For safety, anyone who uses needles, for any reason, is asked to obtain a sharps container from the Health Care Center. When full, or on a timely basis, they can be returned to the Health Care Center for disposal and a new container obtained.

## Skateboard Policy

All skateboarders shall keep all 4 wheels on the pavement at all times. All stunts or acrobatics are prohibited due to the potential for injury and property damage.

Enforcement will include one warning to violators. Any additional incidents will result in immediate confiscation of the skateboard. Skateboards will be returned to owner after appearing before the University adjudication committee. Non-students' skate boards will be returned to their parent/guardian.

## Student Code of Conduct

*Scope of Coverage:* Lake Superior State University strives to preserve for all of its students an environment that is conducive to academic pursuit and social development. It is essential that the needs of others be respected by all members of the University community. Behavior which violates these values is considered disruptive and is subject to disciplinary action.

Policies are applicable to all students, whether enrolled for credit or non-credit, while on the premises and at University-sponsored or University-related events off-campus.

Disruptive behavior includes, but is not limited to the following:

- Theft of property, intentional destruction, damage or unauthorized possession/use of University property or of the property of any member of the college community.
- Abuse, disrespect, noise or other actions that disrupt the educational enterprise and campus environment.
- Unauthorized entry into or unauthorized use or misuse of any room, building, structure or facility.
- Threatening or inflicting physical or psychological violence to the person or property of any member of the campus community, their family, or campus visitors.
- Distribution, sale, use, or possession of alcoholic beverages other than as specified in the policy for use of alcohol.
- Unauthorized possession or use of explosives, dangerous chemicals, or weapons on campus property or at a University function.
- Harassment, stalking, hazing, or initiation/induction rites.
- Possession or distribution or sale of any drugs or controlled substances having potential for abuse, except as authorized by law.
- Failure to comply with the directions of University officials or designated agents in the performance of their duties.
- Abuse of or tampering with fire alarm systems, fire emergency equipment, or any emergency equipment.
- Failure to comply with LSSU policies as stated in the Student Handbook and other official

documents.

## LSSU Slacklining Policy

**Slacklining** is defined as an activity in which the participant walks on a span of nylon climbing or slackline webbing, positioned horizontally above the ground and anchored at two fixed points. The practice as defined, and commonly known, as slacklining and all associated equipment are regulated by this document when used on LSSU property.

**Permitted Activity:** Slacklining is permitted between the hours of sunrise and sunset. To provide for the safety of the campus community the following guidelines have been established:

- *Assumption of Risk:*
  - Participants and spectators assume any and all risk associated with this activity. For participants, the risks include but are not limited to, death, paralysis, and serious injury. Participants and spectators take full responsibility for following these LSSU slacklining guidelines and best safety practices within this activity.
- *Set Up and Tear Down:*
  - All slacklines may be affixed on a temporary basis while in use by a responsible person and slacklines must be removed when not in use. The owner of the slacklining equipment is responsible for setting up and taking down the equipment by sunset each day and may not leave equipment unattended. Unattended slack lining equipment may be removed and stored without notice.
  - All equipment associated with the practice of Slacklining should be maintained in an operable and safe condition. This is the sole responsibility of the equipment owner.
  - Lines may only be affixed to appropriately sized trees and in the manner set forth below:
    - Only Trees with a diameter of one (1) foot or greater may be used as anchor points.
    - To protect the bark on the trees some type of fabric, e.g. burlap, carpet squares, towel tubes, or similar material, must be placed between the tree and the line that is tied to the tree. A clear, flat, non-paved landing surface must be present under the full length of the slack line and extending a minimum of four (4) feet on each side.
    - Trees must be located on flat terrain
    - Use of a padded landing surface is strongly recommended.
    - Spotters are strongly recommended.

### Prohibited activity:

- The slackline may not be elevated higher than 4 feet from the center of the span.
- Slacklines may not exceed 70 feet in length.
- Memorial trees or other trees posted by sign may not be used as anchors for this activity.
- University Officials may direct that equipment that appears to be unsafe or improperly set up be removed.
- Participants may not be under the influence of any drugs or alcohol.
- Slacklines may not be set up within a Special Event Zone.
- Slacklines may not cross or enter into any sidewalks, roads or other paved areas.
- Slacklines may not be affixed to any other campus fixture including but not limited to buildings, bike racks, handrails, art objects, fences or light poles.
- Slacklines will not be up when grounds personnel are visibly mowing on campus until the area to be used for slacklining purposes has been mowed extending out in all directions 100 feet.
- University officials, for any reason, may request the activity to be curtailed and all equipment



removed immediately.

This policy may be enforced by the Public Safety Department, the University Risk Manager, the Campus Life Office or the Grounds Manager for the safety of the active slackliners and spectators as well as to maintain the functions and processes of the University. All University policies and regulations, State laws, local ordinances are in effect and may be enforced. Violations of this policy may result in the administering of one or more of the following University sanctions: verbal warning, written warning with a reminder of the policy or temporary suspension of the activity. In addition, the severity and/or frequency of violations may result in the elimination of this activity as an authorized activity on University property.

## **Theft**

Everyone is expected to show respect for University and individual property. Theft of any kind, whether of money, property, or services, violates the entire community and will not be tolerated. Destruction or mutilation of books, magazines, or other library material is considered a form of theft. Theft of, damage to, or destruction of the property of others is considered a serious offense against the University community and will result in the separation of the student from the University as well as criminal prosecution.

If you have anything stolen while on University property, please notify the Public Safety Department by calling x2100 as soon as possible.

## **Tobacco Use**

In the interest of providing a safe and healthy environment, and in accordance with the Michigan Clean Indoor Air Act of 1986 and subsequent amendments, smoking and tobacco use are prohibited in any public building throughout the campus. Smoking and tobacco use are also prohibited within 20 feet of a University facility.

## **Treatment of Others**

Everyone is expected to treat other members of the University community, whether students, faculty, or staff, with respect and consideration at all times. Lake Superior State University and its Board of Trustees subscribe to the principles of equal opportunity and non-discrimination, and comply with all applicable federal and state laws and regulations prohibiting discrimination, including harassment. The University is committed to the protection of the rights of all individuals within the University community, the equal and fair treatment of all individuals, and to the elimination of barriers that would prevent individuals from reaching their highest potential. It is the responsibility of all students, employees, and other members of the University community to uphold this commitment in the daily activities of University life.

Any acts that infringe on others' rights and safety, including but not limited to, physical or verbal abuse, sexual misconduct, or acts of discrimination, prejudice, or harassment, will result in disciplinary action by the University. Acts that threaten or endanger the health or safety of anyone on the University campus or at University related activities will also be subject to disciplinary action.

## **Trespass Policy**

### ***I. Purpose***

The purpose of this policy is to establish warning and enforcement guidelines for use of the Michigan Trespass Statute. This policy is administered in conjunction with the Lake Superior State University Campus Violence and Weapons policy and with other bona fide University agreements.

## ***II. Policy***

For the protection of the University community and property and to reduce disruption of the University's activities and functions, it is sometimes necessary to prohibit individuals as described below in IV.B.1. from entering or remaining upon property owned or leased by Lake Superior State University, by issuing a trespass warning.

## ***III. Scope***

This policy applies to all Lake Superior State University owned or leased property in the State of Michigan.

## ***IV. Procedures***

### **1. Authorization**

1. The Director of Public Safety as provided by the President of the University, has the authorization to delegate officers to act as agents of the University for the purpose of the Trespass Act.
2. This delegation shall be authorized in writing.

## ***B. Trespass Warning***

1. Officers may use their professional discretion, consistent with this policy, to issue a trespass warning if an individual:
  1. Committed or is suspected of committing a crime while on campus against persons or property;
  2. Refuses or fails to comply with established University rules that protect the health and safety of persons or property;
  3. Disrupts the lawful operations and functions of the University; or
  4. Demonstrates a risk of physical harm or injury to others or property.
2. When an officer issues a trespass warning, the officer shall read the trespass warning to the individual and give a trespass warning form to the individual in the presence of a police officer (as defined by Section 257.42 of the Michigan Vehicle Code). In any incidents at which an individual is instructed to leave campus without the issuance of a trespass warning, the incident report will be forwarded to the Director of Public Safety for review. If warranted, a trespass warning may, subsequently, be issued.
3. Faculty, students, and staff may be issued a trespass warning only in extenuating circumstances (e.g., posing an immediate threat to the safety of others). Administrative alternatives to issuing the warning to faculty, students and staff include but are not limited to referral to:
  1. Staff responsible for administration of the policies contained in the Student Handbook;
  2. The individual's manager, the Office of the Provost or the Human Resources Office;
  3. Other University disciplinary action.
4. Issuing a trespass warning does not preclude the officer from taking other law enforcement action or from recommending that a complainant seek a civil personal protection order.
5. Officers must submit each trespass warning to the Director of Public Safety at the end of the officer's shift. The Director will undertake a review that includes compliance with this policy when the Director returns to his or her office. The Director, upon review, may lift or modify the warning

at his or her discretion.

6. Trespass warnings shall remain in effect for one year or until rescinded or modified by the Director of Public Safety. Unless an earlier time period is granted on appeal, each warning shall be reviewed by the Director of Public Safety on an annual basis for possible rescission or modification. After an annual review, a decision not to rescind a warning by Public Safety must be accompanied by a written justification for continuing the warning. Notice of the decision to extend the trespass warning must be sent to the individual, if possible, including notice of the right to appeal a negative decision.
7. At the time of the annual review, Public Safety may extend the duration of a trespass warning for a certain number of years or indefinitely if an individual poses a long-term danger to a faculty member, staff member or student or to the members of the University community in general. An extended warning of this nature shall be provided to the individual in writing, if possible. The decision to issue an extended warning may be appealed.

### ***C. Trespass Warning Violation***

1. If the individual is provided with the trespass warning and refuses to depart, the Public Safety officer will contact city police to press charges for violation of the Trespass Act.
2. If an individual who has previously been issued a trespass warning enters upon prohibited University-owned or leased property, the subject has violated the trespass statute. A written trespass Incident Report shall be generated. At the officer's discretion, the officer may seek an arrest warrant, and/or document the violation of the trespass warning in the Incident Report.

### ***D. Trespass Appeals***

1. All individuals issued a trespass warning have the right to appeal the warning in its entirety or in part and shall be informed of that right when the warning is issued. A request for an initial appeal of a trespass warning may be submitted at any time after the warning is issued.
2. Trespass warning appeals will be heard by the Director or his or her designee. Individuals wishing to make an appeal shall be directed to make an appointment with the Director. An appeal meeting will be offered within 30 days of the request.
3. After the appeal is heard, the Director or his or her designee shall issue a decision in writing within 10 business days. Notice of a negative decision will be accompanied by information regarding the subsequent available appeal described in #5 (below).
4. A negative decision by the Director may be appealed to the Vice President for Enrollment Services and Student Affairs or his or her designee. An appeal meeting will be scheduled within 30 days and a decision issued within 10 business days. The decision of the Vice President for Enrollment Services and Student Affairs will be final.
5. After the initial appeal, no further appeal will be granted unless the individual can demonstrate a change in circumstances which must be submitted in writing along with the request for an additional appeal meeting. The extension of a trespass warning by Public Safety after an annual review will be considered sufficient change in circumstances to grant a new appeal.
6. Generally, a trespass warning will not be modified or rescinded on appeal until any related criminal matter is adjudicated.
7. Generally, appeals after second or subsequent violations of the Trespass Act will not be granted.

### ***E. Trespass Warning Form***

1. Authorized agents of the University will issue Trespass Warning Forms.
2. Refusal to stay long enough to hear the warning or refusal to accept the issued form shall be documented in an incident report and will be considered if the warning is appealed.

3. Trespass warnings shall be recorded and maintained by Public Safety 7 years after the warning is rescinded.

## ***F. Annual Review***

Public Safety will share data related to trespass warnings issued during each calendar year with the Shared Governance Oversight Committee and the LSSU Cabinet by February 1 of the following year. The data will be stripped of all personal identifying information concerning the individual who received the warning. The data will include the number of warnings issued, the number of individuals who received warnings, the basis, geographic scope and duration of each warning. The Shared Governance Oversight Committee and the LSSU Cabinet shall review the data and make any recommendations related to application of this policy by the Department of Public Safety to the Vice President for Enrollment Services and Student Affairs.

## **Weapons Policy**

### ***I. Purpose***

Lake Superior State University strives to provide a safe work and educational environment. No person, within the University environment, on property owned, leased or otherwise under the control of the University or otherwise in the course of University business, will be allowed to possess weapons or explosives, (except as provided in this policy), or to harass or assault any other person by threatening or exhibiting violent behavior. Violators of this policy (students, employees or visitors) will be subject to discipline by the University, up to and including termination of employment, or dismissal or expulsion from the University. Visitors or contractors in violation will be asked to leave campus. Visitors or contractors who fail to comply, will be issued a No Trespass notification, and local law enforcement will be called to implement this action. Signs will be posted around University buildings indicating that weapons are not allowed in this building. This policy constitutes a Rule and/or Regulation pursuant to MCL 4.201 et seq and MCL 752.581 et seq.

### ***II. Prohibited Conduct***

The following rules, while not all inclusive, are examples of prohibited behavior for all employees, students and any others who are on property owned, leased or otherwise under the control of the University, or who are in the course of University business.

1. Causing or threatening physical injury to another.
2. Aggressive or hostile behavior that creates either a reasonable fear of injury to another person or unreasonably subjects another to emotional distress.
3. Intentionally damaging University property or the property of another.
4. Possession of a weapon, except as provided by this policy, regardless of whether a person has a concealed weapon permit or is otherwise authorized to possess, discharge or use such a weapon.
5. Possession of explosives.
6. Possession of chemicals or other dangerous substances or compounds, with intent of causing injury to a person or property.
7. Hunting on any properties owned, leased, or otherwise controlled by the University.

### ***III. Reporting Procedures***

All members of the campus community are encouraged to report, and all employees of the University are required to report to the Department of Public Safety or the Human Resources Department, any violence,

threats of violence or weapon violations that they have witnessed or received, or any potentially dangerous situation. All reports of incidents will be investigated. Reports or incidents warranting confidentiality will be handled appropriately and information will be disclosed to others only on a need-to-know basis. Any person who has obtained a Personal Protection Order or Restraining Order, which identifies any place located on property owned, leased, or otherwise controlled by the University, as a protected area, is required to provide a copy of the Order to the Department of Public Safety.

#### ***IV. Definitions and Exceptions***

Weapons, for the purposes of this policy, are defined as: (1) a loaded or unloaded firearm or bow/crossbow, whether operable or inoperable, (2) a knife or stabbing instrument (unless conforming to Michigan State Law), brass knuckles, blackjack, club, or other object specifically designed or customarily carried or possessed for use as a weapon, (3) an object that is likely to cause death or bodily injury when used as a weapon and that is used as a weapon or carried or possessed for use as a weapon, or (4) an object or device that is used or fashioned in a manner to lead a person to believe the object or device is a firearm or an object which is likely to cause death or bodily injury. Limited exceptions to policy prohibitions regarding weapons exist and situations where weapons may be possessed on property owned, leased or otherwise under the control of the University or otherwise in the course of University business are defined below:

1. Use in the performance of training, or as a part of the course curriculum in the School of Criminal Justice, Fire Science, and EMS. Transport to and from training is permitted.
2. A qualified law enforcement officer who is authorized to carry a weapon and is in the employ of Federal, State, or Local level, including Tribal, may carry a weapon.
3. A qualified retired police law enforcement officer on the Federal, State, or Local level, including Tribal, as defined in Michigan law and/or federal code to possess a concealed handgun and is currently permitted to do so.
4. A contractor whom the University employs, and whose job requires the carrying of a firearm/weapon (e.g., an armed transport), and is authorized by the Director of Public safety with the authority from the President's Cabinet, may carry a weapon as so authorized.
5. An employee who is not a law enforcement officer, may use or possess a weapon, as authorized by the Director of Public Safety with the authority from the President's Cabinet, to possess or use such a weapon during the time when the employee is engaged in work for the University requiring such a weapon.
6. Norris Center:
  1. *University Firing Range*: Persons using the University shooting range, with one exception, must use the University's weapons at the range. The one exception to this is when police and/or law enforcement officers have scheduled and have been authorized to use the range. Authorization is granted by the chair of the School of Criminal Justice, Fire Science and EMS, as the representative of the Dean of the Department of Arts, Letters, Social Sciences, and Emergency Services. Notification is provided to the Director of Public Safety. In this case, the officer's weapon(s) must be in compliance with the restrictions in place at the range and the only ammunition used must be, likewise, in compliance with the restrictions in place at the range.
  2. *Concealed Carry Course*: Persons enrolled in a Concealed Carry Class may be required to bring their weapon to campus for training in assembly/disassembly and cleaning. The instructor for the course will, prior to that class session, seek permission from the Director of Public Safety regarding the time and date of the class and will inform Public Safety with the names of the Students attending. Students must park their cars in the Norris lot (securing permission from Public Safety to do so if their parking pass is not authorized for that area), and transport their weapon from their car to the classroom in an appropriate case. The

firearm may not be loaded nor may non-law enforcement officials carry ammunition into the building.

7. Upon obtaining prior approval of the Director of Public Safety, an individual may possess a firearm/weapon when the device is worn as part of a military or fraternal uniform in connection with a public ceremony, parade or theatrical performance. The firearm(s) must remain unloaded.
8. Residence Hall and University apartment residents may register and store weapons, ammunition and used ammunition at the Department of Public Safety, and may possess such weapons on property owned or controlled by the University just long enough to deliver and retrieve the weapons from the Department of Public Safety. Persons shall park in D lot (visitor and Public Safety spots are available) and walk directly to Public Safety. The firearms are to be brought to the Public Safety building, unloaded and in a gun case. Archery equipment is to be unloaded and knives are to be sheathed. When reclaiming weapons from Public Safety individuals must, likewise, park in D lot, place the weapon in their vehicle and immediately leave campus. Likewise, University employees may follow the same procedure of registration, storage, and retrieval.
9. Recognized campus outdoor organizations (e.g. Ducks Unlimited) may conduct fund raisers wherein a firearm or other hunting tool is offered as a prize, and may have the item(s) present on campus at the event providing that the organization follows the procedures and limitations outlined by Public Safety and Student Affairs.
10. The Director of Public Safety may waive the prohibitions based on extraordinary circumstances, and an individual may possess a weapon only within the scope and duration of the waiver. Any such waiver must be in writing, signed by the Director, and must define its scope and duration. With input from the Director of Campus Life and the Vice President for Enrollment Services and Student Affairs, the Director of Public Safety is also authorized to make reasonable rules to effectively implement the Storage of Weapons policy for residence halls and apartments contained herein.

*Enforcement:* This policy will be enforced by the Public Safety Department. Reports of violations will be initially reported to the Vice President for Enrollment Services and Student Affairs.

*Exceptions:* Requests for exceptions to this policy must be presented in writing to the Vice President for Enrollment Services and Student Affairs, reviewed with the Director of Public Safety, and approved in writing by the University President.

*Review:* This policy will be reviewed annually by the Director of Public Safety, with modification requests presented in writing to the Vice President for Enrollment Services and Student Affairs.

## **Weapons Prohibition Procedure for Recognized Campus Outdoor Organizations**

The procedures and limitations to the Campus Violence and Weapons Prohibition include the following:

1. Both the Director of Public Safety and the Vice President for Enrollment Services and Student Affairs must be informed of the intent and must give their approval to conduct such a fund raiser.
2. The specific items to be offered as prizes must be identified when notification is given and a limit of no more than five firearms or other items defined as weapons may be offered or present on campus for the event.
3. All firearms will have gun locks or other securing devices applied to the item before they arrive on campus.
4. No ammunition will be on site.
5. The organization will arrange to have a public safety officer present to inspect the items to ensure that the items are secured with an appropriate locking device and that ammunition is not present.
6. Assault-type weapons and large capacity magazines are not permitted on campus.

7. Transfer of ownership of any firearm must be conducted by a properly licensed firearms dealer.

## Resources

### Campus and Community Resources

Health Services, 906-635-2110

LSSU Public Safety Department, 906-635-2100

Counseling services, 906-635-2752

Housing and Residential Life, Cisler Center, 906-635-2411

### Chippewa County Resources

Alcoholics Anonymous 906-495-7220

Chippewa County Health Department 906-635-3647

Great Lakes Recovery Centers 906-632-9809

New Hope Residential Treatment Centers 906-635-5542

Upper Michigan Behavioral Health 906-632-0008

### Web Resources

[www.aa.org/](http://www.aa.org/)

[www.webmd.com/mental-health/addiction/features/12-health-risks-of-chronic-heavy-drinking](http://www.webmd.com/mental-health/addiction/features/12-health-risks-of-chronic-heavy-drinking)

[abovetheinfluence.com/](http://abovetheinfluence.com/)

[collegedrinkingprevention.gov/collegestudents/anatomy/body\\_nonflash.aspx](http://collegedrinkingprevention.gov/collegestudents/anatomy/body_nonflash.aspx)

[www.who.int/mediacentre/factsheets/fs349/en/](http://www.who.int/mediacentre/factsheets/fs349/en/)

[www.chippewahd.com](http://www.chippewahd.com)

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650 W. Easterday Ave., Sault Ste. Marie, MI 49783 / (906) 632-6841



## **Appendix S**

Required Information for Students and the Public: Policies and Procedures

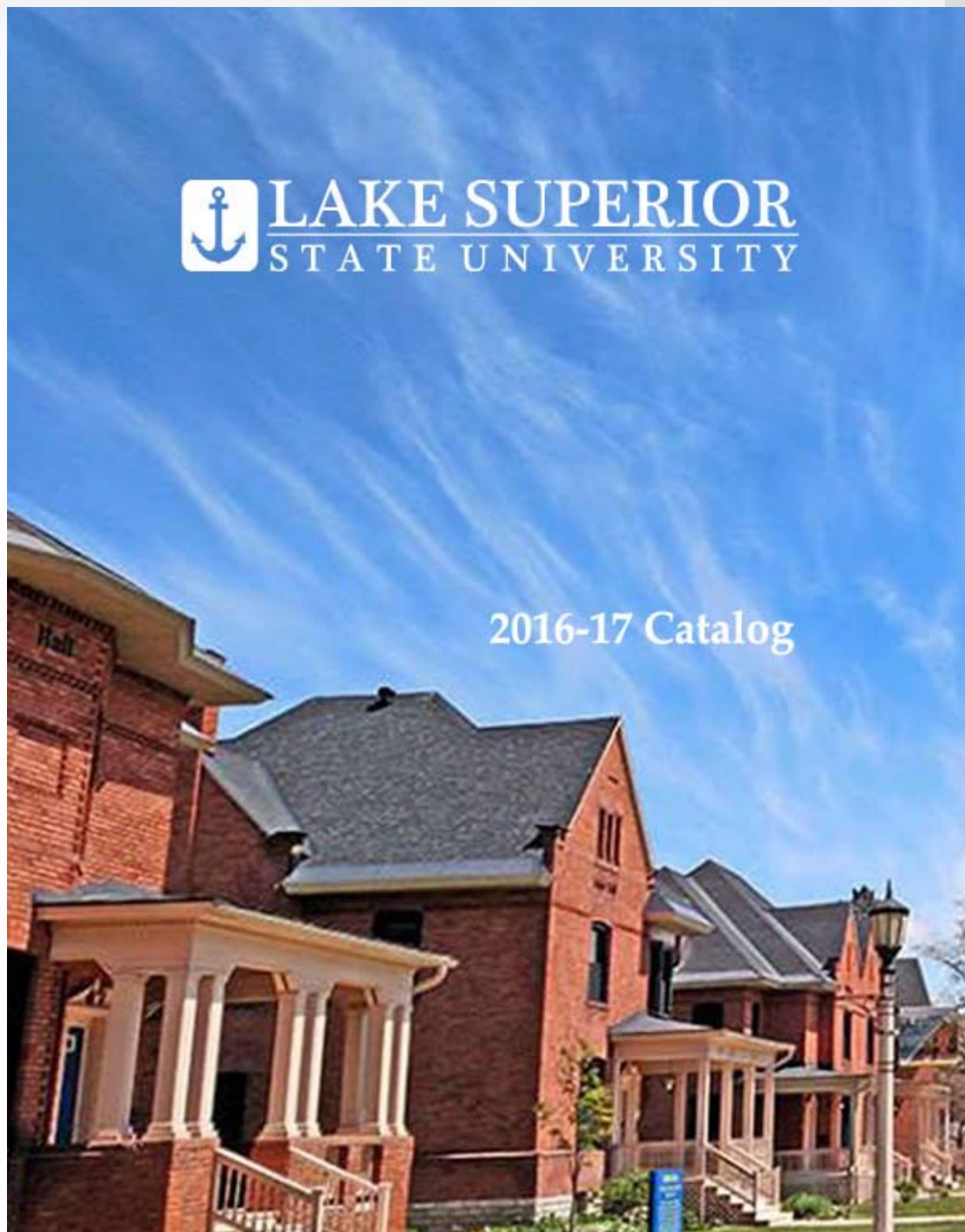


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## Catalog Home

**Welcome to Lake Superior State University's electronic catalog.**


This catalog includes general information about Lake Superior State University and its academic programs, including degree requirements for bachelors, associates and certificates. Course descriptions are available, as well as program information for each major and minor. It is recommended that if you have questions about your program, you speak to your academic advisor.



