Appendix N

Title IV Program Responsibilities: Student RTK/Equity in Athletics

Supplements:
Institutional Research
http://www.lssu.edu/ir/reports.php
Common Data Set
http://www.lssu.edu/ir/documents/cds_14_15.pdf
Directory
https://www.lssu.edu/contacts/personnel.php?l=A
Accrediting Bodies
https://www.lssu.edu/hlc/accreditation.php
Catalog: Financial Aid
http://www.lssu.edu/cmscatalog1516/financial-aid.php
Bachelor Programs
http://www.lssu.edu/cmscatalog1516/programs/bachelor-degrees.php
Associate Programs http://www.lssu.edu/cmscatalog1516/programs/associate-degrees-two-year-programs.php
Certificates http://www.lssu.edu/cmscatalog1516/programs/certificates-one-year-programs.php
Equity in Athletics
http://www.lssulakers.com/information/forms/EADA_Report_2015_-_LSSU.pdf
Study Abroad http://www.lssu.edu/studyabroad/
Disability Services http://www.lssu.edu/disability/
IPEDS data sets – publicly available
https://nces.ed.gov/ipeds/datacenter/Default.aspx
Student Disclosures under Title IV http://www.lssu.edu/hoeanotices/
Cost of Attendance http://www.lssu.edu/finaid/typesofaid.php

LAKE SUPERIOR STATE UNIVERSITY

Reports

All Student Count

- AcademicYear (Fall, Spring & Summer) (pdf)
- Fiscal Year (Summer, Fall & Spring) (pdf)
- Summer Semester (pdf)
- Fall Semester (pdf)
- Spring Semester (pdf)

Common Data Set

- 2014-'15 (pdf)
- 2013-'14 (pdf)
- 2012-'13 (pdf)
- 2011-'12 (pdf)
- 2010-'11 (pdf)
- 2009-'10 (pdf)
- 2008-'09 (pdf)

Fall Enrollments

- Ethnicity (pdf)
- Gender (pdf)

- College Chart (pdf)
- Major within Department

First Generation in College

- 2007-'11 (pdf)

IPEDS

- Institution Profile (pdf)
- 2015 (pdf)
- 2014 (pdf)
- 2013 (pdf)
- 2012 (pdf)
- 2011 (pdf)
- 2010 (pdf)
- 2009 (pdf)
- 2008 (pdf)
- 2007 (pdf)
- 2006 (pdf)
- 2005 (pdf)

Institutional Snapshot

- 2012 (pdf)

Migration

- All Students (pdf)
- Degrees Awarded (pdf)

Residency

- All Students (pdf)

Retention

- All Students (pdf)

Ten Year Review of Tuition & Required Fees

- Undergraduate (pdf)
- Graduate (pdf)

Higher Education Institutional Data Inventory (HEIDI) Fiscal Year 2011-'12

- Crosswalks
  - Instructional (pdf)
  - Non Instructional (pdf)
- Enrollment
  - _____

Headcount and Student Credit Hours (pdf)

- Student Credit Hours by Program (pdf)
- Distance Learning (pdf)

- Instructional
  - Undergraduate Faculty Tenure and Status (pdf)
  - Salary & Wages, Faculty, General Fund (pdf)
  - Salary & Wages, Non Faculty General Fund (pdf)
- Non Instructional
  - Full-time Equated (FTE) (pdf)
  - Salary & Wages, General Fund (pdf)
- Financial Aid
  - Financial Aid by Type and Amount (Section 710 report) (pdf)
  - Student Financial Aid Program (pdf)
- Finance
  - General Fund Expense, Instructional (pdf)
  - General Fund Expense, Non Instructional (pdf)

2011 National Survey of Student Engagement (NSSE)

- The Student Experience (pdf)
- Executive Snapshot (pdf)
- Benchmark (pdf)
- College and School Summary
  - Participant and Respondent Count (pdf)
  - Active and Collaborative Learning (ACL) (pdf)
  - Enriching Educational Experience (EEE) (pdf)
  - Level of Academic Challenge (LAC) (pdf)

Resources »

- HLC Materials
- Information Technology
- Shared Governance, Assessment Committee
- Student Consumer Information

Upcoming Events »

MAY
17

Innocademy

12:00PM to 10:00PM

Additional Links

- Shared Governance
- Employment
- Map

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...

650 W. Easterday Ave., Sault Ste. Marie, MI 49783 / (906) 632-6841

Top

LAKE SUPERIOR STATE UNIVERSITY

2015-16
Common Data Set
For External Publications Surveys

A: GENERAL INFORMATION

A1. Address Information

Name of College or University	Lake Superior State University
Mailing Address, City/State/Zip	650 W. Easterday Avenue, Sault Ste. Marie, Michigan 49783-1699
Main Phone Number	906-632-6841 or 1-888-800-LSSU
WWW Home Page Address	WWW.LSSU.EDU
Admissions Phone Number	906-635-2231 or 1-888-800-LSSU
Admissions Office Mailing Address	650 W. Easterday Avenue, Sault Ste. Marie, Michigan 49783-1699
Admissions FAX number	906-635-6696
Admissions Email Address	ADMISSIONS@LSSU.EDU
Is there a separate URL application site on the Internet? If yes, specify	No

A2. Source of Institutional Control

X	Public

A3. Classify your undergraduate institution

X	Co-educational college

A4. Academic year calendar

X	Semester

A5. Degrees offered by your institution

X	Certificate
	Diploma
X	Associate
	Transfer
	Terminal
X	Bachelor's
X	Post-bachelor's certificate
X	Master's
	Post-master's certificate
	Doctoral
	First professional
	First professional certificate

B. ENROLLMENT & PERSISTENCE

B1. Institutional Enrollment – Men and Women. Provide numbers of students reported on IPEDS Fall Enrollment Survey for current year, as of the institution's official fall reporting date, or as of October 15 of current academic year. **Refer to IPEDS EF-1 Part A or IPEDS EF-2 Part A (undergraduates only) survey.**

Undergraduates	Full-time		Part-time		Total Full-time & Part-time
	Men	Women	Men	Women	
Degree-seeking, first-time freshmen	182	175	4	5	366
Other first-year, degree-seeking	13	15	5	3	36
All other degree-seeking	710	712	125	146	1,693
Total degree-seeking	905	902	134	154	2,095
All other undergraduates enrolled in credit courses	0	0	67	87	154
Total undergraduates	905	902	201	241	2,249

Graduate	Full-time		Part-time		Total Full-time & Part-time
	Men	Women	Men	Women	
Degree-seeking, first-time	0	0	0	0	0
All other degree-seeking	0	0	0	0	0
All other graduates enrolled in credit courses	0	0	0	0	0
Total graduate	0	0	0	0	0

Total all undergraduates	(IPEDS sum of lines 8 and 22, cols. 15 and 16)	2,249
Total all graduate & professional students	(IPEDS sum of lines 14 and 28, cols. 15 and 16)	0
GRAND TOTAL ALL STUDENTS	(IPEDS line 289, sum of cols. 15 and 16)	2,249

B2. Enrollment by Racial/Ethnic Category.. Provide numbers of students reported on IPEDS Fall Enrollment Survey for current year, as of the institution's official fall reporting date, or as of October 15 of current academic yearInclude international students only in the category "Nonresident aliens." Complete the "Total Undergraduates" column only if you cannot provide data for the first two columns. Report as your institution reports to IPEDS: persons who are Hispanic should be reported only on the Hispanic line, not under any race, and persons who are non-Hispanic multi-racial should be reported only under "Two or more races."

	Degree-seeking First-time First year	Degree-seeking Undergraduates (include first-time first-year)	Total Undergraduates (both degree- and non-degree-seeking)
Nonresident aliens	27	145	145
Hispanic	9	44	52
Black or African American, non-Hispanic	4	26	41
White, non-Hispanic	297	1,673	1,781
American Indian or Alaska Native, non-Hispanic	21	160	178
Asian, non-Hispanic	2	12	13
Native Hawaiian or other Pacific Islander, non-Hispanic	0	0	0
Two or more races, non-Hispanic	2	12	14
Race and/or ethnicity unknown	4	23	25
Total	366	2,095	2,249

B3. Number of degrees awarded by your institution from July 1 to June 30 of the past academic year, as reported on IPEDS current fall Completions Reports. ***Note that only degrees awarded by Lake Superior State University are shown.***

Certificates/diplomas	27
Associate degrees	219
Bachelor's degrees	478
Postbachelor's cert.	0
Master's degrees	9
Total	733

Graduation Rates
The information in this section comes from the IPEDS Graduation Rate Survey (GRS).

For Bachelor's or Equivalent Programs
Report for the cohort of full-time, first-time bachelor's (or equivalent) degree-seeking undergraduate students who entered in

Fall 2009

B4. Initial cohort of first-time, full-time bachelor's degree-seeking undergraduate students

459

B5. Of the initial cohort, the number which did not persist and did not graduate for the following reasons: deceased, permanently disabled, armed forces, foreign aid service of the federal government, or official church missions: Total allowable exclusions:

N/A

B6. Final cohort size, after adjusting for allowable exclusions (subtract question B5 from B4):

459

B7. Of the initial cohort, the number who completed the program in four years or less:

77

B8. Of the initial cohort, the number who completed the program in more than four years but in five years or less:

63

B9. Of the initial cohort, the number who completed the program in more than five years but in six years or less:

22

B10. Total graduating within six years (sum of questions B7, B8 and B9).

162

B11. Six year graduation rate for cohort (question B10 divided by question B6):

35%

B12 - B21. Questions relating to two-year institutions are omitted.

B22. Retention Rates (fall to fall, one year percent retained)

Report for the cohort of all full-time, first-time bachelor's (or equivalent) degree-seeking undergraduate students who entered in the semester indicated below, the percentage which was enrolled in the ensuing fall semester:

Entry Semester	Retention Check Semester	Percent Retained
Fall 2014	Fall 2015	63%

C. FIRST-TIME, FIRST-YEAR (FRESHMAN) ADMISSION

Applications

C1. First-time, first-year (freshman) students: Provide the number of degree-seeking students who applied, were admitted, and enrolled (full or part-time) in fall of the current academic year.

Fall 15	Application/admission/enrollment status	Men	Women	Total
FTIAC	Total applied	732	855	1,587
FTIAC	Total admitted	652	807	1,459
FTIAC	Total full-time, first-time, first year (freshman) students enrolled	207	211	418
FTIAC	Total part-time, first-time, first year (freshman) students enrolled	5	6	11

C2. Freshman wait-listed students (those who met admission requirements but whose final admission was contingent on space availability).

Do you have a policy of placing students on a waiting list?	No

Admission Requirements

C3. High school completion requirement

X	High school diploma is required and GED is accepted
	High school diploma is required and GED is not accepted
	High school diploma or equivalent is not required

C4. Does your institution require or recommend a general college preparatory program for degree-seeking students?

	Required
X	Recommended
	Neither required nor recommended

C5. Distribution of high school units requires and/or recommended. Specify the distribution of academic high school course units required and/or recommended of all or most degree-seeking students using Carnegie units (one unit equals one full year of study or its equivalent). If you use a different system for calculating units, please convert it to Carnegie units.

High school unit type	Units required	Units recommended
Total academic units	0	18
English	0	4
Mathematics	0	4
Science	0	3
Of science, units that must be lab	0	3
Foreign language	0	2
Social studies	0	2
History	0	1
Academic electives	0	0
Computer Science	0	1
Visual / Performing Arts	0	1
Other (specify)	0	0

Basis for Selection

C6. Do you have an open admission policy under which virtually all secondary school graduates or students with GED equivalency diplomas are admitted without regard to academic record, test scores, or other qualifications?

No

C7. Relative importance of each of the following academic and nonacademic factors in your first-time, first-year, degree-seeking (freshman) admission decisions.

Academic	Very important	Important	Considered	Not considered
Rigor of secondary school record	X			
Class rank			X	
Academic GPA	X			
Standardized test scores	X			
Application essay			X	
Recommendation(s)			X	

Nonacademic	Very important	Important	Considered	Not considered
Interview				X
Extracurricular activities			X	
Talent / ability				X
Character / personal qualities			X	
First generation				X
Alumni / ae relation			X	
Geographical residence			X	
State residency				X
Religious affiliation / commitment				X
Racial / ethnic status				X
Volunteer work				X
Work experience				X
Level of applicant's interest				X

SAT and ACT Policies

C8. Entrance Exams

A. Does your institution make use of SAT, ACT, or SAT Subject Test scores in admission decisions for first-time, first-year, degree-seeking applicants?

Yes

If yes, place check marks in the appropriate boxes below to reflect your institution's policies for use in admission for

Fall 2016

Test Type	Require	Recommend	Require for some	Considered if submitted	Not used
SAT or ACT	X				
ACT only				X	
SAT only				X	
SAT and SAT Subject Tests or ACT				X	
SAT Subject Tests				X	

B.If your institution will make use of the ACT in admission decisions for first-time, first-year, degree-seeking applicants for fall 2015, please indicate which ONE of the following applies (regardless of whether the writing score will be used in the admissions process):

	ACT with Writing component required
	ACT with Writing component recommended.
X	ACT with or without Writing component accepted

C.Please indicate how your institution will use the SAT or ACT essay component; check all that apply.

	SAT essay	ACT essay
For admission		
For placement		
For advising		
In place of an application essay		
As a validity check on the application essay		
No college policy as of now	X	X
Not using essay component		

D.In addition, does your institution use applicants' test scores for academic advising?

Yes

E.Latest date by which SAT or ACT scores must be received for fall-term admission

August 31st

Latest date by which SAT Subject Test scores must be received for fall-term admission

August 31st

F. If necessary, use this space to clarify your test policies (e.g., if tests are recommended for some students, or if tests are not required of some students):

N/A

G.Please indicate which tests your institution uses for placement (e.g., state tests):

X	SAT
X	ACT
	SAT Subject Tests
X	AP
X	CLEP
	Institutional Exam
	State Exam (specify):

Freshman Profile

C9. Percent and number for all enrolled degree-seeking, full-time and part-time, first-time, first-year (freshman) students enrolled in the current fall semester that submitted test scores. The 25th percentile is the score that 25 percent scored at or below; the 75th percentile is the score that 25 percent scored at or above. **LSSU does not use SAT scores, so only information on ACT is provided.**

Percent submitting ACT scores	93	Number submitting ACT scores	339

Figures are rounded to nearest whole score.

Test Type	Test Score at 25th percentile	Test Score at 75th percentile
ACT Composite	19	24
ACT English	18	24
ACT Math	17	24
ACT Writing	6	8

***Percent* of first-time, first-year (freshman) students with scores in each range.**

Test Score Ranges	PercentACT Composite	Percent ACT English	PercentACT Math
30-36	3%	6%	3%
24-29	27%	24%	29%
18-23	56%	48%	43%
12-17	13%	21%	25%
6-11	0%	0%	0%

C10. *Percent* of degree-seeking, first-time, first-year (freshman) students who had high school class rank within each of the following ranges.

High school rank ranges	Percent
Top 10th of high school graduating class	12%
Top quarter of high school graduating class	35%
Top half of high school graduating class	68%
Bottom half of high school graduating class	32%
Bottom quarter of high school graduating class	9%
Percent of freshmen who submitted high school class rank	66%

C11. *Percent* of degree-seeking, first-time, first-year (freshman) students who had high school grade point averages within each of the following ranges (using 4.0 scale).

High school GPA ranges	Percent
3.75 and higher	19%
3.5 – 3.74	16%
3.25 – 3.49	16%
3.0 – 3.24	14%
2.5 – 2.99	21%
2.0 - 2.49	11%
1.0 - 1.99	3%
Below 1.0	0%

C12. Average high school GPA of all degree-seeking, first-time, first-year (freshman) students who submitted a high school grade point average.

3.17

Percent of degree-seeking, first-time, first-year (freshman) students who submitted high school grade point average.

99%

Admission Policies

C13. Application fee (undergraduate)

Does your institution have an application fee?	Yes
Amount of application fee	$35
Can it be waived for applicants with financial need?	Yes
Cost of on-line application	$25
Can on-line application fee be waived for applicants with financial need?	Yes

C14. Application closing date

Does your institution have an application closing date?	Yes
Application closing date for fall	Rolling
Priority date	March 1st

C15. Are first-time, first-year students accepted for terms other than the fall?

Yes

C16. Notification to applicants of admission decision sent:

On a rolling basis beginning September 1

C17. Reply policy for admitted applicants:

No set date

C18. Deferred admission: Allow students to postpone enrollment after admission? Maximum postponement?

Yes - up to one year

C19. Early admission of high school students: Allow high school students to enroll full-time one year or more before high school graduation?

No

C20. Common Application: Question removed from CDS. (Initiated during 2006-2007 cycle)

C21. Early decision: Does your institution offer an early decision plan (an admission plan that permits students to apply and be notified of an admission decision well in advance of the regular notification date and that asks students to commit to attend if accepted) for first-time, first-year (freshman) applicants for fall enrollment?

No

C22. Early action: Do you have a nonbinding early action plan whereby students are notified of an admission decision well in advance of the regular notification date but do not have to commit to attending your college?

No

D. TRANSFER ADMISSION

Fall Applicants

D1. Does your institution enroll transfer students?

Yes

If 'yes', may transfer students earn credit by transferring credits earned from course work completed at other colleges/universities?

Yes

D2. Provide the number of degree-seeking transfer students who applied, were admitted, and enrolled (full or part-time) in fall of the current academic year.

Fall 2015	Applicants	Admitted Applicants	Enrolled Applicants
Men	126	108	73
Women	141	123	62
Total	267	231	135

Application for Admission

D3. Indicate terms for which transfers may enroll:

Any term: Fall, Spring, or Summer

D4. Must a transfer applicant have a minimum number of credits completed or else must apply as an entering freshman? If yes, what is the minimum number of credits?

Yes: 19 credits

D5. Indicate all items required of transfer student to apply for admission:

Application document	Required of all	Recommended for all	Recommended for some	Required for some	Not required
High school transcript				X	
College transcript(s)	X				
Essay or personal statement			X		
Interview			X		
Standardized test scores				X	
Statement of good standing from prior institution(s)		X			

D6. If a minimum high school grade point average is required of transfer applicants, specify (on a 4.0 scale):

N/A

D7. If a minimum college grade point average is required of transfer applicants, specify (on a 4.0 scale):

2.0

D8. List any other application requirements specific to transfer applicants.

NONE

D9. List application priority, notification and candidate reply dates for transfer students. If applications are reviewed on a continuous or rolling basis, place a check mark in the 'Rolling admission' column.

Semester	Priority date	Closing date	Notification date	Reply date	Rolling admission
Fall					X
Spring					X
Summer					X

D10. Does an open admission policy, if reported, apply to transfer students?

N/A: no open admission

D11. Describe additional requirements for transfer admission, if applicable:

N/A

Transfer credit policies

D12. Report the lowest grade earned for any course that may be transferred for credit:

C-

D13. Maximum number of credits or courses that may be transferred from a two year institution:

N/A. Any number of credits may be transferred. Credit use is restricted by degree completion requirements.

D14. Maximum number of credits or courses that may be transferred from a four year institution:

N/A. Any number of credits may be transferred. Credit use is restricted by degree completion requirements.

D15. Minimum number of credits that transfers must complete at your institution to earn an associate's degree:

16 OF FINAL 20 CREDITS

D16. Minimum number of credits that transfers must complete at your institution to earn a bachelor's degree:

32 OF FINAL 40 CREDITS AND 50% OF 300 AND 400 LEVEL DEPARTMENTAL CREDITS

D17. Describe other transfer credit policies:

NONE

E. ACADEMIC OFFERINGS AND POLICIES

E1. Special study options: Identify those programs available at your institution. Refer to definitions.

X	Accelerated program		X	Honors Program
X	Cooperative education program		X	Independent Study
	Cross-registrations		X	Internships
X	Distance learning		X	Liberal arts/career combination
X	Double major		X	Student-designed major
X	Dual Enrollment		X	Study abroad
	English as a Second Language (ESL)		X	Teacher certification program
	Exchange student program (domestic)			Weekend college
	External degree program			
	Other (specify):			

E2. Core Curriculum: Has been removed from the CDS.

E3. Areas in which all or most students are required to complete some course work prior to graduation.

	Arts/fine arts		X	Humanities
	Computer literacy		X	Mathematics
X	English (including composition)			Philosophy
	Foreign languages		X	Sciences (biological or physical)
	History		X	Social science
X	Other – Communication		X	Other -Diversity

Library Collections
The CDS / Publishers will collect library data again when a new Academic Libraries Survey is in place.

F. STUDENT LIFE

F1. Percentages of first-time, first-year (freshman) students and all degree-seeking undergraduates enrolled in fall semester of the current year that fit the following categories:

Fall 2015	FTIC,1st-year	All Undergraduates
Percent who are from out of state (exclude international students & non-resident aliens)	7%	6%
Percent of men who join fraternities	n/a	n/a
Percent of women who join sororities	n/a	n/a
Percent who live in college-owned-operated housing	74%	40%
Percent who live off-campus or commute	26%	60%
Percent of students age 25 and older	1%	16%
Average age of full-time students	19	21
Average age of all students (full- and part-time)	19	22

F2. Activities offered. Identify those programs available at your institution.

X	Campus Ministries		X	Literary magazine		X	Radio station
X	Choral groups			Marching band		X	Student government
	Concert band			Model UN		X	Student newspaper
X	Dance			Music ensembles			Student-run film society
X	Drama/theater			Musical theater			Symphony orchestra
X	International Student Organization			Opera			Television station
	Jazz band		X	Pep band			Yearbook

F3. ROTC (program offered in cooperation with Reserve Officers' Training Corps):

None

F4. Housing: Check all types of college-owned-operated-affiliated housing available for students at your institution.

X	Co-ed dorms			Special housing for disabled students
X	Men's dorms			Special housing for international students
X	Women's dorms		X	Fraternity/sorority housing
	Apartments for married students			Cooperative housing
X	Apartments for single students			
X	Other: Honors House			

G. ANNUAL EXPENSES

Provide academic year costs for the following categories that are applicable to your institution.

G0. Please provide the URL of your institution's net price calculator:

http://www.lssu.edu/finaid/calculator.php_____

G1. Undergraduate, full-time tuition, required fees, room and board

List the typical tuition, required fees, and room and board for a full-time undergraduate student for the FULL academic year (generally two semesters, September to June). Room and board is defined as double occupancy and 19 meals per week or the maximum meal plan. Required fees include only charges that all full-time students must pay and which are not included in tuition. Do not include optional fees (such as parking, laboratory use).

2015-2016	First-Year Students	Undergraduates
In-state (Michigan Resident)	$10,392	$10,392
"One Rate" (North America residents)	$10,392	$10,392
International	$15,600	$15,600
Required fees	$375	$125
Room and board on-campus	$9,290	$9,290
Room only	n/a	n/a
Board only	n/a	n/a

G2. Number of credits per term a student can take for the stated full-time tuition:

12 minimum; 17 maximum

G3. Do tuition and fees vary by year of study (e.g., freshman...senior)?

No

G4. Do tuition and fees vary by undergraduate instructional program? Yes

If yes, what percentage of full-time undergraduates pay more than the tuition and fees reported in G1?

_____**54%**____

G5. Provide the estimated expenses for a typical full-time, undergraduate student:

2015-16	Residents of campus housing	Commuters (living at home)	Commuters (not living at home)
Books only	$1,100	$1,100	$1,100
Room only	$9,290	$4,590	$7,190
Board only			
Transportation	600	600	600
Other expenses	$1,140	$1,140	$1,140

G6. Undergraduate per-credit-hour charges:

2015-16	Per-credit-hour charges
In-state (Michigan Resident)	$433
"One Rate" (North America residents)	$433
International	$650

H. FINANCIAL AID

Aid Awarded to Enrolled Undergraduates

H1. Enter total dollar amount awarded in the current academic year to full-time and part-time degree-seeking undergraduates (using the same cohort reported in CDS question B1, "Total degree-seeking undergraduates" in the following categories. Include aid awarded to international students (i.e. those not qualifying for federal aid). Do not include non-need-based athletically related aid or tuition waivers that are personnel benefits.

Aid that is non-need-based but is used to meet need should be counted as need-based aid.
Note that at LSSU, virtually all non-need-based aid is used to 'meet need'

If data reported are not for the current award year, what is the award year of the reported data?

2014-15Final

Which needs-analysis methodology does your institution use in awarding institutional aid? (Formerly H3)

	Federal Methodology
	Institutional Methodology
X	Both FM and IM

	Need-based	Non-need-based
Scholarships Grants	$ Awarded undergrads	$ Awarded undergrads
Federal	$4,210,688	$11,173
State	$2,623,636	$49,079
Institutional	$806,498	$3,156,016
Other external	$71,350	$374,874
Total S & G	$7,712,172	$3,591,142

	Need-based	Non-Need-based
Self Help	$ Awarded undergrads	$ Awarded undergrads
Student loans	$11,466,144	
Federal Work Study	$373,036	
State and other work study/ employment	$98,600	
Total self help	$11,937,780	
Parent Loans	$2,284,093	
Tuition Waivers		$1,647,813
Athletic Awards		$1,492,060

Number of Enrolled Students Receiving Aid for the 2014-15 Academic Year

H2. List the number of degree-seeking students who applied for and received financial aid. (Note in the chart below, students may be counted in more than one row, and full-time freshmen should also be counted as full-time undergraduates.) ***Note that at LSSU, virtually all non-need-based aid is used to 'meet need'***

	2014-15Final	First-time, full-time freshmen	Full-time undergrads	Less than full-time undergrads
A	No. degree-seeking students (CDS 14-15, item B)	393	1,916	297
B	No. students in line A who were financial aid applicants	337	1,586	210
C	No. students in line B determined to have financial need	279	1,309	173
D	No. students in line C who were financial aid recipients	279	1,309	173
E	No. students in line D who received any need-based gift aid	225	999	126
F	No. students in line D who received any need-based self help aid	205	1,045	137
G	No. students in line D who received any non-need-based gift aid	167	585	14
H	No. students in line D whose need was fully met	60	232	6
I	On average, percentage of need that was met of students who received any need-based aid. Exclude any resources that were awarded to replace EFC.	72%	65%	42%
J	The average financial aid package of those in line D. Exclude any resources that were awarded to replace EFC.	$12,221	$10,659	$6,116
K	Ave. need-based **gift** award of those in line E who received a need-based gift award	$8,938	$6,830	$3,551
L	Ave. need-based **self-help** award (excluding PLUS, unsubsidized and private alternative loans) of those in line F	$3,583	$4,495	$4,359
M	Average need-based **loan** (excluding PLUS, unsubsidized and private alternative loans) of those in line F.	$3,431	$4,335	$4,318

H2A. Number of Enrolled Students Receiving Institutional Non-need-based Grants and Scholarships

	2014-15 Final	First-time, full-time freshmen	Full-time undergrads	Less than full-time undergrads
N	Number of students in line **a** who had no financial need and who received non-need-based-gift aid (exclude those receiving athletic awards and tuition benefits)	59	254	Too few to report
O	Average dollar amount of non-need-based gift aid awarded to students in line **n**	$4,191	$4,483	---
P	Number of students in line **a** who received a non-need-based athletic grant or scholarship	43	157	Too few to report
Q	Average dollar amount of non-need-based athletic grants and scholarships awarded to students in line **p**	$9,131	$8,944	---

H4. Provide the number of students in the 2015 undergraduate class who started at your institution as first-time students and received a bachelor's degree between July 1, 2014 and June 30, 2015. Exclude transfers.

237

H5. Number and percent of students in class (defined in H4 above) borrowing from federal, non-federal, and any loan sources, and the average (or mean) amount borrowed

	Number in the class (defined in H4 above) who borrowed	Percent of the class (defined above) who borrowed (nearest 1%)	Average per-undergraduate-borrower cumulative principal borrowed, of those in the first column (nearest $1)
Any loan program: Federal Perkins, Federal Stafford Subsidized and Unsubsidized, institutional, state, private loans that your institution is aware of, etc. Include both Federal Direct Student Loans and Federal Family Education Loans.	176	74%	$26,172
Federal loan programs: Federal Perkins, Federal Stafford Subsidized and Unsubsidized. Include both Federal Direct Student Loans and Federal Family Education Loans.	171	72%	$23,912
Institutional loan programs.	---	---	---
State loan programs.	---	---	---
Private alternative loans made by a bank or lender.	32	14%	$16,167

H6. Indicate your institution's policy regarding financial aid for undergraduate international students

	Institutional need-based financial aid is available for international students
X	Institutional non-need-based financial aid is available for international students
	Institutional financial aid is not available for international students

If Institutional need-based financial aid is available for undergraduate international students, provide the number of international students who received need-based or non-need-based aid in the last academic year:

n/a

Average dollar amount awarded to international students in the last academic year:

n/a

Total dollar amount awarded to international students in the last academic year:

n/a

Process for First-Year/freshman Students

H7. Check off all financial aid forms which domestic first-year (freshman) financial aid applicants must submit:

X	FAFSA
	Institution's own financial aid form
	CSS/Financial Aid PROFILE
	State aid form
	Noncustodial (Divorced/Separated) Parent's Statement
	Business/Farm Supplement
	Other

H8. Check off all financial aid forms which international (non-resident alien) first-year (freshman) financial aid applicants must submit:

	Institution's own financial aid form
	CSS/Financial Aid PROFILE
	State aid form
	Foreign Student's Financial Aid Application
	Foreign Student's Certification of Finances
X	Other (OSAP form-Canadians/Ontario)

H9. Indicate filing dates for first-year (freshman) students:

Priority date for filing required financial aid forms	March 1st
Deadline for filing required financial aid forms	
No deadline for filing required forms (applications processed on a rolling basis)	X

H10. Indicate notification dates for first-year (freshman) students:

	Students notified on or about (date):	
X	Students notified on a rolling basis beginning:	October 1st

H11. Indicate reply dates:

X	Students must reply by (date):	May 1st
X	Must reply within (#) weeks of notification:	3

Types of Aid Available
Please check off all types of aid available at your institution:

H12. Loans
FEDERAL DIRECT STUDENT LOAN PROGRAM (DIRECT LOAN)

X	Direct Subsidized Stafford Loans
X	Direct Unsubsidized Stafford Loans
X	Direct PLUS Loans

OTHER LOANS

X	Federal Perkins Loans
X	Federal Nursing Loans
	State Loans
	College/university loans from institutional funds
X	Other: Alternative Loans

H13. Scholarships and Grants

Need based:

X	Federal Pell
X	SEOG
X	State scholarships/grants
X	Private scholarships
X	College/university gift aid from institutional funds
	United Negro College Fund
	Federal Nursing Scholarship
X	Other: third party payments
X	Federal Occupational Educational Grant
X	ACG Grant
X	SMART Grant

H14. Check off criteria used in awarding institutional aid. Check all that apply.

Non-need Based	Need Based			Non-Need Based	Need Based	
X	X	Academics			X	Leadership
	X	Alumni affiliation			X	Minority status
		Art				Music/drama
X	X	Athletics				Religious affiliation
	X	Job skills		X	X	State/district residency

I. INSTRUCTIONAL FACULTY AND CLASS SIZE

Source – IPEDS Staff Report

	Full-time	Part-time	Total
a.) Total number of instructional faculty	119	78	197
b.) Total number who are members of minority groups	7	8	15
c.) Total number who are women	57	40	97
d.) Total number who are men	62	37	99
e.) Total number who are nonresident aliens (international)	7	9	16
f.) Total number with doctorate, or other terminal degree	72	5	77
g.) Total number whose highest degree is a master's but not a terminal master's	40	29	69
h.) Total number whose highest degree is a bachelor's	5	31	36
i.) Total number whose highest degree is unknown or other (Note: Items f, g, h, and i must sum up to item a.)	2	13	15
j.) Total number in stand-alone graduate/professional programs in which faculty teach virtually only graduate-level students	0	0	0

I-2. Student to Faculty Ratio

Report theratio of full-time equivalent students (full-time plus 1/3 part time) to full-time equivalent instructional faculty (full time plus 1/3 part time). In the ratio calculations, exclude both faculty and students in stand-alone graduate or professional programs such as medicine, law, veterinary, dentistry, social work, business, or public health in which faculty teach virtually only graduate level students. Do not count undergraduate or graduate student teaching assistants as faculty.