Use the links on the left to navigate the site.

**Apply Online at:** <http://www.lssu.edu/admissions/applying.php> 

**External Links:** Throughout this catalog the icon  is used to identify links which leave this catalog.

**Printing:** At the top right of each web page is a printer icon . Click on this icon to print the current catalog page.

## Disclaimer

The University makes every effort to ensure the Catalog is current at the time of publication and that it contains relevant policies, procedures, degree requirements and other information of importance to its constituents. Because the institution is dynamic, the LSSU Catalog is for informational purposes and does not constitute a contract between the University and its students on either a collective or individual basis. Changes sometimes occur after the Catalog has been published. Please contact the appropriate office for the most up-to-date information.

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.

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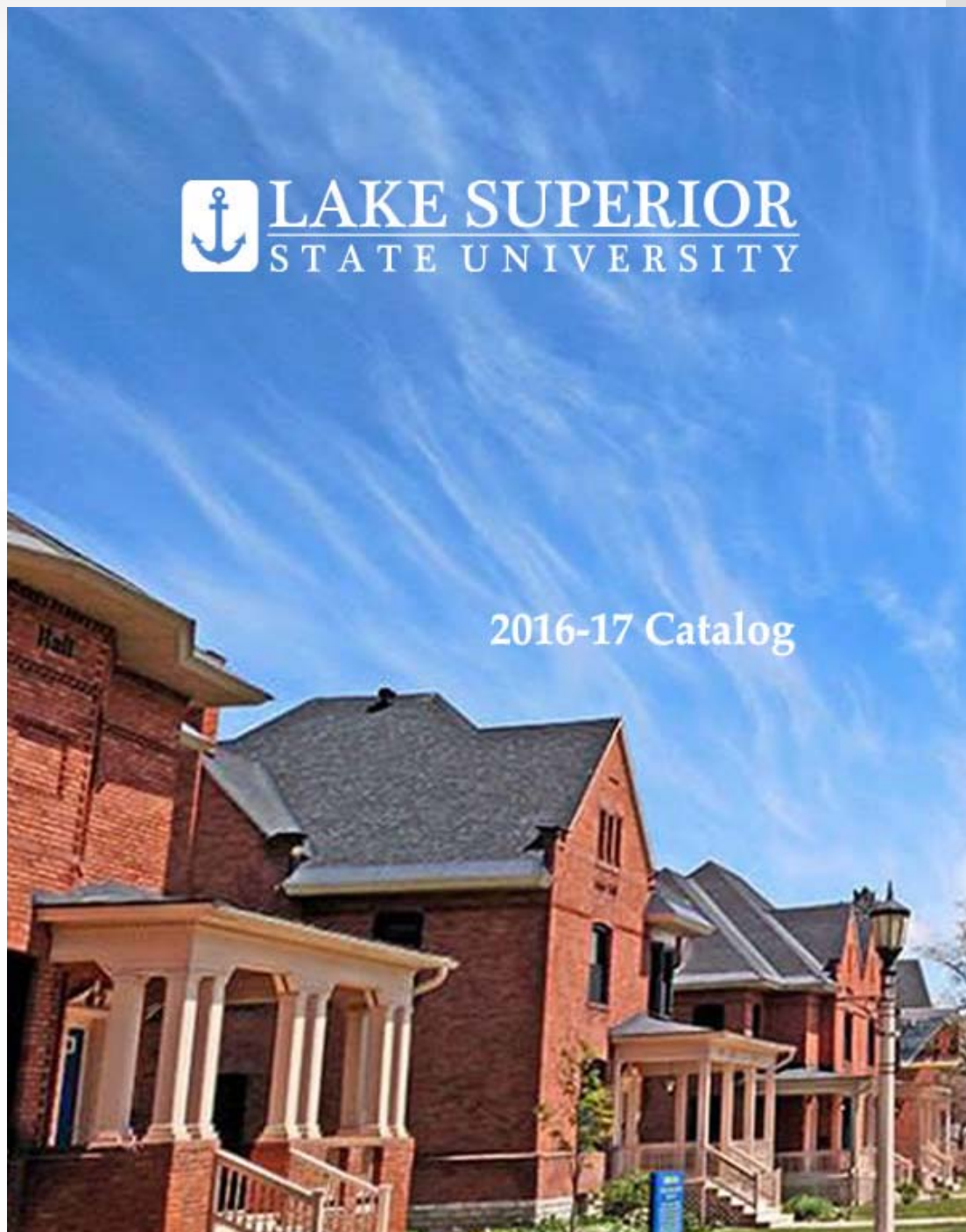
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## A Look at LSSU

Lake Superior State University in Sault Ste. Marie Michigan, is a publicly funded state university operated under the control of a Governor-appointed Board of Trustees.

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## Admissions

### Links

- [Website](#) 
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- [Visit](#) 

### Freshmen

A freshman student is defined as a student who has not enrolled in a postsecondary institution anytime after the summer following high school graduation.

You may apply to Lake Superior State University anytime during your final year of high school. The best time to apply is early in your senior year. 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 SAT or ACT scores (if you graduated from high school within 26 months of entering LSSU).

The primary factors used to determine admission are cumulative grade point average (GPA), high school course curriculum, and SAT or ACT 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 2.90 to 3.60 and ACT scores ranging from 22-25 or SAT (taken after March 1, 2016) scores ranging from 1110 to 1220. 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. SAT or ACT 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. Transcripts delivered via approved platforms such as "Parchment" will also be considered official. Please contact the Admissions Office for information regarding approved current electronic delivery methods.

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 international 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 SAT or ACT scores. Admission will be determined on the basis of your high school grade point average, coursework completed, and SAT or ACT scores.

## SAT or ACT Testing

Students applying for academic scholarships must have SAT or ACT scores sent prior to the May 1 scholarship deadline. For students that have been out of high school two or more years, SAT or ACT scores are not required for admission.

## Transfer Students

A transfer student is defined as a student who enrolls in a postsecondary institution anytime after the summer following high school graduation.

Transfer students must possess a 2.00 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 also send an official high school transcript or GED scores in addition to your college transcript (and SAT or 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 2.00.

## Transfer Credit Evaluations

Official evaluation of transfer credit is made upon acceptance to LSSU. 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 requirements.

Courses with grades less than C- will not transfer. A grade of C or higher may be required for some programs.

The Admissions Office completes transfer credit evaluations based on equivalencies determined by the faculty. 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.

## Michigan Transfer Agreement (MTA)

In order to satisfy the MTA, students must successfully complete at least 30 credits from an approved list of courses at a sending institution with at least a grade of 2.00 in each course. These credits, which will be certified by a sending institution, should be completed according to the following distributions:

- One course in English Composition
- A second course in English Composition or one course in Communication
- One course in Mathematics
- Two courses in Social Sciences (from two disciplines)
- Two courses in Humanities and Fine Arts (from two disciplines excluding studio and performance classes)
- Two courses in Natural Sciences including at least one with laboratory experience (from two disciplines)

Students admitted to Lake Superior State University who have the MTA stamp on their transcript are recognized as having completed the general education requirements at Lake Superior State University.

Students who do not complete the entire block of courses required by the MTA will receive credit for the courses they do complete on the basis of individual course evaluation and established transfer equivalencies.

It is important to note that the MTA is not the best fit for all programs. There are many programs in Michigan for which the MTA is not a good fit. Students are encouraged to work with their advisors at their destination institution (LSSU) in order to select a path that is best for them.

## LSSU-Wisconsin Bridge Agreement

Students transferring from the University of Wisconsin Colleges with an Associate of Arts & Science degree are recognized as having completed the general education requirements at Lake Superior State University.

## MACRAO Transfer 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 Transfer 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 but students are required to complete LSSU's [Residency Requirements](#).

## 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 Readmission 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. Ontario students are not required to take the SAT or ACT for admission consideration.

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, you are required to submit a copy of this documentation.

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 a copy of your tribal ID and an official tribal-issued letter showing proof of blood quantum.

Ontario students planning to attend part-time (fewer than 12 credits) and commute to the University 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 provide a copy of a valid Provincial Health Card (both sides) verifying coverage under a provincial health care program. LSSU highly recommends that students purchase adequate health insurance coverage while in the U.S. Students, however, may request to [waive](#) the purchase of additional health and accident insurance.

## International Students (Excluding Ontario Students)

We recommend international 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](http://www.wes.org) and [www.ece.org](http://www.ece.org). This applies to both first time in college students as well as transfer students. Transfer students who have earned fewer than 19 semester hours of college credit will also need to provide their high school transcripts.

International applicants must also provide verification of ability to pay, prove English proficiency, and purchase health and accident insurance through the University sponsored program. 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, you are required to submit a copy of this documentation.

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 a copy of your tribal ID and an official tribal-issued letter showing proof of blood quantum.

International students are required to purchase health and accident insurance through the University sponsored program.

## **Verification of Ability to Pay – Ontario and International 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](http://www.lssu.edu/admissions/international).

## **Proof of English Proficiency**

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

1. Score 500 or above on the paper-based [Test of English as a Foreign Language \(TOEFL\)](#) or a score of 61 on the internet-based TOEFL. Please use institutional code 1421 to report scores directly to LSSU.
2. Score of 72 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 112 at any ELS Language Center located in the U.S. More information can be found at: [www.studyusa.com](http://www.studyusa.com) or at [www.els.com](http://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 critical reading score of 480 or higher for tests taken before March 1, 2016, minimum overall score of 965 or higher, ACT equivalent is 20. For SAT tests taken after May 2016 an evidence based reading and writing score of 290.
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 6.0 or higher.

## Undocumented Students

Students who are undocumented are considered domestic students, not international students for admissions consideration. They must meet our regular admission requirements. Undocumented students residing in North America will be classified as residents for tuition assessment. Undocumented students are not eligible for financial aid or scholarships.

## Orientation

All new students (including transfer students) attending main campus are required to attend and participate in [orientation](#). Orientation is when students learn important information on academic policies and procedures that students are expected to follow while attending LSSU. Students will also learn about the wide range of services available to assist them in having a successful university experience.

## 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 (commuter) students wishing to attend part-time must apply for admission and be accepted into a degree program. Note that all other international students must maintain full-time enrollment (12+ credits) to maintain F-1 status.

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.

## Career and Technical Education

Lake Superior State University recognizes the excellent academic achievement of students completed through the Career and Technical Education programs throughout the state by awarding university credit for this work completed while in high school. Through this partnership students are able to begin their university


studies by completing their CTE curriculum. Lake Superior State University is a proud partner with the Michigan Department of Education, Michigan High Schools, and Michigan Career and Technical Education Centers in providing direct pathways for students to continue their education after high school. Through [coordinated Articulation Agreements](#), LSSU assists students to realize a seamless and systematic transition, maximizing the use of resources and minimizing duplication of content as they move from their secondary to their postsecondary educational experience.

## Dual Enrollment for High School Students

Effective July 2012, State law now allows qualifying 9th and 10th grade students (in addition to 11th and 12th grades) to attend as dual enrolled students in a postsecondary institution. To be eligible, students must be enrolled in at least one (1) high school class in a school district. A student must receive a qualifying score in each subject area on a reading assessment or the Michigan merit exam (MME) in order to be eligible to take all eligible courses; otherwise, he/she can only take courses in the area for which a qualifying score was achieved. If no qualifying score was achieved, the student is limited to a course in computer science, or foreign language, or a course in fine arts as permitted by the school district. Students must also meet any course prerequisite requirements. Students must be in Good Standing (cumulative gpa of 2.000 or higher) at LSSU to be eligible for continued enrollment. Students on probation are limited to course repeats, if available. Eligible students are limited to no more than ten (10) courses overall if the school district covers the cost; this limit does not apply if the student is covering costs.

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/](http://www.lssu.edu/admissions/dualenrollment/). Attendance as a high school dual enrollee does not constitute admission to a degree program. LSSU encourages students to apply for admission early in their senior year for a major of their choice.

## Placement Testing (COMPASS)

LSSU will use SAT and/or ACT scores 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, SAT or ACT scores may not have been required. In that case, students will take English, reading, and math placement tests to determine which courses they should schedule. [The table](#)  shows the relationship between SAT/ACT scores and LSSU English or math courses.

Students with high SAT, ACT or placement 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 does 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 SAT or ACT scores if they submit their scores to LSSU.

## 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](#) .

## 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.

## Dantes ACE Credit

LSSU is proud to accept your credit for prior military experiences. Once we receive an official transcript, your transcripts (including military training) will be evaluated and credit will be granted based on American Council on Education (ACE) recommendations. If your Dante's equivalence is not listed, contact the Registrar's Office for further review. Credit is granted as shown on the [table](#).

## Departmental Exams

Departments may provide their own examinations for certain courses. You must have the written approval of the appropriate School Chair to take the examination. The [Credit by Departmental Exam Application Form](#) can be found online and in Anchor Access. 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 Care Center better serve your needs.

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

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## Financial Aid

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### Overview

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


### Financial Aid Mission Statement

The mission of the Financial Aid Office is to provide accurate and timely financial aid information to students to meet their educational expenses.

Our goal is to offer all students a balanced financial aid package that is competitive and attractive, and best utilizes the resources available.

We strive to assist and educate our students by providing the best service possible so that they can focus on their educational experience.


### Financial Aid Office

The LSSU Financial Aid Office staff is available to assist students with the financial aid process. Our experienced staff is available during office hours to respond to financial aid questions and requests. No appointments are necessary. Students are assisted in the office on a walk-in basis or may call (906) 635-2678 to speak with a financial aid representative. The Financial Aid Office email address is [finaid@lssu.edu](mailto:finaid@lssu.edu) and website is <http://www.lssu.edu/finaid> . The Financial Aid Office is located in the Fletcher Center for Student Services on the campus of Lake Superior State University.

### Financial Aid Offer

Financial aid is any money used for students' educational expenses and includes grants, scholarships, loans and student employment. An offer of financial aid in the form of a university scholarship is made when a qualified student is initially admitted to LSSU. Other offers of aid follow the admission and receipt of federal applications or athletic tenders. LSSU participates in federal, state and province aid programs and provides a generous institutional scholarship and grant program. An "Official Offer of Award" letter from the Financial Aid Office is sent after all documents needed to complete a student award are received and reviewed.

### Applying for Federal Financial Aid

To apply for most types of aid, students must complete a [Free Application for Federal Student Aid \(FAFSA\)](#) . This application must be renewed each academic year for a student to continue receiving financial aid. The priority filing date for the FAFSA is March 1, and students who have completed a FAFSA by this date will be considered first for priority financial aid. Priority aid includes certain federal and state grants, the Perkins Loan and Federal Work Study. **Title IV School Code for LSSU is 002293.**

## Scholarship Selection

Scholarship recipients are usually selected based on competitive examinations, scholastic records and/or financial need. The American College Test (ACT) and the College Board SAT test serve as the University's primary tests for scholarship consideration. Test results must be on file by May 1.

## Scholarship Requirements

Board of Trustees' Scholarships are determined by a total point value that is based on GPA and ACT/SAT score. A minimum GPA of 3.00 and ACT of 19 is required for automatic review for a scholarship. The recipient of any award must be a full-time student carrying 12 academic hours or more each semester.

## Satisfactory Academic Progress (SAP) Requirements for the Retention of Financial Aid at Lake Superior State University

**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 include 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, Loan and Work Programs, and some Rebates and Tuition Waivers.

The **minimum requirements** for all types of financial aid include three standard measures — the cumulative GPA, the number of credits earned each semester, and the pace of completing your degree. In addition, there are some types of aid with more stringent requirements, such as scholarship renewal requirements.

**Minimum GPA Standard:** Students must maintain a minimum cumulative grade point average (GPA) of 2.0 each semester to remain in good standing.

**Credits Earned Standard:** Each student's progress in total overall credits attempted and earned will be reviewed every semester. Students must earn 67% of the total number of credits attempted to maintain eligibility for aid.

Overall Att. Credits	Must Earn 67%	Attempted Credits	Must Earn 67%	Attempted Credits	Must Earn 67%
200	134	20-21	14	11-12	8
150	101	19	13	10	7
100	67	17-18	12	8-9	6
75	51	16	11	7	5
50	34	14-15	10	5-6	4
25	17	13	9	4	3
				1-3	all

Each semester the total number of credits attempted and earned will be evaluated, including remedial coursework. All prior LSSU credits will be used to determine if the student has earned at least 67% of their total credits attempted. For example, if a student attempts 16 credits for fall and 16 credits for spring semester, the student must earn 22 credits to meet the 67% completion requirement. ( $16 + 16 = 32 \times 67\% = 21.44$  credits or 22.)

NOTE: Transfer credits that have been evaluated and accepted for credit at LSSU will be added to both the credits attempted and earned cumulative totals, however, transfer students must also earn 67% of their LSSU credits each semester to maintain good standing. Consortium students must earn 67% of the combined total credits each semester (credits at both LSSU & the community college) to maintain good standing at LSSU.

**Maximum Time Frame — 150% of Length of Program:** A student must complete the highest degree being sought within 150% of the published length of his/her program. For example, students working on a baccalaureate program of 124 credits may receive aid for 186 attempted credits, **including transfer attempted credits:**

Degree	Average Credits Needed	Maximum Time Frame
Paramedic Certificate	40	Within 60 attempted credits
LPN Certificate	47	Within 70 attempted credits
Pre-Nursing BSN	56	Within 84 attempted credits
Associate	62	Within 93 attempted credits
Bachelor	124	Within 186 attempted credits
Teaching Certificate	136	Within 204 attempted credits
Master's	36	Within 54 attempted credits

### **One *WARNING SEMESTER***

If a student does not meet the Financial Aid Satisfactory Academic Progress (SAP) at the end of each semester, the student will be given one warning semester. Students may receive aid during the warning semester. If a student fails to meet the standard for the second consecutive semester enrolled, the financial aid **will be suspended**. During the *WARNING SEMESTER*, it is **highly recommended that students plan ahead and work with an advisor to correct deficiencies**.

### **Financial Aid Suspension**

No aid will be granted once a student's eligibility is suspended, including but not limited to federal, state and institutional aid.

### **Right to Appeal**

A student whose aid is suspended may request reinstatement through the Financial Aid Appeals Committee. The student must effectively demonstrate that the failure to meet SAP was due to an unusual or extenuating circumstance, and explain what has changed. The directions and required forms for the appeal process are available online at [www.lssu.edu/finaid/pdfs/appealprocess.pdf](http://www.lssu.edu/finaid/pdfs/appealprocess.pdf)

### **Financial Aid Self-Reinstatement**

Once financial aid is suspended, both the cumulative GPA and credit hour completion standards must be met in subsequent semesters of at least six credits before reinstatement of aid is possible. Students who successfully complete a minimum of six credits at LSSU while not receiving financial aid must contact the Financial Aid Office to request a review for reinstatement.

If completion of "I" grades or other record changes warrant a reinstatement, a copy of the transcript must be submitted to the Financial Aid Office with a written request for a review.

### **Repeat Policy for Financial Aid Recipients**

Students may use financial aid to repeat coursework that has been previously failed. Students may also use financial aid one time when repeating coursework to improve an earned letter grade of D- or higher.

For example, a student taking a course for the first time who received an F grade could have financial aid to repeat the course. If the student received a D grade for the repeated course, the student **could** have financial aid one more time to repeat the course to raise the grade. Students advised to retake passed courses more than once to improve their GPA may do so at their own expense, provided the repeats are allowed by the department.

Note: Satisfactory Academic Progress Policy is in compliance with the Department of Education Final Regulations published Oct. 29, 2010 - 34CFR 668.16(e), 668.32(f) & 668.34.

## LSSU Scholarship Renewal Requirements

Congratulations on receiving a Lake Superior State University scholarship. If your scholarship was offered to you as a "renewable" award, it is important that you have met the criteria listed below each spring when your eligibility is reviewed for the next year.

### General renewal requirements include:

1. **You must earn a minimum of 24 LSSU credits each academic year** while receiving a scholarship, unless otherwise noted in your award, and the minimum cumulative GPA as required by the award.
2. You must maintain enrollment each semester (fall & spring) as a continuous full-time LSSU student. Enrollment for summer semester is not included.
3. If you withdraw or leave LSSU for any reason, your scholarship will automatically terminate. If you plan to leave for a study abroad program, internship or health reasons, you may write an appeal to have your scholarship postponed until you return.
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. Students in their teaching internship semester may be eligible to receive a 9th semester renewal.
6. Changing majors does not affect the Board of Trustees' Scholarships, but may affect departmental awards that require enrollment in certain majors.
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 LSSU cumulative GPA or credits earned to the minimum requirements prior to the start of the next semester, you must notify the Financial Aid Office in writing that your student record has been updated with new information warranting a review.
10. LSSU Regional Center students may reactivate a Board of Trustees renewable scholarship by notifying the Financial Aid Office prior to semesters of full-time attendance in LSSU courses, provided that GPA requirements are met.

*Note: Some types of financial aid awards, such as an employee rebate, the Native American Tuition Waiver, or the Tuition Incentive Program, could affect your eligibility for an LSSU scholarship. Please contact the Financial Aid Office for further details.*

In addition to earning the minimum number of credits (24) required each year, scholarship winners must meet the following minimum cumulative GPA requirements to maintain their awards:

**Board of Trustees Distinguished Scholarship & LSSU Partial to Full Tuition Scholarships (>\$5000 per year):**

3.00 or better cumulative gpa after 2 semesters of study

3.10 or better cumulative gpa after 4 semesters of study

3.20 or better cumulative gpa after 6 semesters of study

**Board of Trustees Academic Excellence Scholarship, Board of Trustees Recognition Scholarship, Board of Trustees Transfer Scholarships, LSSU Foundation Scholarships\*:**

2.50 or better cumulative gpa after 2 semesters of study

2.60 or better cumulative gpa after 4 semesters of study

2.70 or better cumulative gpa after 6 semesters of study

\* Includes most other renewable institutional scholarships with a value less than \$5000 per year, unless otherwise stated in criteria.

*Note:* Transfer credits are included when determining "semesters of study."

**Frequently Asked Questions**

Full tuition scholarships are limited to 12-17 credits per semester for the academic year and do NOT include any special course fees, program fees, media fees, etc.

Full tuition scholarships can not be combined with tuition waivers, such as Michigan Indian Tuition Waiver or Employee Rebates.

Recipients of donor-funded scholarships are encouraged to write thank you letters to the donors and may be invited to special donor events.

Departmental scholarship recipients must notify the Financial Aid Office if changing their major course of study to determine the effect on their award!

**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 the teaching program, scholarships are generally not available to students with more than four years of higher education or eight semesters of study or more than 124 attempted credits.

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### Overview

An exact outline of University fees and assessments can be found in Business Operations. 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.