Fall 2015	Semester
1,954	Adjusted Number of UG Students
134	Adjusted Number of Faculty
15:1	Student to Faculty Ratio

I-3. Undergraduate Class Size

In the table below, please use the following definitions to report information about the size of classes and class sections offered in the Fall 2015 term.

Class Sections: A class section is an organized course offered for credit, identified by discipline and number, meeting at a stated time or times in a classroom or similar setting, and not a subsection such as a laboratory or discussion session. Undergraduate class sections are defined as any sections in which at least one degree-seeking undergraduate student is enrolled for credit. Excludedistance learning classes and noncredit classes and individual instruction such as dissertation or thesis research, music instruction, or one-to-one readings. Exclude students in independent study, co-operative programs, internships, foreign language taped tutor sessions, practicums, and all students in one-on-one classes. Each class section should be counted only once and should not be duplicated because of course catalog cross-listings.

Class Subsections: A class subsection includes any subsection of a course, such as laboratory, recitation, and discussion subsections that are supplementary in nature and are scheduled to meet separately from the lecture portion of the course. Undergraduate subsections are defined as any subsections of courses in which degree-seeking undergraduate students enrolled for credit. As above, exclude noncredit classes and individual instruction such as dissertation or thesis research, music instruction, or one-to-one readings. Each class subsection should be counted only once and should not be duplicated because of cross-listings.

Number of Class Sections with Undergraduates Enrolled.

Undergraduate Class Size (provide numbers)

	2 - 9	10-19	20-29	30-39	40-49	50-99	100+	Total
CLASS SECTIONS	90	137	109	32	16	24	0	408

	2 - 9	10-19	20-29	30-39	40-49	50-99	100+	Total
CLASS SUB-SECTIONS	100	113	22	0	0	0	0	235

J. DEGREES CONFERRED

Degrees conferred between July 1, 2014 and June 30, 2015

Reference: IPEDS Completions, Part A

For each of the following discipline areas, provide the percentage of diplomas/certificates, associate, and bachelor's degrees awarded.

Category	Diploma/ Certificates	Associate	Bachelor's	CIP 2000 Categories to Include
Natural resources/environmental science	0	6	6	3
Communication/journalism	0	0	1	9
Communication technologies	0	0	0	10
Computer and information sciences	0	1	2	11
Education	0	1	5	13
Engineering	0	1	2	14
Engineering technologies	0	1	1	15
Foreign languages and literature	0	0	0	16
Law/legal studies	0	0	0	22
English	0	0	2	23
Liberal arts/general studies	0	13	0	24
Library science	0	0	3	25
Biological/life sciences	0	0	5	26
Mathematics and statistics	0	0	1	27
Interdisciplinary studies	0	0	1	30
Parks and recreation		12	7	31
Philosophy and religious studies	0	0	0	38
Physical sciences	0	0	4	40
Science technologies	0	0	0	41
Psychology	0	0	4	42
Homeland Security, law enforcement, firefighting, and protective services	0	46	23	43
Public administration and social services	0	3	0	44
Social sciences	0	0	3	45
Visual and performing arts	0	0	1	50
Health professions and related sciences	100	11	11	51
Business/marketing	0	5	17	52
History	0	0	1	54
Other	0	0	0	
TOTAL	100%	100%	100%	

LAKE SUPERIOR STATE UNIVERSITY

2014-15
Common Data Set
For External Publications Surveys

A: GENERAL INFORMATION

A1. Address Information

Name of College or University	Lake Superior State University
Mailing Address, City/State/Zip	650 W. Easterday Avenue, Sault Ste. Marie, Michigan 49783-1699
Main Phone Number	906-632-6841 or 1-888-800-LSSU
WWW Home Page Address	WWW.LSSU.EDU
Admissions Phone Number	906-635-2231 or 1-888-800-LSSU
Admissions Office Mailing Address	650 W. Easterday Avenue, Sault Ste. Marie, Michigan 49783-1699
Admissions FAX number	906-635-6696
Admissions Email Address	ADMISSIONS@LSSU.EDU
Is there a separate URL application site on the Internet? If yes, specify	No

A2. Source of Institutional Control

X	Public

A3. Classify your undergraduate institution

X	Co-educational college

A4. Academic year calendar

X	Semester

A5. Degrees offered by your institution

X	Certificate
	Diploma
X	Associate
	Transfer
	Terminal
X	Bachelor's
X	Post-bachelor's certificate
X	Master's
	Post-master's certificate
	Doctoral
	First professional
	First professional certificate

B. ENROLLMENT & PERSISTENCE

B1. Institutional Enrollment – Men and Women. Provide numbers of students reported on IPEDS Fall Enrollment Survey for current year, as of the institution's official fall reporting date, or as of October 15 of current academic year. **Refer to IPEDS EF-1 Part A or IPEDS EF-2 Part A (undergraduates only) survey.**

Undergraduates	Full-time		Part-time		Total Full-time & Part-time
	Men	Women	Men	Women	
Degree-seeking, first-time freshmen	207	186	4	3	400
Other first-year, degree-seeking	12	22	3	5	42
All other degree-seeking	745	744	106	175	1,770
Total degree-seeking	964	952	113	183	2,212
All other undergraduates enrolled in credit courses	0	0	70	123	193
Total undergraduates	964	952	183	306	2,405

Graduate	Full-time		Part-time		Total Full-time & Part-time
	Men	Women	Men	Women	
Degree-seeking, first-time	0	0	0	0	0
All other degree-seeking	0	0	0	0	0
All other graduates enrolled in credit courses	0	0	1	0	0
Total graduate	0	0	1	0	0

Total all undergraduates	(IPEDS sum of lines 8 and 22, cols. 15 and 16)	2,405
Total all graduate & professional students	(IPEDS sum of lines 14 and 28, cols. 15 and 16)	1
GRAND TOTAL ALL STUDENTS	(IPEDS line 289, sum of cols. 15 and 16)	2,406

B2. Enrollment by Racial/Ethnic Category.. Provide numbers of students reported on IPEDS Fall Enrollment Survey for current year, as of the institution's official fall reporting date, or as of October 15 of current academic yearInclude international students only in the category "Nonresident aliens." Complete the "Total Undergraduates" column only if you cannot provide data for the first two columns. Report as your institution reports to IPEDS: persons who are Hispanic should be reported only on the Hispanic line, not under any race, and persons who are non-Hispanic multi-racial should be reported only under "Two or more races."

	Degree-seeking First-time First year	Degree-seeking Undergraduates (include first-time first-year)	Total Undergraduates (both degree- and non-degree-seeking)
Nonresident aliens	35	58	159
Hispanic	5	42	61
Black or African American, non-Hispanic	5	28	80
White, non-Hispanic	320	1,749	1,849
American Indian or Alaska Native, non-Hispanic	29	183	198
Asian, non-Hispanic	2	12	12
Native Hawaiian or other Pacific Islander, non-Hispanic	0	0	0
Two or more races, non-Hispanic	3	10	14
Race and/or ethnicity unknown	1	30	32
Total	400	2,112	2,405

B3. Number of degrees awarded by your institution from July 1 to June 30 of the past academic year, as reported on IPEDS current fall Completions Reports. ***Note that only degrees awarded by Lake Superior State University are shown.***

Certificates/diplomas	21
Associate degrees	171
Bachelor's degrees	460
Postbachelor's cert.	0
Master's degrees	3
Total	655

Graduation Rates
The information in this section comes from the IPEDS Graduation Rate Survey (GRS).

For Bachelor's or Equivalent Programs
Report for the cohort of full-time, first-time bachelor's (or equivalent) degree-seeking undergraduate students who entered in

Fall 2008

B4. Initial cohort of first-time, full-time bachelor's degree-seeking undergraduate students

518

B5. Of the initial cohort, the number which did not persist and did not graduate for the following reasons: deceased, permanently disabled, armed forces, foreign aid service of the federal government, or official church missions: Total allowable exclusions:

N/A

B6. Final cohort size, after adjusting for allowable exclusions (subtract question B5 from B4):

518

B7. Of the initial cohort, the number who completed the program in four years or less:

90

B8. Of the initial cohort, the number who completed the program in more than four years but in five years or less:

77

B9. Of the initial cohort, the number who completed the program in more than five years but in six years or less:

26

B10. Total graduating within six years (sum of questions B7, B8 and B9).

193

B11. Six year graduation rate for cohort (question B10 divided by question B6):

37%

B12 - B21. Questions relating to two-year institutions are omitted.

B22. Retention Rates (fall to fall, one year percent retained)

Report for the cohort of all full-time, first-time bachelor's (or equivalent) degree-seeking undergraduate students who entered in the semester indicated below, the percentage which was enrolled in the ensuing fall semester:

Entry Semester	Retention Check Semester	Percent Retained
Fall 2013	Fall 2014	65%

C. FIRST-TIME, FIRST-YEAR (FRESHMAN) ADMISSION

Applications

C1. First-time, first-year (freshman) students: Provide the number of degree-seeking students who applied, were admitted, and enrolled (full or part-time) in fall of the current academic year.

Fall 14	Application/admission/enrollment status	Men	Women	Total
FTIAC	Total applied	703	801	1,504
FTIAC	Total admitted	638	750	1,388
FTIAC	Total full-time, first-time, first year (freshman) students enrolled	225	228	453
FTIAC	Total part-time, first-time, first year (freshman) students enrolled	4	3	7

C2. Freshman wait-listed students (those who met admission requirements but whose final admission was contingent on space availability).

Do you have a policy of placing students on a waiting list?	No

Admission Requirements

C3. High school completion requirement

X	High school diploma is required and GED is accepted
	High school diploma is required and GED is not accepted
	High school diploma or equivalent is not required

C4. Does your institution require or recommend a general college preparatory program for degree-seeking students?

	Required
X	Recommended
	Neither required nor recommended

C5. Distribution of high school units requires and/or recommended. Specify the distribution of academic high school course units required and/or recommended of all or most degree-seeking students using Carnegie units (one unit equals one full year of study or its equivalent). If you use a different system for calculating units, please convert it to Carnegie units.

High school unit type	Units required	Units recommended
Total academic units	0	18
English	0	4
Mathematics	0	4
Science	0	3
Of science, units that must be lab	0	3
Foreign language	0	2
Social studies	0	2
History	0	1
Academic electives	0	0
Computer Science	0	1
Visual / Performing Arts	0	1
Other (specify)	0	0

Basis for Selection

C6. Do you have an open admission policy under which virtually all secondary school graduates or students with GED equivalency diplomas are admitted without regard to academic record, test scores, or other qualifications?

No

C7. Relative importance of each of the following academic and nonacademic factors in your first-time, first-year, degree-seeking (freshman) admission decisions.

Academic	Very important	Important	Considered	Not considered
Rigor of secondary school record	X			
Class rank			X	
Academic GPA	X			
Standardized test scores	X			
Application essay			X	
Recommendation(s)			X	

Nonacademic	Very important	Important	Considered	Not considered
Interview			X	
Extracurricular activities			X	
Talent / ability				X
Character / personal qualities			X	
First generation			X	
Alumni / ae relation			X	
Geographical residence			X	
State residency				X
Religious affiliation / commitment				X
Racial / ethnic status				X
Volunteer work				X
Work experience				X
Level of applicant's interest				X

SAT and ACT Policies

C8. Entrance Exams

A. Does your institution make use of SAT, ACT, or SAT Subject Test scores in admission decisions for first-time, first-year, degree-seeking applicants?

Yes

If yes, place check marks in the appropriate boxes below to reflect your institution's policies for use in admission for

Fall 2015

Test Type	Require	Recommend	Require for some	Considered if submitted	Not used
SAT or ACT	X				
ACT only		X			
SAT only				X	
SAT and SAT Subject Tests or ACT				X	
SAT Subject Tests				X	

B.If your institution will make use of the ACT in admission decisions for first-time, first-year, degree-seeking applicants for fall 2014, please indicate which ONE of the following applies (regardless of whether the writing score will be used in the admissions process):

	ACT with Writing component required
	ACT with Writing component recommended.
X	ACT with or without Writing component accepted

C.Please indicate how your institution will use the SAT or ACT essay component; check all that apply.

	SAT essay	ACT essay
For admission		
For placement		
For advising		
In place of an application essay		
As a validity check on the application essay		
No college policy as of now	X	X
Not using essay component		

D.In addition, does your institution use applicants' test scores for academic advising?

Yes

E.Latest date by which SAT or ACT scores must be received for fall-term admission

July 31st

Latest date by which SAT Subject Test scores must be received for fall-term admission

July 31st

F. If necessary, use this space to clarify your test policies (e.g., if tests are recommended for some students, or if tests are not required of some students):

N/A

G.Please indicate which tests your institution uses for placement (e.g., state tests):

X	SAT
X	ACT
	SAT Subject Tests
X	AP
X	CLEP
	Institutional Exam
	State Exam (specify):

Freshman Profile

C9. Percent and number for all enrolled degree-seeking, full-time and part-time, first-time, first-year (freshman) students enrolled in the current fall semester that submitted test scores. The 25th percentile is the score that 25 percent scored at or below; the 75th percentile is the score that 25 percent scored at or above. **LSSU does not use SAT scores, so only information on ACT is provided.**

Percent submitting ACT scores	91	Number submitting ACT scores	363

Figures are rounded to nearest whole score.

Test Type	Test Score at 25th percentile	Test Score at 75th percentile
ACT Composite	19	24
ACT English	18	24
ACT Math	18	24
ACT Writing	06	08

***Percent* of first-time, first-year (freshman) students with scores in each range.**

Test Score Ranges	PercentACT Composite	Percent ACT English	PercentACT Math
30-36	2%	6%	2%
24-29	31%	20%	29%
18-23	56%	52%	45%
12-17	11%	22%	24%
6-11	0%	0%	0%

C10. *Percent* of degree-seeking, first-time, first-year (freshman) students who had high school class rank within each of the following ranges.

High school rank ranges	Percent
Top 10th of high school graduating class	8%
Top quarter of high school graduating class	32%
Top half of high school graduating class	68%
Bottom half of high school graduating class	32%
Bottom quarter of high school graduating class	7%
Percent of freshmen who submitted high school class rank	70%

C11. *Percent* of degree-seeking, first-time, first-year (freshman) students who had high school grade point averages within each of the following ranges (using 4.0 scale).

High school GPA ranges	Percent
3.75 and higher	16%
3.5 – 3.74	15%
3.25 – 3.49	18%
3.0 – 3.24	20%
2.5 – 2.99	22%
2.0 - 2.49	8%
1.0 - 1.99	1%
Below 1.0	0%

C12. Average high school GPA of all degree-seeking, first-time, first-year (freshman) students who submitted a high school grade point average.

3.19

Percent of degree-seeking, first-time, first-year (freshman) students who submitted high school grade point average.

99%

Admission Policies

C13. Application fee (undergraduate)

Does your institution have an application fee?	Yes
Amount of application fee	$35
Can it be waived for applicants with financial need?	Yes
Cost of on-line application	$25
Can on-line application fee be waived for applicants with financial need?	Yes

C14. Application closing date

Does your institution have an application closing date?	Yes
Application closing date for fall	Rolling
Priority date	March 1st

C15. Are first-time, first-year students accepted for terms other than the fall?

Yes

C16. Notification to applicants of admission decision sent:

On a rolling basis beginning September 1

C17. Reply policy for admitted applicants:

No set date

C18. Deferred admission: Allow students to postpone enrollment after admission? Maximum postponement?

Yes - up to one year

C19. Early admission of high school students: Allow high school students to enroll full-time one year or more before high school graduation?

No

C20. Common Application: Question removed from CDS. (Initiated during 2006-2007 cycle)

C21. Early decision: Does your institution offer an early decision plan (an admission plan that permits students to apply and be notified of an admission decision well in advance of the regular notification date and that asks students to commit to attend if accepted) for first-time, first-year (freshman) applicants for fall enrollment?

No

C22. Early action: Do you have a nonbinding early action plan whereby students are notified of an admission decision well in advance of the regular notification date but do not have to commit to attending your college?

No

D. TRANSFER ADMISSION

Fall Applicants

D1. Does your institution enroll transfer students?

Yes

If 'yes', may transfer students earn credit by transferring credits earned from course work completed at other colleges/universities?

Yes

D2. Provide the number of degree-seeking transfer students who applied, were admitted, and enrolled (full or part-time) in fall of the current academic year.

Fall 2014	Applicants	Admitted Applicants	Enrolled Applicants
Men	152	133	81
Women	149	132	68
Total	301	265	149

Application for Admission

D3. Indicate terms for which transfers may enroll:

Any term: Fall, Spring, or Summer

D4. Must a transfer applicant have a minimum number of credits completed or else must apply as an entering freshman? If yes, what is the minimum number of credits?

Yes: 19 credits

D5. Indicate all items required of transfer student to apply for admission:

Application document	Required of all	Recommended for all	Recommended for some	Required for some	Not required
High school transcript				X	
College transcript(s)	X				
Essay or personal statement			X		
Interview			X		
Standardized test scores				X	
Statement of good standing from prior institution(s)		X			

D6. If a minimum high school grade point average is required of transfer applicants, specify (on a 4.0 scale):

N/A

D7. If a minimum college grade point average is required of transfer applicants, specify (on a 4.0 scale):

2.0

D8. List any other application requirements specific to transfer applicants.

NONE

D9. List application priority, notification and candidate reply dates for transfer students. If applications are reviewed on a continuous or rolling basis, place a check mark in the 'Rolling admission' column.

Semester	Priority date	Closing date	Notification date	Reply date	Rolling admission
Fall					X
Spring					X
Summer					X

D10. Does an open admission policy, if reported, apply to transfer students?

N/A: no open admission

D11. Describe additional requirements for transfer admission, if applicable:

N/A

Transfer credit policies

D12. Report the lowest grade earned for any course that may be transferred for credit:

C-

D13. Maximum number of credits or courses that may be transferred from a two year institution:

N/A. Any number of credits may be transferred. Credit use is restricted by degree completion requirements.

D14. Maximum number of credits or courses that may be transferred from a four year institution:

N/A. Any number of credits may be transferred. Credit use is restricted by degree completion requirements.

D15. Minimum number of credits that transfers must complete at your institution to earn an associate's degree:

16 OF FINAL 20 CREDITS

D16. Minimum number of credits that transfers must complete at your institution to earn a bachelor's degree:

32 OF FINAL 40 CREDITS AND 50% OF 300 AND 400 LEVEL DEPARTMENTAL CREDITS

D17. Describe other transfer credit policies:

NONE

E. ACADEMIC OFFERINGS AND POLICIES

E1. Special study options: Identify those programs available at your institution. Refer to definitions.

X	Accelerated program		X	Honors Program
X	Cooperative education program		X	Independent Study
	Cross-registrations		X	Internships
X	Distance learning		X	Liberal arts/career combination
X	Double major		X	Student-designed major
X	Dual Enrollment		X	Study abroad
	English as a Second Language (ESL)		X	Teacher certification program
	Exchange student program (domestic)			Weekend college
	External degree program			
	Other (specify):			

E2. Core Curriculum: Has been removed from the CDS.

E3. Areas in which all or most students are required to complete some course work prior to graduation.

	Arts/fine arts		X	Humanities
	Computer literacy		X	Mathematics
X	English (including composition)			Philosophy
	Foreign languages		X	Sciences (biological or physical)
	History		X	Social science
X	Other – Communication		X	Other -Diversity

Library Collections
The CDS / Publishers will collect library data again when a new Academic Libraries Survey is in place.

F. STUDENT LIFE

F1. Percentages of first-time, first-year (freshman) students and all degree-seeking undergraduates enrolled in fall semester of the current year that fit the following categories:

Fall 2014	FTIC,1st-year	All Undergraduates
Percent who are from out of state (exclude international students & non-resident aliens)	07%	06%
Percent of men who join fraternities	n/a	n/a
Percent of women who join sororities	n/a	n/a
Percent who live in college-owned-operated housing	73%	37%
Percent who live off-campus or commute	27%	63%
Percent of students age 25 and older	01%	20%
Average age of full-time students	19	22
Average age of all students (full- and part-time)	19	23

F2. Activities offered. Identify those programs available at your institution.

X	Campus Ministries		X	Literary magazine		X	Radio station
X	Choral groups			Marching band		X	Student government
	Concert band			Model UN		X	Student newspaper
X	Dance			Music ensembles			Student-run film society
X	Drama/theater			Musical theater			Symphony orchestra
X	International Student Organization			Opera			Television station
	Jazz band		X	Pep band			Yearbook

F3. ROTC (program offered in cooperation with Reserve Officers' Training Corps):

None

F4. Housing: Check all types of college-owned-operated-affiliated housing available for students at your institution.

X	Co-ed dorms			Special housing for disabled students
X	Men's dorms			Special housing for international students
X	Women's dorms		X	Fraternity/sorority housing
	Apartments for married students			Cooperative housing
X	Apartments for single students			
X	Other: Honors House			

G. ANNUAL EXPENSES

Provide academic year costs for the following categories that are applicable to your institution.

G0. Please provide the URL of your institution's net price calculator:

http://www.lssu.edu/finaid/calculator.php_____

G1. Undergraduate, full-time tuition, required fees, room and board

List the typical tuition, required fees, and room and board for a full-time undergraduate student for the FULL academic year (generally two semesters, September to June). Room and board is defined as double occupancy and 19 meals per week or the maximum meal plan. Required fees include only charges that all full-time students must pay and which are not included in tuition. Do not include optional fees (such as parking, laboratory use).

2014-2015	First-Year Students	Undergraduates
In-state (Michigan Resident)	10,128	10,128
Non-Resident from Ontario, Canada	10,128	10,128
Non-Resident from theMidwest Consortium	15,192	15,192
Non-Resident not from Ontario or the Midwest	15,192	15,192
Required fees*	370	120
Room and board on-campus	8,987	8,987
Room only	n/a	n/a
Board only	n/a	n/a

*See www.lssu.edu/costs for all student fees.

G2. Number of credits per term a student can take for the stated full-time tuition:

12 minimum; 17 maximum

G3. Do tuition and fees vary by year of study (e.g., freshman...senior)?

No

G4. Do tuition and fees vary by undergraduate instructional program? Yes

If yes, what percentage of full-time undergraduates pay more than the tuition and fees reported in G1?

_____**53**_____

G5. Provide the estimated expenses for a typical full-time, undergraduate student:

2014-15	Residents of campus housing	Commuters (living at home)	Commuters (not living at home)
Books only	1,100	1,100	1,100
Room only	8,987	4,400	6,740
Board only			
Transportation	600	600	1,200
Other expenses	1,000	1,000	1,000

G6. Undergraduate per-credit-hour charges:

2014-15	Per-credit-hour charges
In-state (Michigan Resident)	422
Non-Resident from Ontario, Canada	422
Non-Resident from the Midwest Consortium	633
Non-Resident not from Ontario or the Midwest	633

H. FINANCIAL AID

Aid Awarded to Enrolled Undergraduates

H1. Enter total dollar amount awarded in the current academic year to full-time and part-time degree-seeking undergraduates (using the same cohort reported in CDS question B1, "Total degree-seeking undergraduates" in the following categories. Include aid awarded to international students (i.e. those not qualifying for federal aid). Do not include non-need-based athletically related aid or tuition waivers that are personnel benefits.

Aid that is non-need-based but is used to meet need should be counted as need-based aid.
Note that at LSSU, virtually all non-need-based aid is used to 'meet need'

If data reported are not for the current award year, what is the award year of the reported data?

2013-14Final

Which needs-analysis methodology does your institution use in awarding institutional aid? (Formerly H3)

	Federal Methodology
	Institutional Methodology
X	Both FM and IM

	Need-based	Non-need-based
Scholarships Grants	$ Awarded undergrads	$ Awarded undergrads
Federal	4,102,296	9,400
State	2,256,678	23,210
Institutional	732,014	3,040,932
Other external	149,513	415,445
Total S & G	7,240,501	3,531,438

	Need-based	Non-Need-based
Self Help	$ Awarded undergrads	$ Awarded undergrads
Student loans	12,018,248	
Federal Work Study	334,075	
State and other work study/ employment	0	
Total self help	12,352,323	
Parent Loans	2,590,534	
Tuition Waivers		1,285,952
Athletic Awards		1,394,773

Number of Enrolled Students Receiving Aid for the 2013-14 Academic Year

H2. List the number of degree-seeking students who applied for and received financial aid. (Note in the chart below, students may be counted in more than one row, and full-time freshmen should also be counted as full-time undergraduates.) ***Note that at LSSU, virtually all non-need-based aid is used to 'meet need'***

	2013-14Final	First-time, full-time freshmen	Full-time undergrads	Less than full-time undergrads
A	No. degree-seeking students (CDS 13-14, item B)	398	1,963	334
B	No. students in line A who were financial aid applicants	363	1,629	234
C	No. students in line B determined to have financial need	274	1,342	184
D	No. students in line C who were financial aid recipients	274	1,342	184
E	No. students in line D who received any need-based gift aid	209	995	138
F	No. students in line D who received any need-based self help aid	205	1,111	148
G	No. students in line D who received any non-need-based gift aid	166	562	13
H	No. students in line D whose need was fully met	60	237	9
I	On average, percentage of need that was met of students who received any need-based aid. Exclude any resources that were awarded to replace EFC.	69%	63%	43%
J	The average financial aid package of those in line D. Exclude any resources that were awarded to replace EFC.	11,510	10,143	5,758
K	Ave. need-based **gift** award of those in line E who received a need-based gift award	8,575	6,450	3,101
L	Ave. need-based **self-help** award (excluding PLUS, unsubsidized and private alternative loans) of those in line F	3,223	4,398	4,123
M	Average need-based **loan** (excluding PLUS, unsubsidized and private alternative loans) of those in line F.	3,048	4,230	4,099

H2A. Number of Enrolled Students Receiving Institutional Non-need-based Grants and Scholarships

	2013-14 Final	First-time, full-time freshmen	Full-time undergrads	Less than full-time undergrads
N	Number of students in line **a** who had no financial need and who received non-need-based-gift aid (exclude those receiving athletic awards and tuition benefits)	81	259	Too few to report
O	Average dollar amount of non-need-based gift aid awarded to students in line **n**	4,778	4,242	---
P	Number of students in line **a** who received a non-need-based athletic grant or scholarship	47	182	Too few to report
Q	Average dollar amount of non-need-based athletic grants and scholarships awarded to students in line **p**	6,178	7,306	---

H4. Provide the number of students in the 2014 undergraduate class who started at your institution as first-time students and received a bachelor's degree between July 1, 2013 and June 30, 2014. Exclude transfers.

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H5. Number and percent of students in class (defined in H4 above) borrowing from federal, non-federal, and any loan sources, and the average (or mean) amount borrowed

	Number in the class (defined in H4 above) who borrowed	Percent of the class (defined above) who borrowed (nearest 1%)	Average per-undergraduate-borrower cumulative principal borrowed, of those in the first column (nearest $1)
Any loan program: Federal Perkins, Federal Stafford Subsidized and Unsubsidized, institutional, state, private loans that your institution is aware of, etc. Include both Federal Direct Student Loans and Federal Family Education Loans.	172	75%	$30,593
Federal loan programs: Federal Perkins, Federal Stafford Subsidized and Unsubsidized. Include both Federal Direct Student Loans and Federal Family Education Loans.	166	73%	$27,551
Institutional loan programs.	---	---	---
State loan programs.	---	---	---
Private alternative loans made by a bank or lender.	39	17%	$17,658

H6. Indicate your institution's policy regarding financial aid for undergraduate international students

	Institutional need-based financial aid is available for international students
X	Institutional non-need-based financial aid is available for international students
	Institutional financial aid is not available for international students

If Institutional need-based financial aid is available for undergraduate international students, provide the number of international students who received need-based or non-need-based aid in the last academic year:

n/a

Average dollar amount awarded to international students in the last academic year:

n/a

Total dollar amount awarded to international students in the last academic year:

n/a

Process for First-Year/freshman Students

H7. Check off all financial aid forms which domestic first-year (freshman) financial aid applicants must submit:

X	FAFSA
	Institution's own financial aid form
	CSS/Financial Aid PROFILE
	State aid form
	Noncustodial (Divorced/Separated) Parent's Statement
	Business/Farm Supplement
	Other

H8. Check off all financial aid forms which international (non-resident alien) first-year (freshman) financial aid applicants must submit:

	Institution's own financial aid form
	CSS/Financial Aid PROFILE
	State aid form
	Foreign Student's Financial Aid Application
	Foreign Student's Certification of Finances
X	Other (OSAP form-Canadians/Ontario)

H9. Indicate filing dates for first-year (freshman) students:

Priority date for filing required financial aid forms	March 1st
Deadline for filing required financial aid forms	
No deadline for filing required forms (applications processed on a rolling basis)	X

H10. Indicate notification dates for first-year (freshman) students:

	Students notified on or about (date):	
X	Students notified on a rolling basis beginning:	October 1st

H11. Indicate reply dates:

X	Students must reply by (date):	May 1st
X	Must reply within (#) weeks of notification:	3

Types of Aid Available
Please check off all types of aid available at your institution:

H12. Loans
FEDERAL DIRECT STUDENT LOAN PROGRAM (DIRECT LOAN)

X	Direct Subsidized Stafford Loans
X	Direct Unsubsidized Stafford Loans
X	Direct PLUS Loans

OTHER LOANS

X	Federal Perkins Loans
X	Federal Nursing Loans
	State Loans
	College/university loans from institutional funds
X	Other: Alternative Loans

H13. Scholarships and Grants

Need based:

X	Federal Pell
X	SEOG
X	State scholarships/grants
X	Private scholarships
X	College/university gift aid from institutional funds
	United Negro College Fund
	Federal Nursing Scholarship
X	Other: third party payments
X	Federal Occupational Educational Grant
X	ACG Grant
X	SMART Grant

H14. Check off criteria used in awarding institutional aid. Check all that apply.

Non-need Based	Need Based			Non-Need Based	Need Based	
X	X	Academics			X	Leadership
	X	Alumni affiliation			X	Minority status
		Art				Music/drama
X	X	Athletics				Religious affiliation
	X	Job skills		X	X	State/district residency

I. INSTRUCTIONAL FACULTY AND CLASS SIZE

Source – IPEDS Staff Report

	Full-time	Part-time	Total
a.) Total number of instructional faculty	114	91	205
b.) Total number who are members of minority groups	6	6	12
c.) Total number who are women	54	54	108
d.) Total number who are men	60	36	96
e.) Total number who are nonresident aliens (international)	11	7	18
f.) Total number with doctorate, or other terminal degree	65	1	66
g.) Total number whose highest degree is a master's but not a terminal master's	47	36	83
h.) Total number whose highest degree is a bachelor's	2	2	4
i.) Total number whose highest degree is unknown or other (Note: Items f, g, h, and i must sum up to item a.)	0	18	18
j.) Total number in stand-alone graduate/professional programs in which faculty teach virtually only graduate-level students	0	0	0

I-2. Student to Faculty Ratio

Report theratio of full-time equivalent students (full-time plus 1/3 part time) to full-time equivalent instructional faculty (full time plus 1/3 part time). In the ratio calculations, exclude both faculty and students in stand-alone graduate or professional programs such as medicine, law, veterinary, dentistry, social work, business, or public health in which faculty teach virtually only graduate level students. Do not count undergraduate or graduate student teaching assistants as faculty.

Fall 2014	Semester
2079	Adjusted Number of UG Students
144	Adjusted Number of Faculty
14:1	Student to Faculty Ratio

I-3. Undergraduate Class Size

In the table below, please use the following definitions to report information about the size of classes and class sections offered in the Fall 2014 term.

Class Sections: A class section is an organized course offered for credit, identified by discipline and number, meeting at a stated time or times in a classroom or similar setting, and not a subsection such as a laboratory or discussion session. Undergraduate class sections are defined as any sections in which at least one degree-seeking undergraduate student is enrolled for credit. Excludedistance learning classes and noncredit classes and individual instruction such as dissertation or thesis research, music instruction, or one-to-one readings. Exclude students in independent study, co-operative programs, internships, foreign language taped tutor sessions, practicums, and all students in one-on-one classes. Each class section should be counted only once and should not be duplicated because of course catalog cross-listings.

Class Subsections: A class subsection includes any subsection of a course, such as laboratory, recitation, and discussion subsections that are supplementary in nature and are scheduled to meet separately from the lecture portion of the course. Undergraduate subsections are defined as any subsections of courses in which degree-seeking undergraduate students enrolled for credit. As above, exclude noncredit classes and individual instruction such as dissertation or thesis research, music instruction, or one-to-one readings. Each class subsection should be counted only once and should not be duplicated because of cross-listings.

Number of Class Sections with Undergraduates Enrolled.

Undergraduate Class Size (provide numbers)

	2 - 9	10-19	20-29	30-39	40-49	50-99	100+	Total
CLASS SECTIONS	105	149	105	36	18	27	0	441

	2 - 9	10-19	20-29	30-39	40-49	50-99	100+	Total
CLASS SUB-SECTIONS	90	104	34	2	0	0	0	230

J. DEGREES CONFERRED

Degrees conferred between July 1, 2013 and June 30, 2014

Reference: IPEDS Completions, Part A

For each of the following discipline areas, provide the percentage of diplomas/certificates, associate, and bachelor's degrees awarded.

Category	Diploma/ Certificates	Associate	Bachelor's	CIP 2000 Categories to Include
Natural resources/environmental science	0	04	07	3
Communication/journalism	0	0	01	9
Communication technologies	0	0	0	10
Computer and information sciences	0	02	02	11
Education	0	04	07	13
Engineering	0	01	06	14
Engineering technologies	0	0	01	15
Foreign languages and literature	0	0	0	16
Law/legal studies	0	0	0	22
English	0	0	01	23
Liberal arts/general studies	0	06	04	24
Library science	0	0	0	25
Biological/life sciences	0	0	06	26
Mathematics and statistics	0	0	0	27
Interdisciplinary studies	0	0	0	30
Parks and recreation	0	09	04	31
Philosophy and religious studies	0	0	0	38
Physical sciences	0	01	05	40
Science technologies	0	0	0	41
Psychology	0	0	02	42
Homeland Security, law enforcement, firefighting, and protective services	0	54	24	43
Public administration and social services	0	02	0	44
Social sciences	0	0	03	45
Visual and performing arts	0	0	0	50
Health professions and related sciences	100	13	11	51
Business/marketing	0	04	15	52
History	0	0	01	54
Other	0	0	0	
TOTAL	100%	100%	100%	

LAKE SUPERIOR STATE UNIVERSITY

Faculty and Staff Directory

A
Aho, Dave 2542
Aho, Stephanie 2760
Allan, Thomas 2169
Allison, Patricia 2629
Andary, Carol 2104

B
Baird, Timothy 2224
Balfantz, Gary 2659
Barbour, Chad 2553
Barbour, Julie 2657
Barr, Colleen 2441, 2367
Batho, Kaye 2202
Baumann, David 2142
Baumgartner, Heidi (Escanaba) 906-217-4123
Beach, Wendy 2387
Beckon, Susan (Escanaba) 906-217-4102
Becks, Eric 2738
Becks, Maryellen 2240
Been, Mary 2116
Berchem, Kathy 2043
Bisdorf, Marina 2752
Bishop, Eddie 2601
Blalock, Katee 2720
Bofinger, Laura 2207
Boger, Rita 2371
Bole, Michelle 2546
Bosley, Josh 2034
Boston, Robert 2736
Boucher, Marc 2404
Bouvet, Linda 2602, 2601
Brandenburg, Scott 2125
Buckley, Bruce 2151
Bunker, Ashley 2082
Butcher, Cynthia 2722

C
Cairns, Eric 2590
Chaput, Cathy 2028
Chamberlain, Kevin 2210
Charles, Stacy 2761
Childs, Sally 2610
Christensen, Abby 2654
Christensen, Spencer 2735
Clawson, Rebecca 2279
Coates, Thomas 6670
Constatino, Jen 2809
Cook, Deb 2882
Coon, Katelynn 2650
Cooper, Brenda Lee 2811, 2384
Coullard, Collette 2166
Coullard, Jon 2595
Cox, Georgiana 2621
Cox, Juliana 2591
Crandall, Richard 2103

D
Davidson, Suzanne 6240
Davis, Arianne 2604
Davis, Becky 2105
Davis, Jason 2765
Denger, George 2330
DeRusha, Brenda 2620
Devaprasad, James 2131
Devaprasad, Sara 6231
Diaz, Marta 6682
Disney, Louann 2854
Donofrio, Pete 2210
Donmyer, Andrea 2129
Dorrity, Sharon 2665
Drzewiecki, Kathleen 2288
Dunbar, Kristin 2625
Durre, Brittany 2143

E
Eddy, Lloyd 2593
Eide, Suzanne 2861
Espinosa, Philip 2213
Essmaker, Gail 2278
Evans, Barbara 2164

F
Faust, Deborah 2677
Fiebelkorn, Donna 2728
Finley, David 2211
Fisher, Stephanie 2368
Fitzpatrick, Susan 2831
Fletcher, Logan 2368
Folkersma, Charlotte 2438
Formolo, Renee 2110
Fox, Vickie 2355
Franks, Andrew 2109
Freds, Alex 2271
Freeman, Arlene 2213
Freedman, Lee 2860
Furr, Mike 2092

G
Gaberdiel, Dustin 906-379-9351
Gage, Jay 906-440-0524
Garee, Sheri 2217
Garvon, Jason 2471
Gerrie, Jaimee 2732
Gerzetich, Krystle 2684
Gillman, Jaime 2844
Godin, Edith 2210
Gordier, Paige 2749
Gordon, Charla 2038
Graham, John 2894
Greengtski, Gina 6688
Gregory, Lorraine 2154
Gregory, Steve 2182
Greil, Roger 906-635-1949

H
Hackbarth-Onson, Annette 2693
Harding, Kristy 2275
Harris, Jeff 2371
Hartman Kristen 2412
Haske, Beverly 2366
Hemming, Kenneth 2272
Henderson, Herbert 2172
Hering, Judy 906-379-9351
Hester, Josh 2070
Heth, Tiffany 6684
Hettinga, Steve 2174
Hildebrand, Robert 2139
Hill, Gary 2183
Hill, Theresa 6228
Hober, Julie 2686
Holewa, Doug 2835
Hope, Sandra 2802
Hopper, Julie 2118
Horde, Toni 2641
Hunter, Jodi 2424
Hutchens, Martha 2806
Hutchins, Ron 2446

I-J
Innes, David 2220
Iretski, Alexei 2045
Jenkins-Ball, Marcia 2817
Johnson, Chris 2210
Johnson, Steven 2160
Johnston, Karen 2269
Jones, Andrew 2138
June, Mary 2862
Jurvelin, Matt 2634

K
Kabke, Lynn 2819
Kalata, Kathleen 2747
Kapuscinski, Kevin 2093
Keiper, Connie 2110
Kellan, Patti 2144
Keller, Barbara 2148
Kellerman, Jackie 2899
Kelsey, Katie 2613
Kelso, Paul 2158
King, Jeffrey 2838
King, Sandra 2179
Kinghorn, Colleen 2641
Kirkman, Susan 2141
Kirkpatrick, Nancy 2185
Knight, Derric 2723
Kolomyjec, Stephen 2147
Korb, Scott 2032
Krahnke, Keith 906-647-3800
Krouth, Craig 2734
Kubovchich, Larry 231-348-3733
Kyle, Bobbie 2190

L
LaLonde, Katie 2613
Larranaga, Mallory 2143
Larsen, Kristin 2453
Leach, David 2635
LeFavre, Emily 6228
Legg, C. Joshua 2265
Ley, Juliana 2365
Li, Jun 2094
Liedel, Daniel 2220
Light, Barbara 2745
Lokken, Brandon 2607
Loomis, Joe 6244

M
MacDonald, Ashley 2592
MacPherson, Arlene 2225
Mahmud, Zakaria 2137
Markstrom, Michelle 6687
Marsh, Barbra 2878
Martin, Emily 2093
Mattheus, C. Robin 2155
Mauldin, R. Kirk 2123
McCready, Mindy 2255
McDonald, David 2208
McLean, Amber 2636
McLeod, Mary 2110
McMyne, Mary 2327
Meehan, Mary Jo 2189
Merkel, Dennis 2152
Metro, Rich 2605
Mitchell, Britta (Illinois) 231-631-6225
Moening, Joseph 2135
Moerke, Ashley 2153
Moody, James 2120
Mosey, R. Adam 2284
Muller, Kimberly 2170
Muñoz-Hernández, Andrea 2618
Murray, Janine 2426
Myton, David 2349

N
Narkiewicz, Geralyn 2228
Nethery, Nancy 2047
Neve, Nancy 2080
Newton,Fred 2609
Nicholls, Sara 2541
Niles, Dennis 2231
Ngunkeng, Grace 2150
Norman, David 2620

O
Oliver, Lori 2612
Olson, Scott 2828
Olson, Suzette 2211
Olson-Pupek, Kristina 2422
Oshelski, Chris 2121
Ouimette, Sarah 2035

P
Paris, Theresa 2679
Parker, Nicole 2696
Parker, Jennifer 2075
Pascoe, Diane (Escanaba) 906-217-4146
Patnala, Deepak 2757
Pearse, Sheila 2670
Peller, Terri 2552
Peltier, Paula 2877
Peterman, Jenny 2121
Philips, Valerie 2450
Pleger, Tom 2202
Ponaka, Pritish 2757
Pritchard, Ray 2184
Proulx, Esther 6219
Prucha, Paul 7546
Pulfrey, Lynn 7563
Pusch, Brent 2641

R
Raffaele, Adam 2617
Ramsdell, Carolyn (Petoskey) 231-348-6623
Ranson Olson, Britton 2157
Rathje, Gregory 2763
Rebek, Jody 2155
Reynolds-Keegan, Mary 2101
Roese, John 2648
Rodgers, Morgan 2427
Rogers, Kristen 2638
Root, Gerald 2662
Roque, Julia 6673
Rose, Jillena 2091
Rye, Colleen 2222

S
Sabatine, Stephanie 6664
Salo, Todd 2639
Saluja, Madan 2740
Savoie, Jessica 2212
Schaefer, James 2748
Schebel, Ray 2619
Schemm, Evan 2633
Scherer, Marcia 2431
Schmitigal, Carol 2236
Schopp, Jody 2874
Schupp, Mari 2194
Searight, H. Russell 2188
Sefton, Dan 2808
Shaffer-O'Connell, Melissa 2339
Shay, Heather 2106
Shibley, John 2314
Smart, Shirley 2198
Smith, Chris 2162
Smith, Heather 2195
Snyder, Brian 2658
Southwell, Benjamin 2076
Spencer, Kathy 2219
Spencer, Matthew 2085
Statt, Eric 2554
Stephens, Jerry 2205
Storey, Karen 2418
Suggitt, Deanna 2615
Suppa, Lauren 2086
Susi, Jody 2624
Susi, Joe 2161
Swedene, Jason 2122

T
Toll, Benjamin 2763
Tridico, Frank 2171

V
Valente, Olivia 2644
Van, Anne 2146
Verdecchia, Kelli 2611
Voutsadakis, George 2667

W
Waite, Craig 2231
Walworth, Morrie 2216
Weber, Brenda 7570
Weber, Paul 2031
Wenglikowski, Jason 2089
Werner, R. Marshall 2281
Westrick, Aaron 6203
Wesolek, Jessica 2098
White, Donna 2267
Whitten, Damon 6665
Wilhelms, Ralf 2108
Williams, Brittney 2637
Williamson, Rachel 2898
Witucki, Heidi 2186
Wood, Sharmay 2676
Wooley, Shelley 2664
Wright, Derek 2628

Y
Yang, Guidi 2181
Yeadon, Daretha 2626
Yelverton-Johnson, Teresa 2815

Z
Zarepoor, Masoud 2660
Zimmerman, Gregory 2470
Zinser, Virginia 2725

Campus Switchboard: 1-906-632-6841
Calling in from Off-Campus: 1-906-635-extension
Emergency: ext. 2100 • 9-911
Fax: University business only: 906-635-2111

Rev 8/26/16

Frequently Called Numbers — Lake Superior State University

A

Academic Services 2802
Accessibility Services 2355
Accounting 2226, 2720
Accounting & Management, Information Systems 2426
Accounts Payable 2086
Accounts Receivable 2592
Activities Board 2756
Admissions 2231
ALEKS 2228
Alumni Relations 2831
Anchor House 322-5694
Aquatic Research Lab 635-1949
Dr. Ashley Moerke 2153
Roger Greil 635-1949
Arts & Letters, School of 2275
Arts Center
Gallery 2067
Manager 2735
Secretary 2275
Studio 2177
Ticket Office 2787
Assessment 2349
Athletic Department 2627
Audio-Visual 6677

B

BPAC 2136
Bookstore/Textbooks 2883
Blackboard 6231, 2651
Biological Sciences, School of 2267
Biology Club Lounge 2647
Board of Trustees 2202
Business Development Center 2426
Business, Lukenda School of 2426
Computer Lab 2644
Business, V.P. 2216
Business Operations 2276

C

Campus Life 2236
Café a la Carté 3352
Cappuccino Corner 3119
Career Counseling 2189
Career Services 2898
Cashier's Counter 2878
Catering 2546
Center for Social Research 2123
Central Heating 2220
Central Stores 2617
Charter School Office 2121
Chemistry 2267
Chemistry Lab 3186
Cisler Center **2541**
Campus Life 2236
Compass 2551
Galley/Galley Plus 2548
Grill 155° 2548
Guest Room, East 2544
Guest Room, West 2543
Housing & Residential Life 2411
ID Office 2552
Information Desk 2540
Kitchen 2620
Knot's Café 2549
Quarterdeck 2241
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Roger Greil 635-1949
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Career Development Center: Rachel Williamson 2898
Community Research Center: Dr. Kirk Mauldin 2123
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Global Export Center: Ralf Wilhelms 2108
Kemp Museum: Donna White 2267
Nursing Simulation & Certification Center 632-8400
Planetarium: Donna White 2267
Product Development Center: Eric Becks 2738
SSMArt (SmartZone): Eric Becks, CEO 632-8400
Superior Start 635-2268

Fax (university business only): 906-635-2111

Other Campus Faxes: 635-extension listed below

Admissions 6696
Arts Center: Administration 6674
Arts & Letters 6674
Communication, Humanities, Visual & Performing Arts
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LAKE SUPERIOR STATE UNIVERSITY

Personnel Directory

All A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A

- Aho, Stephanie

(906) 635-2760

- Aho, David

(906) 635-2542

- Allan, Thomas

(906) 635-2169

- Allison, Patty

(906) 635-2276

- Andary, Carol

	(906) 635-2104
Arnold, Glen	
-	
Atkinson, Steve	
	(906) 635-2371

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- Alumni Directory
- Mailing Address

Upcoming Events »

There are no submitted events for today.

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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...

650 W. Easterday Ave., Sault Ste. Marie, MI 49783 / (906) 632-6841

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LAKE SUPERIOR STATE UNIVERSITY

Accreditation

Lake Superior State University has remained accredited by the Higher Learning Commission of the North Central Association since 1968. This regional accreditation body was established in 1895 and currently oversees more than 1000 higher education institutions from 19 states.

- The Higher Learning Commission and a member of the North Central Association, 230 S. LaSalle Street, Suite 7-500, Chicago, IL 60604-1413. Phone: 312-263-0456; 800-621-7440. Fax: 312-263-7462. www.ncahigherlearningcommission.org

Individual academic programs may be accredited by disciplinary based organizations when those programs meet the criteria and performance standards of that organization. Program accreditation is a reflection of a program's integrity and alignment with recognized quality standards. Periodic review and reaccreditation of individual programs occurs independently from, but contingent upon, the regional accreditation of the institution. LSSU participates with the program accreditation organizations listed below.

- ATHLETIC TRAINING The Athletic Training Education Program is accredited by the Commission on Accreditation of Athletic Training Education (CAATE), 2201 Double Creek Drive, Suite 5006, Round Rock, TX 78864. Phone: 512-733-9700. Fax: 512-733-9701. www.caate.net

- BUSINESS The following business programs at are accredited by the Accreditation Council for Business Schools and Programs (ACBSP): Accounting (BS), Business Administration - Entrepreneurship (BS), Business Administration - International Business (BS), Business Administration - Management (BS), Business Administration - Marketing (BS), and Finance & Economics (BS). The Business Administration - Generalist degree is regionally accredited, but has been excluded from ACBSP accreditation at this time. http://www.acbsp.org/

- CHEMISTRY The Bachelor of Science in Chemistry is approved by The American Chemical Society Committee on Professional Training, 1155 Sixteenth Street, N.W., Washington, DC 20036. Phone: 202-872-4589. Fax: 202-872-6066. Email: cpt@acs.org. www.acs.org/cpt

- COMPUTER, ELECTRICAL AND MECHANICAL ENGINEERING The computer, electrical and mechanical engineering bachelor's programs are accredited by the Engineering Accreditation Commission (EAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Phone: 410-347-7700. www.abet.org
  - Engineering pass rate data: www.lssu.edu/eng/SETtransparency.php
- EDUCATOR PREPARATION The Educator Preparation Programs at Lake Superior State University are accredited by the Inquiry Brief Commission of the Council for the Accreditation of Educator Preparation (CAEP). 2010 Massachusetts Ave., NW Suite 500 Washington, DC 20036. Phone: 202-223-0077. www.caepnet.org
  - Title II Reporting: http://www.lssu.edu/education/titleII.php
    Performance Reporting: http://www.lssu.edu/education/performancereporting.php
- ENVIRONMENTAL HEALTH The Bachelor of Science in Environmental Health is accredited by:
  - National Environmental Health Science and Protection Accreditation Council (EHAC), 8620 Roosevelt Way NE Suite A, Seattle, WA 98115. Phone: 206-522-5272. Email: ehacinfo@aehap.org. www.ehacoffice.org
  - Canadian Institute of Public Health Inspectors (CIPHI) National, #720-999 W. Broadway, Vancouver, BC V5Z 1K5, (604) 739-8180. Email: questions@ciphi.ca. www.ciphi.ca
- FIRE SCIENCE The Bachelor of Science in Fire Science is approved by the International Fire Service Accreditation Congress, 1700 West Tyler, Oklahoma State University, Stillwater, OK 74078. Phone: 405-744-8303. www.ifsac.org
- MANUFACTURING ENGINEERING TECHNOLOGY The bachelor's program in Manufacturing Engineering Technology is accredited by the Engineering Technology Accreditation Commission (ETAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Phone: 410-347-7700. www.abet.org
- NURSING The Bachelor of Science in Nursing is approved by Michigan Board of Nursing and is accredited by
  - Accreditation Commission for Evaluation in Nursing (ACEN), 3343 Peachtree Road NE, Suite 500, Atlanta, GA 30326. Phone: 404-975-5000. Fax: 404-975-5020. www.acenursing.org
  - Commission on Collegiate Nursing Education (CCNE), One Dupont Circle, NW Suite 530, Washington, DC 20036. Phone: 202-887-6791. Fax: 202-887-8476. www.aacn.nche.edu/ccne-accreditation
  - Nursing home page: www.lssu.edu/programsofstudy/nursing/

Resources »

- Higher Learning Commission
- 2001 NCA Self Study
- 2011 LSSU Self-Study
- 2011 HLC Assurance Section
- LSSU Mission Statement
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MAY
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Innocademy

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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 March 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 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%
175	118	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 x 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 71 attempted credits
Pre-Nursing BSN	56	Within 84 attempted credits
Associate	62	Within 93 attempted credits
Associate Health Care Provider	75	Within 113 attempted credits
Bachelor	124	Within 186 attempted credits
Teaching Certificate	136	Within 204 attempted credits
Master's	32	Within 48 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

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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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

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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- Athletic Training: Bachelor of Science
- Biochemistry Pre-Professional: Bachelor of Science
- Biology: Bachelor of Science
- Business Administration - Bachelor of Science
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- Business Administration - International Business: Bachelor of Science
- Business Administration - Management: Bachelor of Science
- Business Administration - Marketing: Bachelor of Science
- Chemistry: Bachelor of Science
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- Computer Science: Bachelor of Science
- Conservation Biology: Bachelor of Science
- Criminal Justice - Corrections: Bachelor of Science
- Criminal Justice - Criminalistics: Bachelor of Science
- Criminal Justice - Generalist: Bachelor of Science
- Criminal Justice - Homeland Security: Bachelor of Science
- Criminal Justice - Law Enforcement: Bachelor of Science
- Criminal Justice - Law Enforcement Certification: Bachelor of Science
- Criminal Justice - Law Enforcement Certification with NRT: Bachelor of Science
- Criminal Justice - Public Safety: Bachelor of Science
- Early Childhood Education: Bachelor of Science
- Electrical Engineering: Bachelor of Science
- Electrical Engineering Technology: Bachelor of Science
- Elementary Education: Bachelor of Arts/Science
- Elementary Education: Special Education - Learning Disabilities: Bachelor of Science
- English Language and Literature: Bachelor of Arts
- Environmental Health: Bachelor of Science
- Environmental Science: Bachelor of Science
- Exercise Science: Bachelor of Science
- Finance and Economics: Bachelor of Science
- Fine Arts Studies: Bachelor of Arts
- Fire Science - Engineering Technology: Bachelor of Science
- Fire Science - Generalist: Bachelor of Science
- Fire Science - Generalist Non Certification: Bachelor of Science
- Fish Health: Bachelor of Science

- Fisheries and Wildlife Management: Bachelor of Science
- Forensic Chemistry: Bachelor of Science
- General Studies: Bachelor of Arts/Science
- Geology: Bachelor of Science
- History: Bachelor of Arts/Science
- Individualized Studies: Bachelor of Arts/Science
- Industrial Technology: Bachelor of Science
- Language Arts: Bachelor of Arts
- Literature: Bachelor of Arts
- Literature - Creative Writing: Bachelor of Arts
- Manufacturing Engineering Technology: Bachelor of Science
- Mathematics: Bachelor of Science
- Mechanical Engineering: Bachelor of Science
- Medical Laboratory Science: Bachelor of Science
- Nursing: Bachelor of Science
- Parks and Recreation: Bachelor of Science
- Physical Science: Bachelor of Science
- Political Science: Bachelor of Arts/Science
- Prelaw (non-degree)
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- Pre-Pharmacy (transfer program)
- Pre-Veterinary
- Psychology: Bachelor of Arts/Science
- Secondary Education: Bachelor of Arts/Science
- Social Science: Bachelor of Arts/Science
- Sociology: Bachelor of Arts/Science
- Sport and Recreation Management: Bachelor of Arts/Science

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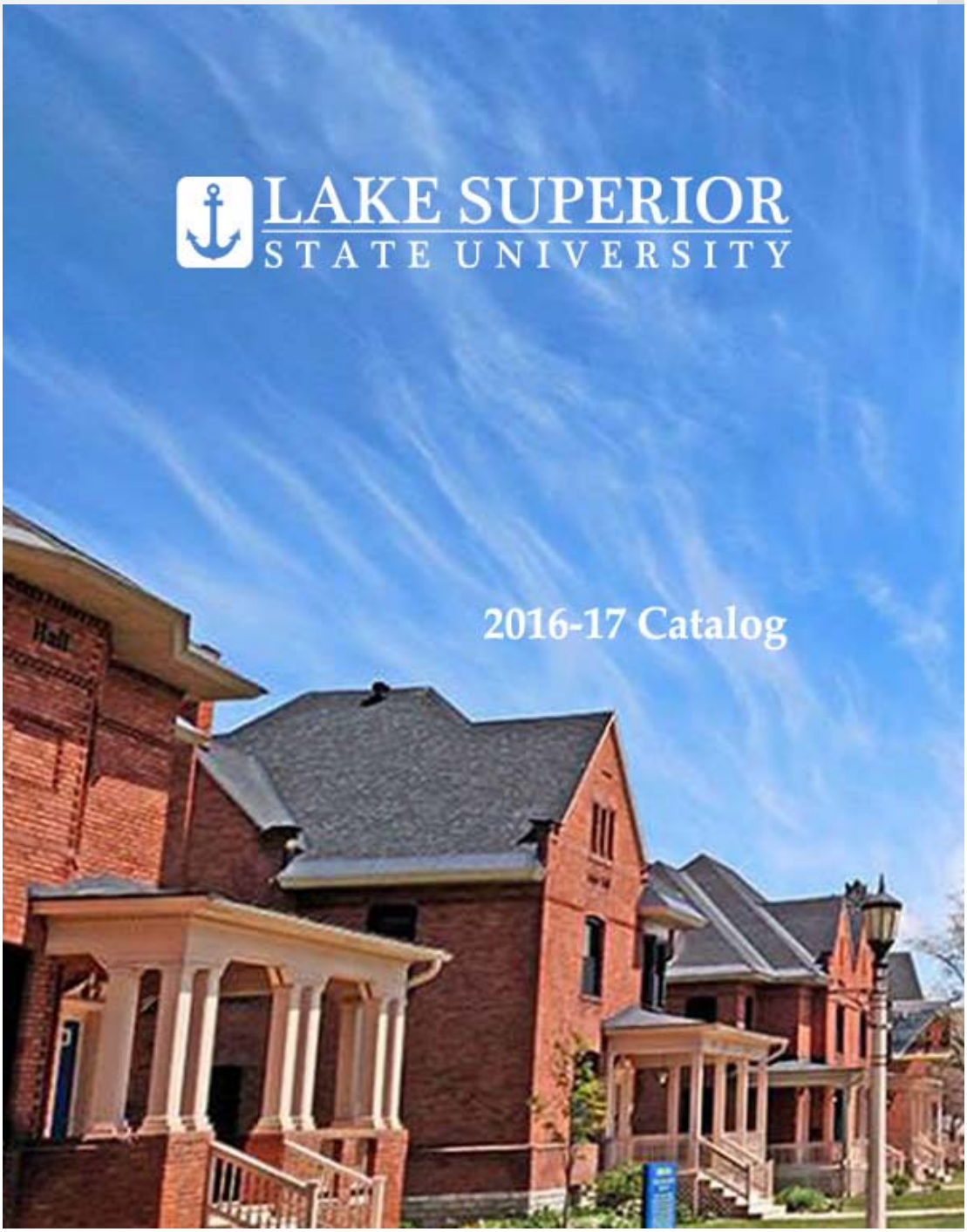
Catalog Cover



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Lake Superior State University: Academic Catalog 2016-17

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 relevent 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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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

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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 and 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.

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 or at www.els.com, 1-609-750-3500 or info@els.com.
4. APIEL - Advanced Placement English Language Test with a score of 3 or higher.
5. SAT 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/. 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

Links

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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 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 x 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

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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Scholarships, Grants, Loans

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Costs

Links

- Costs Website
- Financial Aid Website
- Business Operations Website
- Registrar's Office Website

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.

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.

Withdrawal and Refund Policy for Fall and Spring Semesters

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

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

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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Academic Services

- ALEKS
- Accessibility Services
- Audio-Visual Center
- Center for Career Development
- Computer Services (IT)
- Continuing Education
- Campus Connections, IPASS
- Academic Success Center
- Liberal Arts — Undeclared/Undecided Student Program
- Library (Kenneth J. Shouldice)
- Moodle
- Student First
- Testing Services - *includes placement testing*

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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.

- Campus Life
- Counseling Services
- Student Government
- Recognized Organizations
- Housing
- Dining Services
- Athletics
- Health Service
- Upward Bound
- 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) 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 b 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, 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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Lake Superior State University: Academic Catalog 2016-17

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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Next page: Colleges and Schools

Colleges and Schools

College of Arts & Sciences

- 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

- School of Fire Science & Emergency Services
- School of Nursing
- School of Recreation Studies & Exercise Science

Division of Professional Studies & Outreach

- Lukenda School of Business
- School of Criminal Justice
- School of Engineering & Technology

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Degree Programs

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Next page: Bachelor (Four-Year Programs)

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Programs: Associate (Two-Year Programs)

- Chemical Technology
- Chemistry
- Computer Science
- Criminal Justice-Corrections
- Criminal Justice-Homeland Security
- Criminal Justice-Law Enforcement
- Early Childhood Education
- Electrical Engineering Technology
- Fire Science
- General Engineering
- General Engineering Technology
- General Studies
- Health/Fitness Specialist
- Health Studies
- Internet/Network Specialist
- Liberal Arts
- Manufacturing Engineering Technology
- Marine Technology
- Natural Resources Technology
- Paramedic Technology
- Small Business Administration
- Social Work
- Substance Abuse Prevention and Treatment
- Technical Accounting

Previous page: Bachelor (Four-Year Programs)
Next page: Certificates (One-Year Programs)

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Certificates (One-Year Programs)

- International Studies
- Manufacturing
- Paramedic Training
- Practical Nursing

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Next page: Minors

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Programs: Minors

- Mathematics
- Mathematics - Elementary Teaching
- Mathematics - Secondary Teaching
- Mechanical Engineering
- Paramedic Technology
- Philosophy
- Political Science
- Prelaw
- Professional Communication
- Psychology
- Public Administration
- Public Relations
- Recreation Studies
- Robotics Technology
- Social Work
- Society and Environment
- Sociology - General
- Sports Marketing
- Substance Abuse Counseling
- Theatre
- Web Development

Minors require a minimum of 20 earned credits (at the 100 level or higher) with a minimum gpa of 2.00 or higher. Some minors require a higher gpa. Teaching minors require a minimum gpa of 2.70 or higher.

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Next page: University Administration

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University Administration

- Board of Trustees
- Officers of Administration
- Distinguished Teacher
- Employee of the Year
- Faculty/Staff Directory
- Emeriti Faculty
- Emeriti Staff

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Next page: 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

- USEM - University Seminar

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. Prerequistes: 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
Immunohematology
(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 1H and 13C 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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CSCI101

Introduction to Microcomputer Applications
(2,2) 3

The study of a selection of contemporary microcomputer applications, including operating systems concepts, word processing, spreadsheets, database management systems, and the Internet and World Wide Web. Brief survey of other applications, such as presentation graphics, multimedia usage and desktop publishing. Does not apply toward credit in computer science major or minor.

CSCI103
Survey of Computer Science
(2,2) 3

An introduction to the field of computer science for computer science majors. Microcomputer applications, history of computing, computer networks and the Internet, programming, hardware, theory of computation, artificial intelligence.

CSCI105
Introduction to Computer Programming
(2,2) 3

An introductory course in computer programming 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.

CSCI106
Web Page Design and Development
(2,2) 3

Topics include planning a web site starting with domain name registration and selection of hosting service providers, creating web page using HTML/XHTML and cascading styles sheets; validating web pages; using web authoring tools such as Dreamweaver; publishing web pages to a remote web server, introductory web site design, including best practices for inserting graphics, page layout, building the web site navigation and user interface, integration of third-party and Web 2.0 tools and software, implementing web and accessibility standards, ethical and legal issues such as copyright and trademarks.

CSCI107
Web Graphic Design and Development
(2,2) 3

Apply graphic design, typography, color theory, and image composition to enhance a web site. Create web graphics using Adobe Photoshop and Microsoft Expression Design. Insert graphics into web pages and publish web sites using Adobe Dreamweaver and Microsoft Expresssion Web.

CSCI121
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.

CSCI163
Troubleshooting and Repair of Personal Computers
(2,2) 3

A basic introduction to the architecture, installation, maintenance, troubleshooting and repair of personal computers. The student will learn elementary principles of electronics, magnetism and 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.

CSCI201
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.

CSCI207
Developing Multimedia and Rich Interactive Web Sites
(2,2) 3

Transform static web pages into rich media-based interactive web applications. Apply graphic design and marketing principles to design and produce audio and video components for both consumers and commercial web applications. Using Adobe Flash and Microsoft Silverlight, build rich interactive web applications. Publish web sites to a web server. Prerequisite: CSCI107 with a grade of C or better.

CSCI211
Database Applications
(3,0) 3

An introductory course in database design and implementation, using microcomputer-based relational database software. Single and multi-table databases, forms and reports, query processing, data import and export, and database-related programming. Prerequisite: CSCI105 with a grade of C or better.

CSCI221
Computer Networks
(2,2) 3

An introduction to the basic principles of computer networks and communication, exploring both the hardware necessary to support computer networks and the software needed to utilize those networks. Basic network topologies, network protocols, and local and wide-area networks. Prerequisites: CSCI103 and 105 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.

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.

CSCI323
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.

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.

CSCI341
Discrete Structures for Computer Science
(4,0) 4 alternate years

Formal logic and proof techniques; recursion, recurrence relations and combinational methods; analysis of algorithms; algebraic structures; trees and graphs; Boolean algebra and computer logic; models of computation and formal languages. Emphasis will be on applications to computer science. Prerequisites: CSCI121 with a grade of C or better, and either MATH112 or 151 with a grade of C or better.