### Residency Policy for Tuition Purposes

Effective the Fall Semester 2015, all students with citizenship in North America, or lawful permanent residents of the United States, will pay in-state tuition (One Rate at Lake State). Children of LSSU alumni are also eligible for the One Rate at Lake State resident tuition rates. North America is defined as the land mass north of the Panama-Colombia border and the islands of the Caribbean\*.

Students without North American citizenship or without permanent residency will be required to pay non-resident (international) tuition.

Any individuals using educational assistance under either Chapter 30 (Montgomery GI Bill® – Active Duty Program), Chapter 33 (Post-9/11 GI Bill®), of title 38, United States Code, and/or the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in the State of Michigan while attending Lake Superior State University (regardless of his/her formal state of residence) are eligible for in-state tuition.

Initial decisions on classification of residency shall be made by the Director of Admissions at the time of admission. Requests for reclassification shall be made to the Registrar. Students may appeal these decisions to the Provost.

\* Countries and Territories: Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bonaire, British Virgin Islands, Canada, Cayman Islands, Clipperton Island, Costa Rica, Cuba, Curaçao, Dominica, Dominican Republic, El Salvador, Greenland, Grenada, Guatemala, Guadeloupe, Haiti, Honduras, Jamaica, Martinique, Montserrat, Mexico, Navassa Island, Nicaragua, Panama, Puerto Rico, Saba, Saint Barthélemy, Saint Kitts and Nevis, Saint Lucia, Saint Martin, Saint Pierre and Miquelon, Saint Vincent and The Grenadines, Sint



Eustatius, Sint Maarten, Trinidad and Tobago, Turks and Caicos Islands, USA (United States of America), United States Virgin Islands.

## 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 Business Operations.

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 compliments 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 departmental exams.

**Distance Education Fees:** These fees are charged to offset the costs of non-traditional modes of instruction, including any course listed as online, interactive t.v., or courses recorded for future distribution and viewing. Distance Education Fees are not charged on any course in which Regional Center Fees are also assessed.

**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.

**Late Fee:** Students who do not make payment or enroll in a payment plan by the due date will be charged a 1.5% late fee. For each month thereafter, the University will charge an additional 1.5% late fee for any outstanding balance on the 16th of each month and a hold will be placed on the student's account until full payment is made. The hold prevents registration into classes for subsequent semesters and inability to receive a copy of a University transcript. Balances still outstanding after 90 days will be turned over to collections.

**Late Registration Fee:** The Late registration period is defined as the period after the first payment due date for each semester until the close of the six day add/drop period. For the fall semester, the first due date is August 15. For the spring semester the first due date is December 15. No late registration fees are charged for the summer semester. Students who register in person or online during the late registration period are assessed a \$100 late registration fee. Students who register

for classes after the six day add/drop period will be assessed a late registration fee of \$200.

**Liability Insurance Fee:** The liability insurance fee is a one-time per semester charge for students enrolled in select Biology, Exercise Science, Nursing, and Paramedic courses that involve direct student/patient contact.

**Non-Sufficient Funds (NSF) Fee:** A NSF fee will be assessed for any check or bank draft returned due to insufficient funds.

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

**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.


**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.

**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](http://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 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 Registrar's Office 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 Registrar's Office. Any

refunds will be calculated as of that date.

<b>Withdrawal and Refund Policy for Fall and Spring Semesters</b>		
<b>Courses Dropped</b>	<b>Time of Withdrawal</b>	<b>% of Refund</b>
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.*

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 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 Business Operations located in the Fletcher 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.

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## Campus Life

Campus 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.

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- [Student-Faculty Relations Committee \(Appeals\)](#) *(see below)*

### The LSSU Ombudsman

If you're a student in need of assistance to resolve a conflict or dispute within the University then you should contact the LSSU Ombudsman. The Ombudsman is a senior faculty member appointed by the President and Provost to assist students in resolving these types of issues. The Ombudsman carries out these duties in a neutral, impartial, confidential, informal and independent manner.

#### What does an Ombudsman do?

Following a request for assistance, the Ombudsman will take one or more of the following actions: (1) listen carefully to the concern, (2) explain relevant student rights and responsibilities, (3) review relevant University policies or regulations, (4) suggest fair and equitable options, (5) refer the individual to an appropriate university resource or (6) investigate, when necessary.

Specifically the LSSU Ombudsman:

- meets with the respective student and listens intently,
- discusses conflicts, disputes, and complaints that the student has about the functioning of the University, including policies, and procedures, the actions of others, and treatment that is unfair,
- helps the student identify and evaluate the options available to address his/her concerns
- works with the student to promote the development of critical thinking and problem solving skills,
- helps the student to understand their rights and will encourage and coach the student to work on their own behalf to resolve conflicts,
- answers questions or find others who are able to answer the respective questions,
- engages in shuttle diplomacy between parties who are finding it difficult to solve a problem between the two of them, or
- identifies problem areas, and areas of conflict, that exist within the University and makes recommendations to the University leadership.

### **Are there things the Ombudsman cannot do?**

Yes. The Ombudsman is not an advocate for any group on campus; instead, the Ombudsman is an advocate for fairness. The Ombudsman also does not provide legal service, represent students or instructors at academic grievance or disciplinary hearings or mediate disputes between or among faculty or between faculty and administrators. The Ombudsman does not accept formal complaints, or notices, for the University.

Specifically the LSSU Ombudsman does not:

- administer sanctions,
- determine "guilt" or "innocence" of those being accused of wrong doing ,
- make academic or administrative decisions for other parts of the University
- give legal advice,
- participate in formal grievance processes, hearings or judicial processes,
- accept official "notice" for the University about issues,
- keep official University records and/or written accounts of individual meetings with students, or
- respond to subpoenas or other requests for information because of assertion of Ombudsman privilege.

### **How can I Contact the Ombudsman?**

Students may contact the Ombudsman in person, by email, or by phone. Please remember that e-mail is not recommended for confidential discussions. The LSSU Ombudsman is:

Dr. Sally Childs  
Norris Center, Room 108D  
Phone #: 906-635-2610  
Email: schilds@lssu.edu

### **Other Information:**

According to the International Ombudsman Association



([www.ombudsassociation.org](http://www.ombudsassociation.org)) Code of Ethics, an Ombudsman practices:

### **Independence**

An Ombudsman is independent in structure, function, and appearance to the highest degree possible within the organization

### **Neutrality and Impartiality**

The Ombudsman, as a designated neutral, remains unaligned and impartial. The Ombudsman does not engage in any situation which could create a conflict of interest.

### **Confidentiality**

The Ombudsman holds all communications with those seeking assistance in strict confidence, and does not disclose confidential communications unless given permission to do so. The only exception to this privilege of confidentiality is where there appears to be imminent risk of serious harm.

### **Informality**

The Ombudsman, as an informal resource, does not participate in formal adjudicative or administrative procedure related to concerns brought to his/her attention.

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## 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!

### Student Classifications

0 to 25 credits = freshman

26 to 55 credits = sophomore

56 to 87 credits = junior

88+ = senior

### 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. Please view the [Important Dates](#) for specific information for each semester.

### Academic Credit

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

### Academic Transcripts

You may have an official copy of your permanent records sent to schools, companies and other places or persons of your choice. Complete and sign a [Transcript Request Form](#) and mail or fax it to the Registrar's Office, 650 W. Easterday Avenue, Sault Ste. Marie, MI 49783. Your first official transcript requested 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 Registrar's Office 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.

### 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 by processing a Major Change Form, available in Anchor Access and in the academic offices. Major Change Forms must be filed with the Registrar's Office for each major change. If you are unsure of your major, you will be assigned to the Liberal Arts-Undecided major.

## 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](#) 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.

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 MATH087), which will not count toward graduation.

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

**Prerequisites:** Many courses require that you complete English, reading and/or mathematics, or other preliminary classes before registering for the course. If you are currently enrolled in a course which is prerequisite to a course you need the following semester, you may register for the course on the presumption you will successfully complete the current course. If you do not earn the prerequisite grade required for the next course, you should consult your advisor and make a plan for an alternate course. Exceptions may be made only by the dean of the college or the instructor of the course.

**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.

**Adding/Dropping courses through the Add/Drop Period:** 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 Add/Drop Period 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 Registrar's Office, located in the Fletcher Center for Student Services.

**Dropping courses after the Add/Drop Period 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.

## Repeat Policy

This policy is in effect for all students starting at Lake Superior State University as of the Fall Semester 2011. You may repeat a class in which you earn a grade other than "W" or "N" only twice without special permission.

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.

To repeat a course more than twice, the student must attain the permission of the course instructor and the dean of the college offering that course. Permission is only granted under extenuating circumstances.

## 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 for approval. Upon approval, the dean will then send the form to the Registrar's Office.

## Withdrawals

If you are an enrolled student and drop all of your classes during the first eight weeks of the fall or spring semester (dates vary for summer semester), you may be eligible for a partial tuition refund. You will need to complete a Withdrawal Form at the Registrar's 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.

**Late Withdrawal:** Students requesting a late withdrawal from one or all of their classes after the official drop date need to complete a [Request for a Late Withdrawal and/or Tuition Appeal Form](#) and have documented extenuating circumstances. The decision to grant the late withdrawal and/or tuition appeal will

be made by the Late Withdrawal Appeal Committee. Appeals are reviewed in the order received and results may take from two to four weeks. The need for additional documents may delay this timeframe. All decisions by the committee are final and not subject to appeal.

## 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.

## Grading System

### 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

**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. Students and faculty must be aware that an "I" (incomplete) grade counts toward the student's attempted credits for a semester and may thus affect Satisfactory Academic Progress. Students receiving financial aid must consult with the Financial Aid Office to discuss their specific situation when electing to drop a course or requesting an "I" (incomplete) grade.

Appropriate documentation is required. Students will need to be enrolled and have completed the 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. An "I" (incomplete) grade shall not be issued as a midterm grade for any course.

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 summer semesters) to complete the requirements for the course and to have the "I" (incomplete) grade changed to an appropriate final grade. Students should not re-enroll in any class in which they currently have an "I" (incomplete) 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.

Students are **not** eligible to receive a degree or certificate with an "I" (incomplete) grade on their academic record.

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

## 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 add/drop period; cannot change to regular grades after the add/drop 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.
7. 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.

## 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. Normal tuition and fees are charged for audited courses.

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.

## Senior Audit Policy

Residents of Michigan who are 60 years of age or older may take undergraduate courses at Lake Superior State University without paying tuition (tuition is waived). Such residents may register on an [audit basis](#) for any undergraduate course offered by the University, provided that space is available, and the individual meets the prerequisites or has the permission of the instructor. Verification of age must be provided to the Registrar.

Those participating in course work under this program shall be entitled to full classroom participation, and may complete all assignments and examinations for evaluation by the instructor. The purchase of textbooks, program fees, special course fees, and required materials shall be the responsibility of the participant. The student's name will not appear on an instructor's official class list or grade roster and no grade will be recorded for the student in the Registrar's Office.

## 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 (gpa) of 3.500 or higher, and NOT having any incomplete ("I") grades, will earn Dean's List honors, which acknowledge outstanding academic achievement.

If a grade is changed within 30 days from the end of the semester because of an instructor error in the recording of a grade, or because the student has completed the work required to resolve an Incomplete ("I") grade, the student will be considered 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.

## Prior Learning Policy

### Credit for Prior Learning (CPL)

LSSU recognizes that students may acquire expertise, skills and knowledge through individual study, employment, military training, community service or other experiences outside of the normal college setting, which is known as prior learning. LSSU credit may be awarded for prior learning through successful completion of standardized examination programs, (e.g. CLEP, Advanced Placement, DANTES), credit recommendations of the American Council of Education, or successful

completion of "departmental examinations". Credit may also be awarded upon successful completion of an individual Prior Learning Portfolio that documents the demonstration of learning outcomes for a specific course or set of courses.

All prior learning credits are considered transfer credits and are subject to the same policies as other transfer credits. Discuss your prior learning experience with your academic advisor, chair or dean for more information.

University residency requirements apply to all forms of prior learning (e.g. a minimum of 30 credits of the 124 credits required for an LSSU baccalaureate degree must be earned using LSSU coursework). See the Academic Catalog for the complete residency policy.

### **CPL Portfolio Program**

The CPL Portfolio program grants credit after a successful faculty evaluation, and Dean approval, of a portfolio that demonstrates mastery of the learning outcomes for a specific course or set of courses. Unlike typical course articulations, no list of equivalencies exists since every person's prior learning experience can vary significantly. It is only through the CPL Portfolio review process that equivalencies are identified and credit awarded. Because of this, not all Lake Superior State University courses are eligible for CPL Portfolio review. Credits awarded through the CPL Portfolio review support a student's goals and are applied to a specific academic degree program. A typical portfolio will capture prior learning experiences from work experience (based on past employment), past training (such as classes, workshops, seminars, etc.), and life experiences (long-term activities that may have resulted in college level learning). The University provides guidelines and assistance for CPL Portfolio development through the School of Arts and Letters.

If you are interested in pursuing credit for prior learning through a CPL Portfolio, you should contact the Dean or the Chair of the School of Arts and Letters to review the process. After that meeting, you will be directed to a dean or multiple deans to review your request(s).

### **CPL Portfolio Criteria:**

In order to be considered for CPL Portfolio credit review, a student must be currently enrolled in a degree program and his/her cumulative GPA must be a minimum of 2.00, or higher where required by the program. Furthermore:

1. All CPL Portfolio credit is considered non-LSSU credit (transfer credit) and is limited by LSSU policy to 60 credits and only 16 credits may be used to fulfill 400 level coursework.
2. CPL Portfolio-based credit may only be awarded for content which applies to the student's degree program. Approved CPL will appear on a student's transcript.
3. CPL credit may not be applied to fulfill the University's residency requirement.
4. CPL credit may not be used to satisfy the General Education Requirements of the University.

### **CPL Portfolio Guidelines:**

1. Portfolios must be submitted to the Dean of the College or School responsible for the content review by the 12th Friday of the semester (two weeks before final examinations) during the academic year, or by the 2nd Friday in July for the summer semester. Students are not eligible to submit a CPL Portfolio in their anticipated term of completion (e.g. graduation term).



2. Credit will be granted for college-level learning and only for courses required for LSSU degrees.
3. Credit for any specific instance of prior learning can only be awarded once (e.g. credit for knowledge gained in mathematics cannot be awarded once through CLEP then again petitioned through a CPL Portfolio or transfer credit). All CPL Portfolio requests must be submitted at one time to facilitate coordination of credit awarded, and separate portfolios must be submitted to each School for all credits which the student seeks to have evaluated within the school.
4. The CPL Portfolio may be used to award credit for specific LSSU courses or for general elective credit applicable to the degree program. The amount of credit to be allowed through portfolio evaluation identification of specific courses for substitution, if any, and the fulfillment of graduation requirement, if any, is determined by the Dean of the appropriate school under advisement of the school faculty.
5. While the School of Arts and Letters faculty provide general guidance and assistance, it is each student's responsibility to complete a narrative and a portfolio of documentation, which will be the basis for awarding credit.
6. To assist students interested in developing a portfolio for this purpose, the University may provide an elective portfolio course (e.g. USEM201 Prior Learning Portfolio Development).
7. CPL Portfolios will be evaluated on the alignment of learning evidenced with the specific course's or program's learning outcomes. Elements in the portfolio may include documentations of leadership and community service experiences, professional work experiences, creative contributions to society, and completion of professional training.
8. CPL Portfolios will be evaluated by faculty qualified to teach the course(s) for which the portfolio has been submitted.
9. Credit under this program cannot be obtained for learning when proficiency exams are required by the appropriate department.
10. Formal CPL Portfolio review to evaluate for credit requires an initial \$50 processing fee for each CPL Portfolio submitted using the [CPL Portfolio Review Form](#). If approval is received, the student will be required to pay an additional \$75 per awarded credit.

## Grade Appeal Policy

Lake Superior State University has established procedures for students to appeal the final course grade. The only concerns that may be grounds for an appeal are the grades, and the consistent application of class requirements and policies as they pertain to grades. As with other concerns, a student may also want to consult with the Student Ombudsman, [www.lssu.edu/ombudsman](http://www.lssu.edu/ombudsman), to discuss the matter.

A student who has concerns regarding a final course grade may take the following steps:

1. Contact the course instructor and discuss the concern(s). This will serve as an informal review and an opportunity for open dialog regarding the concern(s).
2. If the informal review does not lead to a satisfactory resolution the student may choose to file a formal appeal. The appeal must be filed in writing with

the School Chair within 20 university working days of the posting of the final grade. The Chair shall respond to the appeal in writing to the student and instructor within five (5) university working days upon receipt of the appeal.

The appeal shall include:

- The [Grade Appeal Record of Action Form](#)
  - Statement of Appeal: this should be brief and specific
  - Justification: reasons for lodging the appeal should be presented with supporting evidence (all documentation must be provided at this point)
  - Remedy: a specific remedy should be cited.
3. If the School Chair's response does not lead to a satisfactory resolution the student may, within three (3) university working days of receipt of the response, request formal review of the appeal by the Dean of the College/School. The student shall deliver the appeal documentation to the Dean who shall respond in writing to the student, the course instructor, the Chair, and the Provost within five (5) university working days upon receipt.
  4. If the appeal timelines stated above are not met by the student the appeal is considered closed and no further action is required. If the appeal timelines stated above are not met by the university personnel the appeal can be advanced by the student to the next step. The Provost may grant an extension in time at any step due to extenuating circumstances; such extensions will be documented on the Grade Appeal Record of Action.
  5. If steps 1-4 do not lead to a resolution of the concern the student may petition the Provost, within three (3) university working days of receipt of the Dean's response, to convene an ad hoc Grade Review Board for a formal hearing of the appeal. The student shall deliver to the Office of the Provost the completed Grade Appeal Record of Action and all documentation required as evidence to the appeal.

The members of the Grade Review Board, appointed by the Provost or his/her designee, shall include a Dean of a college other than that in which the course is housed, two faculty members from schools other than that of the course, and two students of junior or senior standing. Copies of all documentation will be provided to members of the Grade Review Board, the professor and the student. No new documentation will be introduced at the Hearing. The Provost or his/her designee will convene the Grade Review Board Hearing and may participate in deliberations; however, he/she will not cast a vote should there be dispute in determining recommendations.

At the Grade Review Board Hearing, the student shall present his/her argument, followed by the professor's response. The Board shall promptly prepare a written recommendation and forward copies to all parties involved, including the student, course instructor, Chairperson, Dean, and Provost. The report shall include dissenting opinions on the Board, if any. Recommendations of the Board are advisory to the Provost, who will make a final determination. Records of each case heard by the Board shall be maintained in the office of the Provost.

#### **General Information:**

A university working day (UWD) refers to those days when the university is in normal operation, and university offices are open for business.

"Receipt" refers to the day upon which the appropriate document(s) are officially initialed by the person(s) designated.

The Provost may establish appropriate and reasonable extensions of time in cases where the student is not actively enrolled in the current semester, or where the course instructor is not assigned teaching duties for the current semester.

## Undergraduate Academic Standing

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

#### For Undergraduate Coursework

*Effective Summer 2005*

Cumulative GPA Hours Carried at LSSU	Minimum for Good Standing*	On Probation	Dismissal
1 - 18.9	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).

1. You will be on academic probation if your cumulative grade point average falls below 2.00. Academic Probation limits you to 15 credits. You must contact your advisor to adjust your schedule before classes start for the next semester.
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.
3. After a first or second dismissal you may choose one of the following options:
  1. Allow two semesters (summer may be counted for one semester) to elapse before re-enrollment,  
  
or
  2. Petition the Scholastic Standards Committee for immediate readmission should extenuating circumstances exist. This action is initiated with the Chair of the Scholastic Standards Committee. 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.
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. The Registrar 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.

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.
6. The Scholastic Standards Committee may dismiss you from the university for demonstrated academic dishonesty.

## Graduate Academic Standing

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

#### For Graduate Level Coursework

*Effective Summer 2011*

A cumulative grade point average of 3.00 for all graduate credits carried at Lake Superior State University and a minimum grade of B for each course, including courses transferred into the program, are required for graduation.

1. You will be on academic probation if your cumulative grade point average falls below 3.00. Academic Probation limits you to six (6) credits. You must contact your advisor to adjust your schedule before classes start for the next semester.
2. If you are on probation for more than two consecutive semesters (summer semester included if you are enrolled in summer classes), you will be academically dismissed. Your classes for the next semester will be deleted.
3. After a first or second dismissal you may choose one of the following options:
  1. Allow two semesters (summer may be counted for one semester) to elapse before re-enrollment,

OR

  2. Petition the Scholastic Standards Committee for immediate readmission should extenuating circumstances exist. 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 to the Provost, whose decision is final.
4. If you continue after a dismissal, you will be dismissed again after any semester in which your cumulative grade point falls below a 3.00. The Registrar 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 3.00 grade point average in courses carried for that semester.
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 the Provost for readmission. Summer may be counted for one semester.

6. The Scholastic Standards Committee may dismiss you from the university for demonstrated academic dishonesty.

## **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 tolerate 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.

### **Theft**

Everyone is expected to show respect for University and individual property. Theft of any kind, whether of money, property, or services, violates the entire community and will not be tolerated. Destruction or mutilation of books, magazines, or other library material is considered a form of theft. Theft, damage or destruction of University property, or the property of others, is considered a serious offense against the University community and may result in penalties including the issuance of fines, removal from the campus, dismissal from the University, and/or criminal prosecution. If you have anything stolen while on University property, please notify the Public Safety Department by calling 635-2210 as soon as possible.

## **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 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:
  1. are in the sole possession of the maker thereof, and
  2. 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:
  1. maintained apart from the University's educational records;
  2. maintained solely for law enforcement purposes; and
  3. 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:
  1. are made and maintained in the normal course of business;
  2. relate exclusively to the individual in that individual's capacity as an employee; and
  3. are not available for use for any other purpose.
  4. 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:
  1. 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;
  2. created, maintained, or used only in connection with the provision of treatment to the student; and
  3. 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:
  1. to determine the eligibility for financial aid,
  2. to determine the amount of aid
  3. to determine the conditions that will be imposed regarding financial aid, or
  4. 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**

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 of the add/drop period 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:
  1. admission, or
  2. application for employment, or
  3. 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, including an attorney, at their own expense.

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.

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## Degree Requirements

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

**Bachelor degree:** A minimum of 124 credits (at the 100 level or higher) is required for a bachelor degree. Some programs require more than this number of credits. Requirement categories are: general education, bachelor of arts (if applicable) and departmental. Some programs require support courses and/or a minor, and free electives.

**Bachelor of Arts degree (8 credits):** One year of a modern language other than English. If taken at LSSU, this would be CHIN151-CHIN152 or CHIN251-CHIN252; FREN151-FREN152 or FREN251-FREN252; or SPAN161-SPAN162. One-half year of two different languages will not meet this requirement.

**Associate degree:** A minimum of 62 credits (at the 100 level or higher) is required for an associate degree. Some programs require more than this number of credits. Requirement categories are: general education and departmental. Some programs require support courses and free electives.

**Certificate:** A certificate may be comprised of a series of courses/experiences housed in one department, or a cluster of courses/experiences in a defined thematic area which are not confined to a single disciplinary area - referred to as a multidisciplinary certificate.

**Minor:** Academic minor programs are offered in a wide variety of disciplines. A minimum of 20 credits is required for a minor, with some minors requiring additional credits.

**GPA:** A minimum cumulative grade point average of 2.00 for all credits carried at Lake Superior State University **and** a minimum cumulative grade point average of 2.00 for all courses required in your major, minor and general education is necessary for graduation. Some degree programs may require a higher gpa.

**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.

### Residency Requirements: On-campus and regional centers

**Bachelor degree candidates** must successfully complete at least 30 of the 124 credits earned for the degree using Lake Superior State University courses. Additionally, at least 50 percent of the departmentally required 300/400 level credits must be earned using Lake Superior State University courses.

**Associate degree candidates** must successfully complete at least 15 of the 62 credits earned for the degree using Lake Superior State University courses. Additionally, candidates must earn at least 50 percent of their departmentally required credits in courses offered by Lake Superior State University.

**Certificate candidates** must successfully complete at least 16 of their departmentally required credits in courses offered by Lake Superior State University.

**Minor candidates** must earn at least 10 of the departmentally required credits using Lake Superior State University 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 degree in accounting and business administration.

## Multiple Degrees

If you desire to earn more than one degree, you must complete all program requirements of the additional degree(s) as certified by the school chair, comprising a minimum of 30 additional LSSU credits for each additional baccalaureate degree, or a minimum of 15 additional LSSU credits for each additional associate degree from Lake Superior State University.

There are no overlapping or additive residency requirements between the associate and baccalaureate degree tracks. The degrees stand alone. Earning an additional associate degree and a baccalaureate degree at the same time would require the completion of an additional minimum of 30 credits.

## 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 30 additional credits in courses offered by LSSU. The degree schedule must be approved by the major school chair and sent to the Registrar's Office. 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 30 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 15 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 15 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 Chair of the Scholastic Standards Committee.

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 University is continuous. If enrollment is interrupted, or if you select a new major, you must satisfy program requirements in effect at the time you re-enter 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.

## Posthumous Degree Policy

A posthumous degree may be awarded in the name of a deceased student upon request of the student's family, if the deceased student had met the requirements as set forth below.

The deceased student will need to be in good academic standing with the University and have completed a majority of the requirements for the degree. The Chair of the school responsible for the student's degree program will make the recommendation to the Dean. The Dean will complete a degree audit and submit it to the Registrar who will complete a verification of the requirements, and submit the request to the Provost. If the Provost approves, the request will be submitted for Presidential approval, and final Board of Trustees approval.

The academic transcript will be marked: "Degree Granted Posthumously". A copy of the academic record will be released, if requested, to an attorney representing the estate of the deceased student.

Deceased students not meeting the above criteria may receive a "Certificate of Achievement" if requested by the family.

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## General Education Requirements

### 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)

### General Education Requirements (Bachelors Degree)

Students planning to earn a degree are required to complete general education requirements. The general education requirements will be considered satisfied for students transferring to LSSU with [MTA](#), [MACRAO](#), [GCERT](#) or the [LSSU-Wisconsin Bridge Agreement](#). The general education requirements will be considered satisfied for students who have already earned a bachelors degree (honors bachelor degree from a Canadian University).

- **Oral and Written Communication (9 Credits Minimum)** One year of composition and one semester of communication.

Composition: [ENGL110](#) and [ENGL111](#)

Communication - One course from: [COMM101](#), [COMM201](#) or [COMM225](#)

- **Mathematics (3 Credits Minimum)** One course in Mathematics ([MATH110](#) or higher)
- **Social Science (6 Credits Minimum)** Two courses from different disciplines. Pick one course from any two disciplines:

Business Discipline: [BUSN121](#)  
Economics Discipline: [ECON201](#), [ECON202](#), [ECON302](#), ECGE100  
Geography Discipline: [GEOG201](#), [GEOG302](#), GGGE100  
History Discipline: [HIST101](#), [HIST102](#), [HIST131](#), [HIST132](#), HSGE100  
Political Science Discipline: [POLI110](#), [POLI160](#), [POLI241](#), PSGE100  
Psychology Discipline: [PSYC101](#), [PSYC155](#), PYGE100  
Sociology Discipline: [SOCY101](#), [SOCY102](#), [SOCY113](#), SOGE100.

- **Natural Sciences (7 Credits Minimum)** Two courses from different disciplines - one with a lab. Pick one course from any two disciplines (including interdisciplinary), or pick two from interdisciplinary:

Biology Discipline: [BIOL104](#), [BIOL105](#), [BIOL122](#), [BIOL131](#)  
Chemistry Discipline: [CHEM108](#) and [CHEM109](#), [CHEM110](#), [CHEM115](#), [CHEM116](#), [NSCI110](#)  
Geology/Geography Discipline: [GEOL115](#), [GEOL121](#), [GEOL122](#), [GEOG106](#), [NSCI102](#)  
Physics Discipline: [PHYS221](#), [PHYS231](#), [NSCI101](#)  
Interdisciplinary: [NSCI103](#) and [NSCI104](#), [NSCI116](#), [NSCI119](#), [GEOG108](#)  
Other: NSGE100\*

\*Two NSGE100 courses may be used if the reviewing dean determines that two or more disciplines are represented.

- **Humanities (6 Credits Minimum)** Two courses from different disciplines. Pick one course from any two disciplines (including interdisciplinary), or pick two from interdisciplinary:

Arts Discipline: [ARTS250](#), [ARTS251](#), [HUMN240](#)  
Culture Discipline: [ENGL180](#) (effective Summer 2015), [HUMN203](#)  
Music Discipline: [MUSC220](#), [MUSC221](#)  
Mythology Discipline: [HUMN255](#)  
Philosophy Discipline: [PHIL302](#), [PHIL305](#)  
Language Discipline: Second year (6-8 credits) of a foreign language (e.g. [SPAN261](#) and [SPAN262](#) may be used as one course)  
Interdisciplinary: [HUMN251](#), [HUMN252](#),  
Other: HUGE100\*

\*Two HUGE100 courses may be used if the reviewing dean determines that two or more disciplines are represented.

- **Cultural Diversity (3 Credits Minimum)** from:

[BUSN308](#), [EDUC250](#), [ENGL235](#) (effective Summer 2015), [ENGL236](#) (effective Summer 2015), [GEOG306](#), [HIST203](#), [HLTH328](#), [POLI234](#), [POLI334](#), SDGE100, [SOCY103](#), [SOCY213](#), [SOCY225](#), [SOCY321](#).

**Total Credits Required: 34 - 36**

## General Education Requirements (Associates Degree)

- **Oral and Written Communication:** [ENGL110](#), [ENGL111](#), [COMM101](#)
- **Mathematics (Minimum 3 credits):** [MATH110](#) or higher or [PHIL205](#)
- **12 additional General Education credits are required** (chosen from at

least two of the following categories listed above: Humanities, Natural Science, Social Science, or Diversity).

**Total Credits Required: 24**

## **General Education Requirements (Associate of Applied Science Degree)**

- **Oral and Written Communication:** [ENGL110](#) and [ENGL111](#) or [COMM101](#)
- **Mathematics (Minimum 3 credits):** [MATH102](#) or higher or [PHIL205](#)
- **6 additional General Education credits are required** (chosen from the following categories listed above: Communication Skills, Humanities, Mathematics, Natural Science, Social Science, or Diversity).

**Total Credits Required: 15**

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## Graduation Procedures

Two semesters prior to intended graduation, students must submit the following to the Registrar's Office:

**Graduation Application:** Students must complete a [Graduation Application](#) for each degree or certificate they plan to receive.

**Official Degree Audit:** The official 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 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 Chair of Scholastic Standards.

The Registrar's Office will verify the students' Degree Audits and will send a Degree Audit Verification Form to each student and respective department. Students are responsible for examining this verification form and requesting clarification of anything that is not consistent with their records or understanding.

A final degree audit verification will be completed after grades are received at the end of the semester, for students planning to graduate as of that semester. The degree will be awarded if all requirements have been satisfied. Names of graduates are then sent to the president for approval by the Board of Trustees. Subsequently, a diploma is provided to each student.

**Please Note:** Students are **not** eligible to receive a degree or certificate with an "I" (incomplete) grade on their academic record.

**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, spring or summer semester who need documentation of degree completion before their diploma is available, may request a letter from the Registrar's Office certifying that they have completed degree requirements.

**Graduation with honors:** Honors graduates must earn at least 30 credits at Lake Superior State University.

**Cum Laude:** Cumulative gpa of 3.50 to 3.69

**Magna Cum Laude:** Cumulative gpa of 3.70 to 3.89

**Summa Cum Laude:** Cumulative gpa of 3.90 to 4.00

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.

For the commencement ceremony and program, honors status will be determined based on the Fall Semester cumulative gpa. Official graduation with honors status will be granted based on students' final cumulative gpa at LSSU.

## 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).*

## Acceptance of Other Institutions' Honors Credits

This policy applies only to the transfer of honors credits which count towards earning an honors degree at Lake Superior State University. It does not affect non-honors course credits and the transfer of those credits to LSSU.

1. The LSSU Honors Program will accept up to 12 honors credits with a grade no lower than B taken at an accredited college or university. These accepted honors credits will count towards the 21 honors credits required to graduate from LSSU's Honors Program.
2. To graduate from the Honors Program at LSSU, students affected by this policy must meet the following requirements at LSSU:
  1. At least one, three-credit 200 or 300 level Honors seminar (e.g., HONR 302)
  2. The completion of the capstone senior thesis project
3. Students who transfer into LSSU's Honors Program will receive the same honors benefits given to other students who enter LSSU's program earlier. These include but are not limited to:

1. Priority Registration
2. Optional Honors Housing
3. Opportunities to participate at Honors Program conferences
4. Students who transfer into LSSU's Honors Program will receive the same Honors designation on their Lake Superior State University diploma as other LSSU students who meet its Honors requirements by their graduation date.
5. This Policy shall commence on January 24, 2012, or as soon thereafter as administratively possible, and shall be in effect until suspended or terminated.
6. Students already admitted into the Lake Superior State University Honors Program at the time of suspension or termination will be allowed to complete the Program at LSSU under the terms of this policy enumerated (above) in numbers 1 through 4. Suspension or termination will only affect those admitted after suspension or termination of this policy.

## Commencement

From the Graduation Application Forms submitted by students, a potential graduate list is created each semester. The names of students who are listed in the annual commencement program are also compiled from the Graduation Application Forms. Names for the commencement program and diplomas will be the official, legal name as listed in the records of the University. Students may not be listed in the commencement program unless their Graduation Application Form is filed with the Registrar's Office six weeks prior to commencement. Students are expected to attend [commencement](#) exercises unless excused by the Registrar's Office.

Students completing degree requirements during the summer semester may participate in the May commencement ceremony if their Graduation Application Form is received six weeks prior to commencement.

Participation in the commencement ceremony is NOT equivalent to graduation. Because the ceremony occurs before final grades are submitted, it is not possible to determine if all degree requirements have been satisfied at that time.

## Missing Requirements

Students not graduating because of missing requirements will be sent a letter notifying them of the missing requirements and will direct them to the department of their major.

## Graduation Audit Policy

Graduation Audits (Graduation Application, Degree Audit, supporting paperwork) are maintained in the Registrar's Office permanently for students that apply to graduate but ultimately do not graduate due to missing requirements.

If the student re-applies to graduate within two years from original graduation application term, the student will follow the same degree audit previously submitted.

If the student re-applies to graduate after two years from the previous graduation application, the student will be directed to contact their academic department to request a new Degree Audit. The Registrar's Office will provide copies of the student's graduation audit paperwork to the academic department as requested. The student will also be required to complete a new Graduation Application to be submitted to the Registrar's Office with the updated, official, signed degree audit from their academic department.

Because degree programs are continually assessed, requirements may change during the student's absence. Students will need to work with their academic



departments in order to fulfill the department requirements in place at the time the student returns to LSSU.

For degree programs that are no longer available (eliminated/suspended), students having completed the Graduation Application process will be directed to their academic department for advisement.

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- School of Arts and Letters
- School of Biological Sciences
- School of Education
- School of Mathematics and Computer Science
- School of Physical Sciences
- School of Social Sciences

### College of Professional Studies

#### Division of Health and Safety

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- School of Nursing
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- School of Criminal Justice
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## Course Descriptions

Each course description is preceded by the following type of heading:

**CHEM999 Chemistry  
(3,3) 5**

*or*

**CHEM999 Chemistry  
(3,3,1) 5**

*or*

**CHEM999 Chemistry  
(3,3) *alternate years* 5**

The first line provides the code number (CHEM999) and the course name; see abbreviation legend below. The second line includes several pieces of information: The first two numbers in parentheses are hours of lecture-lab per week. If the course has a recitation component, it will be listed next. 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 registration or your department chair concerning scheduling of such courses.

**NOTE:** 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 if it is found during the regular add/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](#)
- [ARTS - Art](#)
- [BIOL - Biology](#)
- [BUSN - Business](#)
- [CHEM - Chemistry](#)
- [CHLD - Early Childhood Education](#)
- [CHIN - Chinese](#)
- [CJUS - Criminal Justice](#)
- [COMM - Communication](#)
- [CSCI - Computer Science](#)
- [DANC - Dance](#)
- [DATA - Data Processing](#)
- [ECON - Economics](#)

- [EDSE - Special Education](#)
- [EDUC - Teacher Education](#)
- [EGEE - Electrical Engineering](#)
- [EGEM - Engineering Mechanics](#)
- [EGET - Electrical Engineering Technology](#)
- [EGME - Mechanical Engineering](#)
- [EGMF - Manufacturing Technology](#)
- [EGMT - Manufacturing Engineering Technology](#)
- [EGNR - General Engineering](#)
- [EGRS - Robotics and Control Systems](#)
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- [ENGL - English](#)
- [EVRN - Environmental Science](#)
- [EXER - Exercise Science](#)
- [FINC - Finance](#)
- [FINE - Fine Arts](#)
- [FIRE - Fire Science](#)
- [FREN - French](#)
- [GEOG - Geography](#)
- [GEOL - Geology](#)
- [HIST - History](#)
- [HLTH - Health Sciences](#)
- [HONR - Honors Program](#)
- [HUMN - Humanities](#)
- [INTB - International Business](#)
- [INTD - Interdisciplinary](#)
- [JAPN - Japanese Studies](#)
- [JOUR - Journalism](#)
- [LAWS - Law](#)
- [LIBR - Library](#)
- [LING - Linguistics](#)
- [MATH - Mathematics](#)
- [MGMT - Management](#)
- [MRKT - Marketing](#)
- [MUSC - Music](#)
- [NSCI - Natural Science](#)
- [NURS - Nursing](#)
- [OFFC - Office Administration](#)
- [PHIL - Philosophy](#)
- [PHYS - Physics](#)
- [PNUR - Practical Nursing](#)
- [POLI - Political Science](#)
- [PSYC - Psychology](#)
- [READ - Reading](#)
- [RECA - Recreational Activities](#)
- [RECS - Recreation Studies](#)
- [SERV - Student Services](#)
- [SOCY - Sociology](#)
- [SOWK - Social Work](#)
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- [THEA - Theatre](#)

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- 

**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. Prerequisite: Two years of high school algebra and equivalent/satisfactory score on ACT/SAT or Placement Exam or MATH102 with a grade of C or better.

**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,) 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 ACTG232 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: Grade of C or higher in ACTG232.



### **ACTG332**

#### **Cost Management I**

**(4,0) 4**

An advanced study of managerial accounting as it applies to management practices. Topics include job order and process costing systems, value chain management, activity based costing and management, joint product costing, CVP analysis, cost allocations, budgeting, and financial planning models, and allocation of support activity costs. Prerequisite: ACTG133.

### **ACTG333**

#### **Cost Management II**

**(4,0) 4**

A continuation of ACTG332. Topics include strategic decision making, strategic issues in capital investment decisions, standard costing and variance analysis, performance evaluation and the balanced scorecard, responsibility accounting, investment centers and transfer pricing, target costing, theory of constraints, and strategic pricing, managing and controlling quality, management compensation, and business valuation. Prerequisite: ACTG332.

### **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.

### **ACTG350**

#### **Income 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 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.

### **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.

### **ACTG432**

#### **Advanced Accounting: Consolidations**

**(4,0) 4**

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, translation of foreign financial statements and the application/comparison of international accounting standards will also be presented. Prerequisite: ACTG233 with a grade of C or higher.

### **ACTG433**

#### **Advanced Accounting: Governmental**

**(4,0) 4**

An introduction to governmental and nonprofit accounting as applied to state and local governments and other nongovernmental not-for-profit entities including colleges and universities, and health care organizations. 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 with a grade of C or higher.

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### **ARTS109**

#### **Principles of Design and Color**

**(0,4.5) 3**

This course acquaints students with the various possibilities of working with two-dimensional space and color theory. Participants will explore line, form, shape, texture, color and the use of negative and positive space. Prerequisite: None.

### **ARTS110**

#### **Fundamentals of Drawing**

**(0,4.5) 3**

This course will introduce the participant to basic drawing techniques. Students will draw from observation, working toward the creation of a portfolio of drawings for final submission. Prerequisite: None.

### **ARTS111**

#### **Introduction to Painting**

**(0,4.5) 3**

Participants will explore fundamental painting techniques and methods. Color theory and basic compositional styles will be covered. With an emphasis on representational painting, students will build a body of self-expressive work using acrylic paint and possibly other media. Prerequisite: None.

### **ARTS115**

#### **Introduction to Ceramics**

**(0,4.5) 3**

A basic course in ceramics with emphasis on throwing and hand construction techniques, design, aesthetics and the creative development of clay objects. Prerequisite: None.

### **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.

### **ARTS220**

#### **Drawing & Painting Studio I**

**(0,4.5) 3**

In an open studio environment, through directed study, students will use aspects of drawing and painting to produce original artwork, displaying a basic level of studio work. This class combines skills learned in foundational courses into a mode of self-expression. Prerequisite: ARTS111 and either ARTS109 or ARTS110.

### **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.

### **ARTS320**

#### **Drawing & Painting Studio II**

**(0,4.5) 3**

Students will investigate a personal direction that fulfills their identity as artists, demonstrating an intermediate level of studio work. Focusing on developing each student's artistic identity, this class is composed of directed studio time and critiques. Prerequisite: ARTS220.

### **ARTS420**

#### **Drawing & Painting Studio III**

**(0,4.5) 3**

In an open studio environment, reinforced by frequent critiques, this course focuses on the individual formative process as students choose among multiple thematic possibilities in order to produce a more advanced level of studio work through directed study. Prerequisite: ARTS320.

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### **BIOL104**

#### **Survey of General Biology**

**(3,3) 4**

This course is a non-majors biology course that will cover the major units of general biology: (1) cells and energy; (2) genetics; (3) evolution; (4) organismal biology; (5) ecology. Developing a solid understanding of the fundamentals of general biology is vital to being an informed citizen about advances in the medical and food sciences, foundational and new information about the organization of life, and current issues of environmental and ecological concern. Course content is tied to the State of Michigan's benchmarks for training elementary school teachers, but any students interested in the life sciences are encouraged to take this class. The laboratory is designed to illustrate the course content as well as illustrate the principles of inquiry. Prerequisites: ENGL091, MATH086 and READ091 or equivalent test scores.

### **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: ENGL091 or equivalent.

### **BIOL106**

#### **Boat Handling and Navigation**

**(2,3) 3**

Topics related to the art of seamanship are covered, including the basics of boating and safety. Piloting and navigation are emphasized with an understanding of weather, waves, and wind, as well as the use of board electronic equipment. Pre- or corequisites: MATH102.

**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: ENGL091 or equivalent.

**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 complement 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, ENGL091 or equivalent, and MATH088 or equivalent satisfactory score on ACT or Placement Exam.

**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.

**BIOL126**  
**Interpretation of Maps and Aerial Photographs**

**(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.

**BIOL131**  
**General Biology: Cells**

**(3,3) 4**

This course is an introduction to the cellular aspects of general biology. This course will provide an overview of cellular biology and serve as a framework for further biological studies. Topics to be covered include basic chemistry of the cell, function of cellular organelles, cellular metabolism including respiration and photosynthesis, the cell cycle, mitosis, meiosis, simple transmission genetics, introduction to molecular and developmental biology. The laboratory introduces the student to inquiry based scientific method. Prerequisites: MATH088, ENGL091, or equivalent scores on the math and English placement exams.

## **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: MATH088, ENGL091, or equivalent scores on the math and English placement exams.

## **BIOL199**

### **Freshman Seminar**

**(1,0) 1**

A partial focus for this course will be on academic skills and the transition from high school to college. Topics will include time management, use of campus resources, development of critical thinking, and strengthening study skills. At other times students will meet in discipline-based groups in conjunction with BIOL299, BIOL399 and BIOL499. These meetings will include discussion of literature relevant to the discipline and progress reports from upper-class students engaged in scholarly projects.

## **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. Prerequisite: ENGL111. Pre- or corequisite: COMM101.

## **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: BIOL131 and CHEM115.

## **BIOL206**

### **Medical Laboratory Practices**

**(2,0) 2**

Covers fundamental principles of medical laboratory science including safety, specimen handling, measurement, common calculations, organization of the medical laboratory, automation, and quality control. Prerequisites: MATH111, CHEM115, BIOL131.

## **BIOL220**

### **Genetics**

**(3,3) 4**

This course covers the three major subdivisions of the study of genetics - Mendelian or transmission genetics, molecular biology, and population genetics. Transmission genetics topics will include traditional genetics problems and modes of inheritance; mitosis, meiosis and control of the cell cycle; chromosomal structure and recombination. Molecular topics will include information on DNA structure and replication, transcription, translation, gene cloning, genomics, and current research in DNA technology. Topics in population genetics will include aspects of the Hardy-Weinberg theory. The laboratory will include exercises in both traditional and molecular genetics. Prerequisites: BIOL131, CHEM115 and (BIOL250 or sophomore statistics course).

## **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 or CHEM110 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 CHEM109 or above; NSCI103 or BIOL132; BIOL126.

## **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**  
**Biostatistics**  
**(2,2) 3**

A course in the design and analysis of biological experiments. The focus of the course is the development of a systematic method for determining an appropriate statistical technique and the interpretation of results in terms of biological science. Prerequisites: BIOL131, BIOL132, and MATH111 or Calculus.

**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 BIOL126.

**BIOL285**  
**Principles of Epidemiology**  
**(3,0) 3**

Principles, purpose and methods of descriptive and analytic epidemiology with emphasis on environmental health. Prerequisite: MATH207.

**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 and 132

**BIOL289**  
**Aquatic Research Sampling Methods**  
**(2,3) 3**

A variety of sampling techniques are introduced as they relate to the various disciplines of aquatic science. These methods include sampling and preservation of biotic (plankton, fish, benthic invertebrates, DNA, pathogens) and abiotic (water quality, sediments, climate) data. Prerequisites: BIOL107, CHEM108/109, MATH111 and permission of instructor. Also listed as EVRN289.

**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**  
**(2,3) 3**

A study of the invertebrate groups with emphasis on morphology, phylogeny and life cycles. Prerequisite: BIOL132.

**BIOL303**  
**General Entomology**  
**(2,3) 3**

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.

**BIOL304**  
**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.

**BIOL306**  
**Medical Mycology**

**(2,2) 3**

Covers fungal structure, reproduction, and classification, medically important fungi and the diseases they cause, techniques for identifying fungi in clinical specimens and for culturing fungi in the laboratory. Laboratory covers techniques for fungal culture and identification, and practice identifying fungal diseases from prepared slides and/or photographs. Prerequisite: BIOL132 and BIOL204.

**BIOL310**  
**Ichthyology**

**(2,3) 3**

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: BIOL131 and BIOL132.

**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 or BIOL330.

**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 CHEM115.

**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.

### **BIOL335**

#### **Principles of Animal Nutrition**

**(3,0) 3 alternate years**

A scientific approach to the nutritional role of water, carbohydrates, proteins, lipids, minerals, and vitamins. The course will emphasize comparative aspects of gastrointestinal anatomy and physiology for livestock, wildlife, and fish. Prerequisites: BIOL250 AND CHEM116.

### **BIOL337**

#### **General Ecology**

**(2,3) 3**

A survey of concepts and applications of plant and animal physiological, morphological, behavioral, population, community, and systems ecology. Prerequisites: BIOL131, BIOL132 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**

**(2,4) 4**

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 CHEM115.

**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.

**BIOL389**  
**Internship in Biology**  
**3-4 3-4**

A variable credit practicum course in which the students will perform research and/or gain work experience under the direction of a faculty mentor and a qualified supervisor. Students are expected to spend a minimum of 45 hours in an approved work setting for each credit earned. The course may be repeated once for a maximum of eight credits. Student interns will be required to write weekly updates or journal entries to be submitted to their LSSU faculty mentor for evaluation of what the student has learned. Prerequisites: 2.50 GPA in major and permission of faculty mentor or department chair.