CSCI342
Advanced Programming Techniques
(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.

CSCI348
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.

CSCI351
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.

CSCI371
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.

CSCI411
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.

CSCI412
UNIX Network Administration
(2,2) 3

Network administration how to and issues for Linux. Installation of a Linux networked system, maintenance and upgrade of a Linux installation, security issues, common scripting languages, system admin tasks, NFS, and mail systems; other UNIXes. Prerequisites: CSCI221 and 281, both with a grade of C or better.

CSCI415
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.

CSCI418
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.

CSCI419
Senior Project II
(1,4) 3

The second of a two-part sequence, CSCI419 provides students with the skills necessary for completion of their 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 deparment 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 sumitted 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, hetroscedasticity, 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-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
(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 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
(3,2) 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 devises. 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: 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) (3,0,1) 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.

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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 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 prequisites: 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 Staubi 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, bethic 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 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), 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).

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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.

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-Rieman 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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NSCI101
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.

NSCI102
Introduction to Geology
(3,2) 4

A survey course to acquaint students with the major concepts and phenomena inherent in a study of geology. It will also provide sufficient background for a better understanding of human relationships to the physical environment. Credit can be earned for only one of NSCI102, GEOL115 and 121. Prerequisite: None.

NSCI103
Environmental Science
(3,0) 3

An introduction to environmental concepts and a brief survey of environmental issues facing society. Emphasis is placed on solutions and the responsibility of the individual towards these solutions.

NSCI104

Environmental Science Laboratory
(0,2) 1

Laboratory component of environmental science. Corequisite: NSCI103.

NSCI105
Physical Geography: Earth, Sun and Weather
(3,1) 3

Study of the physical properties of the earth's surface as they relate to weather and climate. Credit for both GEOG108 and NSCI105 not permitted.

NSCI107
Physical Geography: Landforms and Soils
(3,1) 3

Study of the physical properties of the earth's surface as they relate to landforms and soils. Credit for both GEOG106 and NSCI107 not permitted.

NSCI110
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.

NSCI116
Introduction to Oceanography
(3,2) 4

A survey of the features, processes and evolution of Earth's ocean basins. The course will examine geological, physical, chemical and ecological aspects of oceanography with an emphasis on their interrelationships and their impact on humanity.

NSCI119
Descriptive Astronomy
(3,2) 4

Introductory course with a balanced, comprehensive account of contemporary astronomy with emphasis placed on the broad principles of astronomy rather than on a chronological or historical framework. Prerequisite: 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 Beavoir, 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 Diety. 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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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 enceric feeding, elemental diets, IV therapy and hyper alimentation 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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POLI110
Introduction to American Government and Politics
(4,0) 4

An introductory survey of American national government and politics.

POLI120
Introduction to Legal Processes
(3,0) 3

An introduction to the nature and characteristics of law as it operates in the United States: structure and function of the judiciary, process of litigation, influences on law, and impact and enforcement of judicial decisions.

POLI130
Introduction to State and Local Government

(4,0) 4

A study of the politics and organization of state and local governments, with an emphasis on specific policy issues such as education, criminal justice and economic development.

POLI160
Introduction to Canadian Government and Politics
(3,0) 3

An introductory survey of Canadian government and politics.

POLI201
Introduction to Public Administration
(3,0) 3

This course provides an overview of the field of public administration. It examines the types of organizations, the relation of administration to politics and public management.

POLI211
Political Science Research and Statistics
(4,0) 4

An introduction to research methods and statistical applications in political science and public administration. Among other research methods, the course examines survey research, content analysis, experimental design and analysis of existing data. Introduces students to the basics of descriptive and inferential statistics, up through correlation and regression. Prerequisite: MATH088 or equivalent/satisfactory score on ACT or Placement Exam.

POLI222
Introduction to the Legal Profession
(3,0) 3

Students will become familiar with how the law functions, how the legal profession has evolved, how to prepare for and apply to law school, how law schools differ from college (including development of various methods and techniques to study the law). In addition, students will become aware of the legal profession and its demands, opportunities, options and trends. Prerequisites: POLI110, sophomore standing and/or permission of instructor. Also listed as LAWS222.

POLI234
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.

POLI241
Introduction to International Relations
(4,0) 4

An introductory study of the factors that influence the conduct of international relations and of the various methods by which those relations are conducted. This material will then be applied to an examination of some appropriate current international controversies.

POLI247
Model United Nations
(2,0) 2

This course includes required participation in the model United Nations program, in which students represent specific countries and become familiar with their background and politics. The goal is an understanding of how the United Nations functions. May be repeated for up to a total of four credits, but no more than two credits may be counted toward a political science major or minor. Prerequisite: Permission of instructor.

POLI290
Research Topics in Political Science
(1-4,0) 1-4

This may take the form of either a research project or a program of directed reading on a specific topic. One to four credits over a period of one or two semesters may be granted according to the nature of the student's project. Prerequisite: Permission of instructor.

POLI301
Policy Analysis and Evaluation
(4,0) 4

Examines how public issues and problems are analyzed to assist in the development of public policies. Considers the process of evaluating public programs to determine whether they are to be expanded, cut back or continued at the current level. Prerequisite: Permission of Instructor.

POLI325
Politics and Media
(3,0) 3

Examines the impact of electronic and print media on contemporary American politics. Evaluates proposals for changing the method and role of media coverage of government and politics. Prerequisites: POLI110 and junior standing.

POLI331
Comparative Politics of Western Europe and Russia
(4,0) 4

Institutions and functioning of government in major European states, such as Great Britain, France, Germany and Russia. Prerequisite: POLI110.

POLI334
Middle East Politics
(3,0) 3

An examination of government and politics in the Middle East, with special emphasis on the influences of Islam and nationalism on both international and domestic

politics of the area. Prerequisite: Junior or senior standing.

POLI342
International Environmental Policy
(3,0) 3

This course is intended to familiarize students with the efforts of the international community to establish policy guidelines designed to begin the regulation of the global environment. The course covers basic concepts to international relations necessary to understand the general workings of the nation-state system. It then begins an exploration of significant historical international environmental issues and the ways in which these have been dealt with by the international community. The course further challenges students by investigating various alternative solutions for solving the myriad of global environmental problems faced by all of humankind in the new century.

POLI351
Political Philosophy I
(4,0) 4

An examination of political philosophy from the ancient Greeks through the Reformation, concentrating on Plato, Aristotle, Augustine, Aquinas and Machiavelli. Prerequisites: POLI110 and junior or senior standing.

POLI352
Political Philosophy II
(4,0) 4

An examination of political philosophy from the seventeenth century to the twentieth century, concentrating on Hobbes, Locke, Rousseau, Hume, Burke, Bentham, Mill, Hegel, and Marx. The course includes analysis of the period's main ideologies: Conservatism, liberalism, socialism, communism, anarchism, fascism and national socialism. Prerequisites: POLI110 and junior or senior standing.

POLI367
Congress and the Presidency
(4,0) 4

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

POLI401
Principles of Public Administration
(3,0) 3

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

POLI411
U.S. Foreign Policy
(3,0) 3

A study of the formulation and conduct of American foreign policy. Analysis of relevant factors, institutions which influence the formulation and conduct of policy; and an examination of selected foreign policies. Prerequisite: POLI110.

POLI413
The International Legal Order
(4,0) 4

The primary objective of this course is to explore the reasons for the emergence of the international legal order as a crucial constraint on the freedom of action of national governments; that is, to understand the impact of the international legal order on contemporary international relations. It also seeks to introduce the substance of international law in selected issue-areas, and to provide an overview of the nature of international legal reasoning. Throughout the course, we shall emphasize the interaction of law and politics, and of national and transnational legal processes. Prerequisite: POLI110.

POLI420
Politics of the World Economy
(4,0) 4

Power conflict at the international economic level and its impact on the politics of various nations, states, regions and interests. Prerequisites: POLI110 or 160, and junior standing, as well as either ECON201 or 202. POLI241 recommended but not required.

POLI463
Seminar in Political Science
(1-3,0) 1-3

A reading and discussion seminar dealing with selected topics in political science. Course may be repeated with permission of instructor. Prerequisite: Junior or senior standing.

POLI467
Constitutional Law and Civil Liberties
(4,0) 4

Principles of the American Constitution: separation of powers, federalism, the powers of the national and state governments, and limitations on the exercise of these powers as well as principles of the American Constitution respecting civil rights and liberties, The Bill of Rights, equal protection of the laws, citizenship and suffrage, and limitations on the exercise of those rights. Prerequisite: POLI120 or its equivalent.

POLI490
Independent Study in Political Science
(1-3) 1-3

Independent research or directed study under the supervision of a faculty member. May be repeated for a total of nine credits. Prerequisite: Permission of instructor.

POLI491
Senior Seminar I
(4,0) 4

The first course in a capstone sequence required of all political science majors. The course examines the history of political science and public administration and reviews contemporary approaches and recent research. Students prepare a research

proposal to be carried out in POLI492. Prerequisites: Political science major and senior standing.

POLI492
Senior Seminar II
(4,0) 4

Completion of the research project begun in POLI491. Students will make oral presentations of their project results at the end of the course to other students, faculty and invited guests. Prerequisite: POLI491.

POLI499
Political Science/Public Administration Internship
(1,9 - 27) 3-9

Students arrange, with the assistance and approval of the instructor, a supervised work experience in a governmental, community or nonprofit organization. Students perform professional tasks under the supervision of agency personnel. The students' review and evaluation of the work experience is under the direction of the instructor. Permission of the instructor required by the seventh week of the preceding semester. Course may be repeated to a maximum of nine credits.

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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.

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 2016-17

Campus Map

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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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Lake Superior State University: Academic Catalog 2016-17

University Calendar

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Accounting: Bachelor of Science

Program Description

The discipline of accounting provides financial and other information essential to the efficient conduct and evaluation of the activities of any organization. Accounting includes the development and analysis of data, the testing of its validity and relevance, and the interpretation and communication of the resulting information to intended users. Students completing the degree will be eligible to sit for various professional certification examinations. The program complies with current educational requirements for the CPA certification.

Degree Requirements

Common Professional Component (48 Credits)

- ACTG132 Principles of Accounting I 4
- ACTG133 Principles of Accounting II 4
- BUSN121 Introduction to Business 3
- BUSN211 Business Statistics 3
- BUSN231 Business Communications 3
- BUSN350 Business Law I 3
- BUSN403 Business, Government and Society 3
- BUSN466 Business Policy 3
- ECON201 Principles of Macroeconomics 3
- ECON202 Principles of Microeconomics 3
- FINC341 Managerial Finance 4
- MGMT280 Introduction Management Information Systems 3
- MGMT360 Management Concepts and Apps 3
- MGMT371 Operations/Business Analytics 3
- MRKT281 Marketing Principles and Strategy 3

Major Requirements (40 Credits)

- ACTG232 Intermediate Accounting I 4
- ACTG233 Intermediate Accounting II 4
- ACTG332 Cost Management I 4
- ACTG333 Cost Management II 4
- ACTG334 Accounting Information Systems 3
- ACTG421 Federal Taxation Accounting I 3
- ACTG422 Federal Taxation Accounting II 3
- ACTG427 Auditing 4
- ACTG432 Advanced Accounting I Consolidations 4

- ACTG433 Advanced Accounting II Governmental 4
- MATH111 College Algebra 3

Electives (8-10 Credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

ALL STUDENTS WHO WISH TO SIT FOR THE CPA EXAM must complete the 124-hour accounting degree AND take 26 additional hours of course work. Students will work with an advisor to select 26 additional hours which could be in the form of minors, selected courses in legal studies, CIS, law enforcement, internships, etc. An articulated advanced business degree may also be an option.
(MICPA Requirement)

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Athletic Training: Bachelor of Science

Program Description

LSSU's Athletic Training major is accredited by the Commission on Accreditation of Athletic Training Education (CAATE). Upon successful completion of the Athletic Training Education Program (ATEP) at LSSU students are eligible to begin the application process to sit for the national certification exam through the Board of Certification.

The ATEP at LSSU is comprised of two phases, the pre-professional phase and the professional phase. The pre-professional phase consists of the students' first two years in which the student completes University core curriculum courses and pre-requisite coursework within the athletic training curriculum to enable the student to become eligible to apply for admission into the professional phase of the program. Students then make a formal application to the ATEP.

The number of clinical sites available to the LSSU ATEP limits the number of students that can be admitted to the program on an annual basis. Students accepted into the professional phase of the ATEP will take advanced coursework and engage in supervised clinical experiences at private and university medical practices as well as LSSU athletics. Senior ATEP students are assigned to a staff ATC as they work with one of the athletic teams, and conclude their training with a 15-week internship selected in consultation with their academic advisor.

A detailed program description, competitive admission requirements and Technical Standards for Admission are provided in the Athletic Training Education Program Student Manual and on the Recreation Studies/Exercise Science Web site.

For a copy of the ATEP Student Manual or if you have further questions, please contact:

Joseph D. Susi II, Ph.D, AT, ATC
Athletic Training Education Program Director
(906) 635-2161
jsusi@lssu.edu

Degree Requirements

Program Requirements: (52 credits)

- EXER141 Introduction to Movement 3
- EXER230 Athletic Injury/Illness Prevention 3
- EXER232 Athletic Injury/Illness Recognition 3
- EXER234 Preventative Taping Techniques 1
- EXER262 Exercise Physiology I 3

- EXER268 Fitness Evaluation I 2
- EXER275 Nutrition for Sport 2
- EXER301 A.T. Clinical Experience I 2
- EXER302 A.T. Clinical Experience II 2
- EXER340 Therapeutic Modalities 3
- EXER344 Kinesiology 3
- EXER346 Therapeutic Exercise 3
- EXER349 Orthopedic Assessment 3
- EXER358 Research Methods 3
- EXER401 A.T. Clinical Experience III 2
- EXER402 A.T. Clinical Experience IV 2
- EXER428 Psychological Aspects of Exercise and Athletic Rehabilitation 3
- EXER452 Allied Health Administration 3
- EXER492 Exercise Science Internship 6

Cognate Requirements: (31 credits)

- EMED189 Medical First Responder 3
- MATH207 Statistics 3
- BIOL121 Anatomy & Physiology I 4
- BIOL122 Anatomy & Physiology II 4
- CHEM108 Applied Chemistry 3
- CHEM110 Applied Organic Biochemistry 4
- HLTH209 Pharmacology 3
- HLTH232 Pathophysiology 3
- NURS212 Health Appraisal 4

Support Electives: (9 credits)

- EXER140 Health & Fitness 3
- EXER248 Psychology of Sport and Performance and Coaching 3
- EXER265 Essentials of Strength Training and Conditioning 3
- EXER348 Fitness Evaluation II 3
- EXER362 Exercise Physiology II 3
- EXER442 Electrocardiology 2
- EXER444 Exercise Prescription 2
- EXER450 Philosophy of Human Performance and Leisure 3
- PHYS221 Elements of Physics I 4
- HLTH328 Multicultural Approaches to Health Care 3

General Electives (7 credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.50 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Biochemistry Pre-Professional: Bachelor of Science

Program Description

The Chemistry Program at Lake Superior State University is now accredited by the American Chemical Society (ACS). According to the 2011 National Occupational Employment and Wage Estimator, more people are employed as chemists and chemical technicians than in any other job classification in the life and physical science occupations (http://stats.bls.gov). With many free electives and a common general education core, a chemistry degree can also be used in combination with other majors or minors such as pre-professional (medicine, pharmacy, veterinary, law, etc.), engineering, business, biology, and many more to match student interest and career plans.

Graduates with a bachelor of science in Biochemistry Pre-Professional work in many disciplines and industries, and many proceed on to graduate school in natural sciences, medicine, law, and engineering. Internships in chemistry are encouraged where students can gain valuable real-world work experience while gaining college credit. In addition, students pursuing the ACS certified degree will participate in an applied research project in close collaboration with faculty members to address meaningful chemical-based problems. These projects, through the excellent preparation they provide our students, are often cited as important factors in successful job searches and entry into graduate programs.

The LSSU chemistry program has been approved by the American Chemical Society, and may provide certified degrees in Chemistry, Forensic Chemistry, Biochemistry Pre-Professional, and Environmental Chemistry if a student chooses this track. In addition, the BS in Chemistry Secondary Education degree may also be certified by the ACS. Graduates completing the prescribed requirements are awarded an ACS certificate signifying their completion of the approved degree and can qualify for membership in the Society upon graduation.

American Chemical Society
Committee on Professional Training
155 Sixteenth Street, N.W.,
Washington, D.C. 20036

Degree Requirements

Chemistry Degree Requirements (48 credits minimum)

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4

CHEM231 Quantitative Analysis 4
- CHEM251 Introductory Biochemistry 4
- CHEM261 Inorganic Chemistry 4
- CHEM326 Organic Chemistry II 4
- CHEM332 Instrumental Analysis 4
- CHEM353 Introductory Toxicology 3
- CHEM361 Physical Chemistry I 4
- CHEM363 Physical Chemistry Lab 1
- CHEM395 Junior Seminar 1
- CHEM452 Biochemistry II 4
- CHEM499 Senior Seminar 1

For American Chemical Society certified degree, additionally required (total lab hours must be at least 400 hours). See Department Chair for special rules regarding ACS certification:

- CHEM495 Senior Project 2

Biology Courses (16 credits)

- BIOL131 General Biology: Cells 4
- BIOL132 General Biology: Organisms 4
- BIOL220 Genetics 4
- Any BIOL 400 level course 4

Support Courses (19 credits)

- BUSN211 Business Statistics 3
  or
- MATH207 Principles of Statistical Methods 3
- MATH151 Calculus I 4
- MATH152 Calculus II 4
- PHYS231 Applied Physics I 4
- PHYS232 Applied Physics II 4

General Electives (16 credits minimun)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.50 or higher. A gpa of 2.50 or higher is also required in your Major, and a gpa of a 2.00 or higher is required in your General Education Requirements.

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Biology: Bachelor of Science

Program Description

The Bachelor of Science degree in biology combines theory and concepts of biology with intensive, hands-on experiences in our state-of-the-art laboratories and a wealth of close-by field sites. Students build on a core of biology classes by selecting the physiology and taxonomy classes and other electives that best fit their interests.

The program is an excellent preparation for biology or related careers. Our graduates are currently employed as doctors, dentists, veterinarians, biological researchers, laboratory technicians, consultants and teachers. Many careers in biology require education beyond the baccalaureate degree and LSSU's biology program has a proven record of excellent preparation for professional and graduate school.

Pre-Medical concentration - prepares students for medical, dental, optometry, podiatry, chiropractic, and physician assistant graduate studies. Biology students will work with a pre-professional advisor to select the electives best suited for the health professional program of their choice while also providing a well-rounded biology education. This program has an embedded chemistry minor that meets the requirements of most U.S. medical schools. The LSSU Biology department is recognized by all health professional schools in Michigan as a top rate biology program.

LSSU participates in the Michigan State University College of Human Medicine's Early Assurance Program. During their junior year, students who excel in the LSSU biology pre-medical program may apply to the College of Human Medicine, and selected students will be assured of admission and begin a relationship with MSU College of Human Medicine during their senior year of college.

Pre-Veterinary concentration - with an embedded chemistry minor, prepares students to enter veterinary college after graduation from LSSU. It was designed to meet the specific requirements for the Michigan State University-College of Veterinary Medicine, but our students go to vet schools all over the country, for example North Carolina State, Oklahoma State and University of Illinois. This program stresses not only academics, but also the animal care experience that is critical for gaining admission to a veterinary college.

Available degrees (see specific requirements further down the page):

- Bachelor of Science Biology
- Bachelor of Science Biology, Pre-Medical Concentration
- Bachelor of Science Biology, Pre-Veterinary Concentration

Degree Requirements

Bachelor of Science Biology

Biology Core (27 credits)

- BIOL131 General Biology: Cells 4
- BIOL132 General Biology: Organisms 4
- BIOL199 Freshman Seminar 1
- BIOL220 Genetics 4
- BIOL250 Quantitative Biology 3
- or
- MATH207 Statistics 3
- BIOL280 Biostatistics 3
- BIOL299 Sophomore Seminar 1
- BIOL337 General Ecology 3
- BIOL399 Junior Seminar 1
- BIOL495 Senior Project 2
- BIOL499 Senior Seminar 1

Physiology Elective (1 course from)

- BIOL315 Plant Physiology 4
- BIOL330 Animal Physiology 4
- BIOL421 Cell Biology 4

Taxonomy Elective (1 course from)

- BIOL202 Field Botany 3
- BIOL204 General Microbiology 4
- BIOL302 Invertebrate Zoology 3
- BIOL303 General Entomology 4
- BIOL306 Medical Mycology 3
- BIOL310 Ichthyology 3
- BIOL311 Mammalogy 3
- BIOL312 Ornithology 3
- BIOL422 Parasitology 3
- BIOL475 Aquatic Entomology 3

Biology Electives (21 credits)

A minimum of 17 credits must be from 300 or 400 level courses. At least one elective must be a 400 level class. Courses not used to satisfy the physiology or taxonomy requirement may be used as 'other' electives.

Support Courses

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Science 4
- Physical Science (CHEM, PHYS, GEOL) course with lab 4

Free Electives

A minimum of 12 free elective credits must be non-biology courses.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

Bachelor of Science Biology, Pre-Medical Concentration

Biology Core (27 credits)

- BIOL131 General Biology: Cells 4
- BIOL132 General Biology: Organisms 4
- BIOL199 Freshman Seminar 1
- BIOL220 Genetics 4
- BIOL250 Quantitative Biology 3
- or
- MATH207 Statistics 3
- BIOL280 Biometrics 3
- BIOL299 Sophomore Seminar 1
- BIOL337 General Ecology 3
- BIOL399 Junior Seminar 1
- BIOL495 Senior Project 2
- BIOL499 Senior Seminar 1

Physiology Elective (1 course from)

- BIOL330 Animal Physiology* 4
- BIOL421 Adv Cell & Molecular Biology* 4

Taxonomy Elective (1 course from)

- BIOL204 General Microbiology* 4
- BIOL306 Medical Mycology 3
- BIOL422 Parasitology 3

Other Biology (21 credits from)

- BIOL243 Vertebrate Anatomy* 4
- BIOL423 Immunology* 4
- BIOL433 Histology* 3
- BIOL285 Epidemiology 3
- BIOL332 Embryology 3
- BIOL380 Hematology 4
- BIOL406 Immunohematology 3
- BIOL420 Evolutionary Analysis 3
- BIOL425 Virology 3
- BIOL434 Histopathology 1
- BIOL455 Body Fluids Analysis 3

- BIOL480 Advanced Microbiology 4

*These courses are highly recommended by medical and dental schools in Michigan, Ontario and around the country.

A minimum of 17 credits from 300/400 level courses. At least one elective must be a 400 level class. Courses not used to satisfy the physiology or taxonomy requirement may be used as 'other' electives.

Support Courses

- PHYS221 Principles of Physics I 4
- PHYS222 Principles of Physics II 4
- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Science 4
- PSYC101 General Psychology 4
- SOCY101 Sociology 4
- HLTH328 Multicultural Approaches to Health Care 3

Chemistry Minor - Option B (22 credits)

Free Electives

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.75 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

Bachelor of Science Biology, Pre-Veterinary Concentration

Biology Core (27 credits)

- BIOL131 General Biology: Cells 4
- BIOL132 General Biology: Organisms 4
- BIOL199 Freshman Seminar 1
- BIOL220 Genetics 4
- BIOL250 Quantitative Biology 3
- or
- MATH207 Statistics 3
- BIOL280 Biometrics 3
- BIOL299 Sophomore Seminar 1
- BIOL337 General Ecology 3
- BIOL399 Junior Seminar 1
- BIOL495 Senior Project 2
- BIOL499 Senior Seminar 1

Physiology Elective (1 course from)

- BIOL330 Animal Physiology 4
- BIOL421 Adv Cell & Molecular Biology* 4

Taxonomy Elective (1 course from)

- BIOL204 General Microbiology* 4
- BIOL306 Medical Mycology 3
- BIOL422 Parasitology 3

Other Biology (21 credits from)

- BIOL243 Vertebrate Anatomy 4
- BIOL332 Embryology 3
- BIOL335 Animal Nutrition* 3
- BIOL380 Hematology 4
- BIOL405 Animal Behavior 3
- BIOL423 Immunology 4
- BIOL425 Virology 3
- BIOL426 Ecology of Animial Disease 3
- BIOL433 Histology 3
- BIOL434 Histopathology 1
- BIOL480 Advanced Microbiology 4

***These courses required by MSU-CVM.

A minimum of 17 credits from 300/400 level courses. At least one elective must be a 400 level class. Courses not used to satisfy the physiology or taxonomy requirement may be used as 'other' electives.

Support Courses

- PHYS221 Principles of Physics I 4
- PHYS222 Principles of Physics II 4
- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Science 4

Chemistry Minor - Option B (22 credits)

Free Electives

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.75 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Business Administration - Bachelor of Science

Program Description

The Business Administration degree provides students with a broad overview of business concepts, along with particular emphasis in one functional area as identified by the minor selected. The intent of this degree is to create a well-rounded graduate with a basic understanding of all aspects of a business organization, both in the office and on the workplace floor. This degree is designed specifically for individuals who acquired training at community colleges, technical institutes, industry-related schools, etc., or have several years of workplace experience, and want to continue their education in the area of business.

Degree Requirements

Common Professional Component (48 Credits)

- ACTG132 Principles of Accounting I 4
- ACTG133 Principles of Accounting II 4
- BUSN121 Introduction to Business 3
- BUSN211 Business Statistics 3
- BUSN231 Business Communications 3
- BUSN350 Business Law I 3
- BUSN403 Business, Government & Society 3
- BUSN466 Business Policy 3
- ECON201 Principles of Macroeconomics 3
- ECON202 Principles of Microeconomics 3
- FINC341 Managerial Finance 4
- MGMT280 Introduction Management Information Systems 3
- MGMT360 Management Concepts and Applications 3
- MGMT371 Operations/Business Analytics 3
- MRKT281 Marketing Principles and Strategy 3

Major Requirements (3 Credits)

- MATH111 College Algebra 3

Disciplinary Requirement: Pick one Minor from the following:

- Accounting-Finance
- Economics-Finance
- Human Resource Management

International Business
- Marketing
- Public Relations
- Sports Marketing
- Cognate of 15 or more credits approved by the Dean

*Students can not double major in discipline in which minor is selected.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Business Administration - Entrepreneurship: Bachelor of Science

Program Description

The entrepreneurship major is designed to develop students' skills so that they are both confident and competent in analyzing new business ideas; refining a vision of a new business into the kind of business plan lenders and investors are likely to approve; and, translating the business plan into the start-up, launch, daily management, and growth and exit strategies most relevant and feasible for a small business venture. The entrepreneurship major also prepares students for working within a small, entrepreneurial firm, as an employee with specific business skills tailored to the needs of the smaller firm. The study of entrepreneurship includes classes in marketing, accounting, management, and entrepreneurship, and requires an internship placement in a small firm or as an advisor to a small firm. These courses, along with the common professional business core courses, will provide students with the knowledge, training, and practical experience required to become successful small business owners, counselors, and employees.

Degree Requirements

Common Professional Component (48 Credits)

- ACTG132 Principles of Accounting I 4
- ACTG133 Principles of Accounting II 4
- BUSN121 Introduction to Business 3
- BUSN211 Business Statistics 3
- BUSN231 Business Communications 3
- BUSN350 Business Law I 3
- BUSN403 Business, Government & Society 3
- BUSN466 Business Policy 3
- ECON201 Principles of Macroeconomics 3
- ECON202 Principles of Microeconomics 3
- FINC341 Managerial Finance 4
- MGMT280 Introduction Management Information Systems 3
- MGMT360 Management Concepts and Applications 3
- MGMT371 Operations/Business Analytics 3
- MRKT281 Marketing Principles and Strategy 3

Major Requirements

- BUSN399 Internship 3
- MATH111 College Algebra 3

Minimum 21 Credits from 3 disciplines should be selected from the following list:

- ACTG334 Accounting Information Systems 3
- BUSN261 Business Skills 1
- INTB389 Competing in the Global Market Place 3
- INTB486 International Marketing 3
- MGMT365 Human Resource Management 3
- MGMT380 Principles of Leadership 3
- MGMT464 Organizational Behavior 3E
- MGMT476 Employee Training and Development 3
- MRKT283 Principles of Selling 3
- MRKT385 Services Marketing
- MRKT387 Advertising Theory and Practice 3
- MRKT388 Retail Management 3
- MRKT389 Entrepreneurship 3

Free Electives (300/400 level) to reach minimum of 124 credits from: BUSN, MRKT, MGMT, ECON, FINC, ACTG, INTB.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Business Administration - International Business: Bachelor of Science

Program Description

A major in international business is intended to develop a student's ability to meet the challenges of the global business environment. In addition to providing the fundamental foundations of all business functional areas, the major teaches the student to identify and develop appropriate solutions to situations that are unique to conducting business in the global environment. The international business major provides the student with an understanding of international business by providing upper-level courses in international economics, international marketing, cultural differences, politics and foreign languages. Students will also participate in an approved international experience which will involve either study abroad, work experiences, or internships.

Degree Requirements

Common Professional Component (48 Credits)

- ACTG132 Principles of Accounting I 4
- ACTG133 Principles of Accounting II 4
- BUSN121 Introduction to Business 3
- BUSN211 Business Statistics 3
- BUSN231 Business Communications 3
- BUSN350 Business Law I 3
- BUSN403 Business, Government & Society 3
- BUSN466 Business Policy 3
- ECON201 Principles of Macroeconomics 3
- ECON202 Principles of Microeconomics 3
- FINC341 Managerial Finance 4
- MGMT280 Introduction Management Information Systems 3
- MGMT360 Management concepts & Applications 3
- MGMT371 Operations/Business Analytics 3
- MRKT281 Marketing Principles and Strategy 3

Major Requirements (33 Credits)

- ECON408 International Economics 3
- INTB389 Competing in the Global Marketplace 3
- INTB375 International Business Law 3
- INTB420 Comparative International Management 3
- INTB486 International Marketing 3

- MATH111 College Algebra 3
- International Experience (BUSN399 or INTD310 or INTD410) 3

Regional Electives (Minimum 3-4 Credits)

Language Electives (Minimum 8 Credits)

Free Electives (300/400 level) to reach minimum of 124 credits from: BUSN, MRKT, MGMT, ECON, FINC, ACTG, INTB.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Business Administration - Management: Bachelor of Science

Program Description

The management major is designed to provide students with a broad background in business by presenting courses covering the functional areas of business. This management degree program prepares students for human resource and leadership positions in business and non-profit organizations.

Degree Requirements

Common Professional Component (48 Credits)

- ACTG132 Principles of Accounting I 4
- ACTG133 Principles of Accounting II 4
- BUSN121 Introduction to Business 3
- BUSN211 Business Statistics 3
- BUSN231 Business Communications 3
- BUSN350 Business Law I 3
- BUSN403 Business, Government & Society 3
- BUSN466 Business Policy 3
- ECON201 Principles of Macroeconomics 3
- ECON202 Principles of Microeconomics 3
- FINC341 Managerial Finance 4
- MGMT280 Introduction Management Information Systems 3
- MGMT360 Management Concepts and Applications 3
- MGMT371 Operations/Business Analytics 3
- MRKT281 Marketing Principles and Strategy 3

Major Requirements (29 Credits)

- BUSN308 Managing Cultural Differences 3
- BUSN355 Business Law II 3
- MGMT365 Human Resource Management 3
- MGMT380 Principles of Leadership 3
- MGMT451 Labor Law 4
- MGMT464 Organizational Behavior 3
- MGMT469 Collective Bargaining 3
- MGMT476 Employee Training Development 4
- MATH111 College Algebra 3

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Business Administration - Marketing: Bachelor of Science

Program Description

The marketing major is designed to prepare students for the many opportunities in the field of marketing. The study of marketing includes marketing principles, principles of selling, retail management, consumer behavior, advertising theory and practice, marketing management, sales force management, marketing research and international marketing. These courses, along with the common professional business core courses, are designed to provide our students with the appropriate knowledge and skills to understand the function of marketing in the firm and in society and to be effective decision makers.