**BIOL398**  
**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. Prerequisites: BIOL299.

**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.

### **BIOL405**

#### **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.

### **BIOL406**

#### **Immunoematology**

**(2,3) 3**

Fundamentals of blood banking in the ABO, Rh and other blood group systems; blood component preparation and utilization; transfusion complications; quality control and problem solving. Laboratories include techniques used in immunology/serology; blood grouping; compatibility testing; and antibody identification. Prerequisites: BIOL220, CHEM226, Junior standing and permission of instructor.

### **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**

#### **Advanced Cell & Molecular Biology**

**(3,3) 4**

This course will examine cellular structure and function with emphasis on organelle ultrastructure, cell membranes and permeability, cellular interactions, and the molecular foundations of genetic mechanisms and cell energetics. Prerequisites: BIOL220 and CHEM351.

### **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. Prerequisite: BIOL204 and BIOL220.

**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. Prerequisite: BIOL337.

**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**

**(2,3) 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: BIOL330.

**BIOL434**

**Histopathology**

**(0,3) 1**

The course is an intensive 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 or corequisite: 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: BIOL202, BIOL337 and MATH207.

**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: BIOL311 or BIOL312 and BIOL339.

**BIOL450**  
**Laboratory Apprenticeship**  
**(0,3) 1**

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. This is a credit/no credit course.

**BIOL455**  
**Body Fluids Analysis**  
**(3,2) 4**

Covers molecular analytes that are measured in blood, urine, and body fluids: the physiologic and pathologic processes that affect the levels of these analytes, correlations of analyte levels with disease, methods and instruments used to measure them, and principles and practices of quality control. Prerequisites: MATH207, CHEM226, CHEM332, BIOL330.

**BIOL460**  
**Clinical Internship**  
**3 or 9**

A six-month internship experience in a clinical laboratory. This course is open only to students in the Medical Laboratory Science Major, Clinical Concentration. Students will be placed at one of LSSU's affiliate clinical sites. There they will perform routine analyses of clinical specimens under the supervision of clinical site personnel. Students will be trained in chemical, hematological, microbiological, coagulation, and blood bank analyses. Prerequisites: BIOL380, BIOL406, BIOL423, BIOL455, BIOL480 and Permission of Course Director. Variable credits, 3 or 9; must be repeated once for a maximum of 12 credits.

**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. Prerequisite: BIOL337

**BIOL475**  
**Aquatic Entomology**  
**(2,3) 3**

Survey and identification of regional lake and stream insects, with additional emphasis on lifehistory 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**  
**(3,3) 4 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: BIOL204 and CHEM226.

**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**  
**(0,6) 2**

A practicum under the guidance of a faculty member. The student will conduct a scholarly project based on the proposal submitted by the student in BIOL399 (or an appropriate substitute). Prerequisite: BIOL399.

**BIOL497**  
**Experiential Learning Project**  
**3**

A full semester/summer practicum experience. Students 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 experience should be 12 weeks at 40 hours per week. Prerequisite: BIOL398.

**BIOL499**  
**Senior Seminar**  
**(1,0) 1**

Students meet in discipline-based, student-faculty groups in conjunction with BIOL199, BIOL299 and BIOL399. 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 or BIOL497.

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## **BUSN121**

### **Introduction to Business**

**(3,0) 3**

This course is intended to provide students a broad overview of the complex and dynamic contemporary world of business. The course will illustrate how human resources management, marketing, production, and finance are major functions that work together to help owners, employees and customers reach their objectives. Business must operate within economic, social, natural, technological, international, legal, and political environments.

## **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.

## **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.

## **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]**

**(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 achieve the school approved learning

objectives/outcomes established for the internship. Students are expected to spend a minimum of 45 hours (1 credit), 90 hours (2 credits), 135 hours (3 credits), or 180 hours (4 credits) in an appropriate work setting. This course may be repeated once for a maximum of four total credits. Prerequisites: 2.5 GPA, and approval of the Dean.

### **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.

### **BUSN350**

#### **Business Law I**

**(3,0) 3**

This portion of business law covers the law applicable to contracts, sales, personal property and bailments.

### **BUSN355**

#### **Business Law II**

**(3,0) 3**

This portion of business law covers the law applicable to commercial paper, corporations, partnerships, agency and employment.

### **BUSN399**

#### **Internship in [Discipline]**

**(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 achieve the school approved learning objectives/outcomes established for the internship. Students are expected to spend a minimum of 45 hours (1 credit), 90 hours (2 credits), 135 hours (3 credits), or 180 hours (4 credits) in an appropriate work setting. This course may be repeated once for a maximum of four total credits. Prerequisite: 2.5 GPA, junior standing or higher, employee and instructor approval of the Dean.

### **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 and junior standing.

### **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.

**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: 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. Prerequisite: Senior status.

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**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: MATH088 or equivalent. Students must receive a C (2.0) or better in this course to qualify for CHEM104, CHEM108 or CHEM115. Credit in this course does not apply toward graduation.

**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: ENGL091 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.

**CHEM110**

## **Applied Organic & Biochemistry**

**(3,2) 4**

A continuation of concepts presented in CHEM108 with an emphasis on the fundamentals of organic and biochemistry. The interrelationships between the metabolic processes of living systems are discussed along with their underlying chemical reactions. Prerequisite: CHEM108 or equivalent, with a grade of C (2.00) or better.

## **CHEM115**

### **General Chemistry I-Intro to Fundamental Principles of Chemistry**

**(4,2) 5**

Fundamental principles of chemistry with emphasis on scientific method, basic chemical reactions and acid base equilibria, stoichiometry, periodic trends of elements, an introduction to the energy of reactions, atomic structure, simple bonding models, molecular structure, intermolecular forces, and nuclear chemistry will be presented. Pre- or corequisite of MATH111 or higher and ENGL091 or equivalent. One year of high school chemistry is strongly recommended.

## **CHEM116**

### **General Chemistry II-Intro to Physical Chemistry**

**(4,3) 5**

Continuation of CHEM115 with emphasis on physical chemical concepts such as bonding, gas laws, solids and solutions, kinetics, thermodynamics, and equilibrium, including acid-base reactions and electron transfer processes. Prerequisite: CHEM115 with a grade of C (2.0) or better.

## **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 (2.0) 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 MATH111 with a grade of C (2.0) or better.

## **CHEM261**

### **Inorganic Chemistry**

**(3,3) 4**

This course will provide a foundation in Inorganic Chemistry with a focus on understanding the properties of the elements, bonding and geometries of small

molecules and their chemical re-activities. Survey of main group and transition metal chemistry and applications to bio-inorganic chemistry. The laboratory component will provide students with opportunities to observe and measure the changes that accompany inorganic reactions and to make predictions regarding these inorganic reactions. Prerequisite: CHEM116 with a grade of C or better.

### **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.

### **CHEM310**

#### **Applied Spectroscopy**

**(3,3) 4**

General principles of spectroscopy will be explored including underlying principles and theory, data acquisition and processing coupled with spectral interpretation. Different spectroscopic methods used for the structural determination of organic molecules and in chemical research are described including mass spectrometry (MS), ultraviolet and visible spectroscopy (UV-Vis), infra-red spectroscopy (IR), atomic spectroscopy, fluorescence spectroscopy, and both one-dimensional and two-dimensional  $^1\text{H}$  and  $^{13}\text{C}$  nuclear magnetic resonance (NMR) spectroscopy. Prerequisite: CHEM231 and CHEM326. (Alternate Years)

### **CHEM326**

#### **Organic Chemistry II**

**(3,3) 4**

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 advance 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 (2.00) or better.

### **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. Recommended either PHYS222 or PHYS232.

### **CHEM341**

#### **Environmental Chemistry**

**(3,3) 4 alternate years**

A study of the environmental chemistry of the hydrosphere, atmosphere,

lithosphere, and biosphere, the measurement and remediation of water and air quality problems, the toxicology of water and air pollutants, and the environmental aspects of energy use. Prerequisites: CHEM225, CHEM231. Also listed as EVRN341.

### **CHEM351**

#### **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, vitamins, 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: CHEM225.

### **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: CHEM351

### **CHEM361**

#### **Physical Chemistry I**

**(4,0) 4 alternate years**

Chemical thermodynamics with applications to both phase and chemical equilibria. Prerequisites: CHEM116, one year of physics, and either MATH112 or MATH152. Corequisite: CHEM363.

### **CHEM362**

#### **Physical Chemistry II**

**(3,0) 3 alternate years**

Traditional quantum chemistry topics will be discussed that help explain chemical phenomena and provide descriptions and applications for spectroscopy. Prerequisite: CHEM361.

### **CHEM363**

#### **Physical Chemistry Laboratory: Kinetics and Reaction Dynamics**

**(0,3) 1**

An advanced laboratory exploring reaction kinetics and dynamics with an emphasis on modern methods of physical chemistry measurement. Prerequisite: CHEM116 and one semester of calculus.

### **CHEM395**

#### **Junior Seminar**

**(1,0) 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.

### **CHEM399**

#### **Internship in Chemistry**

**1-4 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. Work hours and activities must be documented daily and approved by both the on-site supervisor and the instructor to receive credit. The course may be repeated for a maximum of four credits. Prerequisite: 2.5 GPA in major, Junior standing and permission of chair at least one semester in advance of registering for the course.

### **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**

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.

### **CHEM452**

#### **Advanced Biochemical and Molecular Techniques**

**(2,4) 4 alternate years**

A course covering advanced laboratory techniques for manipulating and analyzing bio-polymers such as proteins and nucleic acids. A brief discussion of bioinformatics will be presented. Protein expression vectors, PCR, and modern molecular techniques will be explored with potential applications for chemistry, biology, toxicology, forensic, and clinical lab science. Prerequisite: CHEM351.

### **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. Prerequisite: CHEM261.

### **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. Pre- or corequisites: CHEM461 and either CHEM310 or CHEM332.

## **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**

**(0,6) 2**

This is a 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. This course will be required for a degree certified by the American Chemical Society. This course may not be repeated for credit. Prerequisites: CHEM395 (also listed as EVRN395) and permission of instructor. Dual listed as EVRN495.

## **CHEM499**

### **Senior Seminar**

**(1,0) 1**

Required for seniors majoring in chemistry/environmental science. Students will present the results of their scholarly research. Students who have completed CHEM/EVRN495 will be required to give poster and oral presentations to the University community as part of this class. Pre- or corequisite: CHEM395 (also listed as EVRN395). Dual listed as EVRN499.

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## **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.

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### **CHLD101**

#### **Introduction to Early Childhood Education**

**(4,0) 4**

This course provides an introduction to the field of early childhood. Topics include typical and atypical developmental milestones in the social, emotional, physical, intellectual and moral development of children from birth to age 8. In addition, the history of early childhood education, types of programs and issues in the field of childcare will be addressed. Field experience is required.

### **CHLD103**

#### **Learning Environments for the Young Child**

**(4,0) 4**

This course explores the contributions of child development theorists, and the multiple integrated influences of family and community, to the design and implementation of early childhood learning environments. The use of space, materials, and routines in providing inclusive, safe environments is considered, as well as philosophical approaches to supporting young learners. Field experience is required. Prerequisite: CHLD101.

### **CHLD150**

#### **Observation and Assessment**

**(4,0) 4**

This course provides experience with the practices and tools for observation, documentation, and assessment of young children from birth through age eight. Discussion will include the use of results of assessment for planning continued developmental and learning experiences, as well as for appropriate classroom management and guidance strategies. Field experience is required.

### **CHLD210**

#### **Infants and Toddlers**

**(4,0) 4**

This course examines the design and evaluation of developmentally appropriate teaching, caregiving, and guidance practices for children from birth to 36 months. Addresses environments that provide challenging and developmentally appropriate expectations to stimulate development toward the long-term goals of autonomy, and cognitive and social-emotional growth of infants and toddlers. Field experience is required. Prerequisite: CHLD150.

### **CHLD225**

#### **Emergent Literacy**

**(3,0) 3**

This course focuses on literacy acquisition theory and language development milestones for children from birth through age 8. Factors that affect reading acquisition and techniques that assist children in developing listening, speaking, reading and writing skills are also explored. Consideration of the unique needs of English Language Learners is included. Prerequisite: CHLD210.

### **CHLD241**

#### **STEM Foundations for the Young Child**

**(4,0) 4**

This course explores basic concepts and skills in science, mathematics, engineering, and technology appropriate to early childhood education. Field experience is required. Prerequisites: MATH110 or higher; BIOL105.

### **CHLD242**

#### **Creativity & Humanities**

**(4,0) 4**

This course examines literature, visual and performing arts, and social studies topics appropriate to early childhood education. Field experience is required. Prerequisites: ENGL111, SOCY103.

### **CHLD245**

#### **Early Childhood Curriculum**

**(3,0) 3**

This course focuses on the design of developmentally appropriate practices and curriculum for young children. Emphasis is placed on planning learning activities that support positive developmental outcomes, as well as on differentiating instructional strategies for the individual child. Field experience is required. Prerequisite: CHLD150.

### **CHLD260**

#### **Practicum I**

**4**

The student will complete at least 140 hours in an early childhood setting culminating in experience as a lead teacher. Seminar meetings are included. Grading will be CR/NC. Prerequisites: CHLD150 and permission of instructor.

### **CHLD270**

#### **Administration of Early Childhood Programs**

**(2,0) 2**

This course focuses on the financial, legal, supervisory and administrative procedures used in operating early childhood programs, including applicable local, state, and national standards. Prerequisite: CHLD150.

### **CHLD310**

#### **Inclusion of Young Children with Special Needs in Early Childhood Settings**

**(3,0) 3**

This course provides resources and models for designing and implementing quality inclusive learning environments for young children who demonstrate developmental diversity birth to age 5. Includes identification of common delays, impairments and disabilities, as well as assistive technologies appropriate for supporting continued development. Field experience is required. Prerequisite: CHLD210.

### **CHLD330**

#### **Philosophical Foundations of Early Childhood Education**

**(2,0) 2**

This course expands on basic knowledge of early childhood education practices to examine and evaluate contemporary early childhood program models and philosophical foundations. Prerequisite: CHLD260

### **CHLD350**

#### **Early Childhood Facilities Management**

**(2,0) 2**

This course develops an advanced level of knowledge and skills necessary for effective management of child development centers, preschools, and other facilities. Effective leadership styles are considered. Prerequisite: CHLD270.

### **CHLD410**

#### **Practicum II**

**4**

Students complete at least 140 hours in an early childhood setting, with primary emphasis on curriculum and administrative responsibilities. Seminar meetings are included. Grading will be CR/NC. Prerequisites: CHLD350 and Permission of Instructor.

### **CHLD440**

#### **Family and Community Partnerships**

**(3,0) 3**

This course explores the multiple integrated influences that impact the development

of young children, and provides opportunities for students to develop collaborative and cooperative skills that are essential to building partnerships focused on supporting that development. The various roles of the early childhood educator as an advocate for individual children and for the community is addressed. Field experience is required. Prerequisite: CHLD310.

### **CHLD480**

#### **Directed Teaching: Seminar**

**(1,0) 1**

This seminar provides a forum for students in the CHLD Directed Teaching experience to discuss issues in early childhood education, classroom management, teaching of all students and professional development. Co-requisite: CHLD492.

### **CHLD492**

#### **Directed Teaching: Early Childhood**

**5**

This course is a full-time teaching practicum under the direction and mentoring of a cooperating teacher at the pre-primary level. Evolution from observation and facilitation of small group activities, to whole-class instruction of a full-teaching load in an area center. Emphasis is placed on full range of responsibilities, including family involvement and administrative responsibilities. Grading will be CR/NC. Prerequisite: Admission to student teaching internship. Corequisite: CHLD480.

### **CHLD495**

#### **Senior Project 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. Requires field research and oral presentation. Prerequisite: Senior Status and Instructor's approval.

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### **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.

### **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. Prerequisite: 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: CJUS101 and CJUS102.

### **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. Prerequisite: 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: CJUS101 and CJUS102.

### **CJUS325**

#### **Homeland Security and Emergency Services**

**(3,0) 3**

This course will prepare all graduates from a variety of majors to understand how homeland security impacts the US political system as a whole, but especially from the standpoint of emergency response and preparedness. 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. Prerequisite: Junior standing. Students from other majors are encouraged to enroll with permission from instructor. 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: CJUS220, CJUS240, 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. Prerequisite: 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. Prerequisite: Junior standing in criminal justice or fire science and MATH088 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: CJUS101 and SOCY214.

### **CJUS384**

#### **International and Comparative Criminal Justice Systems**

**(3,0) 3**



A survey of selected 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.

**CJUS401**  
**Senior Seminar**  
**(3,0) 3**

Seminar and independent study course with individual student guidance by faculty on selected research topics in criminal justice. Prerequisite: 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: Senior standing and permission of instructor.

**CJUS409**  
**Procedural Criminal Law**  
**(3,0) 3**

Principles, duties and mechanics of criminal procedures as applied to important areas of arrest, search and seizure. Prerequisite: 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. Prerequisite: 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: CJUS101, and junior or senior standing.

**CJUS444**  
**Criminalistics**  
**(3,3) 4**

Criminalistics 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 MCOLES mandated hours. Prerequisite: 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: 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: CJUS101 and CJUS102.

## **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. Prerequisite: Permission of instructor.

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## **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.

### **COMM399**

#### **Internship in Communication**

**(1-4) 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 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.

### **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.

### **COMM490**

#### **Senior Directed Study in Communication**

**3-4 3-4**

This course is designed to allow communication 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 a student's individual areas of interest within the communication discipline, 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).

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### **CSCI 101**

## **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.

## **CSCI 103**

### **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.

## **CSCI 105**

### **Introduction to Computer Programming**

**(2,2) 3**

An introductory course in computer programming in a graphical development environment, intended for students with no prior computer programming experience. Arithmetic, control structures and simple data structures. Sound, graphics and animation techniques. Prerequisite: MATH088 or equivalent/satisfactory score on SAT, ACT or Placement Exam.

## **CSCI 106**

### **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.

## **CSCI 107**

### **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 Expression Web.

## **CSCI 121**

### **Principles of Programming**

**(4,0) 4**

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. Introduction to classes and dynamic memory allocation. Text manipulation and parsing, binary files, and exception handling. C-style input and output. 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.

### **CSCI 163**

#### **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 interference as they relate to computer repair and operation. The disassembly and upgrading of a personal computer will be covered in the laboratory as well as the use of diagnostic hardware and software.

### **CSCI 201**

#### **Data Structures and Algorithms**

**(4,0) 4**

An introductory course in data structures and algorithms, with an emphasis on abstraction, implementation and analysis. Advanced class concepts, including operator overloading, Linked lists, stacks, queues, trees and binary trees. Separate compilation and third-party libraries. Application of various data structures to problems selected from the spectrum of computer science topics. Prerequisites: CSCI121 with a grade of C or better and MATH111 (or equivalent math placement) with a grade of C or better.

### **CSCI 207**

#### **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. Prerequisite: CSCI107 with a grade of C or better.

### **CSCI 211**

#### **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.

### **CSCI 221**

#### **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 with a grade of C or better.

### **CSCI248**

#### **Network Operating Systems I**

**(2,2) 3**

An introduction to using and administering network operating systems. Students will also be introduced to virtualization of machines, as well as interaction between virtualized machines. Topics include: account setup, basic security, file and device sharing, and maintenance. Course topics will be presented in the context of different network operating systems. Prerequisite: CSCI221 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 CSCI103 with grade of C or better.

### **CSCI275**

#### **Web Server Administration**

**(2,2) 3**

Install and configure a web server; identify the web server administrator 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. Prerequisites: CSCI221 and CSCI248, both with a C or better.

### **CSCI281**

#### **Introduction to UNIX and Networking**

**(2,2) 3**

An introduction to the UNIX operating system, shell scripting, and UNIX networking from the users 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 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. Prerequisites: CSCI201 with a grade of C or better.

### **CSCI 292**

#### **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. Prerequisite: CSCI106 and 107, both with a grade of C or better, or CSCI163 and CSCI221, both with a grade of C or better.

### **CSCI 321**

#### **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.

### **CSCI 323**

#### **Routers and Switches**

**(2,2) 3**

Principles of Wide Area Networks, IP and TCP, routers, routing protocols and configurations, virtual LANs, network management, subnetting, design of LANs and WANs, and security issues. Students completing this course will be prepared to take the CCENT and CCNA certification exams. Prerequisite: CSCI221 with a grade of C or better.

### **CSCI 325**

#### **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 with a grade of C or better.

### **CSCI 326**

#### **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 with a grade of C or better.

### **CSCI 341**

#### **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.

### **CSCI 342**

#### **Advanced Programming Techniques**

**(4,0) 4 alternate years**

Advanced data structures including general trees and graphs. Advanced 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. Prerequisites: CSCI201 with a grade of C or better.

### **CSCI 348**

#### **Network Operating Systems II**

**(2,2) 3**

A continuation of using and administering network operating systems. Students will also be introduced to virtualization of servers, as well as interaction between virtualized machines. Topics include: file system and network service management, remote access, security, printing, and disaster recovery. Course topics will be presented in the context of different network operating systems. Prerequisite: CSCI248 with a grade of C or better.

### **CSCI 351**

#### **Mobile Application Development**

**(3,0) 3**

Introduction to the development of applications for smart phones and tablets; using a simulator and provisioning to mobile devices; user interfaces, touch events, data management, and graphics; interaction with camera, accelerometer, and location hardware. Prerequisite: CSCI121 with a grade of C or better.

### **CSCI 371**

#### **Multi-Platform Application Development**

**(3,0) 3**

The design and implementation of applications across multiple platforms, with a goal of a similar or identical code base between versions. The course covers a variety of programming environments, as well as a variety of platforms. Focus will be on comparison between programming languages, as well as the strengths and weaknesses of various programming environments and models for a uni-platform vs a multi-platform approach. Prerequisite: CSCI121 and either CSCI281 or CSCI201

all with a grade of C or better.

### **CSCI 411**

#### **Advanced Database and Project Management**

**(3,0) 3 alternate years**

Designing and implementing an enterprise-level database. Creating interfaces to database systems from common programming language platforms. Capturing requirements, process modeling, project scheduling, documenting, testing, delivering and maintain a system. Prerequisites: CSCI201 and CSCI211, each with a minimum grade of C.

### **CSCI 412**

#### **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.

### **CSCI 415**

#### **Computer Organization and Architecture**

**(3,0) 3**

A hardware-orientated 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. Parallel computing for both SMP and MIMD models. Prerequisite: CSCI201 and either CSCI351 or CSCI371 with a grade of C or better.

### **CSCI 418**

#### **Senior Project I**

**(1,4) 3**

This course is the first part of the two-part sequence CSCI418/CSCI419. The student will begin a two-semester capstone experience that will include one of the following: a software project; a network implementation; a co-operative education position with an external company; or a research project. The experience must include the fulfillment of customer-generated requirements. The projects/experiences will vary each year to allow students to experience work in a real-world environment. Students in CSCI418 must take CSCI419 the following semester. Prerequisite: CSCI291 or CSCI292 with a C or better and permission of instructor.

### **CSCI 419**

#### **Senior Project II**

**(1,4) 3**

The second of a two-part sequence, CSCI419 provides students with the skills necessary for completion of their two-semester capstone experience that will include one of the following: a software project; a network implementation; a cooperative education opportunity with an external company; or a research project. The experience must include the fulfillment of customer-generated requirements.

The projects/experiences will vary each year to allow students to experience work in a real-world environment. Students in CSCI418 must take CSCI419 the following semester. Prerequisite CSCI418 with a C or better and permission of the instructor.

### **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 from the exploiters 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 administered systems. Prerequisites: CSCI412 and either CSCI351 or CSCI371.

### **CSCI434**

#### **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, protection, parallel and distributed systems. Case studies of modern operating systems. Prerequisite: CSCI201 with a minimum grade of C.

### **CSCI490**

#### **Individualized 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 nine credits. Prerequisites: Junior standing or higher.

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### **DANC101**

#### **Ballet I**

**(0,4) 2**

Students explore ballet technique, vocabulary, and history. Emphasis is on placement/alignment, length of line, weight shift, and a developing sense of musicality. This course may be repeated twice for a maximum of 6 credits. No prerequisite.

### **DANC120**

#### **Jazz Dance I**

**(0,4) 2**

Students explore core concepts in jazz dance, its roots/history, and its fundamental techniques. No prerequisite. This course may be repeated once for a maximum of 4 credits

### **DANC125**

### **Modern Dance I**

**(0,4) 2**

Through embodied and academic inquiry, students will explore principles and practices in American modern dance training. Concepts focus on safe/efficient dancing, individual creative voice, and basic rhythmic patterns, among others. No prerequisite. This course may be repeated twice for a maximum of 6 credits.

### **DANC201**

#### **Ballet II**

**(0,4) 2**

Continuing their study of classical ballet, students will deepen their examination of ballet vocabulary and pedagogy. Movement sequences will become longer and more complex. Emphasis will be on increased stamina, clarity of movement, and musicality. This course may be repeated twice for a maximum of 6 credits. Prerequisite: Instructor Permission.

### **DANC212**

#### **The Business of Dance**

**(3,0) 3**

Students build the basic business skills necessary for success as an independent artist, studio owner, or dance company administrator. Topics range from financial statements to tax issues that independent (self-employed) artists face, business plans, entrepreneurship, marketing, and creating a nonprofit. Students will create a digital presence and artistic portfolio. Prerequisite: DANC101, DANC102 and Instructor Permission.

### **DANC220**

#### **Musical Theatre Styles**

**(0,4) 2**

Students investigate approaches to choreography rooted in American musical theatre traditions, with an emphasis on ballet and/or jazz based techniques. Class experiences including learning excerpts from masterworks of musical theatre dance by choreographers such as Bob Fosse, Jerome Robbins, and Michael Bennett. Prerequisite: Instructor Permission. This course may be repeated once for a maximum of 4 credits.

### **DANC225**

#### **Modern Dance II**

**(0,4) 2**

Building on Modern Dance I, students continue investigating principles and practices in American modern dance training. Movement sequences become longer, more complex, and require greater attention to detail. Prerequisite: Instructor Permission. This course may be repeated twice for a maximum of 6 credits.

### **DANC226**

#### **Dance Improvisation**

**(0,4) 2**

Dance improvisation is a performance technique involving artistic creation of original movement in the moment, working with structures and concepts to guide or prompt the development and evaluation of the materials created. Students will work with a

critical response process that will guide artistic feedback. The final includes a performance of a structured improvisation. Completion of DANC201 and DANC225 is recommended prior to taking this course. This course may be repeated twice for a maximum of 6 credits. Prerequisite: Instructor Permission.

### **DANC230**

#### **Anatomy & Environment**

**(3,0) 3**

In this introduction to experiential anatomy, students examine the body's systems in relationship to both human movement and artmaking. In the process, students will also explore the body's relationship to the environment, and how that relationship affects our movement choices as human beings, and as artists. Prerequisite: Instructor Permission. Students should have a background in some artistic practice such as dance, theatre, music, visual art, etc.

### **DANC301**

#### **Ballet III**

**(0,4) 2**

Continuing their study of classical ballet, students will deepen their examination of ballet vocabulary and pedagogy. Focus will be on speed, increased clarity of movement, and artistry. Contemporary ballet practices will be incorporated, including the use of improvisation. This course may be repeated twice for a maximum of 6 credits. Prerequisite: Instructor Permission.

### **DANC305**

#### **Dance History**

**(3,0) 3**

Students will investigate and analyze Western concert dance history and its socio-cultural contexts with an emphasis on American dance art. Attention will be paid to the impact of race, gender, identity/agency, politics, and economics on dance and its creators. Eurocentric and Africanist aesthetics will be examined. Connections to other artforms will also be examined. No prerequisite.

### **DANC310**

#### **Choreography**

**(3,0) 3**

As they explore the building blocks of dancemaking practices, students will create a series of experimental phrases, and develop (short) completed dances by semester's end. A critical response process is utilized that will guide artistic feedback. Performance of a completed work from each student constitutes the final project. Prerequisite: Instructor Permission.

### **DANC401**

#### **Senior Thesis**

**1-4 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 3 years of dance technique, courses in Choreography, Dance History, and at least 2 semesters of Dance Company with a minimum of 4 formal performances. Permission of Instructor. This course may be repeated for a total of 4 credits.

**DANC402**  
**Advanced Dance Studies**  
**(0,3) 1**

This course is designed to provide students with opportunities to explore advanced studies in ballet or modern dance and to apply their studies in production. Students will be encouraged and guided as they develop, direct, produce and/or choreograph a successful, high quality dance stage production. Prerequisite: Completion of DANC301, DANC310 and permission of instructor.

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**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.

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**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: Two years of high school algebra and equivalent/satisfactory score on ACT or Placement Exam or MATH102 with a grade of C or better.

**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: Two years of high school algebra and equivalent/satisfactory score on ACT or Placement Exam or MATH102 with a grade of C or better.

**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. Prerequisite: MATH112 or equivalent.

**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. Prerequisite: ECON201.

**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. Prerequisite: ECON201 or 202.

### **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. Prerequisite: ECON202.

### **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. Prerequisite: ECON202.

### **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. Prerequisite: ECON201.

### **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.

### **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.

### **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.

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### **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.

### **EDSE302**

#### **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.

### **EDSE320**

#### **Introduction to Learning Disabilities**

**(4,0) 4**

An examination of the educational research, characteristics, diagnostic principles and practices related to teaching students with learning disabilities. Psychological theories (e.g. developmental, behavioral, and cognitive) of teaching students with learning disabilities and associated learning strategies are reviewed. Prerequisites: EDSE301, EDSE302.

### **EDSE401**

#### **Issues and Trends Impacting Learning Disabilities & Special Education**

**(3,0) 3**

Contemporary issues in the education of students with learning disabilities and other special needs will be explored. Policies and regulations, requirements and procedures for service, curriculum adaptation and modification, delivery models relating to placement, privacy, advocacy, and family education will be discussed. Prerequisite: EDSE302.

### **EDSE403**

#### **Assessment and Diagnosis**

**(3,0) 3**

An examination of the education research and best practices related to identification, assessment, instruction, accommodation, and implementation of special education programs. Legal responsibilities of the school in the areas of assessment, diagnosis, and diversity will also be addressed. Prerequisites: EDSE301, EDSE320.

### **EDSE404**

## **Instruction and Technology: Preschool to Adult**

**(4,0) 4**

An examination of the research and best practices using assistive technologies to increase, maintain or improve the capabilities of students with disabilities.

Prerequisites: EDSE320, EDSE403.

### **EDSE480**

#### **Student Teaching Seminar: Special Education**

**(1,0) 1**

A seminar for teacher candidates during a student teaching internship in a special education classroom. Corequisite: EDSE492. Prerequisites: EDSE320, EDSE403, and EDSE404, 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. Grading will be CR/NC. Corequisite: EDSE480. Prerequisites: EDSE320, EDSE403, EDSE404 and admission to student teaching. The course may NOT be repeated for credit.

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### **EDUC101**

#### **Self as Learner**

**(1,0) 1**

This course introduces students to the field of education. Emphasis is placed on the application of basic learning theory to personal success in learning, successful integration into the university culture, effective time management and the development of organizational, critical thinking, and study skills required for academic success.

### **EDUC250**

#### **Student Diversity and Schools**

**(4,0) 4**

This course will examine the impact of diversity on students and educational systems through the consideration of the historical and philosophical foundations of schooling, the impact of diversity on students' participation in the system, and the characteristics of effective teaching practice to meet the needs of diverse learners. Field experience in an Eastern Upper Peninsula elementary or secondary school is required. Prerequisite: ENGL111.

### **EDUC301**

#### **Educational Psychology and Learning Theory**

**(3,0) 3**

This course focuses on research-based theories of learning and learning processes, the role of the teacher in supporting the process, and alternatives for evaluation of

learning outcomes. Field experience is required. Prerequisites: EDUC250 and admission to the teacher education program.

### **EDUC330**

#### **Reading in the Elementary Classroom**

**(3,0) 3**

This course examines reading as a process of constructing meaning through dynamic interaction among reader, the text, and the context of the reading situation. Content includes objectives, content, materials, organization and methods of teaching reading in the elementary school. Fieldwork required. Prerequisite: Admission to the teacher education program. Pre- or co-requisite: EDUC301.

### **EDUC350**

#### **Integrating Technology into 21st Century Learning Environments**

**(2,2) 3**

This course explores instructional technology tools, educational media, theory, and practice with the goal of designing consummate learning experiences with seamless technology integration for all students. Application of technology and learning theory to planning for instruction is included, with specific focus on setting outcomes for learning. Prerequisites: Admission to the teacher education program, EDUC301.

### **EDUC410**

#### **Corrective Reading in the Classroom**

**(3,0) 3**

This course considers methods for the classroom diagnosis of students' reading strengths and weaknesses. Techniques for planning and implementing corrective and remedial interventions based on diagnosis are presented and applied. Fieldwork required. Prerequisite: EDUC330.

### **EDUC411**

#### **Elementary Language Arts and Literacy Skills**

**(2,0) 2**

This course studies methods of teaching language arts as literate activity and the use of a research base for the social context of children's learning. Emphasis is on the emergence of literacy in elementary students. Fieldwork required. Prerequisites: EDUC415, admission to teacher education program.

### **EDUC415**

#### **General Instructional Methods**

**(1,2) 2**

This course provides opportunities to study and apply research-based instructional methodologies to facilitate effective learning with an emphasis on differentiation and authentic assessment. Fieldwork required. Prerequisites: Admission to the teacher education program, EDUC350.

### **EDUC420**

#### **Math Methods for Elementary Teachers**

**(2,0) 2**

This course studies strategies and methodologies that facilitate effective mathematics instruction. Students develop and present mathematics lessons and units using national, state and local standards in planning instruction and assessment. Emphasis is placed on effective integration of technology in learning and assessment. Fieldwork required. Prerequisites: MATH103, MATH104, EDUC415 and admission to teacher education program.

### **EDUC421**

#### **Science Methods for Elementary Teachers**

**(2,0) 2**

This course studies strategies and methodologies that facilitate effective science instruction. Students develop and present science lessons and units using national, state and local standards in planning instruction and assessment. Emphasis is placed on effective integration of technology in learning and assessment. Fieldwork required. EDUC415 and admission to teacher education program.

### **EDUC422**

#### **Social Studies Methods for Elementary Teachers**

**(2,0) 2**

This course studies strategies and methodologies to facilitate effective social studies instruction. Students develop and present social studies lessons and units using national, state and local standards in planning instruction and assessment. Emphasis is placed on effective integration of technology in learning and assessment. Fieldwork required. Prerequisites: EDUC415 and admission to 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**

#### **English Language Arts Methods for Secondary Teachers**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific language arts and English content. Students develop and present English lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC442**

#### **Math Methods for Secondary Teachers**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific mathematics content. Students develop and present math lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC443**

#### **Science Methods for Secondary Teachers**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific science content. Students develop and present science lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite:

EDUC415 or EDUC430.

### **EDUC444**

#### **Social Studies Methods for Secondary Teachers**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific social studies content. Students develop and present social studies lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC445**

#### **Teaching Computer Science in the Secondary Classroom**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific computer science content. Students develop and present computer science lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC447**

#### **Theories and Methods of Teaching World Languages**

**(3,0) 3**

This course applies general instructional strategies and methodologies to specific world language content and second language acquisition. Students develop and present lessons and units using national, state, and local standards for planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Prerequisite: EDUC415 or EDUC430.

### **EDUC451**

#### **Directed Study in English Language Arts Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific language arts and English content. Students develop and present English lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC441. Prerequisite: EDUC415 or EDUC430.

### **EDUC452**

#### **Directed Study in Math Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific mathematics content. Students develop and present mathematics lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC442. Prerequisite: EDUC415 or EDUC430.

### **EDUC453**

#### **Directed Study in Science Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific science content. Students develop and present science lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC443. Prerequisite: EDUC415 or EDUC430.

### **EDUC454**

#### **Directed Study in Social Studies Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific social studies content. Students develop and present social studies lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC444. Prerequisite: EDUC415 or EDUC430.

### **EDUC455**

#### **Directed Study in Computer Science Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific computer science content. Students develop and present computer science lessons and units using national, state, and local standards in planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC445. Prerequisite: EDUC415 or EDUC430.

### **EDUC457**

#### **Directed Study in World Language Teaching Methods for Secondary Teachers**

**(3,0) 3**

This course, delivered in an independent research or directed study format under the supervision of a faculty member, applies general instructional strategies and methodologies to specific world language content and second language acquisition. Students develop and present lessons and units using national, state, and local standards for planning instruction and assessment, with effective integration of instructional technology. Fieldwork required. Course will substitute for EDUC447. Prerequisite: EDUC415 or EDUC430.

### **EDUC460**

#### **Classroom Management**

**(2,0) 2**

This course focuses on effective classroom management techniques essential to

creating a positive, democratic learning environment. Exploration of management techniques and theories leads to a development of personal classroom management system to help students become responsible for their behaviors and choices.

Prerequisite: EDUC415.

### **EDUC480**

#### **Directed Teaching Seminar**

**(2,0) 2**

This seminar provides a forum for students in the Directed Teaching experience 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.

### **EDUC492**

#### **Directed Teaching**

**10**

This course is a full-time teaching practicum under the direction and mentoring of a k-12 cooperating teacher. Evolution from observation and facilitation of small group activities, to whole-class instruction of a full-time teaching load in an area school. Emphasis is placed on maintaining classroom communities that ensure equitable access to important knowledge and skills. Grading will be CR/NC. Prerequisites: Admission to student teaching internship. Corequisite: EDUC480.

### **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.

### **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.

## **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.

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## **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. Emphasis is placed on digital circuit design and contemporary programmable logic concepts. Prerequisite: EGNR101 or EGNR103. Pre or Corequisite: MATH111 and MATH131.

**EGEE210**

**Circuit Analysis**

**(3,3) or (3,3,1) 4**

This course is an introduction to the analysis of linear circuits. Topics include: basic circuit elements and their terminal relations, Kirchoff'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 or 103.

**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 C or better grade.

**EGEE280**

**Introduction to Signal Processing**

**(4,0,0) or (4,0,1) 4**

The course introduces mathematical techniques used in the design and analysis of analog and digital signal processing systems. Topics include complex numbers, phasor representation of sinusoids, spectral representations, convolution, frequency response, sampling and reconstruction, Fourier series and Fourier transform, and the use of MATLAB as a signal processing tool. Prerequisites: MATH152 and EGNR140.

**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, EGEE280. 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 or (3,3,1) 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 and PHYS232. Pre- or corequisite: MATH310.

### **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.

### **EGEE370**

#### **Electronic Devices**

**(3,3) (3,3,1) 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 with a C or better grade, EGEE210 with a C or better grade, and MATH152.

### **EGEE411**

#### **Power Distribution and Transmission**

**(3,0) 3**

This course provides an introduction to the analysis and design of systems that carry electrical power from the point of generation to the point of use. Topics include mathematics and techniques of power flow analysis, ground-fault analysis, transient stability analysis, analysis of large power system networks, and the use of power system simulation software. Prerequisites: MATH152, EGEE210, and EGEE280.

**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.

**EGEE475**  
**Power Electronics**  
**(3,3) 4**

This course provides an introduction to electrical power processing. The general topics include various electronic power switching circuits including: AC-DC rectifiers, DC-DC converters and DC-AC inverters. Additional topics include applications of power switching circuits as well as characteristics of power semiconductor devices. Prerequisites: EGEE280, EGEE370, and MATH251.

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**EGEM220**  
**Statics**  
**(3,0) or (3,0,1) 3**

A study of theory and application of engineering mechanics principles with emphasis on vector analysis, free body diagrams, properties of areas, and problem solving. This emphasis includes applying principles of equilibrium to particles and rigid bodies. Prerequisite: EGNR140. Pre, or Corequisites: MATH152 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.

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**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: MATH111 and MATH131 each 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-an-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.

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## **EGME110**

### **Manufacturing Processes**

**(2,3) 3**

An introduction to basic manufacturing processes. Both theory and applications of various processes are covered in lecture and laboratory. Topics include: machining processes, welding and related processes, metal forming processes, and plastic forming processes. Included in machining processes is a limited scope computer aided design and computer numerical control project. The topics of measuring instruments and laboratory safety will also be addressed in the lecture and laboratory. Completion of a high school trigonometry course is expected for enrollment. Co-requisite or Prerequisite: EGME141 and MATH111 (or equivalent/satisfactory score on ACT/SAT, or Placement Exam) or Permission of Instructor.

## **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, dimensioning, assemblies, and constraining. An introduction to animation of assemblies is also included. Pre- or Corequisite: MATH102.

## **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, EGME141, MATH131 and sophomore standing.

### **EGME275**

#### **Engineering Materials**

**(3,0) 3**

A study of the 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 or (CHEM108 and CHEM109). Pre- or corequisite: EGME225 or EGME225.

### **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 and EGME275) or (Prerequisite EGME225 and Pre or corequisite 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 their 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 is also covered. Laboratory content includes an introduction to a commercial vehicle dynamics software package. Prerequisites: PHYS221 or PHYS231. Pre- or corequisites: EGEM220 or EGME225.

### **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 EGME332.

### **EGME338**

#### **Fluid Mechanics**

**(3,0) 3**

A study of the theory and applications of fluid statics and fluid dynamics. Topics covered include: hydrostatics, buoyancy and stability, Bernoulli and energy equations, dimensional analysis, flow in pipes, pumps, potential flow, open-channel flow, introductory gas dynamics, integral and differential analysis of flow, exact and approximate solutions of the Navier-Stokes equations, and computational fluid dynamics (CFD). Prerequisites: EGME220, MATH251, MATH310.

### **EGME350**

#### **Machine Design**

**(3,3) 4**

Design and selection of machine components and power transmission units. Selected topics in load, stress, and deflection analysis in more depth than EGME225, notably (but not exclusively) torsion of thin-walled sections, thick-walled pressure vessels, interference fits, buckling problems by eigenvalue analysis, and Castigliano's theorems. Deterministic and stochastic theories of static failure, dynamic loading, and fatigue. Performance analyses of machine components, such as shafts, bearings, gears, worms, fasteners, and belt/chain drives. Laboratory covers finite element analysis using commercial software, and involves a major group design project. Prerequisites: EGME141, 225, 275, and 276. Pre-or Corequisite: MATH310.

### **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 or (3,2,1) 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) (3,0,1) 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, EGME338 and (EGNR265 or EGNR140).

### **EGME432**

#### **Thermal and Fluids Lab**

**(1,3) 2**

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 major project in the area of power generation and dissipation. Prerequisites: EGME337 and EGME338. 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.

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### **EGMF110**

#### **EGMF110 Introduction to Machining I**

**(2,6) 4**

Students will receive instructions on shop safety, blueprint reading, measuring instruments, layout principles, and basic bench work. They will also receive instructions on grinding, lathes, drill presses, saws, and basic milling. Some metallurgical concepts are introduced. The course will make use of the Machinery's Handbook and apply the principles, concepts, and data in the handbook to industrially related projects. Information from the handbook will be used to ensure proper set-up and operation of the machinery. Students will spend several hours each week setting up, working, and familiarizing themselves with the machines.

### **EGMF130**

#### **EGMF130 Introduction to Machining II**

**(2,6) 4**

This course builds up upon the material presented in EGMF110. Students will receive additional instruction on shop safety and measuring techniques relative to the machinery introduced in this course. Additional topics on vertical and horizontal milling machines, surface grinders, metallurgy, and blueprint reading are covered. The Machinery's Handbook will continue to be used in conjunction with the machines utilized in this course. Students will spend several hours each week setting up, working, and familiarizing themselves with the machines. Prerequisite: EGMF110.

### **EGMF210**

#### **EGMF210 Advanced Machining**

**(2,6) 4**



In this course, students will write CNC programs in machine codes, and then setup and run CNC machines 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. Students will be able to describe the sequence and operations for a part program, determine the tools required for machining, calculate speeds and feeds, set-up tooling on CNC machines, develop CNC programs using standardized formats, and use CAM software to produce three dimensional parts. Prerequisites: EGMF110 or EGME110, and MATH102. Pre- or corequisite: EGMF130.

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## **EGMT142**

### **EGMT142 An Overview of Solid Modeling Techniques**

**(1,2) 2**

This course will cover an application of solid modeling software techniques to create parts and assemblies. Topics covered include creating sketches; creating parts with extrude, revolve, blend, and sweep; creating part features with round, chamfer, pattern, mirror; use of the part history tree; dimensioning of parts; building of assemblies; creation of parts from 2D drawings; creating 2D drawings from solid models of parts and assemblies; and an introduction to animation of assemblies. Prerequisites: Previous CAD course and permission or instructor.

## **EGMT216**

### **CAM with CNC Applications**

**(2,3) 3**

Writing CNC programs in machine codes, and the setup and trial runs to produce parts from these programs. Simulation of CNC machining processes to predict tool paths and cycle times. Computer-aided manufacturing (CAM) topics and applications of CAM software will also be covered. Prerequisites: EGME110, EGME141, MATH131.

## **EGMT225**

### **EGMT225 Statics and Strength of Materials**

**(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: MATH111 and MATH131 each with a C or better and PHYS221.

## **EGMT332**

### **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.

**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 Applications for Engineers****(1,3) 2**

This course covers the engineering application of concepts from applied mathematics, iterative programming and computational software packages. Applications of linear algebra are introduced. Iterative programming emphasizes loops, conditional statements and user input-output. The lab also includes instruction on commercially-available software used to perform computational tasks of applied interest. Prerequisite: MATH131. Pre- or Co-requisites: MATH112 or MATH151.

**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) 2**

A practicum in which students work in a supervised engineering capacity (on site) with industry. The student is expected to work at least 6 hours per week in an industrial setting. The student's experience must be related to his/her academic studies and thus this experience contributes significantly to his/her professional development. May be repeated for a maximum of 4 credits. 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.

### **EGNR261**

#### **Energy Systems and Sustainability**

**(3,0) 3**

The course provides an introduction to energy conversion systems and discusses issues related to the sustainability of each system. Topics include basic energy definitions, traditional energy resources and reasons for pursuing alternative energy resources, renewable and nonrenewable energy resources, energy storage, and electrical grid integration. Topics also include policy as well as social, economic, and environmental sustainability issues as they relate to energy conversion. Prerequisite: MATH102 or equivalent.

### **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: MATH111 and MATH131 and sophomore standing.

### **EGNR310**

#### **Quality Engineering**

**(3,0) 3**

Provides a coverage of classical and modern methods of quality control and quality engineering. Topics include quality control principles and terminology, classical qualitative and quantitative quality control methods, including statistical process control procedures, robust design methods as applied to product design and design of experiments, and an overview of quality management systems used in industry. Pre- or Corequisites: MATH207 or MATH308.

### **EGNR340**

#### **Numerical Methods for Engineers**

**(0,2) 1**

This course addresses numerical methods for the solution of problems in linear algebra, numerical integration, root searching, linear and non-linear regression, ordinary and partial differential equations, and eigenvalue analysis. It emphasizes proficiency in independently programming algorithms for the simulation of physical systems with engineering applications, an understanding of how these algorithms work and are structured, and an appreciation for the value of computational efficiency in numerical methods. Prerequisites: EGNR140. Pre- or Corequisites: MATH310 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.

### **EGNR361**

#### **Energy Systems and Sustainability Lab**

**(0,3) 1**

The course explores the technical and implementation aspects of sustainable energy systems. Students will design, construct, and/or analyze various energy conversion systems. They will also design and implement subsystems that can store energy and construct connections between energy sources, energy storage subsystems, and the electrical grid. Prerequisites: (CHEM108 or CHEM115), (EGET110 or EGEE210), MATH131 or higher, excluding MATH207, (PHYS221 or PHYS231); Pre/Corequisite: EGNR261.