Degree Requirements

Common Professional Component (48 credits)

- ACTG132 Principles of Accounting I 4
- ACTG133 Principles of Accounting II 4
- BUSN121 Introduction to Business 3
- BUSN211 Business Statistics 3
- BUSN231 Business Communications 3
- BUSN350 Business Law I 3
- BUSN403 Business, Government & Society 3
- BUSN466 Business Policy 3
- ECON201 Principles of Macroeconomics 3
- ECON202 Principles of Microeconomics 3
- FINC341 Managerial Finance 4
- MGMT280 Introduction Management information systems 3
- MGMT360 Management Concepts and Applications 3
- MGMT371 Operations/Business Analytics 3
- MRKT281 Marketing Principles and Strategy 3

Major Requirements (Minimum 30 Credits)

- MRKT381 Consumer Behavior 3
- MRKT480 Marketing Research 3
- MRKT481 Marketing Management 3
- MATH111 College Algebra 3
- Four Marketing Electives* 12
- Two Business Electives ** 6-8

*Electives in Marketing, INTB486, or COMM320

**Electives in 300/400 level courses in BUSN, MGMT, ECON, FINC, ACTG, INTB.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Chemistry: Bachelor of Science

Program Description

The Chemistry Program at Lake Superior State University is now accredited by the American Chemical Society (ACS). According to the 2011 National Occupational Employment and Wage Estimator, more people are employed as chemists and chemical technicians than in any other job classification in the life and physical science occupations (http://stats.bls.gov). With many free electives and a common general education core, a chemistry degree can also be used in combination with other majors or minors such as pre-professional (medicine, pharmacy, veterinary, law, etc.), engineering, business, biology, and many more to match student interest and career plans.

Graduates with a bachelor of science in chemistry work in many disciplines and industries, and many proceed on to graduate school in natural sciences, medicine, law, and engineering. Internships in chemistry are encouraged where students can gain valuable real-world work experience while gaining college credit. In addition, students pursuing the ACS certified degree will participate in an applied research project in close collaboration with faculty members to address meaningful chemical-based problems. These projects, through the excellent preparation they provide our students, are often cited as important factors in successful job searches and entry into graduate programs.

The LSSU chemistry program has been approved by the American Chemical Society, and may provide certified degrees in Chemistry, Forensic Chemistry, Biochemistry Pre-Professional, and Environmental Chemistry if a student chooses this track. In addition, the BS in Chemistry Secondary Education degree may also be certified by the ACS. Graduates completing the prescribed requirements are awarded an ACS certificate signifying their completion of the approved degree and can qualify for membership in the Society upon graduation.

American Chemical Society
Committee on Professional Training
155 Sixteenth Street, N.W.,
Washington, D.C. 20036

Available degrees (see specific degree requirements further down the page):

- Bachelor of Science Chemistry
- Bachelor of Science Chemistry, Secondary Teaching

Degree Requirements

Bachelor of Science Chemistry

Chemistry Degree Requirements (57 credits minimum)

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
- CHEM231 Quantitative Analysis 4
- CHEM261 Inorganic Chemistry 4
- CHEM310 Applied Spectroscopy 4
- CHEM326 Organic Chemistry II 4
- CHEM332 Instrumental Analysis 4
- CHEM351 Introductory Biochemistry 4
- CHEM361 Physical Chemistry I 4
- CHEM362 Physical Chemistry II 3
- CHEM363 Physical Chemistry Lab 1
- CHEM395 Junior Seminar 1
- CHEM461 Advanced Inorganic Chemistry 3
- CHEM462 Advanced Inorganic Chemistry Lab 1
- CHEM495 Senior Project 2
- CHEM499 Senior Seminar 1
- CHEM Electives 300 level or higher (3 cr min)

Support Courses (19-20 credits)

- BUSN211 Business Statistics 3
  or
- MATH207 Principles of Statistical Methods 3
- MATH151 Calculus I 4
- MATH152 Calculus II 4
  or
- MATH112 Calculus for Business & Life Science I 4
- EGNR140 Linear Algebra Num Meth Engineers 2
- EGNR245 Calculus App for Technology 3
- Two semesters of college physics with laboratory (8 cr min)

General Electives (24 credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.50 or higher. A gpa of 2.50 or higher is also required in your Major, and a gpa of 2.00 is required in your General Education Requirements.

Bachelor of Science Chemistry, Secondary Teaching

Chemistry Requirements (44 credits)

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
- CHEM231 Quantitative Analysis 4

- CHEM261 Inorganic Chemistry 4
- CHEM326 Organic Chemistry II 4
- CHEM332 Instrumental Analysis 4
- CHEM351 Introduction to Biochemistry 4
- CHEM361 Physical Chemistry I 4
- CHEM362 Physical Chemistry II 4
- CHEM363 Physical Chemistry Lab 1
- CHEM395 Junior Seminar 1
- CHEM499 Senior Seminar 1

For American Chemical Society certified degree, additionally required (total lab hours must be at least 400 hours). See Department Chair for special rules regarding ACS certification:

- CHEM Elective 300 or higher (3 cr min)
- CHEM495 Senior Project 2

Complete one methods course from the following:

- EDUC443 Science Methods for Secondary Teachers 3 **or**
- EDUC453 Directed Study in Science Methods 3

Support Courses (19 credits)

- MATH151 Calculus I 4
- MATH152 Calculus II 4
- BUSN211 Business Statistics 3 **or**
- MATH207 Principles of Statistical Methods 3
- PHYS221 Principles of Physics I 4 **or**
- PHYS231 Appl Phys Engineer/Scientist I 4
- PHYS222 Principles of Physics II 4 **or**
- PHYS232 Appl Phys Engineer/Scientist II 4

Secondary Teaching Certification

To be recommended for secondary teacher certification, students must complete an approved minor in a second teachable subject.

Professional Education Requirements and Education Cognates- see Secondary Education.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.70 or higher. A gpa of 2.70 or higher is also required in your Major, and a gpa of 2.00 or higher is required in your General Education Requirements.

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Lake Superior State University: Academic Catalog 2016-17

Communication: Bachelor of Arts

Program Description

The communication and theatre program offers versatility, nationally award-winning faculty, and excellent preparation for a career or graduate education.

The variety of elective choices allows for program adaptability to better meet future career goals. Culminating in a capstone experience of a communication internship or independent research project, the program provides a blend of theoretical and practical knowledge and experience necessary for success in the communication arts.

Degree Requirements

Majors in communication must complete one minor in an area to be approved by the chair of the department.

Required Courses (24-25 credits)

- COMM101 Fundamentals of Speech, Communication 3
- COMM201 Small Group Communication 3
- COMM225 Interpersonal Communication 3
- COMM280 Understanding Mass Media 3
- COMM307 Classical/Contemporary Rhetoric 3
- COMM308 Communication Theory 3
- COMM399 Internship in Communication** 3
  or
- COMM490 Senior Directed Study** 3-4
- THEA251 History of Drama and Theatre I* 3
  or
  THEA252 History of Drama and Theatre II* 3

Select Additional Elective Courses (39 credits)

- ENGL306 Technical Writing 3
- HUMN256 Introduction to Film: Images of Our Culture 3
- COMM399 Internship in Communication** 3
  or
- COMM490 Senior Directed Study** 3-4
- THEA161 Problems in Speech/Drama 1-3
- COMM210 Business and Professional Speaking 3
- THEA251 History of Drama and Theatre I* 3
  or

- THEA252 History of Drama and Theatre II*3
- COMM302 Argumentation and Advocacy 3
- THEA309 Speech and Drama Productions 3
- COMM320 Public Relations 3
- COMM325 Organizational Communication 3
- THEA333 Studies in the Drama: the Genre and Theatre in Context 3
- COMM416 Communication in Leadership 3

A minimum of 12 hours must be from 300 or 400 level courses.
**may select one class for required class and one for elective.*
***may select one class for required class and one for elective.*

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

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.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Computer Engineering: Bachelor of Science

Program Description

LSSU's Computer Engineering program has been designed to put you in the high-demand computer market with the potential for good career growth. This accredited* program blends practical computer science courses in computer organization, databases, operating systems, and networks with traditionally hands-on electrical engineering courses in digital circuits, digital system, microcontrollers, computer programming, and digital signal processing. This combination gives you a broad-based education that ties software to hardware and theory to application. Some of the program highlights are:

- The program provides an excellent mix of theory and practical laboratory experiences, preparing you to solve real-world problems.
- For your senior year experience, choose from opportunities in cooperative education, industry-based projects or research projects.
- Engineering courses begin in your freshman year.
- Opportunities exist for you to work with faculty on current undergraduate research projects.
- You will study assembly language programming, computer architecture, microcontroller hardware and software, databases, digital signals and systems, and networking.
- Concentrations available in robotics and automation and sustainable Energy.

Cooperative Education

Opportunities are available as part of this program for students who are academically qualified. A certificate that documents this practical training is available.

Degree Requirements

Departmental Requirements:

Mathematics

- MATH151 Calculus I 4
- MATH152 Calculus II 4
- MATH251 Calculus III 4
- MATH308 Probability and Mathematical Statistics 3
- MATH310 Differential Equations 3

Sciences

- CHEM115 General Chemistry I 5

- PHYS231 Applied Physics for Engineers and Scientists I 4
- PHYS232 Applied Physics for Engineers and Scientists II 4

Computer Science

- CSCI105 Intro. to Computer Programming 3
- CSCI121 Principles of Programming 4
- CSCI201 Data Structures and Algorithms 4
  or
  CSCI221 Computer Networks 3
- CSCI341 Discrete Structures for Computer Science 4

Engineering

- EGEE125 Digital Fundamentals 4
- EGEE210 Circuit Analysis 4
- EGEE250 Microcontroller Fundamentals 4
- EGEE280 Introduction to Signal Processing 5
- EGEE320 Digital Design 4
- EGEE355 Microcontroller Systems 4
- EGEE370 Electronic Devices 4
- EGEE425 Digital Signal Processing 3
- EGNR101 Introduction to Engineering 2
- EGNR140 Linear Algebra and Numerical Methods for Engineers 2
- EGNR340 Advanced Numerical Methods for Engineers 1
- EGNR346 Probability and Statistics Lab for Engineers 1

Technical Electives (Minimum 13 Credits):

For students obtaining a concentration, the concentration electives must meet the requirements listed below. Otherwise, all 13 technical elective credits may be selected from the list of technical electives.

- CSCI281 Intro to UNIX and Networking (or higher level CSCI) 3
- EGEE310 Network Analysis (or higher level EGEE) 3
- EGEM220 Statics 3
- EGME275 Engineering Materials (or higher level EGME) 3
- EGET310 Electronic Manufacturing Processes 4
- EGRS365 Programmable Logic Controllers 3
- EGRS460 Control Systems 4
- MATH215 Fund Concepts of Mathematics (or higher level MATH) 3
- or any course from the listed concentrations

Robotics and Automation Concentration (C or better grade required for all courses)

- EGRS385 Programmable Logic Controllers 3
- EGRS430 Systems Integration and Machine Vision 4
- EGRS435 Automated Manufacturing Systems 4

Sustainable Energy Concentration (C or better grade required for all courses)

- EGNR261 Energy Systems and Sustainability 3

EGNR361 Energy Systems and Sustainability Lab 1

Complete two courses from:

- EGEE330 Electro-Mechanical Systems 4
- EGEE411 Power Distribution and Transmission 3
- EGEE475 Power Electronics 4
- EGNR362 Vehicle Energy Systems 3

Senior Sequence (Complete one of the following sequences):

Industrial Project

- EGNR491 Engineering Design Project I 3
- EGNR495 Engineering Design Project II 3

Cooperative Project

- EGNR250 Cooperative Education 2
- EGNR450 Cooperative Education Project I 4
- EGNR451 Cooperative Education Project II 3
- EGNR491 Engineering Design Project I 3

Research Project

- EGNR260 Engineering Research Methods 2
- EGNR460 Engineering Research Project I 4
- EGNR461 Engineering Research Project II 2

32 credits from Mathematics (including EGNR340) and Natural Sciences is required.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Computer Networking: Bachelor of Science

Program Description

This degree gives students the knowledge and tools necessary to be successful in the field of computer networking. Courses cover a range of networking topics, including network operating systems, hardware, web page design, and system administration.

Students will have hands-on experience with Linux, Novell and Windows platforms, as well as networking hardware and operating system installation.

Some of the highlights of the program are:

- Students get hands-on training in networking hardware and software, and receive the necessary concepts of hardware, software and network operating systems.
- Students are prepared to take industry-standard examinations, such as those established by Cisco, Novell and Microsoft.
- Students can choose software design, research, or co-operative education as their senior capstone experience.

Available degrees (see specific degree requirements further down the page):

- Bachelor of Science Computer Networking
- Bachelor of Science Computer Networking, Web Development Concentration

Degree Requirements

Bachelor of Science Computer Networking

Departmental Requirements (59 credits)
Departmental GPA must be 2.50 or higher

- CSCI103 Survey of Computer Science 3
- CSCI105 Intro. to Computer Programming 3
- CSCI106 Web Page Design and Development 3
- CSCI121 Principles of Programming 4
- CSCI163 Troubleshooting & Repair of Personal Computers 3
- CSCI211 Database Applications 3
- CSCI221 Computer Networks 3
- CSCI248 Network Operating Systems I 3
- CSCI263 Managing Computer Security 3
- CSCI281 Intro. to UNIX and Networking 3
- CSCI292 Computer Networking Project 4

- CSCI323 Routers and switches 3
- CSCI348 Network Operating Systems II 3
- CSCI351 Mobile Applications Development 3
- CSCI371 Multi-Platform Application Development 3
- CSCI412 UNIX System Administration 3
- CSCI418 Senior Project I 3
- CSCI419 Senior Project II 3
- CSCI422 Network and Computer Security 3

Support Courses (12 credits)

- BUSN121 Introduction to Business 3
- BUSN231 Business Communications 3
- MATH111 College Algebra 3
- MATH207 Princ. of Statistical Methods 3
- ENGL306 Technical Writing 3

Free Electives (17 -20)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.50 or higher is required in your Major, and a gpa of 2.00 or higher is required in your General Education Requirements.

Bachelor of Science Computer Networking, Web Development Concentration

Departmental Requirements (64 credits)
Departmental GPA must be 2.50 or higher

- CSCI103 Survey of Computer Science 3
- CSCI105 Intro. to Computer Programming 3
- CSCI106 Web Page Design and Development 3
- CSCI107 Web Graphic Design and Development 3
- CSCI121 Principles of Programming 4
- CSCI207 Developing Multimedia and Rich Interactive Web Sties 3
- CSCI211 Database Applications 3
- CSCI221 Computer Networks 3
- CSCI248 Network Operating Systems I 3
- CSCI263 Managing Computer Security 3
- CSCI275 Web Server Administration 3
- CSCI281 Intro. to UNIX and Networking 3
- CSCI292 Computer Networking Project 4
- CSCI325 Developing Web Applications with JavaScript and PHP 3
- CSCI326 Developing Web Applications with ASP.NET 3
- CSCI351 Mobile Applications Development 3
- CSCI371 Multi-Platform Application Development 3
- CSCI412 UNIX Network Administration 3
- CSCI348 Networking Operating Systems II 3

or

- CSCI422 Network and Computer Security 3
- CSCI418 Senior Project I 3
- CSCI419 Senior Project II 3

Support Courses (12 credits)

- BUSN121 Introduction to Business 3
- BUSN231 Business Communications 3
- MATH111 College Algebra 3
- MATH207 Princ. of Statistical Methods 3

Free Electives (14-17)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.50 or higher is required in your Major, and a gpa of 2.00 or higher is required in your General Education Requirements.

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Computer Science: Bachelor of Science

Program Description

This degree provides a solid background in computer science with supporting coursework in applied mathematics and business. Adding an appropriate minor field of study can complement the program, as well as give the graduate a competitive edge in the work force.

Degree Requirements

Departmental Requirements (62 credits). Departmental GPA minimum of 2.50 or higher.

- CSCI103 Survey of Computer Science 3
- CSCI105 Intro. to Computer Programming 3
- CSCI121 Principles of Programming 4
- CSCI201 Data Structures and Algorithms 4
- CSCI211 Database Applications 3
- CSCI221 Computer Networks 3
- CSCI263 Managing Computer Security 3
- CSCI291 Computer Science Project 4
- CSCI321 Computer Graphics 3
- CSCI325 Web Applications w PHP & Javascript 3
  or
- CSCI326 Web Applications w ASP.NET 3
- CSCI341 Discrete Structures for Computer Science 4
- CSCI342 Advanced Programming Techniques 4
- CSCI351 Mobile Applications Development 3
- CSCI371 Multi-Platform Application Development 3
- CSCI411 Adv Database & Project Management 3
- CSCI415 Computer Organization & Architecture 3
- CSCI434 Operating Systems Concepts 3
- CSCI418 Senior Project I 3
- CSCI419 Senior Project II 3

Mathematics Requirements (10 credits)

- MATH131 College Trigonmetry 3
- MATH112 Calculus for Business & Life Science 4
  or
- MATH151 Calculus I 4
- MATH207 Prin. of Statistical Methods 3

Other Requirements (6 credits)

- BUSN121 Introduction to Business 3
- ENGL306 Technical Writing 3

Free Electives (13-16 credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.50 or higher is required in your Major, and a gpa of 2.00 or higher is required in your General Education Requirements.

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Conservation Biology: Bachelor of Science

Program Description

The BS in Conservation Biology prepares students for careers whose goal is to solve a wide range of environmental challenges such as invasive species, altered landscapes, species extinctions, or the restoration of degraded aquatic and terrestrial ecosystems. Our selection of rigorous field based courses in watersheds, soils, forestry, ecology (general, fish, wildlife or plant), and organisms (mammalogy, ornithology, ichthyology, or entomology) offers a strong set of foundational courses in the natural sciences. Combining this coursework with interdisciplinary courses and GIS technology adds the breadth needed to formulate sustainable solutions to local, regional and global conservation challenges. Electives allow students to tailor the program to their interests and career goals. Students may choose as a capstone experience, a summer semester internship working in a professional capacity in conservation biology or a senior thesis research project. Students will be prepared for careers or for graduate work in conservation biology or a broad range of related areas.

The Human Dimensions Concentration prepares students for careers in global, national and community conservation advocacy programs including environmental outreach and policy development and communication. This multi-disciplinary program combines a strong core in the biological sciences with classes in geographic information science, communications, business and economics, and political science. The program is flexible, allowing students to select classes that best match their educational and career goals. Students conclude their program by completing a conservation related service learning project for a conservation organization, unit of government, or business (e.g., land conservancies, Michigan Department of Environmental Quality, watershed organizations, zoos and aquariums).

Available degrees (see specific degree requirements further down on page):

- Bachelor of Science Conservation Biology
- Bachelor of Science Conservation Biology, Human Dimensions Concentration

Degree Requirements

Bachelor of Science Conservation Biology

Departmental Requirements

- BIOL126 Interpretation of Maps & Aerial Photos 2
- BIOL131 General Biology: Cells 4

- BIOL132 General Biology: Organisms 4
- BIOL199 Freshman Seminar 1
- BIOL203 Fundamentals of Natural Resources 3
- BIOL220 Genetics 4
- BIOL230 Introduction to Soil Science 4
- BIOL250 Quantitative Biology 3
- BIOL280 Biometrics 3
- BIOL284 Principles of Forest Conservation 4
- BIOL286 Principles of Watersheds 3
- BIOL287 Conservation Biology 3
- BIOL299 Sophomore Seminar 1
- BIOL304 The Human Environment 3
- BIOL337 General Ecology 3
- BIOL420 Evolutionary Analysis 3
- BIOL470 Restoration Ecology 3
- BIOL499 Senior Seminar 1

Support Courses

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- EVRN131 Introduction to GIS and GPS 3
- EVRN231 Intermediate GIS 3
- EVRN311 Environmental Law 3
- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Science 4

Global Perspective - Select 1 course from:

- ECON307 Environmental Economics 3
- SOCY227 Population and Ecology 3
- POLI342 International Environmental Policy 3
- Study Abroad 3+

Internship Option

- BIOL398 Planning Experiential Learning Project 1
- BIOL497 Internship in Conservation Biology 3

or

Research Option

- BIOL399 Junior Seminar 1
- BIOL495 Senior Project 2

Free Electives (13-14 credits) At least 6 elective credits must be from courses at the 300 level or higher.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education

Requirements.

Bachelor of Science Conservation Biology, Human Dimensions Concentration

Departmental Requirements

- BIOL126 Intrepretation of Maps & Aerial Photos 2
- BIOL131 General Biology I 4
- BIOL132 General Biology II 4
- BIOL199 Freshman Seminar 1
- BIOL203 Fundementals of Natural Resources 3
- BIOL220 Genetics 4
- BIOL230 Introduction to Soil Science 4
- BIOL250 Quantitative Biology 3
- BIOL280 Biometrics 3
- BIOL284 Principles of Forest Conservation 4
- BIOL286 Principles of Watersheds 3
- BIOL287 Conservation Biology 3
- BIOL299 Sophomore Seminar 1
- BIOL304 The Human Environment 3
- BIOL337 General Ecology 3
- BIOL420 Evolutionary Analysis 3
- BIOL470 Restoration Ecology 3
- BIOL499 Senior Seminar 1

Support Courses

- CHEM115 General Chemistry I 5
- EVRN131 Introduction to GIS and GPS 3
- EVRN231 Intermediate GIS 3
- EVRN311 Environmental Law 3
- MATH111 College Algebra 3

Marketing & Management* - 1 course from:

- MGMT360 Management Concepts & Applications 3
- MRKT281 Marketing Principles & Strategies 3
- MRKT385 Services Marketing 3

Political Science* - 1 course from:

- POLI130 Introduction State & local Government 4
- POLI201 Public Administration 3

Communication* - 1 course from:

- COMM280 Understanding Mass Media 3
- COMM302 Argumentation & Advocacy 3
- COMM320 Public Relations 4

- COMM416 Communication in Leadership 3

Global Perspective* - 1 course from:

- ECON307 Environmental Economics 3
- SOCY227 Population and Ecology 3
- POLI342 International Environmental Policy 3
- Study Abroad 3+

***At least 2 of the designated electives must be 300 or 400 level**

Internship Option

- BIOL398 Planning Experiential Learning Project 1
- BIOL497 Internship in Conservation Biology 3

or

Research Option

- BIOL399 Junior Seminar 1
- BIOL495 Senioor Project 2

Free Electives (13 - 14 credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Criminal Justice - Corrections: Bachelor of Science

Program Description

This emphasis is designed for students preparing for professional positions in adult and juvenile correctional facilities, probation, parole and the prevention, treatment, and control of both youthful and adult offenders. The emphasis is designed to provide the student with all of the varied functions of the corrections field. Students in this emphasis will have the educational requirements for corrections officers as established by the Michigan Corrections Officers' Training Council.

Degree Requirements

Major Requirements (46 credits)

- CJUS101 Intro. to Criminal Justice 3
- CJUS102 Police Process 3
- CJUS110 Introduction to Corrections 3
- CJUS130 Client Relations in Corrections 3
- CJUS140 Correctional Client Growth and Development 3
- CJUS220 Institutional Corrections 3
- CJUS240 Community Based Corrections 3
- CJUS250 Correctional Law 3
- CJUS319 Substantive Criminal Law 3
- CJUS321 Ethical Issues in Public Safety 3
- CJUS330 Correctional Casework 3
- CJUS355 Juvenile Justice 3
- CJUS401 Senior Seminar 3
- CJUS402 Criminal Justice Internship 3-9

Statistics: Choose one of the following:

- BUSN211 Business Statistics 3
- CJUS345 Statistics and Design for Public Safety 4
- MATH207 Principles of Statistical Methods 3
- POLI211 Political Science Research and Statistics 4
- PSYC210 Statistics 3
- SOCY302 Statistics for Social Science 4

Support Courses (20 credits)

- POLI110 Intro. to American Government & Politics 4

- POLI120 Intro. to Legal Processes 3
- PSYC101 Introduction to Psychology 4
- PSYC259 Abnormal Psychology 3
- SOCY214 Criminology 3
- Approved Diversity Course 3

Minor/Concentration (20 credits)

Students may complete an approved minor. This may be an approved minor other than Corrections, or, you may develop an approved concentration in one or more disciplines with the approval of your academic advisor.

Electives (10 credits)

A minimum of 24 credits of 300/400 level CJUS coursework is required for graduation.

Canadian students may substitute CJUS202 for CJUS319 and POLI160 for POLI110.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Criminal Justice - Criminalistics: Bachelor of Science

Program Description

This emphasis is designed for students preparing for professional positions with state, federal or private crime labs. This emphasis provides the student with the knowledge and skills needed to be a field investigator/re-constructionist or a lab technician. This emphasis incorporates courses from criminal justice and chemistry to achieve the needed education. This emphasis allows students to obtain a chemistry minor as part of their degree. This emphasis also includes all of the required courses to allow students to attend the LSSU Skills Completion Academy which in combination allows students to be licensed by the Michigan Commission on Law Enforcement Standards (MCOLES). Students who graduate from this program and successfully complete the State Licensing exam are qualified for direct placement in Michigan police agencies. Many out of state agencies also recognize the MCOLES academy training.

Degree Requirements

Major Requirements (84-85 Credits)

- CJUS101 Intro. to Criminal Justice 3
- CJUS102 Police Process 3
- CJUS197 Physical Fitness for Public Safety* 2
- CJUS201 Firearms Training 1
- CJUS243 Investigation 3
- CJUS319 Substantive Criminal Law 3
- CJUS321 Ethical Issues in Public Safety 3
- CJUS401 Senior Seminar 3
- CJUS402 Criminal Justice Internship 3-9
- CJUS409 Procedural Criminal Law 3
- CJUS411 Police Operations*** 5
- CJUS444 Criminalistics 4
- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
- CHEM226 Organic Chemistry II 4
- CHEM231 Quantitative Analysis 4
- CHEM251 Introductory Biochemistry 4
- CHEM332 Instrumental Analysis 4
- EMED189 Medical First Responder 3
- MATH112 Calculus for Business & Life Sciences** 4

- PHYS221 Principles of Physics I 4
- PHYS222 Principles of Physics II 4

Statistics: Choose one of the following:

- CJUS345 Statistics and Design for Public Safety 4
- MATH207 Principles of Statistical Methods 3
- PSYC210 Statistics 3
- SOCY302 Statistics for Social Science 4

Support Courses (17 cr)

- POLI110 Intro. to American Government and Politics 4
- PSYC101 Intro. to Psychology 4
- POLI120 Introduction Legal Processes 3
- PSYC259 Abnormal Psychology 3
- SOCY214 Criminology 3

**Repeated twice*
***or MATH151*
****Complete CJUS411 for certification. Non-certification majors will complete CJUS313.*
Canadian students may substitute POLI160 for POLI110.
Canadian students do not take CJUS197 or EMED189. These are replaced by advisor-approved electives.
Canadian students may substitute CJUS202 and CJUS406 for CJUS319 and CJUS409.

MCOLES Certification: Students complete CJUS197 (2 cr), CJUS409, CJUS411, CJUS444, and EMED189. These six courses are required by the Michigan Commission on Law Enforcement Standards to be taken by students during their last year at LSSU. CJUS197 will be taken both semesters. In addition, students desiring MCOLES certification must also complete a summer Skills Completion program. See the MCOLES Director for details.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Criminal Justice - Generalist: Bachelor of Science

Program Description

This emphasis provides a broad understanding of the major components of the criminal justice system. This emphasis is designed to allow the student flexibility in the variety of criminal justice courses selected. Students in this emphasis can customize their educational experience by their course choices. This emphasis prepares students for a variety of occupations within the criminal justice system. Students may also pursue a graduate degree or other professional study.

Degree Requirements

Major requirements (44-45 credits)

- CJUS101 Intro. to Criminal Justice 3
- CJUS102 Police Process 3
- CJUS110 Introduction to Corrections 3
- CJUS321 Ethical Issues in Public Safety 3
- CJUS401 Senior Seminar 3
- CJUS Electives 26

(24 credits of Criminal Justice Coursework must be 300/400 level)

Statistics: Choose one of the following:

- BUSN211 Business Statistics 3
- CJUS345 Statistics and Design for Public Safety 4
- MATH207 Principles of Statistical Methods 3
- POLI211 Political Science Research and Statistics 4
- PSYC210 Statistics 3
- SOCY302 Statistics for Social Science 4

Support courses (20 credits)

- POLI110 Intro. to American Government and Politics 4
- POLI120 Legal Processes 3
- PSYC101 Intro. to Psychology 4
- PSYC259 Abnormal Psychology 3
- SOCY214 Criminology 3
- Approved Diversity Course 3

Electives (31 credits)

Canadian students may substitute POLI160 for POLI110.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Criminal Justice - Homeland Security: Bachelor of Science

Program Description

This emphasis provides students with the knowledge and skills needed to be employed by local, state, and federal agencies. This emphasis prepares students for careers in law enforcement and investigation with agencies such as Customs and Border Protection (CBP), Department of Homeland Security (DHS), Immigration and Customs Enforcement (ICE), municipal, county and/or state emergency management, Environmental Protection Agency (EPA), Internal Revenue Service, Transportation Security Administration (TSA), US Secret Service and numerous other agencies. This emphasis prepares students for administrative and management positions in their chosen field.

Degree Requirements

Major Requirements (60 Credits)

- CJUS101 Introduction to Criminal Justice 3
- CJUS103 Introduction to Terrorism and Homeland Security 3
- CJUS203 Cyberterrorism 3
- CJUS204 Domestic and International Terrorism 3
- CJUS243 Investigation 3
- CJUS303 Critical Infrastructure Protection 3
- CJUS313 Crisis Intervention and Deviant Behavior 3
- CJUS319 Substantive Criminal Law 3
  or
  CJUS202 Canadian Criminal Law 3
- CJUS321 Ethical Issues in Public Safety 3
- CJUS325 Homeland Security and Emergency Services 3
- CJUS444 Criminalistics 4
- CJUS401 / FIRE401 Senior Seminar 3
- CJUS402 Criminal Justice Internship3-9
  or
  FIRE403 Fire Science Internship 3-9
- FIRE101 Introduction to Fire Science 3
- FIRE102 Wildland and Rural Fire Control 3
- FIRE111 Hazardous Materials 3
- FIRE312 Hazardous Materials Management 4
- POLI201 Introduction to Public Administration 4
  or

- POLI241 Introduction to International Relations 4

Statistics: Choose one of the following:

- BUSN211 Business Statistics 3
- CJUS345 Statistics and Design for Public Safety 4
- MATH207 Principles of Statistical Methods 3
- POLI211 Political Science Research and Statistics 4
- PSYC210 Statistics 3
- SOCY302 Statistics for Social Science 4

Support Courses (18 Credits)

- POLI110 Introduction to American Government and Politics 4
- POLI130 Introduction to State and Local Government 4
- PSYC101 Introduction to Psychology 4
- PSYC259 Abnormal Psychology 3
- SOCY214 Criminology 3

Electives (6-10 Credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Criminal Justice - Law Enforcement: Bachelor of Science

Program Description

This emphasis provides students with the knowledge and skills needed to be employed as a law enforcement officer. This emphasis prepares students for a career in law enforcement and possible future promotion to supervisory and adminstrative positions with local, state, and federal agencies. This emphasis does not have the Michigan Commission on Law Enforcement Standards (MCOLES) requirements.

Degree Requirements

Major Requirements (48 credits)

- CJUS101 Intro. to Criminal Justice 3
- CJUS102 Police Process 3
- CJUS110 Introduction to Corrections 3
- CJUS201 Firearms Training 1
- CJUS206 Law Enforcement/Loss Control Internship 3
- CJUS212 Loss Control 3
- CJUS243 Investigation 3
- CJUS313 Crisis Intervention and Deviant Behavior 3
- CJUS319 Substantive Criminal Law 3
- CJUS321 Ethical Issues in Public Safety 3
- CJUS401 Senior Seminar 3
- CJUS402 Criminal Justice Internship 3-9
- CJUS409 Procedural Criminal Law 3
- CJUS444 Criminalistics 4
- FIRE101 Introduction to Fire Science 3

Statistics: Choose one of the following:

- BUSN211 Business Statistics 3
- CJUS345 Statistics and Design for Public Safety 4
- MATH207 Principles of Statistical Methods 3
- POLI211 Political Science Research and Statistics 4
- PSYC210 Statistics 3
- SOCY302 Statistics for Social Science 4

Support Courses (20 credits)

- POLI110 Introduction to American Government and Politics 4
- POLI120 Introduction to Legal Processes 3
- PSYC101 Introduction to Psychology 4
- PSYC259 Abnormal Psychology 3
- SOCY214 Criminology 3
- Approved Diversity Course 3

Electives (29 credits)

A minimum of 24 credits of 300/400 level CJUS Coursework is required for graduation.

Canadian students may substitute CJUS202 and CJUS406 for CJUS319 and CJUS409 and POLI160 for POLI110.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Criminal Justice - Law Enforcement Certification: Bachelor of Science

Program Description

This emphasis provides students with the knowledge and skills needed to be employed as a law enforcement officer. This emphasis prepares students for a career in law enforcement and possible future promotion to supervisory and administrative positions with local, state, and federal agencies. This emphasis includes the necessary courses to allow students to attend the LSSU Skills Completion Academy which in combination allows students to be licensed by the Michigan Commission on Law Enforcement Standards (MCOLES). Students who graduate from this program and successfully complete the State licensing exam are qualified for direct placement in Michigan police agencies. Many out of state agencies also recognize the MCOLES academy training.

Degree Requirements

Major Requirements (51 credits)

- CJUS101 Intro. to Criminal Justice 3
- CJUS102 Police Process 3
- CJUS110 Introduction to Corrections 3
- CJUS197 Physical Fitness for Public Safety** 1
- CJUS201 Firearms Training 1
- CJUS206 Law Enforcement/Loss Control Internship 3
- CJUS212 Loss Control 3
- CJUS243 Investigation 3
- CJUS319 Substantive Criminal Law 3
- CJUS321 Ethical Issues in Public Safety 3
- CJUS401 Senior Seminar 3
- CJUS402 Criminal Justice Internship 3
- CJUS409 Procedural Criminal Law* 3
- CJUS411 Police Operations* 5
- CJUS444 Criminalistics* 4
- EMED189 Medical First Responder* 3
- FIRE101 Introduction to Fire Science 3

Statistics: Choose one of the following:

- BUSN211 Business Statistics 3
- CJUS345 Statistics and Design for Public Safety 4

- MATH207 Principles of Statistical Methods 3
- POLI211 Political Science Research and Statistics 4
- PSYC210 Statistics 3
- SOCY302 Statistics for Social Science 4

Support Courses (20 credits)

- POLI110 Intro. to American Government and Politics 4
- POLI120 Intro. to Legal Processes 3
- PSYC101 Introduction to Psychology 4
- PSYC259 Abnormal Psychology 3
- SOCY214 Criminology 3
- Approved Diversity Course 3

Electives (22 credits)

**MCOLES courses*
***Repeated twice*

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Criminal Justice - Law Enforcement Certification with NRT: Bachelor of Science

Program Description

This emphasis provides students with the knowledge and skills needed to be employed as a law enforcement officer. This emphasis prepares students for a career in law enforcement and possible future promotion to supervisory and administrative positions with local, state, and federal agencies. This emphasis includes the necessary courses to allow students to attend the LSSU Skills Completion Academy which in combination allows students to be licensed by the Michigan Commission on Law Enforcement Standards (MCOLES). Students who graduate from this program and successfully complete the State licensing exam are qualified for direct placement in Michigan police agencies. Students in this emphasis will also attain an associate's degree in Natural Resources Technology (NRT). The addition of the NRT degree is a key component for students seeking employment with the Michigan Department of Natural Resources and out of state wildlife agencies.

Degree Requirements

Students with a particular interest in state and federal laws enacted to protect our natural resources and federal restrictions on the use of our renewable resources should consider obtaining both an associate's degree in natural resources technology and a bachelor of science degree in criminal justice. The NRT degree will provide the student with a good general background in natural resources and the criminal justice degree will allow the student to be fully qualified for many different law enforcement opportunities. Jobs for conservation law officers are limited, but the above configuration of degrees prepares a student to be highly competitive for openings that do occur. Students selecting this course of study should work closely with their advisor in order to complete both degrees in the four-year span. Students will take courses from both programs during their first three years and then complete the final requirements for the Criminal Justice-Law Enforcement degree in their fourth year.

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Criminal Justice - Public Safety: Bachelor of Science

Program Description

This emphasis provides students with the knowledge and skills needed to be employed as a public safety officer, which is a combination of law enforcement, fire fighter and emergency medicine. Students in this emphasis have the option to seek a career as a public safety officer or any of the included occupations of police officer, fire fighter, fire inspector, industrial safety officer, or EMT/Paramedic. This emphasis includes the necessary courses to allow students to attend the LSSU Skills Completion Academy which in combination allows students to be licensed by the Michigan Commission on Law Enforcement Standards (MCOLES). Students who graduate from this program and successfully complete the State Licensing exam are qualified for direct placement in Michigan police agencies. Many out of state agencies also recognize the MCOLES academy training.

Degree Requirements

Major Requirements (68 credits)

- CJUS101 Intro. to Criminal Justice 3
- CJUS102 Police Process 3
- CJUS197 Physical Fitness for Public Safety* 2
- CJUS201 Firearms Training 1
- CJUS206 Law Enforcement/Loss Control Internship 3
- CJUS243 Investigation 3
- CJUS313 Crisis Intervention and Deviant Behavior** 3
- CJUS319 Substantive Criminal Law 3
- CJUS321 Ethical Issues in Public Safety 3
- CJUS401 Criminal Justice Senior Seminar 3

  or
- FIRE401 Fire Science Senior Seminar 3
- CJUS402 CJUS Internship 3

  or
- FIRE403 Fire Science Internship 3
- CJUS409 Procedural Criminal Law 3
- CJUS444 Criminalistics 4
- FIRE101 Introduction to Fire Science 3
- FIRE111 Hazardous Materials 3
- FIRE204 Fire Protection Hydraulics and Pumps 3
- FIRE206 Fire Protection Systems Equipment and Industrial Protection 3
- FIRE211 Tactics & Strategy 3

- FIRE219 Firefighter Essentials 3
- FIRE220 Fire Science Certification 4
- EMED189 Medical First Responder 3

Statistics: Choose one of the following:

- CJUS345 Statistics and Design for Public Safety 4
- MATH207 Principles of Statistical Methods 3
- PSYC210 Statistics 3
- SOCY302 Statistics for Social Science 4

Support Courses (17 Credits)

- POLI110 Intro. to American Government and Politics 4
- POLI120 Intro. to Legal Processes 3
- PSYC101 Introduction to Psychology 4
- PSYC259 Abnormal Psychology 3
- SOCY214 Criminology 3

**Repeated twice*
***MCOLES students must take CJUS411 Police Operations (5) instead of CJUS313 (3).*
FIRE197, FIRE219 and FIRE220 are required if firefighter certification is desired.

MCOLES Certification: Students complete CJUS197 (2 cr), CJUS409, CJUS411, CJUS444, and EMED189. These six courses are required by the Michigan Commission on Law Enforcement Standards to be taken by students during their last year at LSSU. CJUS197 will be taken both semesters. In addition, students desiring MCOLES certification must also complete a summer Skills Completion program. See the MCOLES Director for details.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Early Childhood Education: Bachelor of Science

Program Description

The bachelor in early childhood education prepares professionals to provide high quality education and care for children birth through age eight in a wide variety of settings. Graduates are qualified to work as teachers and directors in private early childhood programs; state-funded preschool programs, such as Great Start Readiness Preschool; and federally-funded HeadStart programs. Students develop their understanding of typically and atypically developing children through integrated coursework and field experience, as well as two semester-long practicums. The required minor provides the opportunity for students to explore a related field, adding to their knowledge and skills for working with young children and their parents, or expanding their expertise for employment opportunities.

Degree Requirements

Departmental Requirements (54 credits)

- CHLD101 Introduction to Early Child Education 4
- CHLD103 Learning Environments for the Young Child 4
- CHLD150 Observation and Assessment 4
- CHLD210 Infants and Toddlers 4
- CHLD225 Emergent Literacy 3
- CHLD241 STEM Foundations for the Young Child 4
- CHLD242 Creativity & Humanities for the Young Child 4
- CHLD245 Early Childhood Curriculum 3
- CHLD260 Practicum I 4
- CHLD270 Administration of Early Childhood Programs 2
- CHLD310 Inclusion of Young Children with Special Needs in Early Childhood Settings 3
- CHLD330 Philosophical Foundations of Early Childhood Education 2
- CHLD350 Early Childhood Facilities Management 2
- CHLD410 Practicum II 4
- CHLD440 Family and Community Partnerships 3
- CHLD495 Senior Project 4

Cognate Requirements (11 credits)

- BIOL105 Function of the Human Body 4
- EMED181 First Aid 1
- HLTH104 Nutrition for Early Childhood 3

- SOCY103 Cultural Diversity 3

Approved Minor (minimum 20 credits)

Free Electives (minimum 9 credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Electrical Engineering: Bachelor of Science

Program Description

The electrical engineering program, which is accredited by EAC of ABET, combines topics from science, math and engineering in order to study and develop solutions to electrical and computer problems. The program contains a strong laboratory emphasis with plenty of opportunities to work on real electrical systems. Some of the program highlights are:

- The teaching emphasis is on preparing you to solve real-world problems.
- You have three choices for fulfillment of your senior year experience. You may pursue opportunities in cooperative education, industry-based projects or research projects.
- You will study assembly language, circuit design, microcontroller hardware and software, digital electronics, and networks.
- Engineering courses begin in your freshman year.
- The program provides an excellent mix of theory and practical laboratory experiences.

Your Degree Options — You may choose to follow one of the following degree concentrations while studying electrical engineering at LSSU. They are: Robotics and Automation Concentration, Digital Systems Concentration and Sustainable Energy Concentration. The Robotics and Automation Concentration provides you with a strong background in robotics, machine vision, sensors, communications and automation. The Digital Systems Concentration will give you additional knowledge in digital design, digital signal processing and microcontroller systems. The Sustainable Energy Concentration provides increased employment opportunities as demand for engineers with knowledge of the power industry and sustainable/renewable energies grows.

Cooperative Education: Opportunities are available as part of this program for students who are qualified. A certificate that documents this practical training is available.

Degree Requirements

Departmental Requirements:

Mathematics

- MATH151 Calculus I 4
- MATH152 Calculus II 4
- MATH251 Calculus III 4
- MATH308 Probability and Mathematical Statistics 3

- MATH310 Differential Equations 3

Sciences

- CHEM115 General Chemistry I 5
- PHYS231 Applied Physics for Engineers and Scientists I 4
- PHYS232 Applied Physics for Engineers and Scientists II 4

Engineering

- EGEE125 Digital Fundamentals 4
- EGEE210 Circuit Analysis 4
- EGEE250 Microcontroller Fundamentals 4
- EGEE280 Introductory Signal Processing 4
- EGEE310 Network Analysis 4
- EGEE330 Electro-Mechanical Systems 4
- EGEE345 Fundamentals of Engineering Electromagnetics 3
- EGEE370 Electronic Devices 4
- EGEE475 Power Electronics 4
- EGNR101 Introduction to Engineering 2
- EGNR140 Linear Algebra and Numerical Methods for Engineers 2
- EGNR265 "C" Programming 3
- EGNR340 Advanced Numerical Methods for Engineers 1
- EGNR346 Probability and Statistics Lab for Engineers 1
- EGEM220 Statics 3
- EGRS460 Control Systems 4

Technical Electives (Minimum of 13 credits):

For students obtaining a concentration, the concentration electives must meet the requirements listed below. Otherwise, all 13 technical elective credits may be selected from the Technical Electives List.

- EGEE320 Digital Design (or higher level EGEE) 3
- EGEM320 Dynamics 3
- EGET310 Electronic Manufacturing Processes 4
- EGME225 Mechanics of Materials (or higher level EGME) 3
- EGRS365 Programmable Logic Controllers 3
- EGRS461 Design of Control Systems 4
- MATH215 Fund Concepts of Mathematics (or higher MATH) 3
- or any course from the listed concentrations

Robotics and Automation Concentration (C or better grade required in all courses)

- EGRS385 Robotics Engineering 3
- EGRS430 Systems Integration & Machine Vision 4
- EGRS435 Automated Manufacturing Systems 4

Digital Systems (C or better grade required in all courses)

- EGEE320 Ditigal Design 4
- EGEE355 Microcontroller Systems 4
- EGEE425 Digital Signal Processing 3

Sustainable Energy Concentration (C or better grade required in all courses)

- EGNR261 Energy Systems and Sustainability 3
- EGNR361 Energy Systems and Sustainability Lab 1
- EGEE411 Power Distribution and Transmission 3

Complete one course from:

- EGNR362 Vehicle Energy Systems 3
- EGME337 Thermodynamics 4

Senior Sequence (Complete one of the following sequences):

Industrial Project

- EGNR491 Engineering Design Project I 3
- EGNR495 Engineering Design Project II 3

Cooperative Project

- EGNR250 Cooperative Education 2
- EGNR450 Cooperative Education Project I 4
- EGNR451 Cooperative Education Project II 3
- EGNR491 Engineering Design Project I 3

Research Project

- EGNR260 Engineering Research Methods 2
- EGNR460 Engineering Research Project I 4
- EGNR461 Engineering Research Project II 2

32 credits from Mathematics (including EGNR340) and Natural Sciences is required.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Electrical Engineering Technology: Bachelor of Science

Program Description

LSSU's Electrical Engineering Technology (EET) program integrates knowledge from areas of
study such as science, math, computers, electrical engineering, management and economics in
order to prepare you for an engineering technology career with the potential for growth into management. The EET program includes topics such as C programming, robotics, programmable logic controllers (PLCs), digital system design, embedded microprocessor systems, and circuit board layout and population. Most technical classes in the curriculum include a laboratory along with the lecture.

Students pursuing the BS degree in EET have the option to minor in Robotics Technology. LSSU is one of a few universities in the U.S. to offer an extensive Robotics Technology minor as part of the BS degree in EET and is home to one of the best robotics educational facilities in North America. The minor in Robotics Technology will be indicated on your transcripts.

Some of the program highlights are:

- The program provides an excellent mix of theory and practical laboratory experiences, preparing you to solve real-world problems.
- Engineering courses begin in the freshman year.
- Technical electives may be selected to obtain a minor in Robotics Technology.
- Less mathematics than the Electrical Engineering program.

Cooperative Education: Opportunities are available as part of this program for students who are academically qualified. A certificate that documents this practical training is available.

Additional Degree Information

- *Option in:* General
- *Minor:* Robotics Technology

Degree Requirements

Departmental Requirements

- CHEM108 Applied Chemistry 3
- CHEM109 Applied Chemistry Lab 1
- EGEE125 Digital Fundamentals (C or better required) 4

- EGEE250 Microcontroller Fundamentals 4
- EGEE320 Digital Design 4
- EGEE355 Microcontroller Systems 4
- EGET110 Applied Electricity (C or better required) 4
- EGET175 Applied Electronics (C or better required) 4
- EGET310 Electronic Manufacturing Processes 4
- EGME141 Solid Modeling 3
- EGNR101 Introduction to Engineering 2
- EGNR140 Linear Algebra & Numerical Methods for Engineers 2
- EGNR245 Calculus Applications for Technology 3
- EGNR265 C Programming 3
- EGNR310 Advanced Quality Engineering 3
- EGRS365 Programmable Logic Controllers 3
- EGRS380 Robotics Technology 2
- EGRS381 Robotics Technology Lab 1
- MATH111 College Algebra (C or better required) 3
- MATH112 Calculus for Business and Life Science 4
- MATH131 College Trigonometry 3
- MATH207 Principles of Statistical Methods 3
- MGMT375 Introduction to Supply Chain Management 3
- PHYS221 Elements of Physics I (C or better required) 4
- PHYS222 Elements of Physics II 4
- Technical Elective 2

Select one of the following Senior Sequence options to complete the Electrical Engineering Technology Degree:

Industrial Project

- EGNR491 Engineering Design Project I 3
- EGNR495 Engineering Design Project II 3

or

Cooperative Project

- EGNR250 Cooperative Education 2
- EGNR450 Cooperative Education Project I 2
- EGNR451 Cooperative Education Project II 2
- EGNR491 Engineering Design Project I 3

Technical Electives 10

- CSCI163 Troubleshooting and Repair of Personal Computers 3
- EGEE305 Analog & Digital Electronics 3
- EGEE365 Vehicle Instrumentation 4
- EGME141 Solid Modeling 3
- EGME240 Assembly Modeling and GD&T 3
- EGME275 Engineering Materials 3
- EGME276 Strength of Materials Lab 1
- EGME338 Fluid Mechanics 2
- EGME310 Vehicle Development and Testing 2
- EGMT225 Statics and Strength of Materials 4

- EGMT310 CNC Manufacturing Processes 4
- EGMT332 Thermodynamics and Heat Transfer for Technologists 4
- EGRS215 Robotics Technology 2
- EGRS430 Systems Integration and Machine Vision 4
- EGRS480 Control Systems & Automation 3
- EGRS481 Control Systems & Automation Lab 1
- MATH215 Fundamental Concepts of Math or higher 3

Students wishing to complete the Robotics Technology minor should take the following as technical or free electives:

- EGRS430 Systems Integration and Machine Vision 4
- EGRS480 Control Systems & Automation 3
- EGRS481 Control Systems & Automation Lab 1

Free Electives 3

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Elementary Education: Bachelor of Arts/Science

Program Description

The Elementary Education program is highlighted by in-depth study in a subject major, subject concentration, or student-focused concentration, extended field experience in elementary school settings; and focused development of the knowledge and skills critical for effective teachers.

Elementary-level teacher certification in Michigan permits individuals to teach in self-contained classrooms at grade K - 8, and in all subjects at grades K - 5. Individuals may also qualify to teach the subjects of their academic major or minors in grades 6 - 8.

Students begin their studies with a focus on general education requirements, and an academic major or specific concentration. They complete the initial professional education coursework in their sophomore year, and apply for formal admission to the program at the end of that year. By that time, they will have also passed the Michigan Test for Teacher Certification Professional Readiness Examination.

Upper level professional education coursework, along with the completion of the major or concentration, is the focus for the junior and senior years. Student teaching, a semester-long culminating experience, may be completed in the spring of the fourth year or fall of the fifth year, depending on the individual student's progress through the program. Generally, this student teaching experience will be in the Eastern Upper Peninsula or in Sault Ste. Marie, Ontario. The Michigan Test for Teacher Certification Elementary Education tests must be passed prior to beginning student teaching.

Note: Candidates who pass the Michigan Test for Teacher Certification in their major or concentration meet the requirements of the No Child Left Behind Act and are considered "highly qualified" for the subject areas of the endorsements shown on their Michigan teaching certificates.

Degree Requirements

The components of the Elementary Education Bachelor of Arts/Sciences are:

Teaching Concentration - Students may complete one of the following options:

- **Academic Concentration:** Major in either Language Arts or Mathematics (see requirements in this catalog for these teaching majors)

  or

- **Language Arts and Mathematics Concentration** (see requirements listed below)

  or

- **Early Childhood Education Concentration** (see requirements listed below)

Language Arts and Mathematics Concentration (25 credits)

- ENGL221 Introduction to Creative Writing 3
- ENGL231 American Literature I 3
- ENGL232 American Literature II 3
- ENGL320 Responding to Writing 3
- THEA112 Acting for Beginners 3
- MATH215 Fundamental Concepts of Mathematics 3
- MATH321 History of Mathematics 3
- MATH112 Calculus for Business & Life Sciences 4
  or
- MATH151 Calculus I 4

Early Childhood Education Concentration (28 credits)

- CHLD150 Observation and Assessment 4
- CHLD210 Infants and Toddlers 4
- CHLD225 Emergent Literacy 3
- CHLD245 Early Childhood Curriculum 3
- CHLD270 Administration of Early Childhood Programs 2
- CHLD310 Inclusion of Young Children with Special Needs in Early Childhood Settings 3
- CHLD440 Family and Community Partnerships 3
- CHLD480 Directed Teaching Seminar 1
- CHLD492 Directed Teaching : Early Childhood 5

Elementary Planned Program (49 credits)

- MATH103 Number Systems & Problem Solving 4
- MATH104 Geometry & Measurement 4
- MATH207 Principles of Statistical Methods 3
- BIOL104 Survey of General Biology 4
- NSCI101 Conceptual Physics 4
- NSCI102 Introduction to Geology 4
- POLI110 American Government 4
- GEOG201 World Regional Geography 4
- HIST131 United States History I 4
- HIST321 History of Michigan 2
- ENGL180 Introduction to Literary Studies 3
- ENGL222 English Grammar 3
- ENGL335 Children’s Literature in the Classroom 3
- CHLD225 Emergent Literacy 3

Professional Education Sequence (47 credits)

- EDUC250 Student Diversity & Schools 4
- EDUC301 Learning Theory and Teaching Practice 3
- EDUC330 Reading in the Elementary Classroom 3
- EDUC350 Integrating Technology into 21st Learning Environments 3
- EDSE301 Introduction to Special Education 3
- EDUC410 Corrective Reading in the Classroom 3
- EDUC411 Elementary Language Arts and Methods Across the Curriculum 3
- EDUC415 General Instructional Methods 2
- EDUC420 Math Methods for Elementary Teachers 2
- EDUC421 Science Methods for Elementary Teachers 2
- EDUC422 Social Studies Methods for Elementary Teachers 2
- EDUC423 Arts Methods for Classroom Teachers 2
- EDUC424 Health/Physical Education Methods for Classroom Teachers 2
- EDUC460 Classroom Management 2
- EDUC480 Directed Teaching Seminar 2
- EDUC492 Directed Teaching 10

Formal admission to the Elementary Education program, qualification for student teaching, and successful completion of the program requires:

- Completion of the Professional Education Sequence courses with a grade of B- (2.70) or higher.
- Completion of all required courses in the teaching major or concentration with a GPA of 2.70 or higher and no grade below a C (2.00).
- Completion of the elementary planned program with a GPA of 2.70 or higher and no grade below a C (2.00).
- Completion of the General Education Core Requirements with a GPA of 2.00 or higher.
- Passing scores on all required Michigan Test for Teacher Certification tests.

The Elementary Education program undergoes periodic review, evaluation, and alignment with the Michigan Department of Education standards. Since program approval and renewal cycles vary, individuals should contact the School of Education regularly to confirm the current requirements of each program component. Graduates must meet the standards that are in place at the time of completion of their programs, in order to be recommended to the Department of Education for teacher certification.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

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.

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Elementary Education: Special Education - Learning Disabilities: Bachelor of Science

Program Description

The Special Education - Learning Disabilities program expands the basic elementary education program to prepare teachers to work with students with learning disabilities from kindergarten through grade 12. Program features include extended field experience in regular and special education settings, and focused development of the knowledge and skills critical for effective teachers.

Graduates are prepared for elementary-level teacher certification in Michigan, which permits individuals to teach in self-contained classrooms at grades K-8, and in all subjects at grade K-5, as well as a Learning Disabilities endorsement for grades K-12. Individuals may also qualify to teach the subject of an optional academic minor in grades 6-8.

Students begin their studies with a focus on general education requirements and elementary planned program coursework. If they opt for an academic minor this coursework also begins in year one. They complete the initial professional education coursework in their sophomore year, and apply for formal admission to the program at the end of that year. By that time, they will have also passed the Michigan Test for Teacher Certification Professional Readiness Examination.

Special education and upper-level professional education coursework, along with the completion of the elementary planned program and optional minor, are the focuses for the junior and senior years. Students in the special education program complete two semesters of student teaching, one in a regular elementary education setting and one in a special education setting. These experiences are normally in the fifth year of the program, depending on the individual student's progress through the program. Generally, student teaching will be in the Eastern Upper Peninsula or in Sault Ste. Marie, Ontario. The Michigan Test for Teacher Certification Elementary Education and Learning Disabilities tests must be passed prior to beginning student teaching.

Note: Candidates who complete an optional minor and pass the Michigan Test for Teacher Certification subject test for that minor meet the requirements of the No Child Left Behind Act and are considered "highly qualified" for the subject area of the endorsement shown on their Michigan teaching certificates.

Degree Requirements

The components of the Elementary Education: Special Education - Learning Disabilities: Bachelor of Science program are:

Special Education (32 credits)

- EDSE301 Introduction to Special Education 3
- EDSE302 Communication and Community 3
- EDSE320 Introduction to Learning Disabilities 4
- EDSE401 Issues and Trends Impacting Learning Disabilities & Special Ed 3
- EDSE403 Assessment and Diagnosis 3
- EDSE404 Instruction and Technology for Learning Disabilities-Preschool to Empl 4
- EDSE480 Student Teaching Seminar: Special Education 1
- EDSE492 Internship/Supervised Student Teaching: Learning Disabilities 8
- PSYC301 Exceptional Child and Adolescent 3

Elementary Planned Program (49 credits)

- MATH103 Number Systems & Problem Solving 4
- MATH104 Geometry & Measurement 4
- MATH207 Principles of Statistical Methods 3
- BIOL104 Survey of General Biology 4
- NSCI101 Conceptual Physics 4
- NSCI102 Introduction to Geology 4
- POLI110 Introduction to American Government and Politics 4
- GEOG201 World Regional Geography 4
- HIST131 United States History I 4
- HIST321 History of Michigan 2
- ENGL180 Introduction Literary Studies 3
- ENGL222 English Grammer 3
- ENGL335 Children's Literature 3
- CHLD225 Emergent Literacy 3

Academic Minor (Optional): Students may complete a teaching minor in either Language Arts or Mathematics (see the requirements in this catalog for these teaching minors).

Professional Education Sequence (47 credits)

- EDUC250 Student Diversity & Schools 4
- EDUC301 Learning Theory and Teaching Practice 3
- EDUC330 Reading in the Elementary Classroom 3
- EDUC350 Integrating Technology 3
- EDUC410 Corrective Reading in the Classroom 3
- EDUC411 Elementary Language Arts and Methods Across the Curriculum 3
- EDUC415 General Instructional Methods 2
- EDUC420 Math Methods for Elementary Teachers 2
- EDUC421 Science Methods for Elementary Teachers 2
- EDUC422 Social Studies Methods for Elementary Teachers 2
- EDUC423 Arts Methods for Classroom Teachers 2
- EDUC424 Health/Physical Education Methods for Classroom Teachers 2
- EDUC460 Classroom Management 2
- EDUC480 Internship in Teaching: Seminar 1
- EDUC492 Internship/Advanced Methods: (subject) 8

Formal admission to the program, qualification for student teaching, and successful completion of the program requires:

- Completion of the Professional Education Sequence courses with a grade of B- (2.70) or higher.
- Completion of all required courses in the education cognates and teaching minor with a GPA of 2.70 or higher and no grade below a C (2.00).
- Completion of the elementary planned program with a GPA of 2.70 or higher and no grade below a C (2.00).
- Completion of the General Education Core Requirements with a gpa of 2.00 or higher.
- Passing scores on all required Michigan Test for Teacher Certification tests.

The Elementary Education program undergoes periodic review, evaluation, and alignment with the Michigan Department of Education standards. Since program approval and renewal cycles vary, individuals should contact the School of Education regularly to confirm the current requirements of each program component. Graduates must meet the standards that are in place at the time of completion of their programs, in order to be recommended to the Department of Education for teacher certification.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.70 or higher. A gpa of 2.70 or higher is also required in your Major, and a gpa of 2.00 or higher is required in your General Education Requirements.

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English Language and Literature: Bachelor of Arts

Program Description

The English Language and Literature - Secondary Teaching program prepares graduates for secondary-level teacher certification in Michigan, which permits individuals to teach English in grades 6-12. See Secondary Education for additional information. The major is housed in the Department of English.

Featuring small classes, close reading of great works of literature, many opportunities for writing and research, and supervision by faculty who know their students, LSSU English programs emphasize the human letters and language study, and give students many opportunities to excel at what they love.

English Education students have ample opportunities to help coordinate local literary events and festivals as part of their coursework. They are also encouraged to join the English Club, work as editors on student and professional journals, and enter the Stellanova Osborn Poetry Contest and the LSSU Short Story Contest.

In this program, students will complete a teaching major in English Language and Literature and additional professional education requirements that will prepare them for a career in teaching at the secondary level.

Degree Requirements

English Requirements (34 credits)

- ENGL180 Introduction to Literary Studies 3
- ENGL221 Introduction to Creative Writing 3
- ENGL222 English Grammar and Language in Context 3
- ENGL231 American Literature I 3
- ENGL232 American Literature II 3
- ENGL320 Responding to Writing 3
- ENGL336 Young Adult Literature and Culture 3
- ENGL345 Studies in Classic Texts 3
- ENGL435 Studies in Visual Texts 3
- ENGL380 History of Literary Criticism 3
- ENGL490 Senior Thesis 2
- ENGL499 Senior Thesis 2

English and Literacy Education Methods (6 credits):

- EDUC440 Reading in the Content Area 3

- EDUC441 Secondary English Methods 3
  or
- EDUC451 Ind Study English Methods 3

Professional Education Sequence and Education Cognates- see Secondary Education.

Approved Teaching Minor Required (Minimum 20 credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

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; or FREN151-FREN152 or FREN251-FREN252 or SPAN161-SPAN162. One-half year of two different languages will not meet this requirement.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.70 or higher. A gpa of 2.70 or higher is required in your Major, and a gpa of 2.00 or higher is required in your General Education Requirements.

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Environmental Health: Bachelor of Science

Program Description

The B.S. environmental health program is accredited by the National Environmental Health Science and Protection Accreditation Council.

The B.S. in environmental health is offered in response to strong student, state and local government demand for an academic program to prepare students for careers in public health, environmental health and related fields. Graduates of this program will be prepared to seek employment in jobs with titles like public health officer, environmental technician, and scientist, as well as many others. After working in the field for a period of time, graduates may sit for the Registered Sanitarian (RS) examination and achieve state certification, or for the Registered Environmental Health Specialist (REHS) examination and achieve national certification.

This program is similar to the successful environmental science degree, but includes many required elements that are specifically directed to public health. These include courses in Geographic Information Systems and Global Positioning Systems, Hydrology and Groundwater, Toxicology and Epidemiology, Public Health Care and Public Administration. Students participate in an applied research project in close collaboration with faculty members to address meaningful environmental health problems. These projects, through the excellent preparation they provide our students, are often cited as important factors in successful job searches and entry into graduate programs.

Degree Requirements

Major Requirements (111 credits)

Chemistry Courses (21 credits)

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry 4
- CHEM231 Quantitative Analysis 4
- CHEM353 Introductory Toxicology 3

Environmental Courses (44 credits)

- NSCI103 Environmental Science 3
- NSCI104 Environmental Science Lab 1
- EVRN131 Introduction to GPS and GIS 3
- EVRN231 Intermediate GIS 2
- EVRN311 Environmental Law 3

- EVRN313 Solid & Hazardous Waste 3
- EVRN317 Environmental Health Applications 4
- EVRN341 Environmental Chemistry I 4
- EVRN395 Junior Seminar 1
- EVRN425 Environmental Systems Analysis 3
- EVRN495 Senior Project 1
- EVRN499 Senior Seminar 1
- GEOL411 Hydrological Systems: Surface and Groundwater 4
- HLTH210 Intro. to Health Care Concepts 3
- HLTH328 Multicultural Approach to Health Care 3
- INTD399 Internship in Environmental Health 4

Support Courses (34 credits)

- BIOL131 General Biology: Cells 4
- BIOL132 General Biology: Organisms 4
- BIOL204 General Microbiology 4
- BIOL285 Principles of Epidemiology 3
- ECON202 Principles of Microeconomics 3
- ECON307 Environmental Economics 3
- One semester of College Physics with Lab 4
- MATH112 Calculus for Business & Life Sciences 4 **or**
- MATH151 Calculus I 4
- MATH207 Principles of Statistical Methods 3
- POLI201 Intro. to Public Administration 3

Directed Electives (6 credits)

Select from the following:

- BIOL126 Interpretation of Maps and Aerial Photography 2
- BIOL220 Genetics 4
- BIOL230 Introduction to Soil Science 4
- BIOL280 Biometrics 3
- BIOL422 Parasitology 3
- CHEM251 Introductory Biochemistry 4
- CHEM332 Instrumental Analysis 4
- INTD300 The Human Environment 3
- POLI342 International Environmental Policy 3

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 136 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.50 or higher. A gpa of 2.50 or higher is required in your Major, and a gpa of 2.00 or higher is required in your General Education Requirements.