### **EGNR362**

#### **Vehicle Energy Systems**

**(2,3) 3**

An introduction to vehicle power train energy systems and both battery and fuel cell electric/hybrid systems. Other topics include vehicle drive profile calculations, torque and speed coupling, and safety considerations. Vehicle topics also include cars, trucks, and off-road hybrid systems. Laboratory activities include CAN and other communication and information systems, and vehicle performance analysis and simulations using Excel, Simulink, and CANoe. Lab activities include using the chassis vehicle dynamometer with external instrumentation, CAN and OBD-based data acquisition. Prerequisites: (PHYS221 or PHYS231), (EGEE210 or EGET110) and pre/corequisite: EGNR265.

### **EGNR450**

#### **Cooperative Education Project I**

**(4) 4**

A practicum in which students work in a supervised engineering capacity (on site) with industry. This is the first of a two-part 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. The expectation is that at least 60% of a forty hour work week is devoted to completing the project. Prerequisite: EGNR250 Cooperative Education.

### **EGNR451**

#### **Cooperative Education Project II**

**(3) 3**

A practicum in which students work in a supervised engineering capacity (on site) with industry. This is the second of a two-part sequence that can replace the senior year Engineering Design Project II (EGNR495). The focus of this course is the completion of the co-op project. The documentation at the completion of the project includes an update presentation and a final report/final presentation. The expectation is that at least 60% of a forty hour work week is devoted to completing the project. Prerequisite: EGNR450 Cooperative Education.

### **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: senior status, EGNR260 and permission of instructor. Students who plan to take EGNR461 must complete both EGNR460 and EGNR461 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**

#### **Special Topics in Engineering: (Topic)**

**(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.

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### **EGRS215**

#### **Introduction to Robotics**

**(1,2) 2**

An introduction and orientation to the field of robotics. Challenges in robotics manufacturing, design and structure of robotic systems, classification of robots, robot geometry, power sources, robotic control systems are covered in this course. The lab part of the course will provide an overview of robotics applications in industry through videos and hands-on experiences. Applied laboratory topics will cover basic programming concepts, structures, and applications using industrial 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**

**(2,0) 2**

This course will cover topics relative to robotics and robotics 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: MATH111 and MATH131 with grade of C or better, and PHYS221.

### **EGRS381**

#### **Robotics Technology Lab**

**(0,3) 1**

Laboratory exercises will provide hands-on examples in the use of industrial robots. Focus will be on learning a structured robotics programming language. Applications and projects will simulate industrial situations as well as emphasize system integration. Prerequisites: EGNR265. 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**

**(3,3) 4**

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 EGRS385, and EGNR265 or CSCI121.

### **EGRS435**

#### **Automated Manufacturing Systems**

**(2,3) 3**

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. Prerequisites: 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, EGEM220 and EGEE210. Pre- or co-requisite: EGNR340.

### **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. 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, EGRS381 or EGRS382, and MATH112 or MATH151 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 co-requisite: 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.

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**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 pharmaco-dynamics, 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.

### **EMED490**

#### **Independent Study for Emergency Medicine**

**(1-3,0) 1-3**

This may take the form of either a research project or a program of directed reading on a specific subject. One to three 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: Permission of Instructor.

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### **ENGL091**

#### **Prep College Writing**

**(3,0) 3**

This course is designed to give students who have limited experience with writing

an opportunity to increase their confidence as writers, and to improve their command of the written language. The course is appropriate for students who find writing to be difficult or confusing. Students write weekly, with much of the instruction taking place as students learn to revise and edit their own work. Students completing the course will be able to write successful essays that represent complex approaches to different topics. 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/SAT 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 or a C or higher in ENGL091.

**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**  
**Introduction to Creative Writing**  
**(3,0) 3**

Through writing and discussion, students will study and practice introductory elements of drama, fiction, nonfiction, and poetry. Co-requisite ENGL110.

**ENGL222**  
**English Grammar & Language in Context**

**(3,0) 3**

This course requires students to master the vocabulary and principles of standard English grammar related to sentence structure and the production of meaning. Students will also analyze and evaluate prescriptive and descriptive conventions of usage, the history and cultural influences of the English language, and its regional and social variations. Prerequisites: A grade of C or higher in ENGL110 and ENGL111.

**ENGL223**

**Creative Writing II**

**(3,0) 3**

Through writing and discussion, students will study and practice intermediate elements of fiction and poetry. Prerequisite: ENGL221.

**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.

**ENGL301**  
**Creative Prose Writing**  
**(3,0) 3**

This course is a seminar and workshop for the study and practice of prose fiction, creative non-fiction, and other prose forms. Students will complete a final portfolio. Prerequisite: ENGL223.

**ENGL302**  
**Poetry Writing**  
**(3,0) 3**

This course is a seminar and workshop for the study and practice of poetry and its various forms. Students will complete a final portfolio. Prerequisite: ENGL223.

**ENGL303**  
**Performance Writing**  
**(3,0) 3**

This course is a seminar and workshop for the study and practice of writing for performance, which may include plays, film scripts, and other performance genres. Students will complete a final portfolio. Prerequisite: ENGL223.

**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.

**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.

### **ENGL335**

#### **Children's Literature**

**(3,0) 3**

This course focuses on understanding the historical, cultural, and generic dimensions of children's literature, with emphasis on critical reading, literary analysis, and the selection and evaluation of texts for children and young adults. Pre- corequisites: ENGL111 or COMM101.

### **ENGL336**

#### **Young Adult Literature and Culture**

**(3,0) 3**

This course focuses on understanding the historical, cultural, and generic dimensions of young adult literature, with emphasis on critical reading, literary analysis, and selection and evaluation of culturally diverse texts for children and young adults. Prerequisite: ENGL180.

### **ENGL345**

#### **Studies in Classic Texts**

**(3,0) 3**

Readings in literature, beyond North American traditions, that have possessed profound influence or reach throughout history, including theoretical and critical approaches to these texts, examining form, theme, and genre. Includes classic Greek drama, classic British literature from the Anglo-Saxon period through the twentieth century, Shakespeare, mythology, folklore, and world literature in translation. Prerequisites: ENGL111, ENGL180.

### **ENGL380**

#### **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. This course prepares students for advanced studies in literature. Prerequisite: Either ENGL233 and ENGL234 or ENGL231 and ENGL232.

### **ENGL398**

#### **Community Workshop Internship**

**(3) 3**

This is an internship designed to provide students with an opportunity to earn credit while obtaining meaningful work experience leading a creative writing community workshop. 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 6 credits total. Prerequisite: ENGL223, a 2.50 gpa in the major, and



permission of the instructor.

**ENGL399**  
**Publishing Internship**

**1-2 1-2**

This course is designed to provide students with an opportunity to earn credit while obtaining meaningful work experience in English or publishing 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 up to four times at 1-2 credit hours for a maximum of 3 credit hours with each LSSU publication, up to 6 credits total. Prerequisite: 2.5 GPA in major and permission of the instructor.

**ENGL409**  
**Advanced Writing Workshop**

**(3,0) 3**

This course is a workshop for advanced level writing in a variety of genres, with an emphasis on students doing sustained work in a chosen genre. Students will complete a final portfolio and projects relating to the writing life and publishing world. Prerequisites: Two courses from: ENGL301, ENGL302, or ENGL303.

**ENGL435**  
**Studies in Visual Texts**

**(3,0) 3**

Theoretical and critical approaches to visual texts, with the focus on graphic novels and film, examining form, theme, and genre and the production and interpretation of meaning in visual media. Prerequisites: ENGL111, ENGL180.

**ENGL440**  
**Advanced Studies in British Literature**

**(3,0) 3**

Examination, implementing rigorous research and critical methods, of a notable period, genre, aesthetics, or movement in British literature. Prerequisite: ENGL380.

**ENGL442**  
**Advanced Studies in American Literature**

**(3,0) 3**

Examination, implementing rigorous research and critical methods, of a notable period, genre, aesthetics, or movement in American literature. Prerequisite: ENGL380.

**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.

**ENGL480**

## **Creative Writing Portfolio I**

**(3,0) 3**

This is the first in a series of two capstone courses. Working with an English faculty member on an independent study basis, the student will create a proposal for a unified collection of creative work of literary merit in a chosen genre. Upon approval of the proposal, the student will make significant progress toward completion of the creative work. Prerequisites: Creative writing major, senior standing, and ENGL409.

## **ENGL482**

### **Creative Writing Portfolio II**

**(3,0) 3**

This is the second in a series of two capstone courses. Working with an English faculty member on an independent study basis, the student will complete a unified collection of creative work of literary merit in a chosen genre. Prerequisites: ENGL480.

## **ENGL490**

### **Senior Thesis I**

**(2,0) 2**

In consultation with an English faculty member, students will gather research and produce a bibliography and research proposal, as well as begin writing the thesis. This course is an independent study. Prerequisites: Literature or English Education major, senior standing, and ENGL380 or EDUC415.

## **ENGL499**

### **Senior Thesis**

**(2,0) 2**

Completion of the thesis with focus on revising and editing of the final project. This course is an independent study. Prerequisite: ENGL490.

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## **EVRN131**

### **Introduction to GIS and GPS**

**(2,2) 3**

This course provides a foundation in geographic information systems (GIS) such as data types, cartography, queries, classification, geoprocessing, basic editing, basic raster analysis and map overlay. The theory and operation of GPS receivers and data integration with GIS is covered in multi-week student initiated projects. Prerequisites: None.

## **EVRN231**

### **Intermediate GIS**

**(1,3) 2**

This course will survey the rapidly growing GIS industry, consider many important principles guiding GIS use and development, and provide the student with hands-on experience. Emphasis will be on geospatial analysis techniques, geodatabase, system design, remote sensing, and provide an introduction to advanced topics.

After successfully completing this course, students should come away with a clear understanding of GIS analyses, the issues affecting how a GIS is used (and misused), how to review GIS research, how GIS research is written, and an appreciation for how GIS can contribute to a wide variety of disciplines and research interests. Prerequisite: EVRN131 or equivalent.

### **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.

### **EVRN317**

#### **Environmental Health Applications**

**(3,3) 4**

A systems approach addressing the factors that contribute to illness, injury, or death, and that affect the health status of individuals and populations. Topics include: environments within buildings, food sanitation, recreation facilities, personal services, and community noise and control. The laboratory emphasizes methods of measuring and evaluating environmental health risks as well as field experience. Prerequisite: One semester of chemistry and NSCI103 or permission of instructor.

### **EVRN325**

#### **Geospatial Analysis**

**(2,3) 3 alternate years**

A project-centered course incorporating advanced GIS tools, GPS field work, and

data sources for geospatial analysis. This class focuses on a wide range of issues relating to the raster data model, and Digital Elevation Data (DEM) and satellite imagery. The majority of the class will be devoted to 1) surface derivatives including slope, aspect, and drainage; 2) modeling; and 3) error and uncertainty. This is a hands-on course, and the student will use a variety of software tools to experience model development, analysis, and visualization. There will be a semester project and a number of mini-projects. Prerequisites: EVRN131 and a 200 level or higher course in statistics.

### **EVRN341**

#### **Environmental Chemistry**

**(3,3) 4 alternate years**

A study of the environmental chemistry of the hydrosphere, atmosphere, lithosphere, and biosphere, the measurement and remediation of water and air quality problems, the toxicology of water and air pollutants, and the environmental aspects of energy use. Prerequisites: CHEM225, CHEM231. Also listed as CHEM341.

### **EVRN345**

#### **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: EVRN131 and a course in statistics.

### **EVRN355**

#### **GIS Programming and Applications**

**(3,3) 4**

This course expands the students' skills regarding object oriented programming and customization of GIS software to extend functionality and automative repetitive tasks. Emphasis will be placed on ArcObjects and object model diagrams. Prerequisites: CSCI105 and EVRN131.

### **EVRN389**

#### **Environmental Research Methods**

**(2,3) 3**

A variety of sampling techniques and laboratory methods are introduced as they relate to the environmental sciences. These methods include sampling, preservation, and analysis of biotic (plankton, fish, benthic invertebrates, DNA, pathogens) and abiotic (water quality, sediments, soil, climate) data. Topics include representative sampling, trace inorganic and organic methods, calibration, selection of analytical methods, QA/QC, data analysis, and cost comparison. This course requires travel over spring break. Prerequisites: CHEM108 and CHEM109 or CHEM116; either NSCI103, NSCI116, BIOL286 or BIOL345; and either MATH207, BUSN211 or BIOL280.

### **EVRN395**

#### **Junior Seminar**

**(1,0) 1**

Literature searching, scientific writing, and oral presentation of scientific data. Students will be expected to listen to presentation of peers enrolled in EVRN/CHEM499 and develop a topic for their senior thesis. Prerequisite: Junior standing. Note: Also listed as CHEM395.

### **EVRN399**

#### **Internship in the Environmental Sciences**

**1-4 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. Work hours and activities must be documented daily and approved by both the on-site supervisor and the instructor to receive credit. The course may be repeated for a maximum of four credits. Prerequisite: 2.5 GPA in major, Junior standing and permission of chair at least one semester in advance of registering for the course.

### **EVRN425**

#### **Environmental Systems Analysis**

**(3,3) 4 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. Discussion of solid, liquid, and hazardous wastes from a macro- and microscopic approach will be included. Prerequisite: CHEM341. Pre- or corequisite: EVRN313.

### **EVRN450**

#### **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 department chair. Credits may be used as EVRN electives.

### **EVRN465**

#### **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: EVRN131 and either EVRN231 or CSCI211.

### **EVRN490**

#### **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.

### **EVRN495**

#### **Senior Project**

**(0,6) 2**

This is a 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. This course will be required for a degree certified by the American Chemical Society. This course may not be repeated for credit. Prerequisites: EVRN395 (also listed as CHEM395), and permission of instructor. Dual listed as CHEM495.

### **EVRN499**

#### **Senior Seminar**

**(1,0) 1**

Required for seniors majoring in chemistry/environmental science. Students will present the results of their scholarly research. Students who have completed EVRN495/CHEM495 will be required to give poster and oral presentations to the University community as part of this class. Pre- or corequisite: EVRN395 (dual listed as CHEM495). Dual listed as CHEM499.

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### **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. 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 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.

### **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.

### **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: EXER262.

### **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.

### **EXER446**

#### **Exercise Prescription and Testing for Special Populations**

**(3,0) 3**

This course provides a framework for developing exercise programs for individuals with disease, disabilities, or special health issues. The course will focus on exercise prescription through management of problems created by disease of the cardiovascular, pulmonary, metabolic, musculoskeletal, neuromuscular, and immunological systems. It includes a review of the basic principles of exercise testing and exercise prescription and builds on that foundation. Also covered are methods for assessment of functional capacity of individuals with the most common health conditions presented to exercise scientists. This course fits with the new Registry for Clinical Exercise Physiologists and the American College of Sports Medicine guidelines and will provide students with the necessary skills and knowledge for employment in a clinical setting. Prerequisites: EXER358 and 444.

### **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. Prerequisites: Junior standing and instructor permission.

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### **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 and MATH111.

**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.

**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. Prerequisite: FINC341.

**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. Prerequisite: FINC341.

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## **FINE405**

### **Independent Project**

**(3,0) 3**

Under the direction of an appropriate supervisor, the student will design and execute a scholarly (academic/creative) or practical (business/management) project related to an artistic discipline. The project will culminate in a relevant performance, works of art, composition, paper, presentation, or other appropriate product.

Prerequisites: Instructor approval. This course may be repeated once for a total of six credits.

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## **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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam and FIRE101 or FIRE102, or BIOL102 or BIOL140 or BIOL286 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, FIRE111, FIRE204 and MATH088 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.

## **FIRE219**

### **Firefighter Essentials**

**(3,0) 3**

This course is the first part of a two class sequence; the second part of the sequence is FIRE220. This course will cover the principles of firefighting attack skills through the practical instruction and exercises as outlined by the Michigan Firefighters Training Council (MFFTC). This course introduces the student to the application of the principles of fire attack and strategy for Firefighter I certificate and portions of Firefighter II 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 and 111. Corequisites: FIRE197, 204, and 206. Completion of special medical examination.

## **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, FIRE111, FIRE197 and FIRE204. Corequisites: FIRE206 and FIRE211. 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, formulations and its relation to fire prevention and public education efforts and responsibilities of the fire service. Prerequisites: FIRE111, FIRE206 and Junior Standing.

### **FIRE309**

#### **Fire-Related Human Behavior**

**(3,0) 3**

This course will provide students the knowledge to understand how humans behave in fire and emergency situations, and how that behavior is integrated into life safety systems development and design. Students will study past and present research on human behavior, life safety models, building design, and life safety education. Students will develop an understanding how to analyze possible outcomes as it relates to human survivability in fire and emergency situations. Pre- or Co-requisites: FIRE101, FIRE206, and FIRE301, or permission of instructor.

### **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: 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: FIRE101, FIRE111, FIRE204, FIRE206 and FIRE211.

### **FIRE325**

#### **Homeland Security and Emergency Services**

**(3,0) 3**

This course will prepare all graduates from a variety of majors to understand how homeland security impacts the US political system as a whole, but especially from the standpoint of emergency response and preparedness. 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.

Prerequisite: Junior standing. Students from other majors are encouraged to enroll with permission of instructor. 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: 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. Prerequisite: 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: 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. Prerequisite: Permission of instructor.

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### **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 DELF (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 DELF. 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 FREN351. Prerequisite: FREN252 or equivalent.

## **FREN356**

### **Survey of French Literature II**

**(3,0) 3**

Continuation of FREN355. Study of major works of French literature of the 19th and 20th centuries. Text analysis and discussion. May be taken concurrently with FREN352. 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.

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**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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam. 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: MATH088 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.

## **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.

## **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.

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## **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 GEOL121.

## **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 GEOL121.

## **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. Pre- or corequisites: GEOL121 or NSCI102 or GEOL115.

## **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: GEOL121 or NSCI102. Pre- or corequisites: GEOL122 and CHEM115.

## **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.

## **GEOL308**

### **Structural Geology Systems**

**(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. Day and/or weekend field excursions may be required. Prerequisite: GEOL122.

## **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. Prerequisites: GEOL218 and GEOL223.

**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 tectonic environments in which these processes occur. A pre-semester one-week field trip and weekend field trips may be required. Prerequisites: GEOL218 and GEOL223.

**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. Prerequisites: GEOL218 and GEOL223.

**GEOL380**

**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 GEOL223.

**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: GEOL218. Pre- or corequisites: MATH112 or MATH151 and PHYS221 or PHYS231.

**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: GEOL122, GEOL218 and one GEOL course at the 300 level or above.

**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. Prerequisite: Two GEOL courses at the 300 level or above.

**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: Two GEOL courses at the 300 level or above.

**GEOL468**  
**Tectonic Systems**  
**(3,6) 5**

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 and/or weeklong field trips may be required. Prerequisites: GEOL223 and GEOL308.



**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: GEOL380 and one additional GEOL course 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.

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**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.

**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.

### **HIST231**

#### **Natives and Newcomers**

**(3,0) 3**

This course is an introduction to the encounters between Native Americans, Europeans, and Africans in North America from the late fifteenth century to the mid-eighteenth century. Students will gain a working knowledge on how these encounters generated a variety of cultural, economic, religious, political, social, and military interactions. No Prerequisites or Co-requisites required.

### **HIST250**

#### **The Atlantic World**

**(3,0) 3**

From the late 15th through the 18th centuries, the continents bordering the Atlantic Ocean were thrust into interaction. Europeans, Africans, and indigenous peoples negotiated diverse new societies through both confrontation and cooperation. This course explores interconnections through histories of Europe, Africa, North America, and the Caribbean, demonstrating the associations between peoples and nations within a global context. Prerequisite: HIST101 or HIST131. Spring odd-numbered years.

### **HIST296**

#### **Historical Methods**

**(2,0) 2**

Survey emphasizing research aids and techniques and historical analysis. Readings, discussions and written exercises introduce students to problems, methods and techniques of historical research. Discussion of and practice in main techniques of historical method, including bibliography and documentation. Prerequisites: HIST101/HIST102 sequence or HIST131/HIST132 sequence. Fall.

### **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.

### **HIST321**

#### **History of Michigan**

**(2,0) 2**

The History of Michigan is a survey course that will include an examination of the geology, geography, and history of the state. This course will also study the role of citizens, events, issues, and their impact on the development of Michigan as well as the larger developments in the United States during the Jacksonian Period, the Civil War Period, the Period of Rapid Industrialization and Urbanization, the Period of 1914 to 1945, the Period 1950 to the Present, the Period of Industrial Expansion and Decline, and the Post-Vietnam War Period of Globalization. The major political, economic, social, and cultural movements and developments of these historic periods will be examined.

### **HIST333**

#### **American Military History**

**(4,0) 4**

This is a survey of military history that will study the inter-relationships of warfare and society in American history. It will not only investigate how political and societal changes have influenced the nature of warfare in American history, but how the composition of the military establishment and its transformations has impacted state and society.

### **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 the role in the change of problems of U.S.-Latin American relations will be an important focus of this study. Prerequisite: GEOG322 geography of South America.

### **HIST371**

#### **Far East Civilization: 1850 to Present**

**(4,0) 4 Odd numbered years**

A study of the history of China, Japan, India and adjoining areas of Asia from 1850 to present.

**HIST440**  
**American Revolutionary Era**  
**(3,0) 3**

This course examines the diversity of Colonial America in the mid 18th century. It traces the challenges faced by the British colonies in the French and Indian War, the emergence of political unity and national identity among Americans, and the achievement of American independence by 1783. Prerequisite: HIST101 and HIST102 sequence or HIST131 and HIST132 sequence; HIST296; or instructor permission.

**HIST441**  
**History of American Foreign Policy, 1776-1950**  
**(3,0) 3**

This course examines US Foreign Policy from 1776 to 1950, with some consideration to the 1607-1776 era. The course investigates US conduct in war and diplomacy, issues of cultural contact, impact of domestic politics on foreign policymaking, the organization political economy, and problems of American Imperialism. Prerequisite or Co-requisite of the HIST131, HIST132 sequence or POLI110.

**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.

**HIST497**  
**Senior Seminar in History**  
**(0-6) 2 Spring**

Students will complete a historical research project under the supervision of a faculty member; at end of term participants make oral presentation at seminar for other students and invited guests, and submit the final paper. Prerequisite: HIST496 and instructor permission.

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**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 alternate years**

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.

**HLTH185**

**Basic Health Care Skills**

**(1,3) 2**

The purpose of this course is to introduce the student to basic health care skills. Student learning will include basic concepts and skills related to medical and surgical asepsis, total hygiene, mobility, body mechanics, patient safety, phlebotomy skills, and earn a certificate in mental health first aid. Prerequisite: HLTH101.

**HLTH208**

**Principles of Human Nutrition**

**(3,0) 3**

Fundamentals of human nutrition and nutrition therapy are presented in relation to human body function in wellness and illness. With a special focus across the lifespan, content from this course begins to build a foundation for the interpretation of diet regimes and diet formulations for patients with nutritional needs. This course is required for all nursing students. Prerequisites: BIOL122 or BIOL105 with a grade of C or better.

**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**

**(2,0) 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 alternate years**

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 and junior level status. Also listed as NURS352.

### **HLTH452**

## **Contemporary Issues in Nutrition**

**(3,0) 3 alternate years**

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.

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## **HONR101**

### **Honors First-Year Seminar (variable topics)**

**(1-2,0) 1-2**

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, HONR202 and HONR302. Students must present a fully developed proposal to the Honors Council for approval before enrolling in HONR401 or its equivalent in their major.

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**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**

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 arts, language, religion, mythology, philosophy and ancient Chinese and Indian systems of religious thought. Prerequisite: ENGL110.



## **HUMN252**

### **Humanities II**

**(4,0) 4 fall, spring,**

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, Dostoevksy, 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.

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### **INTB375**

#### **International Business Law**

**(3,0) 3**

The course provides an introduction to the environment of international business and law. It will focus on the foundations and principles of the international legal environment and international legal systems. The course covers the law on international trade. It allows the student to understand government foreign trade policies, the law concerning international business transactions, importing, exporting, transportation and logistics. This course covers a range of legal issues involved in conducting international business, surveying some of the many issues encountered in intellectual property and licensing, and the taxation of international business transactions.