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Environmental Science: Bachelor of Science

Program Description

Environmental science is the study of human interaction with the environment. By seeking solutions for such environmental problems as water pollution, hazardous wastes and acid rain, environmental scientists help ensure a safe, healthful environment for all living things.

Graduates with a bachelor of science in Environmental Science work in many disciplines and industries including Environmental Health and Management positions, and many proceed on to graduate school in natural sciences, medicine, law, engineering. Internships in Environmental Science are encouraged where students can gain valuable real-world experience while gaining college credit. In addition, students pursuing the ACS certified degree will participate in an applied research project in close collaboration with faculty member to address meaningful environmental-based problems. These projects, through the excellent preparation they provide our students, are often cited as important factors in successful job searches and entry into graduate programs.

The LSSU chemistry program has been approved by the American Chemical Society, and may provide certified degrees in Chemistry, Forensic Chemistry, Biochemistry Pre-Professional, and Environmental Chemistry if a student chooses this track. Graduates completing the prescribed requirements are awarded an ACS certificate signifying their completion of the approved degree and can qualify for membership in the Society upon graduation.

American Chemical Society
Committee on Professional Training
155 Sixteenth Street, N.W.,
Washington, D.C. 20036

Degree Requirements

Program Core (59 credits)

Environmental Science (19 cr)

- NSCI103 Environmental Science 3
- EVRN131 Introduction to GIS/GPS 3
- EVRN231 Intermediate GIS 2
- EVRN311 Environmental Law 3
- EVRN313 Solid & Hazardous Waste 3
- EVRN389 Environmental Research Methods 3
- EVRN395 Junior Seminar 1

- EVRN499 Senior Seminar 1

Biology (15 cr)

- BIOL131 General Biology: Cells 4
- BIOL132 General Biology: Organisms 4
- BIOL337 General Ecology 3
- BIOL204 General Microbiology 4

Earth Science (8 cr)

- GEOL121 Physical & Historical Geology I 4
- NSCI116 Introduction to Oceanography 4
  or
- GEOG108 Physical Geography: Meteorology & Climatology 4

Chemistry (10 cr)

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5

Mathematics (7 cr)

- MATH112 Calculus for Business and Life Sciences 4
  or
- MATH151 Calculus I 4
- BUSN211 Business Statistics 3
  or
- MATH207 Principles of Statistics 3
  or
- BIOL280 Biostatistics 3

Hydrology (3-4 cr)

- GEOL411 Hydrologic Systems: Surface and Groundwater 4
  or
- BIOL286 Principles of Watersheds 3

Students will select a Concentration from: Physical Sciences, Chemistry, or Policy and Management.

CONCENTRATION: Physical Sciences (40 cr)

- CHEM225 Organic Chemistry I 4
- CHEM231 Quantitative Analysis 4
- CHEM332 Instrumental Analysis 4
- EVRN317 Environmental Health App 4
- EVRN341 Environmental Chemistry 4
- EVRN425 Environmental Systems Analysis 4
- PHYS221 Principles of Physics I 4
  and
- PHYS222 Principles of Physics II 4
  or

PHYS231 App Phys Engineer/Scientist I 4
and
- PHYS232 App Phys Engineer/Scientist II 4

Directed Electives (5 cr minimum):

- BIOL126 Interpretation of Maps and Aerial Photographs 2
- BIOL230 Introduction to Soils 4
- BIOL304 The Human Environment 3
- CHEM261 Inorganic Chemistry 4
- CHEM326 Organic Chemistry 4
- FIRE312 Hazardous Materials Management 4
- GEOL122 Physical and Historical Geology II 4
- ECON307 Environmental Economics 3
- Any 300 or 400 level BIOL, CHEM, or EVRN

CONCENTRATION: Chemistry (50 cr)

- CHEM225 Organic Chemistry I 4
- CHEM231 Quantitative Analysis 4
- CHEM261 Inorganic Chemistry 4
- CHEM326 Organic Chemistry II 4
- CHEM332 Instrumental Analysis 4
- CHEM341 Environmental Chemistry I 4
- CHEM351 Introductory Biochemistry 4
- CHEM353 Introductory Toxicology 3
- CHEM361 Physical Chemistry I 4
- CHEM363 Physical Chemistry I Lab 1
- EVRN425 Environmental Systems Analysis 4
- PHYS221 Principles of Physics I 4
  and
- PHYS222 Principles of Physics II 4
  or
- PHYS231 App Phys Engineer/Scientist I 4
  and
- PHYS232 App Phys Engineer/Scientist II 4
- MATH152 Calculus II 4
  or
- EGNR245 Calculus Applications for Technology 3
  and
- EGNR140 Linear Algebra Numerical Methods Engineers 2

For American Chemical Society certified degree, additionally required (total lab hours must be at least 400 hours). See Department Chair for special rules regarding ACS certification:

- CHEM495 Senior Project 2
- CHEM Electives 300 level or higher (7 cr minimum)

CONCENTRATION: Policy and Management (46 cr)

- BIOL203 Fundamentals of Natural Resources 3
- BIOL287 Conservation Biology 3

- BIOL304 The Human Environment 3
- EVRN317 Environmental Health App 4
- EVRN325 Geospatial Analysis 3
- EVRN345 Advanced Spatial Statistics 4
- EVRN355 GIS Programming and Applications 4
- ECON202 Principles of Microeconomics 3
- ECON307 Environmental Economics 3
- POLI342 International Environmental Policy 3

Directed Electives (10 credits minimum):

- BIOL126 Interpretation of Maps and Aerial Photographs 2
- BIOL230 Introduction to Soil Science 4
- BIOL284 Principles of Forest Conservation 4
- BIOL470 Restoration Ecology 3
- BUSN308 Managing Cultural Differences 3
- COMM302 Argumentation and Advocacy 3
- COMM320 Public Relations 4
- CSCI105 Introduction to Computer Programming 3
- EVRN495 Senior Project 2
- FIRE312 Hazardous Materials Management 4
- GEOG302 Economic Geography 3
- GEOG306 Cultural Geography 3
- POLI110 Introduction to American Government and Politics 4
- POLI201 Introduction to Public Administration 3
- POLI301 Policy Analysis and Evaluation 4
- SOCY227 Population and Ecology 3

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. The Environmental Science, Chemistry Concentration requires a minimum of 132 credits. A gpa of 2.00 or higher is also required in your Major, and a gpa of 2.00 or higher is required in your General Education Requirements.

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Exercise Science: Bachelor of Science

Program Description

A bachelor of science degree in exercise science prepares you to work in a variety of professional settings, ranging from corporate fitness to hospital clinical to educator and trainer.

Upon graduation, students are prepared and qualify to sit for both American College of Sports Medicine (ACSM) and National Strength and Conditioning Association (NSCA) certifications.

Graduate School Preparations: Students progress to graduate programs in exercise science, sport psychology, physical therapy, chiropractic medicine and other allied health fields.

Degree Requirements

Program Requirements (51 credits)

- EXER105 Leadership Programming 3
- EXER140 Health Fitness 3
- EXER141 Introduction to Movement 3
- EXER230 Athletic Injury and Illness Prevention 3
- EXER262 Exercise Physiology I 3
- EXER265 Essentials of Strength Training and Conditioning 3
- EXER268 Fitness Evaluation I: Field Tests 2
- EXER275 Nutrition for Sport and Exercise Performance 2
- EXER295 Practicum 1
- EXER344 Kinesiology 3
- EXER348 Fitness Evaluation II: Laboratory Procedures 3
- EXER358 Research Methods in Exercise Science 3
- EXER362 Exercise Physiology II 3
- EXER390 Recreation Leadership Apprenticeship 1
- EXER444 Exercise Prescription 2
- EXER452 Allied Health Administration 3
- EXER481 Professional Development Seminar 1
- EXER492 Internship 6
- EXER496 Selected Research Topics 3

Cognate Requirements (25-27 credits)

- BIOL121 Anatomy & Physiology I 4

- BIOL122 Anatomy & Physiology II 4
- CHEM108 Applied Chemistry 3
  or
- CHEM115 General Chemistry I 5
- CHEM110 Applied Organic & Biochemistry 4
  or
- CHEM116 General Chemistry II 4
- MATH207 Principles of Statistical Methods 3
  or
- PSYC210 Statistics 3
- PSYC101 Introduction to Psychology 4
- PSYC385 Health Psychology 3

School Electives (10 credits)

- EXER232 Athletic Injury & Illness Recognition and Evaluation 3
- EXER234 Preventative Taping Techniques 1
- EXER248 Psychology of Sport and Performance and Coaching 3
- EXER295 Practicum 3
- EXER340 Therapeutic Modalities in Athletic Training 3
- EXER346 Therapeutic Exercise in Athletic Training 3
- EXER349 Orthopedic Assessment in Sports Medicine 3
- EXER390 Recreation Leadership Apprenticeship 1
- EXER428 Psychological Aspects of Exercise and Athletic Rehabilitation 3
- EXER434 Neurological Basics of Motor Learning 3
- EXER440 Exercise Physiology Seminar 2
- EXER442 Electrocardiography in Exercise Science 2
- EXER446 Exercise Prescription and Testing for Special Populations 3
- EXER450 Philosophy of Human Performance and Leisure 3

Cognate Electives (12 credits)

- *Select with your advisor*

Elective credits (approximately 3)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Finance and Economics: Bachelor of Science

Program Description

This degree requires successful completion of a minimum of 124 semester credits as prescribed on the following page. The study of finance and economics develops the capacity for analytical reasoning and critical thinking, the most important decision making tools in business, government, education, and in your personal life.

Organizations need planners and problem-solvers, people who are logical thinkers. Economists and financiers learn to develop accurate information upon which to make decisions from the vast quantities of complex and often conflicting data generated in today's global economy. Employers hire these professionals because of their abilities for careful analysis, planning and decision making.

Graduate, Professional and Continuing Education

This degree program is an excellent preparation for graduate and professional education in such fields as finance, economics, accounting, business administration and law. Graduates may seek professional certification in related professions such as Certified Financial Planner (CFP), Chartered Financial Analyst (CFA), Chartered Financial Consultant (ChFC), Chartered Life Underwriter (CLU) and Certified Management
Accountant (CMA).

Degree Requirements

Common Professional Component (48 credits)

- ACTG132 Principles of Accounting I 4
- ACTG133 Principles of Accounting II 4
- BUSN121 Introduction to Business 3
- BUSN211 Business Statistics 3
- BUSN231 Business Communications 3
- BUSN350 Business Law I 3
- BUSN403 Business, Government & Society 3
- BUSN466 Business Policy 3
- ECON201 Principles of Macroeconomics 3
- ECON202 Principles of Microeconomics 3
- FINC341 Managerial Finance 4
- MGMT280 Intro Management Information Systems 3
- MGMT360 Management Concepts & Apps 3
- MGMT371 Operations/Business Analytics 3
- MRKT281 Marketing Principles & Strategy 3

Major Requirements (Minimum 33 credits)

- MATH111 College Algebra 3
- MATH112 Calculus Business/Life Science 4

FINC 400-Level Courses. Choose two from the following:

- FINC443 Insurance 4
- FINC446 Financial Analysis and Policy 4
- FINC448 Investment Strategy 4

Economics Option (18 credits)

- ECON407 Introductory Econometrics 3
- ECON300-400 Level Electives (3 Courses) 9
- Economics, Finance or Mathematics Electives 6

Finance Option (18 credits)

- FINC** 400-level Elective 4
- Finance, Economics or Accounting Electives 14

***FINC 400-level courses include FINC446, Financial Analysis & Policy; FINC448, Investment Strategy; and FINC443, Insurance. Two courses from this group must be completed for all options; all three courses must be completed for the finance option.*

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Fine Arts Studies: Bachelor of Arts

Program Description

The fine arts degree is for students who have wide-ranging interests in fine arts, and who wish to explore and express their potential through following a personalized course of study. While students will invariably participate in a broad range of courses, they must select two main areas of focus (concentrations).

Fine arts have been an important aspect of the human experience since first recorded history; from African cave paintings to Greek dramas, from Beethoven symphonies to the writings of Canadian playwrights. From the study of fine arts we can gain an understanding of various cultures through their own indigenous means of expression. Furthermore, we can deepen our understanding of our own culture by participation in various contemporary art forms (drama, music, painting, writing etc.). Most important, by exploring our own creative potential, we can develop a better understanding of ourselves.

Degree Requirements

To graduate with a B.A. in fine arts studies, a student must:

1. satisfy all stated requirements for a bachelor of arts degree;
2. complete 124 credits (100 level or higher) with an overall grade point average of at least 2.00;
3. complete at least 78 credits from three fine arts concentrations (minimum 9 credits in third concentration) as defined below, with an average GPA of at least 2.00 in each concentration;
4. complete no more than 30 credits in studio and/or performance courses with no more than 15 in any one discipline;
5. complete all general education requirements;
6. complete a student project (students must complete 6 credits of FINE405), which is intended to allow you, with the approval of the supervising professor, the opportunity to integrate or synthesize some aspects of the fine arts into a single project.

Concentration: A concentration is a sequence of at least 21 credits and no more than 36 credits, beyond the first-year prerequisite, in which related subject matter 'as defined below' is studied to develop knowledge of a particular discipline.

Arts Management Concentration (Total Credits Required: 32-35)

Required History Courses (6-8 Credits)

- ARTS250 Art History & Appreciation I 4

- ARTS251 Art History & Appreciation II 4
  or
- MUSC220 History & Appreciation of Music I 4
- MUSC221 History & Appreciation of Music II 4
  or
- THEA251 History of Drama & Theatre I 3
- THEA252 History of Drama & Theatre II 3
  or
- DANC305 Dance History 3
  and
- Elective from: ARTS250-ARTS251, MUSC220-MUSC221, or THEA251-THEA252

Required Courses (25-28 Credits)

- ACTG132 Principles of Accounting I 4
- ACTG133 Principles of Accounting II 4
- COMM210 Business and Professional Speaking 3
- COMM320 Public Relations 4
- FINC245 Principles of Finance 3
- INTD399 Internship in Department 1-4
- MRKT281 Marketing Principles and Strategy 3
- MGMT360 Management Concepts and Applications 3
  or
- MRKT387 Advertising Theory and Practice 3

Dance Concentration (Total Credits Required: 23-24)

Technique Classes (8 credits)

- DANC101 Ballet I 1
- DANC201 Ballet II 1
- DANC301 Ballet III 1
- DANC125 Modern Dance I 1
- DANC225 Modern Dance II 1
- DANC120 Jazz Dance I 1
- DANC130 Scottish Highland 1
- RECA173 Social Dance 1

Dance Performance (13 credits)

- DANC110 Dance Company 1
- DANC220 Musical Theatre: Tap/Jazz 1
- DANC305 Dance History 3
- DANC310 Choreography 3
- DANC401 Senior Thesis 1-4

Elective (2-3 credits)

- DANC205 Creative Movement for Elem Educators 3
- DANC210 Movement for Actors 3

Theatre Concentration (Total Credits Required: 21-24)

- THEA101 Acting I 3
- THEA161 Theatre Practicum 3-6
- THEA251 History of Drama & Theatre I 3
  or
- THEA252 History of Drama & Theatre II 3

Choose 12 credits from the following courses:

- THEA201 Acting II 3
- THEA309 Theatre Studies (Topic) 3-6
- THEA333 Studies in the Drama: The Genre & Theatre in Context 3-6
- DANC210 Movement for Actors 3
- DANC220 Musical Theatre: Tap/Jazz 2
- MUSC140 Chorus 1
- MUSC141 Chorus 1

Visual Arts Concentration (Total Credits Required: 35)

- ARTS250 Art History & Appreciation I 4
- ARTS251 Art History & Appreciation II 4
- ARTS109 Principles of Design & Color 3
- ARTS110 Fundamentals of Drawing 3

Select at least 15 credits from the classes below:

- ARTS111 Intro to Painting Media & Tech 3
- ARTS211 Mixed Media Explorations 3
- CSCI105 Intro to Computer Programming 3
- CSCI106 Web Page Design & Development 3
- CSCI107 Web Graphic Design & Development 3
- CSCI207 Developing Multimedia & Rich Interactive Web Sites 3
- JOUR220 Photojournalism 3

Web Design and Management Concentration (Total Credits Required: 28)

- ARTS109 Principles of Design and Color 3
- CSCI105 Introduction to Computer Programming 3
- CSCI106 Web Page Design and Development 3
- CSCI107 Web Graphic Design and Development 3
- CSCI121 Principles of Programming 3
- CSCI207 Developing Multimedia and Rich Interactive Web Sites 3
- CSCI211 Database Applications 3
- CSCI292 Computer Networking Project 4
- CSCI325 Developing Web Applications with Javascript and PHP 3
  or
- CSCI326 Developing Web Applications with ASP.NET 3

Writing Concentration (Total Credits Required: 24)

Select 6 credits from the following:

- ENGL180 Intro to Literary Studies 3
- ENGL231 American Literature I 3
- ENGL232 American Literature II 3
- ENGL233 English Literature I 3
- ENGL234 English Literature II 3

Pick at least 18 credits, including 3 from each of Groups I and II and additional credits from Group III. A minimum of 9 credits in applied rhetoric or writing courses must be completed.

Group I: Practical Writing & Production Courses

- ENGL310 Advanced Writing 3
- ENGL306 Technical Writing 3
- COMM280 Understanding the Mass Media 3
- JOUR211 Newswriting 3
- JOUR310 Editing & Production 3

Group II: Creative Writing Courses

- ENGL221 Intro to Creative Writing 3
- ENGL301 Creative Prose Writing 3
- ENGL302 Poetry Writing 3
- ENGL303 Performance Writing 3
- ENGL320 Responding to Writing 3
- ENGL321 Rhetoric & Composition 3

Group III: Senior Year Courses

- ENGL409 Advanced Writing Workshop 3
- ENGL420 History of English Language 3
- ENGL421 History of Literary Criticism 3
- ENGL480 Creative Writing Portfolio 3
- JOUR410 Broadcast Newswriting 3
- JOUR411 Broadcast Editing & Production 3

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

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.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Fire Science - Engineering Technology: Bachelor of Science

Program Description

This emphasis is designed for students preparing for professional positions in the private sector. This emphasis is designed to provide the student with a wide knowledge base of the fire service while earning a minor in engineering. Students in this emphasis will have the education necessary to become part of an engineering team that specializes in fire suppression and design. It should be noted that students of this emphasis are equally marketable for municipal, county, state, and federal fire departments, and have the option of earning firefighter certfications.

Degree Requirements

Major Requirements (49 credits)

- CJUS341 Fire Cause and Arson Investigation 3
- FIRE101 Introduction to Fire Science 3
- FIRE111 Hazardous Materials 3
- FIRE197 Physical Fitness for Public Safety 1
- FIRE201 Fire Protection Construction Concepts 3
- FIRE204 Fire Protection Hydraulics and Pumps 3
- FIRE206 Fire Protection Systems Equipment and Industrial Fire Protection 3
- FIRE211 Tactics & Strategy 3
- FIRE220 Fire Science Certification 4
- FIRE301 Code Enforcement Inspection and Fire Prevention 3
- FIRE312 Hazardous Materials Management 4
- FIRE315 Company Level Supervision and Management 3
- FIRE401 Senior Seminar 3
- FIRE402 Fire Service and the Law 3
- FIRE403 Fire Science Internship 3

Statistics: Choose one of the following:

- BUSN211 Business Statistics 3
- CJUS345 Statistics and Design for Public Safety 4
- MATH207 Principles of Statistical Methods 3
- POLI211 Political Science Research and Statistics 4
- PSYC210 Statistics 3
- SOCY302 Statistics for Social Science 4

Support Courses (35 credits)

- CSCI101 Intro. to Microcomputer Applications 3
- MATH112 Calculus for Business/Life Science* 4
- MATH140 Pre-Calculus 5
- EGME337 Thermodynamics 4
- EGME338 Fluid Mechanics 2
- EGMT225 Statics & Strength of Materials I 4
- EGMT332 Thermodynamics & Heat Transfer for Technologists 4
- EGNR140 Linear Algebra and Numerical Methods for Engineers 2
- EGNR245 Calculus Applications for Technology 3
- PHYS221 Elements of Physics I 4

*or MATH151

Electives (9 credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Fire Science - Generalist: Bachelor of Science

Program Description

This emphasis is designed for students preparing for professional fire service positions in public and private sectors. The emphasis is designed to provide the student with a working knowledge of the many different areas of the fire service, giving the students the ability to function in fire departments and participate in fire prevention and investigation divisions. Students in this emphasis will complete the requirements for Firefighter I and II state certifications established by the Michigan Firefighters Training Council.

Degree Requirements

Major Requirements (54-55 credits)

- CJUS341 Fire Cause & Arson Investigation 3
- FIRE101 Introduction to Fire Science 3
- FIRE111 Hazardous Materials 3
- FIRE197 Physical Fitness for Public Safety 1
- FIRE201 Fire Protection Construction Concepts 3
- FIRE204 Fire Protection Hydraulics & Pumps 3
- FIRE206 Fire Protection Systems Equipment and Industrial Fire Protection 3
- FIRE211 Tactics & Strategy 3
- FIRE219 Firefighter Essentials 3
- FIRE220 Fire Science Certification 4
- FIRE301 Code Enforcement Inspection and Fire Prevention 3
- FIRE309 Fire-Related Human Behavior 3
- FIRE312 Hazardous Materials Management 4
- FIRE315 Company Level Supervision and Management 3
- FIRE401 Senior Seminar 3
- FIRE402 Fire Service and the Law 3
- FIRE403 Fire Science Internship 3

Statistics: Choose one of the following:

- CJUS345 Statistics and Design for Public Safety 4
- MATH207 Principles of Statistical Methods 3
- PSYC210 Statistics 3
- SOCY302 Statistics for Social Science 4

Minor or Paramedic License (20 credits) Students may complete an approved minor. The minor must be an approved minor other than Fire Science.

Electives (9 - 14 credits)

Note: A minimum of 24 credits of 300/400 level coursework is required for graduation.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Fire Science - Generalist Non Certification: Bachelor of Science

Program Description

This emphasis is designed for long-distance students who currently possess firefighting certifications; it also serves those students who do not desire, or have the physical ability, to enter the fire service as active firefighters. This emphasis is designed for students who seek promotions or desire a professional position in the private fire service sector, and provides students a wide knowledge base of the fire service. Students in this emphasis will have the education necessary to work in preventive, investigative, and educational areas of the fire service.

Degree Requirements

Major Requirements (45-46 credits)

- FIRE101 Introduction to Fire Science 3
- FIRE204 Fire Protection Hydraulics and Pumps 3
- FIRE206 Fire Protection Systems Equipment and Industrial Fire Prevention 3
- FIRE301 Code Enforcement, Inspection and Fire Prevention 3
- FIRE315 Company Level Supervision and Management 3
- FIRE401 Senior Seminar 3

Statistics: Choose one of the following:

- CJUS345 Statistics and Design for Public Safety 4
- MATH207 Principles of Statistical Methods 3
- PSYC210 Statistics 3
- SOCY302 Statistics for Social Science 4

Electives - Select at least 30 additional credits of Fire Science and Criminal Justice Electives from:

- CJUS103 Introduction to Terrorism and Homeland Security 3
- CJUS203 Cyberterrorism 3
- CJUS204 Domestic and International Terrorism 3
- CJUS303 Critical Infrastructure Protection 3
- CJUS321 Ethical Issues in Public Safety 3
- CJUS325 / FIRE325 Homeland Security and Emergency Services 3

CJUS341 Fire Cause and Arson Investigation 3
- FIRE111 Hazardous Materials 3
- FIRE201 Fire Protection Construction Concepts 3
- FIRE211 Tactics and Strategy 3
- FIRE300 Special Topics 3-6
- FIRE309 Fire-Related Human Behavior 3
- FIRE312 Hazardous Materials Management 4
- FIRE400 Special Topics 3-6
- FIRE402 Fire Service and the Law 3
- FIRE403 Fire Science Internship 3

Electives to reach 124 credits.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Fish Health: Bachelor of Science

Program Description

The Bachelor of Science degree in Fish Health prepares students for assessment of aquatic animal health in areas of bacterial, viral and parasitic disease. The degree requirements cover content in fish ecology, physiology and hatchery culture, including diseases caused by environmental stress (e.g. gas bubble disease or issues with low dissolved oxygen), as well as those caused by nutritional and mineral deficiencies. In addition, the program includes background in the microbial, viral and parasitic vectors of disease as well as the ecology of disease transmission. The program satisfies the academic requirements for American Fisheries Society (AFS) Fish Pathologists. The program is an excellent preparation for veterinary school* and other careers in the health professions. Our graduates are currently employed as medical doctors, dentists, veterinarians, clinical laboratory scientists, biological researchers, consultants and teachers. Many careers in biology require education beyond the baccalaureate degree and LSSU's biology program has a proven record of excellent preparation.

*Most veterinary colleges will also require one year of physics.

Degree Requirements

Fish Health Major (74 credits)

- BIOL131 General Biology: Cells 4
- BIOL132 General Biology: Organisms 4
- BIOL199 Freshman Seminar 1
- BIOL204 General Microbiology 4
- BIOL220 Genetics 4
- BIOL250 Quantitative Biology 3
- BIOL280 Biometrics 3
- BIOL299 Sophomore Seminar 1
- BIOL310 Ichthyology 3
- BIOL330 Animal Physiology 4
- BIOL333 Fish Ecology 3
- BIOL335 Principles of Animal Nutrition 3
- BIOL337 General Ecology 3
- BIOL345 Limnology 3
- BIOL372 Freshwater Fish Culture 3
- BIOL389 Internship in Biology 3-4
- BIOL399 Junior Seminar 1
- BIOL422 Parasitology 3
- BIOL423 Immunology 4

- BIOL425 Virology 3
- BIOL426 Ecology of Animal Disease 3
- BIOL433 Histology 3
- BIOL434 Histopathology 1
- BIOL480 Advanced Clinical Microbiology 4
- BIOL495 Senior Project 2
- BIOL499 Senior Seminar 1

Chemistry Minor (22 credits)

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
- CHEM226 Organic Chemistry II 4
- CHEM351 Introductory Biochemistry 4

Support Courses (10 credits)

- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Science 4
- HLTH209 Pharmacology 3

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 131 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Fisheries and Wildlife Management: Bachelor of Science

Program Description

Fisheries and Wildlife Management programs place a strong emphasis on understanding the relationship between organisms and their habitats by blending a conceptual understanding of fish and wildlife ecology and population dynamics with practical skills obtained during laboratory and field exercises. Students graduating from this rigorous, applied curriculum can meet the qualifications of state and federal natural resource management agencies as technicians and biologists.

Available degrees (see specific degree requirements further down the page):

- Bachelor of Science Fisheries and Wildlife Management
- Bachelor of Science Fisheries and Wildlife Management, Fisheries Management Concentration
- Bachelor of Science Fisheries and Wildlife Management, Wildlife Management Concentration

Degree Requirements

Bachelor of Science Fisheries and Wildlife Management

Departmental Requirements

- BIOL131 General Biology I: Cells 4
- BIOL132 General Biology II: Organisms 4
- BIOL199 Freshman Seminar 1
- BIOL202 Field Botany 3

or

- BIOL284 Forestry 4
- BIOL203 Fundamentals of Natural Resources 3
- BIOL220 Genetics 4
- BIOL243 Vertebrate Anatomy 4

or

- BIOL330 Animal Physiology 4
- BIOL250 Quantitative Biology 3
- BIOL280 Biometrics 3
- BIOL299 Sophomore Seminar 1
- BIOL310 Ichthyology 3
- BIOL311 Mammology 3
- BIOL312 Ornithology 3
- BIOL333 Fish Ecology 3

- BIOL337 General Ecology 3
- BIOL339 Wildlife Ecology 3
- BIOL345 Limnology 3
- BIOL399 Junior Seminar 1
- BIOL432 Fisheries Management 3
- BIOL439 Wildlife Management 3
- BIOL495 Senior Project 2
- BIOL499 Senior Seminar 1
- BIOL Electives 3

Support Courses

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
  or
- PHYS221 Principles of Physics I 4
- EVRN131 Introduction to GIS and GPS 2
- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Sciences 4

Free Electives - 10-11 credits

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

Bachelor of Science Fisheries and Wildlife Management, Fisheries Management Concentration

Departmental Requirements

- BIOL131 General Biology I: Cells 4
- BIOL132 General Biology II: Organisms 4
- BIOL199 Freshman Seminar 1
- BIOL203 Fundamentals of Natural Resources 3
- BIOL220 Genetics 4
- BIOL243 Vertebrate Anatomy 4
  or
- BIOL330 Animal Physiology 4
- BIOL250 Quantitative Biology 3
- BIOL280 Biometrics 3
- BIOL299 Sophomore Seminar 1
- BIOL310 Ichthyology 3
- BIOL333 Fish Ecology 3
- BIOL337 General Ecology 3
- BIOL345 Limnology 3
- BIOL372 Freshwater Fish Culture 3

- BIOL399 Junior Seminar 1
- BIOL432 Fisheries Management 3
- BIOL475 Aquatic Entomology 3
- BIOL495 Senior Project 2
- BIOL499 Senior Seminar 1
- BIOL Electives 8

Support Courses

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
  or
- PHYS221 Principles of Physics I 4
- EVRN131 Introduction to GIS and GPS 2
- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Sciences 4

Human Dimensions - 3 credits from:

- ECON307 Environmental Economics 3
- EVRN311 Environmental Law 3
- BIOL304 The Human Environment 3
- POLI342 International Environmental Policy 3

Free Electives - 12 credits

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

Bachelor of Science Fisheries and Wildlife Management, Wildlife Management Concentration

Departmental Requirements

- BIOL126 Interpretation of Maps and Aerial Photography 2
- BIOL131 General Biology I: Cells 4
- BIOL132 General Biology II: Organisms 4
- BIOL199 Freshman Seminar 1
- BIOL202 Field Botany 3
- BIOL203 Fundamentals of Natural Resources 3
- BIOL220 Genetics 4
- BIOL243 Vertebrate Anatomy 4
- **or**
- BIOL330 Animal Physiology 4
- BIOL250 Quantitative Biology 3
- BIOL280 Biometrics 3
- BIOL284 Principles of Forestry 4

- BIOL299 Sophomore Seminar 1
- BIOL311 Mammology 3
- BIOL312 Ornithology 3
- BIOL337 General Ecology 3
- BIOL339 Wildlife Ecology 3
- BIOL399 Junior Seminar 1
- BIOL439 Wildlife Management 3
- BIOL495 Senior Project 2
- BIOL499 Senior Seminar 1
- BIOL Electives 3

Support Courses

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- EVRN131 Introduction to GIS and GPS 2
- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Sciences 4

Physical Science* - 3-4 credits from:

- BIOL230 Introduction to Soil Science 4
- BIOL286 Principles of Watersheds 3
- PHYS221 Principles of Physics I 4

Policy/Admin/Law - 9 credits from:

- BIOL287 Conservation Biology 3
- ECON307 Environmental Economics 3
- EVRN311 Environmental Law 3
- BIOL304 The Human Environment 3
- POLI342 International Environmental Policy 3

Free Electives - 10 credits

*Students considering graduate school should select PHYS221

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Forensic Chemistry: Bachelor of Science

Program Description

The B.S. in Forensic Chemistry combines elements of criminal justice and biology with a strong chemistry program. The forensic chemist analyzes and interprets materials collected at crime scenes, accidents, and at sites of terrorist activities.

The degree is offered in response to strong student, state and local government demand for an undergraduate academic program to prepare students for careers in forensic chemistry. According to the U.S. Department of Labor Bureau of Labor Statistics 2010 Occupational Outlook Handbook, forensic science technicians will grow much faster than average.

Graduates with a bachelor of science in forensic chemistry work in forensic laboratories for federal, state, or local government agencies or in some cases, work for private investigative laboratories. Some graduates may also go on to pursue a graduate degree.

The Chemistry Program at Lake Superior State University is now accredited by the American Chemical Society (ACS). According to the 2011 National Occupational Employment and Wage Estimator, more people are employed as chemists and chemical technicians than in any other job classification in the life and physical science occupations (http://stats.bls.gov). With many free electives and a common general education core, a chemistry degree can also be used in combination with other majors or minors such as pre-professional (medicine, pharmacy, veterinary, law, etc.), engineering, business, biology, and many more to match student interest and career plans.