### **INTB389**

#### **Competing in the Global Market Place**

**(3,0) 3**

This course presents a systematic overview of international business and provides an introduction to important issues, including international trade policy, the global monetary system, and strategies of international business. Additionally, the course will look at management practices of international business, including: organizational structure of multinational organizations, production and logistics, human resource management, and financial management.

### **INTB420**

#### **International Comparative Management**

**(3,0) 3**

This course in international comparative management will examine important trends impacting international business as well as the major and developing players in the international economy. The course will examine the stage on which international management is conducted, which includes political, legal and socio-cultural systems as a backdrop. The course will cover how firms develop and execute their international strategies and how they stay ahead of their competitions, once they do. An important aspect for the success of international companies is HR (Human Resources). The course will explore how firms can build an outstanding international workforce through selecting and motivating employees as well as dealing with a host of related human resource management issues, such as compensation, performance appraisal, training and development and labor relations from an international perspective. Prerequisites: MGMT360 or special permission of instructor.

### **INTB486**

#### **International Marketing**

**(3,0) 3**

The International Marketing course examines the scope, challenge and dynamic environment of international marketing. This course will provide an understanding of the cultural environment of global markets, global opportunities and the development and implementation of global marketing strategies. Challenging decisions must be made in international marketing objectives-strategies-policies, regional & country market selection, products that fit regions-countries, multiple distribution channels, communications to fit each global region, management models & organizations per region-country, knowledge-information-data management, exploration of cultural issues, competition, economies, and customers. Prerequisites: MRKT281 or permission of instructor.

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**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.

**INTD410**  
**Foreign Study**  
**3-16 3-16**

Individual extension added based on student's program. (Graded)

**INTD420**  
**Foreign Study**  
**3-16 3-16**

Individual extension added based on student's program. 3-16 credit/no credit

**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).

### **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.

**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.

**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.

**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.

**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 LAWS125.

## **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.

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## **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.

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## **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.

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## **MATH087**

### **Pre-Algebra**

**(3,0) 3**

Basic operations and problem solving using whole numbers, rational numbers (including decimals, ratios and percents) and integers. Solving problems related to

measurement and geometry. Credit in this course does not apply toward graduation. Prerequisite: None.

### **MATH088**

#### **Beginning Algebra**

**(3,0) 3**

An introduction to algebra, algebraic expressions and solving of elementary equations and inequalities. Manipulation and graphing of equations in two variables as well as solving systems of equations in two variables. Multiplying, factoring and manipulating polynomial expressions. Credit in this course does not apply toward graduation. Prerequisite: MATH087.

### **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 MATH088 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 for Elementary Teachers**

**(3,2) 4**

General notions of problem solving and number theory for elementary teachers including sets, functions, numeration systems, and properties and operations of whole numbers, integers, fractions and decimals, and proportional reasoning. Prerequisite: Equivalent/satisfactory score on ACT or Placement Exam, or MATH102 with a grade of C (2.00) or better.

### **MATH104**

#### **Geometry and Measurement for Elementary Teachers**

**(3,2) 4**

Basic notions of geometry for elementary teachers including constructions, congruence and similarity, motion geometry, symmetry and tessellations. Concepts of measurement, coordinate geometry, probability and data analysis. Prerequisite: Equivalent/satisfactory score on ACT, or Placement Exam, or MATH102 with a grade of C (2.00) 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: MATH088 or equivalent score on ACT or Placement Exam.

## **MATH111**

### **College Algebra**

**(3,0) 3**

This course is a study of families of functions through formulas, tables, graphs and words, emphasizing applications in business, life and social science. The function families include linear, polynomial, rational, exponential, logarithmic and power functions. Within these families, topics include problem solving, model creation, solving equations, systems of equations and inequalities, rates of change, graphing, analysis, and interpretation. Prerequisites: Two years of high school algebra and satisfactory achievement on the mathematics 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.

## **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 SAT, ACT or Placement Exam or both MATH111 and MATH131 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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam. This course will not count toward a major or minor 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 MATH151 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: MATH215 with a grade of C or better.

### **MATH341**

#### **Abstract Algebra I**

**(3,0) 3 alternate years**

An introduction to congruencies, 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.

**MATH401**

**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 Topics in 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**

**(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.

### **MATH490**

#### **Individualized 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 nine credits. Prerequisite: Junior standing or higher and Permission of Instructor.

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### **MGMT280**

#### **Introduction to Management Information Systems**

**(3,0) 3**

This course will introduce students to MIS theories including (1) Information Systems in Business and Society (information management in global society; security, privacy and ethical issues); (2) Information Technology Concepts (hardware technology, software technology, database management systems, network and internet technology); (3) Business Information Systems (automation and support systems, transaction processing systems, management information systems, decision support and expert systems, enterprise systems such as ERP); (4) Systems Development (systems investigation and analysis, systems planning development and implementation). Students will gain hands-on computer skills in advanced spreadsheet, database, and web technologies. Prerequisites: BUSN121 and ACTG132 with a grade of C or higher.

### **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. Prerequisite: Junior standing.

### **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. Prerequisite: Junior standing.

### **MGMT371**

## **Operations and Business Analytics**

**(3,0) 3**

This course introduces students to (1) Operations Management (operations strategy, operations design, operations planning & control, operations execution), (2) Supply Chain Management, and (3) Quantitative Business Analysis (linear programming, project scheduling including PERT and CPM, inventory modeling, statistical process control, queuing theory, simulation, decision analysis, time-series forecasting, advanced statistical analysis). Prerequisite: BUSN211 or equivalent.

## **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. Prerequisite: BUSN211 or statistics equivalent.

## **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. Prerequisite: MGMT360.

## **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. Prerequisite: Junior standing.

## **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.

## **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. Prerequisite: Junior standing.

**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.

**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.

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**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.

**MRKT379**

**Sports and Events Marketing**

**(3,0) 3**

A study of the theories, concepts, impacts, and contemporary issues unique to sports and events marketing, including the marketing athletes, teams, leagues, celebrities, entertainment, and special events. Prerequisite: MRKT281 or special

permission of instructor.

### **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. Prerequisite: MRKT281.

### **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. Prerequisite: MRKT281.

### **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. Prerequisite: MRKT281.

### **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. Prerequisite: MRKT281.

### **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: 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.

**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: 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.

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**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**  
**Choir**  
**(0,3) 1**

Rehearsal and performance of representative literature for mixed choir in both classical and contemporary styles of choral music. May be repeated for a total of eight credits.

**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.

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### **NSCI 101**

#### **Conceptual Physics**

**(3,2) 4**

A survey of basic physical science principles emphasizing their applications in daily life. Prerequisite: MATH088 or equivalent/satisfactory score on ACT or Placement Exam.

### **NSCI 102**

#### **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.

### **NSCI 103**

#### **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.

### **NSCI 104**

## **Environmental Science Laboratory**

**(0,2) 1**

Laboratory component of environmental science. Corequisite: NSCI103.

## **NSCI 105**

### **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.

## **NSCI 107**

### **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.

## **NSCI 110**

### **Investigations in Chemistry and Forensics**

**(3,2) 4**

An applied introductory chemistry course introduces the world of forensics focusing on the aspects of chemistry used during an investigation. This unique general education class will incorporate a criminal justice and fire science perspective while providing an introduction to chemical principles. Attention will be given to developing critical thinking skills, understanding the scientific process and to making scientifically informed decisions about every day events. Pre- or co-requisite of MATH102 (or higher) or equivalent/satisfactory score on ACT, SAT or Placement Exam.

## **NSCI 116**

### **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.

## **NSCI 119**

### **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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam.

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## **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.

## **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. Prerequisite: NURS327. Corequisite: NURS326. Pre-or Corequisite: NURS/HLTH328.

## **NURS326**

### **Nursing of Children and Families**

**(3,6) 5**

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. Prerequisite: NURS327; Corequisite: NURS325. Pre- or Corequisite: NURS/HLTH328.

### **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: NURS213 (or NURS222), HLTH209 and BIOL223.

### **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. Prerequisites: PSYC155 and junior level status. 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, NURS325, NURS327, NURS326. 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. Prerequisites: For Pre-licensure BSN Majors: HLTH328, NURS325, NURS327, NURS326. Post-licensure Majors (RN-BSN): NURS363 and NURS365.

## **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, 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, NURS325, NURS326, NURS327.

## **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. Prerequisite: NURS327, Corequisite: MATH207 or PSYC210.

## **NURS435**

### **Management in Nursing**

**(4,0) 4**

Analysis of the leadership and management roles in professional nursing; focus is leadership/management theories basic to the planning, organizing, directing and controlling or 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: HLTH328, NURS325, NURS327, NURS326, Corequisite 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. Prerequisite: For Pre-licensure BSN Majors: HLTH328, NURS325, NURS327, NURS326. For Post-licensure Majors (RN-BSN): 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.

**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.

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**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.

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**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 term 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 are 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 and worshiping 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 as 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.

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**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, sophomore standing in EET course work, and MATH140 (which may be taken concurrently).

**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.

## **PNUR102**

### **Drugs and Dosages**

**(2,3) 3**

This course introduces the practical nursing student to dosage calculations and medication administration. Calculations for conversion between systems of measurement are covered. The seven rights of medication administration are emphasized. Categories of drugs, their actions, side effects and nursing implications are covered. Prerequisite: MATH087 or equivalent placement score.

## **PNUR104**

### **Introduction to Practical Nursing**

**(2,0) 2**

Introduction to Practical Nursing provides a theoretical foundation for practicing nursing care of adults within a variety of health care settings. Concepts such as practical nursing philosophy and conceptual framework, history of nursing, nursing's Code of Ethics, the role of nursing in the health care system with emphasis on the practical nurse, the nursing process, therapeutic communication, culture, and critical thinking are explored. Prerequisites: Permission of Chair of Nursing or Instructor only.

## **PNUR107**

### **Understanding Clinical Nutrition Lab for Practical Nurses**

**(0,3) 1**

This lab 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. 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 feeding, and the principles of enteral feeding, elemental diets, IV therapy and hyperalimentation are presented. Prerequisites: BIOL105 or BIOL122 passed with a C or better; HLTH208 passed with a C or better or corequisite of HLTH208.

## **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: Co-requisite BIOL105 or Prerequisite BIOL122 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: PNUR102, PNUR104, PNUR113, all with a grade of C or better. Co-requisites: HLTH208, PNUR107.

### **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.

### **PNUR205**

#### **Maternal/Child Practical Nursing**

**(3,6) 5**

This course explores the family as the client beginning with the reproductive cycle, conception, fetal development, labor, birth and the care of the postpartum woman and newborn. At risk pregnancies and complications are identified. The course continues to address normal growth and development, immunizations, health risk factors, well-defined health problems common to children and their response to illness. Prerequisite: PNUR107, PNUR201, HLTH208, all with a grade of C or better.

### **PNUR206**

#### **Ambulatory Care Practical Nursing**

**(3,6) 5**

The efficiency of a health care agency, and the quality of health care provided, depends in large part on the staff members who supplement and support the role of the provider for provision of quality patient care services. This course stresses strong interprofessional communication skills, organizational abilities, computer knowledge, and excellent human relationship skills in the ambulatory setting across the lifespan. Prerequisite: PNUR107, PNUR201, HLTH208, all with a C or better.

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### **POLI 110**

#### **Introduction to American Government and Politics**

**(4,0) 4**

An introductory survey of American national government and politics.

### **POLI 120**

#### **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.

### **POLI 130**

#### **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.

**POLI 160**

**Introduction to Canadian Government and Politics**

**(3,0) 3**

An introductory survey of Canadian government and politics.

**POLI 201**

**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.

**POLI 211**

**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: MATH088 or equivalent/satisfactory score on ACT or Placement Exam.

**POLI 222**

**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.

**POLI 234**

**Women and Politics Around the World**

**(4,0) 4**

This course will examine a broad range of issues involving gender and politics: the political participation of women, the history of women's movements, voting differences, political divisions among women, and the present political status of women in the United States and globally.

**POLI 241**

**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.

**POLI 247**

**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.

**POLI 290**

**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.

**POLI 301**

**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.

**POLI 325**

**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.

**POLI 331**

**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.

**POLI 334**

**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.

**POLI 342**  
**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.

**POLI 351**  
**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.

**POLI 352**  
**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.

**POLI 367**  
**Congress and the Presidency**  
**(4,0) 4**

Examines the legislative and executive branches of government as parts of the policy-making process. Prerequisite: POLI110.

**POLI 401**  
**Principles of Public Administration**  
**(3,0) 3**

Examines major issues and methods in public administration. Analysis of specific public policy issues. Prerequisite: Advanced standing.

**POLI 411**  
**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.

### **POLI 413**

#### **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.

### **POLI 420**

#### **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.

### **POLI 463**

#### **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.

### **POLI 467**

#### **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.

### **POLI 490**

#### **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.

### **POLI 491**

#### **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.

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**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.

**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: MATH088 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.

### **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.

**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.

**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.

**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: PSYC212, PSYC311 and either PSYC210 or MATH207.

### **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. Co-requisite: PSYC495.

### **READ091**

#### **Preparation for College Reading**

**(3,0) 3**

Introduces reading strategies and study skills necessary for college success. Through integration of acquired knowledge and reading practice, students will develop strategies for vocabulary expansion, comprehension, critical thinking, and increase reading rate. Students must earn a minimum grade of C to pass the course. Credit received in this course does not count toward graduation. Prerequisites: none.

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### **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.

### **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.

### **RECA115**

#### **Tai Chi**

**(0,2) 1**

Tai Chi is a soft martial art that promotes \"a long life and good health\" while improving range of motion, balance, centeredness, and a quiet mind. The Tai Chi 24 Forms Set is the most practiced style throughout the world and will be taught in this class along with utilizing Chi Kung for warm up and cool down exercises.

### **RECA116**

#### **Kickboxing**

**(0,2) 1**

Kickboxing combines martial arts techniques with cardio conditioning as a high energy, total body workout. Course may be repeated twice for credit.

### **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.

### **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.

### **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.

### **RECA190**

#### **Aquatic Fitness**

**(0,2) 1**

This course will introduce students to developing cardiovascular fitness, muscular strength and muscular endurance through aquatic activities as an alternative to weight bearing forms of exercise. Water related exercises and activities will be utilized to improve physical fitness. Individuals of all fitness levels will enjoy getting fit in the water.

### **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.

### **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.

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### **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. 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.

**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.

**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.

### **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.

### **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 an 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 at 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 RECS262 or NSCI103 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**

#### **Research in 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.

### **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.

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**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.

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**SOCY101**  
**Introduction to Sociology**  
**(4,0) 4**

This course introduces students to core sociological theorists and perspectives, including functionalism, conflict and symbolic interactionism, and familiarizes them with basic research designs, terminology and findings within the context of collective behavior and social movements.

**SOCY102**  
**Social Problems**  
**(4,0) 4**

An introductory to descriptions, theories, proposed solutions, and research methods for a variety of social problems including inequality, poverty, unemployment, environmental issues, family problems, and violence.

**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.

### **SOCY214**

#### **Criminology**

**(3,0) 3**

A study of the nature and causes of crime and the results of various attempts to reduce crime.

### **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.

### **SOCY301**

#### **Social Research Methods**

**(3,0) 3**

Identification of research problems, concepts and theoretically derived hypothesis; Review of principle methods of experimental design, survey and field research and unobtrusive analysis. Prerequisite: Junior Status or Permission of Instructor.

### **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: MATH088 or equivalent/satisfactory score on

ACT or Placement Exam.

### **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: SOCY238.

### **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.

### **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 deviant behavior and the development of deviant subcultures; examination of various societal responses to control deviance and their effectiveness. Prerequisite: Junior standing or three hours of sociology and/or human services.



### **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.

### **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.

### **SOCY497**

#### **Community Action Project**

**(1,6) 3**

This is an applied course in which, under the guidance of a sociology faculty member, the student carries out a practical project designed to address a community need identified in and elaborated upon in SOCY495. Prerequisites: SOCY401 and SOCY495.

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### **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.).

### **SOWK204**

#### **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. Prerequisite or Corequisite: BIOL105 or equivalent.

### **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. Credit/No credit grade.

### **SOWK292**

#### **Substance Abuse: Prevention and Treatment**

**(3,0) 3**

This course examines current prevention, detection and treatment approaches for substance abuse and addiction.

### **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. Prerequisite: PSYC201.

### **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

### **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.

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### **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**

Acquisition of advanced skills in composition, grammar, reading and conversation, using media and readings related to the Hispanic world. Corequisite: SPAN262 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.

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### **THEA112**

#### **Acting for Beginners**

**(2,2) 3**

This course provides an exciting, fun, and safe environment to begin a college-level study of acting. These simple, doable acting techniques will help students express their ideas and thoughts more fully. Working to get students present in the moment, this course will introduce physically active games and exercises that activate all the actor's tools including breath, body, face, voice, and knees through releasing tension and embracing the imagination. Open to all majors.

### **THEA162**

#### **Practicum-Acting in Practice**

**(1,0) 1**

Practicum provides practical experience in the work of the theatre artist by acting in a production of LSSU theatre or its equivalent in the community. Students will spend a minimum of 45 hours in an approved work setting for each hour of credit and required to keep a record of such hours with the instructor of record in charge of the practicum. (May be repeated once for a maximum of 2 credits.) Prerequisite: Permission of Instructor.

### **THEA163**

#### **Practicum-Production Team**

**(1,0) 1**

Practicum provides practical experience in assisting with the various non-performance production aspects associated with LSSU productions. Students are expected to spend a minimum of 45 hours in an approved work setting for each hour of credit and required to keep a record of such hours with the instructor of record in charge of the practicum. (May be repeated once for a maximum of 2 credits.) Prerequisite: Permission of Instructor.

### **THEA164**

#### **Practicum-Healthcare Simulation**

**(1,0) 1**

Practicum provides practical experience in the work of the theatre artist in assisting LSSU's diverse healthcare programming. Students will receive acting training and 'act' in various real world scenarios for healthcare simulations associated with programs like, but not limited to, nursing and EMS training. Students will be expected to spend a minimum of 45 hours in an approved work setting for each hour of credit and required to keep a record of such hours with the instructor of record in charge of the practicum. This course is open to all students. (May be repeated once for a maximum of 2 credits.) Prerequisite: Permission of Instructor.

### **THEA212**

#### **Improvisational Acting**

**(2,2) 3**

No script. No lines. No set. Step outside the box and make the best of it! Improvisational acting gives students a creative opportunity to free the imagination, build self-confidence and let go. The course introduces the structure and training vital to successful improvisational theatre. Build ensemble, poise, and learn to trust yourself. Prerequisite: THEA112 or Permission of Instructor.

### **THEA251**

#### **Theatre History**

**(3,0) 3**

This course delves into various historic and groundbreaking movements in theatre throughout time.

### **THEA309**

#### **Survey of Great Playwrights**

**(3,0) 3**

This course is designed to study the best of the best playwrights in theatre history and the various theatrical genres and creative challenges involved in the production of their work. Prerequisite: THEA251 or Permission of Instructor.

**THEA312**  
**Acting Shakespeare**  
**(3,0) 3**

Shakespeare wrote his plays to be spoken - to be acted. This course will immerse the student in an exciting study of Shakespeare's language and its heightened structure so as to bring it to life. Prerequisite: THEA212 or Permission of Instructor.

**THEA333**  
**Play Analysis**  
**(3,0) 3**

This course will reveal techniques used by theatre artists to dissect plays so as to offer intelligent, creative, and dynamic productions by studying an exciting, diverse collection of plays. Prerequisite: THEA251 or Permission of Instructor.

**THEA412**  
**Acting Studio**  
**(3,0) 3**

Acting Studio deepens the study of the craft - providing technique to the more disciplined actor. The course explores the tools used to deliver actors to a technique that frees the self, imagination and sense of play, in other words, to what acting really feels like. Stella Adler, Stanislavski, Morris Carnovsky, and Meisner will lead our study. Our exploration will make use of monologues and scene work from various classical and contemporary playwrights. Prerequisite: THEA312 or Permission of Instructor.

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**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.

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## Glossary of Terms



### Terms & Phrases

**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.

**Anchor Access:** Accessed from the My.LSSU Portal. Anchor Access is the most important online tool you will use at LSSU. Access to Registration, financial aid, tuition & billing information, all academic information, parking, employee information, addresses, etc.

**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:** Normally 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, selected it from a number of specified courses.

**Field Placement:** *See practicum.*

**Financial Aid:** Includes grants, loans, scholarships or work-study.

**Full-Time Student:** Enrollment of 12 or more credits in a semester (nine credits for graduate students).

**General Education Core Requirements:** Courses you must take in addition to your major to earn a bachelor's (or an associate's degree in liberal arts). Provides a broadly based education.

**GED Examinations:** (General Education Development examination): A test for students who did not finish high school. Can be used in place of high school graduation.

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).

**My.LSSU:** Web portal to Anchor Access, your email service, school announcements, etc.

**Part-Time Student:** Enrollment of fewer than 12 credits in a semester (fewer than nine for graduate students).

**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 courses 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.

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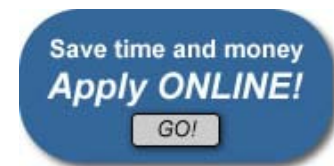


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- International Citizen
  - Canadian, resident of Ontario: [Click here](#)
  - Canadian, non-resident of Ontario: [Click here](#)
  - All other countries: [Click here](#)



#### Admissions Criteria

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 fifty percent of our entering freshman class have high school GPA's ranging from 2.9 to 3.6 and ACT scores ranging from 22-25. 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.



## U.S. Citizen

➤ Freshman: [Click here](#)

A freshman student is defined as a student who has not enrolled in a postsecondary institution anytime after the summer following high school graduation.

➤ Transfer: [Click here](#)

A transfer student is defined as a student who enrolls in a postsecondary institution anytime after the summer following high school graduation and then applies to Lake Superior State University.

➤ Re-Admit (former student): [Click here](#)

A re-admit student is defined as a student whom was previously admitted into a full-time, degree seeking program and attended classes, but has missed one or more semesters (not including summer). There is no application fee for such students. Students who attend another college or university since they last applied or attended LSSU will need to submit official transcripts and meet our transfer student requirements. Students who were academically dismissed must meet the requirements for re-enrollment.

A student who applied to LSSU, but never actually attended is not considered a re-admit and will need to apply again as a freshman or transfer applicant and pay the application fee. LSSU will retain application materials for up to one year beyond an applicant's intended term of entry. If we still have official transcripts on file, students will not need to request new copies unless additional coursework has been completed. Please contact the [Admissions Office](#) with any questions.

➤ Graduate: [Click here](#)

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## Canadian Citizen, Resident of Ontario

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➤ Transfer: [Click here](#)

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➤ Graduate: [Click here](#)

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## Canadian Citizen, Non-resident of Ontario

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- Graduate: [Click here](#)

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## International Citizen, non-Canadian

- Freshman: [Click here](#)  
A freshman student is defined as a student who has not enrolled in a postsecondary institution anytime after the summer following high school graduation.
- Transfer: [Click here](#)  
A transfer student is defined as a student who enrolls in a postsecondary institution anytime after the summer following high school graduation and then applies to Lake Superior State University.
- Re-Admit (former student): [Click here](#)

A re-admit student is defined as a student whom was previously admitted into a full-time, degree seeking program and attended classes, but has missed one or more semesters (not including summer). There is no application fee to re-admit. Students who attend another college or university since they last applied or attended LSSU will need to submit official transcripts and meet our transfer student requirements. Students who were academically dismissed must meet the requirements for re-enrollment.

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› Graduate: [Click here](#)

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- › Scholarship Calculator
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SEP Fall Fling Open House

24

9:30AM to 3:30PM

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### About Us

Lake Superior State University is a personal, small-town school that provides a superior blend of liberal and technical studies in the natural setting on Michigan's Upper Peninsula. LSSU offers undergraduate degrees in 45 areas of study that attract students from every county in Michigan, more than a dozen states and provinces, and nine nations. LSSU is Michigan's most personal public university emphasizing an undergraduate experience provided by a fully-qualified faculty and a dedicated staff. [Read More...](#)

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