Graduates with a bachelor of science in chemistry work in many disciplines and industries, and many proceed on to graduate school in natural sciences, medicine, law, or engineering. Internships in chemistry are encouraged where students can gain valuable real-world work experience while gaining college credit. In addition, students pursuing the ACS certified degree will participate in an applied research project in close collaboration with faculty members to address meaningful chemical-based problems. These projects, through the excellent preparation they provide our students, are often cited as important factors in successful job searches and entry into graduate programs.

The LSSU chemistry program has been approved by the American Chemical Society, and may provide a certified degree in Chemistry, Environmental Chemistry, Forensic Chemistry, and Pre-Professional Chemistry degrees if a student chooses this track. Graduates completing the prescribed requirements are awarded an ACS certificate signifying their completion of the approved degree and can qualify for membership in the Society upon graduation.

American Chemical Society
Committee on Professional Training
155 Sixteenth Street, N.W.,

Washington, D.C. 20036

Degree Requirements

Major Requirements (55 credits)

Chemistry (39 credits)

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
- CHEM231 Quantitative Analysis 4
- CHEM332 Instrumental Analysis 4
- CHEM351 Introductory Biochemistry 4
- CHEM353 Introductory Toxicology 3
- CHEM361 Physical Chemistry I 4
- CHEM363 Physical Chemistry Lab 1
- CHEM395 Junior Seminar 1
- CHEM445 / CJUS445 Forensic Science 4
- CHEM452 Biochemistry II 4
  or
- CHEM310 Applied Spectroscopy 4
- CHEM499 Senior Seminar 1

For American Chemical Society certified degree, additionally required (total lab hours must be at least 400 hrs). See Department Chair for special rules regarding ACS certification:

- CHEM261 Inorganic Chemistry 4
- CHEM326 Organic Chemistry II 4
- CHEM495 Senior Project 2
- MATH152 Calculus II 4
  or
- EGNR140 Linear Algebra and Numeral Apps Engineers 2
- EGNR245 Calculus Applications for Technology 3

Criminal Justice (16 credits)

- CJUS101 Introduction to Criminal Justice 3
- CJUS243 Investigation 3
- CJUS319 Substantive Law 3
- CJUS409 Procedural Law 3
- CJUS444 Criminalistics 4

Support Courses (47 credits)

- BIOL131 General Biology: Cells 4
- BIOL132 General Biology: Organisms 4
- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Sciences 4
- MATH207 Principles of Statistical Methods 3

or

- BUSN211 Business Statistics 3
- Two semesters of College Physics with laboratory (8 cr min)
- POLI110 Introduction to American Government and Politics 4
- PSYC101 Introduction to Psychology 4
- PSYC259 Abnormal Psychology 3
- SOCY103 Cultural Diversity 3
- SOCY214 Criminology 3

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.50 or higher. A gpa of 2.50 or higher is required in your Major, and a gpa of 2.00 or higher is required in your General Education Requirements.

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General Studies: Bachelor of Arts/Science

Program Description

Through the General Studies BA/BS, students choose two minors, two concentrations or one minor and one concentration from separate areas of interest. Working closely with the Liberal Studies coordinator and advisors in both areas of study, the student designs a unique degree which emphasizes their individual strengths in diverse fields of study. This synthesis of knowledge from more than one area of study enables the student to become an effective contributor in their community and a world in which careers are increasingly complex and varied in their requirements. The value of this interdisciplinary model can be seen most concretely in the student's capstone project (INTD 490) in which the student must merge what he or she has learned in both areas of study into a practical and academically valuable research project.

Degree Requirements

Major Requirements (60 credits)

Complete two academic minors, or two academic concentrations, or one of each. No more than two (2) courses may be counted in common to meet the minimum requirements for minors, concentrations, or between minor and concentration.

Minors: Sucessfully complete academic minor(s) totaling at least 30 credits each. At least 10 credits in each minor must be LSSU credits. Complete additional courses in the same course prefixes used in the minor in cases where the minor does not meet the minimum of 30 credits.

Concentrations: Complete at least 30 credits in defined academic concentrations. Concentrations must include at least 10 credits in LSSU credits, and at least 12 credits must be at the 300/400 level.

Academic Concentrations:

- Behavioral Sciences - Courses with SOCY, PSYC and SOWK prefixes
- Business - Courses with ACTG, BUSN, ECON, FINC, INTB, MGMT and MRKT prefixes
- Communication - Courses with COMM prefixes
- Computational Sciences - Courses with MATH and CSCI prefixes
- Education - Courses with CHLD, EDUC and EDSE prefixes
- Emergency Services - Courses with CJUS, FIRE and EMED prefixes
- Engineering - Courses with EGEE, EGET, EGME, EGEM, EGMT, EGNR and EGRS prefixes
- Fine Art - Courses with ARTS, DANC, FINE, MUSC and THEA prefixes

- Health & Human Performance - Courses with HLTH, RECS, RECA and EXER prefixes
- Humanities and Philosphy - Courses with HUMN and PHIL prefixes
- Modern Language and Literature - Courses with ENGL, FREN and SPAN prefixes
- Natural Science - Courses with BIOL, CHEM, EVRN, GEOL, NSCI and PHYS prefixes
- Nursing - Courses with NURS and PNUR prefixes
- Social Sciences - Courses with ECON, GEOG, HIST and POLI prefixes

Additional Major Requirements:

- PHIL Elective (excluding PHIL205) 3
- INTD490 Senior Directed Study 3-4

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

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.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Geology: Bachelor of Science

Program Description

Geology examines the dynamic Earth and its physical, chemical and biologic history. It involves the study of changes that are taking and have taken place and the forces that cause these changes. For example, geologists interpret the movements of the continents over geologic time and the formation of mountains, volcanoes and other features of the Earth's surface. Geologists attempt to understand our physical environment from which we derive most of the natural resources essential to civilization. They investigate the processes that led to the formation of mineral deposits, and oil, gas and coal. They also study environmental change throughout the history of the Earth and how those changes and the development of life are related. Geologists attempt to predict natural disasters such as earthquakes, volcanic eruptions, and landslides, and they are very active in modeling groundwater flow to develop water reserves for municipalities and to protect groundwater from contamination. Geologists study the natural world and apply their knowledge to achieve harmony between the human race and its environment.

Available degrees (see specific degree requirements further down the page):

- Bachelor of Science Geology
- Bachelor of Science Geology, Environmental Geology Concentration

Degree Requirements

Bachelor of Science Geology

Geology (60 credits)

- GEOL121 Physical/Historical Geology I 4
- GEOL122 Physical/Historical Geology II 4
- GEOL223 Mineralogy and Petrology 5
- GEOL308 Structural Geology Systems 5
- GEOL315 Geoenvironmental Systems 5
- GEOL323 Geochemical Systems 4
- GEOL325 Clastic Systems 4
- GEOL380 Introduction to Field Geology 3
- GEOL411 Hydrologic Systems: Surface and Groundwater 4
- GEOL431 Geophysical Systems 5
- GEOL445 Carbonate Systems 5
- GEOL450 Geology Seminar I 2
- GEOL451 Geology Seminar II 2
- GEOL468 Tectonic Systems 5
- GEOL480 Advanced Field Geology 3

Support Courses (28-31 credits)

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- PHYS221 Elements of Physics I* 4
- PHYS222 Elements of Physics II* 4
- MATH111 College Algebra* 3
- MATH112 Calculus for Business and Life Sciences* 4
- MATH207 Principles of Statistical Methods 3
  or
- MATH308 Probability and Mathematical Statistics 3
  or
- BUSN211 Business Statistics 3

*Students with adequate preparation in mathematics are advised to take MATH151 and MATH152 in place of MATH111 and MATH112 and to take PHYS231 and PHYS232 in place of PHYS221 and PHYS222.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

Bachelor of Science Geology, Environmental Geology Concentration

Total Program Requirements Plus Distributed Electives (95 credits)

Program Requirements (78-80 credits)

- GEOL121 Physical & Historical Geology I 4
- GEOL122 Physical & Historical Geology II 4
- GEOL223 Mineralogy and Petrology 5
- GEOL308 Structural Geology Systems 5
- GEOL315 Geoenvironmental Systems 5
- GEOL380 Introduction to Field Geology 3
- GEOL411 Hydrologic Systems: Surface and Groundwater 4
- GEOL431 Geophysical Systems 5
- GEOL450 Geology Seminar I 2
- GEOL451 Geology Seminar II 2
- GEOL480 Advanced Field Geology 3
- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
- CHEM326 Organic Chemistry II 4
- PHYS221 Elements of Physics I* 4
- PHYS222 Elements of Physics II* 4
- MATH111 College Algebra* 3
- MATH112 Calculus for Business and Life Sciences* 4
- MATH207 Principles of Statistical Methods 3

or

- MATH308 Probability and Mathematical Statistics 3

or

- BUSN211 Business Statistics 3

Distributed Electives (17 credits min)

Select electives to total 95 credits

- BIOL230 Introduction to Soil Science 4
- CHEM231 Quantitative Analysis 4
- CHEM332 Instrumental Analysis 4
- CHEM341 Environmental Chemistry 4
- EVRN131 Introduction to GIS and GPS 2
- FIRE312 Hazardous Material Management 4
- GEOL325 Clastic Systems 4
- GEOL445 Carbonate Systems 5
- GEOL490 Research Topics in Geology 1-4
- NSCI103 Environmental Science 3

*****Students with adequate preparation in mathematics are advised to take MATH151 and MATH152 in place of MATH111 and MATH112 and to take PHYS231 and PHYS232 in place of PHYS221 and PHYS222.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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History: Bachelor of Arts/Science

Program Description

The bachelor of arts or science degree will prepare you for entry-level work in industry and government as well as prepare you for graduate or professional schools.

Other Qualifications — Graduate degrees may be necessary for some of the positions shown. The Ph.D. is essential for appointment to a permanent teaching and research position in colleges and universities.

Degree Requirements

Major Requirements:

- ECON201 Principles of Macroeconomics 3
- GEOG201 World Regional Geography 4
- GEOG306 Cultural Geography 3
- HIST101 History of World Civilization I 4
- HIST102 History of World Civilization II 4
- HIST131 United States History I 4
- HIST132 United States History II 4
- HIST231 Natives and Newcomers 3
- HIST250 Atlantic World 3
- HIST296 Historical Methods 2
- HIST497 Senior Seminar in History 2
- HUMN251 Humanities I 4
- HUMN252 Humanities II 4
- PHIL204 Intro to Philosophy 3
- PHIL302 Ancient Western Philosophy 3
  or
- PHIL305 Modern and Contemporary Philosophy 3

History Electives at 300/400 level (16 credits)

Electives (5-13 credits)

Minor (20 credits minimum)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

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.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Individualized Studies: Bachelor of Arts/Science

Program Description

The individual studies degree may be appropriate if you desire an unusually specialized program. The purpose of the degree is to provide you an opportunity to specialize in two or more academic areas. You will meet with an academic advisor to plan an individualized studies academic program that reflects your professional and personal goals.

Degree Requirements

Guidelines for an individualized studies degree are:

1. Contact a department chair or regional site director with a preliminary plan for degree development.
2. The department chair or regional site director will identify possible faculty advisor's or another department chair to counsel you in degree planning.
3. The advisor's will assist you in the development of the proposal. The proposal must include justification for specialization and a list of courses which meet the individualized studies degree requirement including:
    1. general education requirements.
    2. minimum of 124 credits and a minimum of 30 credits on campus or a minimum of 30 credits of LSSU classes offered at a regional center. Fifty percent of the 300-400 level credits used in the concentration areas must be completed with LSSU classes.
    3. 24 credits at 300/400 level in addition to general education requirements and a 2.00 cumulative GPA. At least one three-credit course at the 400 level is required.
    4. BA or BS degree requirement.
4. You need to contact the chairperson of the Individualized Studies Committee to schedule a committee meeting.
5. You will present the degree proposal to the committee for review. It is recommended that your advisor attend this meeting.
6. The committee will approve your original proposal, approve your proposal with recommended changes, or not approve your degree proposal.
7. You and your advisor will submit an approved Degree Audit Sheet to the chairperson to be distributed to the committee.
8. You will process a Major Change Form.
9. Any course changes from the approved program must be submitted to the committee for approval.

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Industrial Technology: Bachelor of Science

Program Description

Your academic experience will include a foundation in the basic sciences, mathematical concepts through algebra and trigonometry, general education, software, technology and automation.

You will learn to apply your skills toward the solution of practical, industrial-type technical problems. During your senior year, you will participate in the construction-and-build semester of a real-world industrial project, working with engineers and company representatives. During your time at LSSU, you will also have developed communication skills that will enable you to grow and succeed in your professional career.

Not a first-time college student? There are multiple technical and free electives to allow transfer students to fit into the flow of the program.

Degree Requirements

Required Courses

- CHEM108 Applied Chemistry 3
- CHEM109 Applied Chemistry Lab 1
- COMM101 Fundamentals of Speech Communication 3
- CSCI101 Introduction to Microcomputer Applications 3
- CSCI105 Introduction to Computer Programming 3
- Social Science Elective 3
- EGEE125 Digital Fundamentals 4
- EGET110 Applied Electricity 4
- EGET175 Applied Electronics 4
- EGME110 Manufacturing Processes 3
- EGME141 Solid Modeling 3
- EGME240 Assembly Modeling and GD&T 3
- EGMT225 Statics and Strength of Materials I 4
- EGME312 CNC Manufacturing Processes 3
- EGNR265 C Programming 3

  or
- CSCI121 Principles of Programming 3
- EGNR310 Advanced Quality Engineering 3
- EGRS215 Introduction to Robotics 2
- EGRS365 Programmable Logic Controllers 3
- EGRS380 Robotics Technology 2

- EGRS381 Robotics Technology Lab 1
- MATH102 Intermediate Algebra 4
- MATH111 College Algebra 3
- MATH131 College Trigonometry 3
- MATH207 Principles of Statistical Methods 3
- PHYS221 Principles of Physics I 4

Complete one sequence:

Industrial Project

- EGNR496 Senior Directed Project 3

Cooperative Project

- EGNR450 Cooperative Education Project I 2
- EGNR451 Cooperative Education Project II 2

Technical Electives (18 credits*)

Choose from:

- CSCI106 Web Page Design and Development 3
- CSCI200 Level or higher
- EGEE250 Micro-Controller Fundamentals 4
- EGME240 Assembly Modeling and GD&T 3
- EGME275 Engineering Materials 3
- EGME276 Strength of Materials Lab 1
- EGNR101 Introduction to Engineering 2
- EGNR140 Linear Algebra and Numerical Methods for Engineers 2
- EGNR245 Calculus Applications for Technology 3
- EGNR250 Cooperative Education 2
- EGNR491 Engineering Design Project I 3
- EGRS480 Manufacturing Automation 3
- EGRS481 Manufacturing Automation Lab 1
- MATH112 Calculus for Business and Life Sciences 4
- MGMT360 Management Concepts and Applications 3
- MGMT375 Introduction to Supply Chain Management 3
- MGMT471 Production/Operations Management 3

Other courses may be approved in writing by the Program Chair and School Dean using a substitution/waiver form.

Free Electives (9 credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Language Arts: Bachelor of Arts

Program Description

Featuring small classes, lots of reading, many opportunities for writing and research, and supervision by faculty who know their students, the English programs emphasize the human letters and language study.

Every year, the English Department holds the Osborn Poetry Contest and the Fiction Short Story Contest. Submissions are due at the beginning of February, with the winners announced in March.

The Language Arts program prepares graduates for elementary-level teacher certification in Michigan, which permits individuals to teach in self-contained classrooms at grades K-8, in all subjects at grades K-5, and in language arts at grades 6-8. See Elementary Teaching for additional information regarding this program.

Degree Requirements

Bachelor of Arts Language Arts - Elementary Teaching

In this program, students will complete a teaching major in Language Arts, and a planned program in the other three academic areas essential to elementary school teaching: mathematics, natural science and social science. The planned program is explained in the Elementary Education section of this catalog.

The program also includes general education requirements and a professional education sequence. Students complete their initial professional education course in their sophomore year, and then apply for formal admission to the Teacher Education Program.

English Requirements (36 credits)

- ENGL180 Introduction to Literary Studies 3
- ENGL221 Introduction to Creative Writing 3
- ENGL222 English Grammar 3
- ENGL231 American Literature I 3
- ENGL232 American Literature II 3
- ENGL236 Literature and Culture 3
- ENGL320 Responding to Writing 3
- ENGL335 Children's Literature 3
- ENGL490 Senior Thesis 3
- COMM308 Communication Theory 3

THEA112 Acting for Beginners 3
- CHLD225 Emergent Literacy 3

English Departmental Requirements (8 credits)

- One year of a modern language other than English

For information regarding the Professional Educational Sequence and Elementary Planned Program, - see Elementary Education.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

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.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.70 or higher. A gpa of 2.70 or higher is required in your Major, and a gpa of 2.00 or higher is required in your General Education Requirements.

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Literature: Bachelor of Arts

Program Description

This program promotes a well-rounded study of literary texts across mulitiple genres and media in keeping with current scholarship and research in the field of English while honing skills significant to effective writing, critical thinking, and textual analysis.

Opportunities for publishing and editing are available through work on the literary journal, and the student-edited journal, or the monthly magazine.

Degree Requirements

Methods, Genre, and Theory (9 credits)

- ENGL180 Introduction to Literary Studies 3
- ENGL221 Introduction to Creative Writing 3
- ENGL380 History of Literary Criticism 3

Diversity and Culture (3 credits - Choose one)

- ENGL235 Survey of Native Literature 3
- ENGL236 Literature and Culture 3

Literary History and Traditions (12 credits)

- ENGL231 American Literature I 3
- ENGL232 American Literature II 3
- ENGL233 English Literature I 3
- ENGL234 English Literature II 3

Professional Skills (3 credits - Choose one)

- ENGL222 English Grammar 3
- ENGL306 Technical Writing 3
- ENGL320 Responding to Writing 3

Textual Criticism (6 credits)

- ENGL345 Studies in Classic Texts 3
- ENGL435 Studies in Visual Texts 3

Advanced Studies in Literature (6 credits)

- ENGL440 Advanced Studies in British Literature 3
- ENGL442 Advanced Studies in American Literature 3

Senior Thesis (4 credits)

- ENGL490 Senior Thesis Research 2
- ENGL499 Senior Thesis 2

Minor (minimum 20 credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

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.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Literature - Creative Writing: Bachelor of Arts

Program Description

Featuring small workshop classes and instruction by faculty who are published authors, the Creative Writing program of the School of English and Language Studies emphasizes the art and craft of imaginative writing in a range of genres, including poetry, fiction, non-fiction, and performance writing.

Every year the Creative Writing program holds the Osborn Poetry Contest and Short Story contest. Opportunities for publishing and editing are available through work on the literary journal, the student-edited journal or the monthly magazine. Guest writers, public readings and other events are also featured.

Degree Requirements

Required Courses (48 credits)

- ENGL180 Introduction to Literary Studies 3
- ENGL221 Introduction to Creative Writing 3
- ENGL223 Creative Writing II 3
- ENGL301 Creative Prose Writing 3
- ENGL302 Poetry Writing 3
- ENGL303 Performance Writing 3
- ENGL409 Advanced Writing Workshop 3
- ENGL480 Creative Writing Portfolio I 3
- ENGL482 Creative Writing Portfolio II 3

Select one sequence from:

- ENGL231 American Literature I 3
- ENGL232 American Literature II 3

or

- ENGL233 English Literature I 3
- ENGL234 English Literature II 3

Select two additional literature courses at the 300/400 level

Select two additional professional writing skills courses from:

- ENGL222 English Grammar and Language in Context 3
- ENGL306 Technical Writing 3
- ENGL398 Community Workshop Internship 3
- ENGL399 Publishing Internship 3

- JOUR211 Newswriting 3
- CSCI106 Web Page Design and Development 3

Select one theatre course from:

- THEA251 History of Drama and Theatre I 3
- THEA252 History of Drama and Theatre II 3
- THEA333 Studies in the Drama: The Genre and Theater in Context 3
- THEA309 Theatre Studies: (Topic) 3

Minor (minimum 20 credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

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.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Manufacturing Engineering Technology: Bachelor of Science

Program Description

Manufacturing engineering technology (MfgET) is a multi-disciplinary field that integrates knowledge from areas of study such as science, math, computers, mechanical engineering, electronics engineering, management and economics. MfgET is a profession that gives you the expertise to develop tools, processes, machines and equipment to make quality products at a reasonable cost. The profession also involves working with and coordinating people from several other fields.

In addition to providing a strong background in the fundamentals of manufacturing engineering technology, *the program places an emphasis on the application of computer systems to modern manufacturing technologies*. This includes topics such as robotics, computer-aided design (CAD), programmable logic controllers (PLC), computer-aided manufacturing (CAM),and simulation of manufacturing systems. The classes and labs in the curriculum average about 12 students and are taught by faculty who are dedicated to undergraduate teaching excellence.

Students pursuing the B.S. degree in manufacturing at LSSU have the option to minor in robotics technology. LSSU is one of a few universities in the U.S. to offer the robotics minor in the TAC of ABET-accredited* manufacturing engineering technology B.S. degree. LSSU is home to one of the best robotics educational facilities in North America. Graduates with this emphasis have had nearly 100 percent job placement with high and competitive starting salaries. Your minor in robotics will be identified on your transcripts.

A scientific “high technology” basis in the field of manufacturing engineering technology is evolving. The MfgET program is designed to place LSSU graduates at the leading edge of this evolution.

Degree Requirements

Departmental Requirements: (102 credits)

Mathematics (12 credits)

- MATH111 College Algebra 3
- MATH112 Calculus for Business and Life Science 4
- MATH131 College Trigonometry 3
- MATH207 Principles of Statistical Methods 3

Science (9 credits)

- CHEM108 Applied Chemistry I 3
- CHEM109 Applied Chemistry Lab 1
- PHYS221 Principles of Physics I 4

Engineering Technology (62 credits)

- EGNR101 Introduction to Engineering 2
- EGNR140 Linear Algebra and Numerical Methods for Engineers 2
- EGNR245 Calculus Applications for Technology 3
- EGNR265 "C" Programming 3
- EGNR310 Advanced Quality Engineering 3
- EGNR491 Engineering Design Project I 3
- EGNR495 Engineering Design Project II 3
- EGET110 Applied Electricity 4
- EGET175 Applied Electronics 4
- EGME110 Manufacturing Processes I 3
- EGME141 Solid Modeling 3
- EGME240 Assembly Modeling and GD&T 3
- EGME275 Engineering Materials 3
- EGME276 Strength of Materials Lab 1
- EGMT216 CAM with CNC Applications 3
- EGMT225 Statics and Strength of Materials 4
- EGRS365 Programmable Logic Controllers 3
- EGRS380 Robotics Technology 2
- EGRS381 Robotics Technology Lab 1
- EGRS480 Manufacturing Automation 3
- EGRS481 Manufacturing Automation Lab 1

Support Courses (22 credits)

- ECON302 Managerial Economics 4
- MGMT360 Management Concepts and Applications 3
- Cooperative Education* 2
- Technical Electives 10
- Free Electives 3

Select a Senior Engineering Project Sequence: (0-8 credits)

Industrial Project (0 addt'l credits-see above)

- EGNR491 Engineering Design Project I 3
- EGNR495 Engineering Design Project II 3

Co-op Project (addt'l 6 credits)

- EGNR250 Cooperative Education I 2
- EGNR450 Cooperative Education Project I 2
- EGNR451 Cooperative Education Project II 2
- EGNR491 Engineering Design Project I 3

Research Project (addt'l 8 credits)

- EGNR260 Engineering Research Methods 2

- EGNR460 Engineering Research Project I 4
- EGNR461 Engineering Research Project II 2

Your degree options:

You may choose to follow one of the following degree options while studying manufacturing engineering technology at LSSU. They are the general option or the minor in robotics technology.

In the **general option**, you will have the ability to choose the specific course of study for the course(s) noted as technical electives in the curriculum.

For the **robotics technology minor**, you will complete a specified advanced course in robotics in place of the technical electives credits. The advanced course will provide you with a strong background in systems integration, machine vision, sensors and automation. LSSU is one of a few universities in the USA that offer you this option to specialize in robotics in the manufacturing program. LSSU is home to one of the best robotics educational facilities in North America. Graduates with this emphasis have had nearly 100-percent job placement with high and competitive starting salaries. Your completion of study in the robotics minor will be identified on your transcript.

Additional Credits for the Robotics Technology minor (4 credits)

- EGRS430 Systems Integration and Machine Vision 4

General Option Select ten credits from the following courses:

Technical Electives

- EGRS215 Introduction to Robotics 2
- EGEE250 Microcontroller Fundamentals 4
- EGME310 Vehicle Development & Testing 2
- EGMT332 Thermodynamics & Heat Transfer for Technologists 4
- MGMT375 Introduction to Supply Chain Management 3
- MGMT471 Production/Operations Management 3
- EGME338 Fluid Mechanics 2
- EGET310 Electronic Manufacturing Processes 4
- EGNR250 Cooperative Education I 2

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Mathematics: Bachelor of Science

Program Description

Mathematics:

Many who major in the field of mathematics combine those studies with education courses and obtain employment as teachers. People with mathematics degrees are found in a broad range of occupations where quantitative skills are needed; one of the largest employers of mathematics is the National Security Agency. Often a minor field of study (such as computer science) provides the supporting credential for entry-level jobs.

Actuarial and Business Applications:

The actuarial and business applications concentration combines mathematical knowledge with quantitative business applications. The result is a very marketable degree that provides many exciting career opportunities for graduates. A student should be prepared to take the first actuarial examination in the spring of his/her junior year and the second examination the following spring. A student choosing this emphasis will complete a minor in accounting-finance.

Teaching Certification:

A completion of professional education coursework, including a semester of student teaching, prepares students for elementary or secondary teacher certification in Michigan and Ontario.

Graduate School:

An undergraduate mathematics major with emphasis on abstraction, together with an analytical approach to problem solving, continues to provide strong preparation for graduate work in diverse fields — especially when combined with a minor in the related field.

Available degrees (see specific degree requirements further down the page):

- Bachelor of Science Mathematics
- Bachelor of Science Mathematics, Elementary Teaching
- Bachelor of Science Mathematics, Secondary Teaching
- Bachelor of Science Mathematics, Actuarial and Business Applications Concentration

Degree Requirements

Bachelor of Science Mathematics

Departmental Requirements: (55 credits)

- MATH151 Calculus I 4
- MATH152 Calculus II 4
- MATH251 Calculus III 4
- MATH215 Fundamental Concepts of Mathematics 3
- MATH216 Discrete Mathematics and Problem Solving 3
- MATH261 Intro. to Numerical Methods 3
- MATH305 Linear Algebra 3
- MATH308 Probability and Mathematical Statistics 3
- MATH309 Applied Statistics 4
- MATH310 Differential Equations 3
- MATH341 Abstract Algebra I 3
- MATH351 Graph Theory 3
- MATH401 Mathematical Modeling 3
- MATH411 Advanced Calculus 3
- MATH490 Research Topics in Mathematics 3

Choose any two (2) of the following (6-7 credits)

- CSCI103 Survey of Computer Science 3
- CSCI105 Intro. to Computer Programming 3
- CSCI121 Principles of Programming 4

Other Requirements (4 credits)

- PHYS231 Applied Physics for Engineers and Scientists I 4

Free Electives or Academic Minor (32-36 credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

Bachelor of Science Mathematics, Elementary Teaching

In this program, students will complete a teaching major in mathematics and a planned program in the other three academic areas essential to elementary school teaching: language arts, natural science and social science. The planned program is explained in the Elementary Education section of this catalog.

The program also includes general education requirements and a professional education sequence. Students complete their initial teacher education courses in their sophomore year, and then apply for formal admission to the Teacher Education Program.

Degree Requirements:

Mathematics Requirements (37 hours)

- CSCI103 Survey of Computer Science 3
- CSCI105 Intro. to Computer Programming 3
- MATH103 Number Systems and Problem Solving 4
- MATH104 Geometry & Measurement 4
- MATH151 Calculus I 4
- MATH152 Calculus II 4
- MATH215 Fundamental Concepts of Math 3
- MATH305 Computational Linear Algebra 3
- MATH308 Probability and Mathematical Statistics 3
  or
- MATH207 Principles of Statistical Methods 3
- MATH321 History of Mathematics 3
- MATH325 College Geometry 3

For information regarding the Professional Education Sequence and Elementary Planned Program, see Elementary Education.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.70 or higher. A gpa of 2.70 or higher is required in your Major, and a gpa of 2.00 or higher is required in your General Education Requirements.

Bachelor of Science Mathematics, Secondary Teaching

In this program, students will complete a major in mathematics tailored to the needs of a secondary teacher and a minor in another teachable subject. Computer science courses are included, and students work extensively with computer and calculator technology as it applies to classroom teaching.

This program also includes general education requirements and a professional education sequence. Students complete their initial teacher education courses in their sophomore year and then apply for formal admission to the Teacher Education Program.

Graduates earn a bachelor’s degree, which includes a semester of student teaching, in order to become certified to teach.

Degree Requirements:

Mathematics Requirements (42 credits)

- MATH151 Calculus I 4
- MATH152 Calculus II 4
- MATH207 Principles of Statistical Methods 3
- MATH215 Fundamental Concepts of Math 3
- MATH216 Discrete Mathematics and Problem Solving 3
- MATH251 Calculus III 4
- MATH305 Computational Linear Algebra 3
- MATH310 Differential Equations 3

- MATH321 History of Mathematics 3
- MATH325 College Geometry 3
- MATH341 Abstract Algebra I 3
- MATH401 Mathematical Modeling 3

Complete one methods course from the following:

- EDUC442 Secondary Math Methods 3
- EDUC452 Directed Study Math Methods 3

Cognate

- CSCI105 Intro. to Computer Programming 3
  or
- CSCI121 Prin. of Computer Programming 4

Teaching Minor (Minimum 20 credits)

Professional Education Sequence and Education Cognates- see Secondary Education.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.70 or higher. A gpa of 2.70 or higher is required in your Major, and a gpa of 2.00 or higher is required in your General Education Requirements.

Bachelor of Science Mathematics, Actuarial and Business Applications Concentration

Departmental Requirements: (52 credits)

- MATH151 Calculus I 4
- MATH152 Calculus II 4
- MATH251 Calculus III 4
- MATH215 Fundamental Concepts of Mathematics 3
- MATH216 Discrete Mathematics and Problem Solving 3
- MATH305 Linear Algebra 3
- MATH308 Probability and Mathematical Statistics 3
- MATH309 Applied Statistics 4
- MATH310 Differential Equations 3
- MATH341 Abstract Algebra I 3
- MATH351 Graph Theory 3
- MATH401 Mathematical Modeling 3
- MATH411 Advanced Calculus 3
- MATH490 Research Topics in Mathematics 3

Choose any two (2) of the following (6-7 credits)

- CSCI103 Survey of Computer Science 3
- CSCI105 Intro. to Computer Programming 3
- CSCI121 Principles of Programming 4

Other Requirements (7 credits)

- ECON201 Principles of Macroeconomics 3
- FINC341 Managerial Finance 4

A student choosing this emphasis will complete a minor in accounting-finance (24 credits).

Free Electives (11-15 credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Mechanical Engineering: Bachelor of Science

Program Description

Mechanical engineering is a broad-based program that prepares you for a rewarding career in mechanical and related engineering fields. Course work for this EAC of ABET-accredited* program includes 72 credits in Engineering subjects, 32 credits in math and sciences and 25 credits in general education for a total of 129-131 credits in the bachelor of science degree. You will work with mechanical systems in the laboratories and receive an excellent mix of theory and application.

Program Highlights:

- Emphasis is on preparing you to solve real-world engineering problems.
- You will participate in multidisciplinary, industrial or research-based senior engineering design projects which emphasize teamwork, communications, project management, customer relations and ethics.
- You will learn numerous software packages for CAD, CAM, fluid dynamics, finite element analysis, and other applications.
- Cooperative education opportunities are available.
- Degree Concentrations — You must choose from among three concentrations: robotics and automation, vehicle systems, or general mechanical while studying mechanical engineering.
- Emphasis on fundamentals of engineering, applications of theory, traceability to first principles, and generous laboratory content to complement and reinforce theoretical understanding.

The **robotics and automation concentration** will give you skills through courses in machine vision, system integration, automated manufacturing, robotics, and programmable logic controllers.

The **vehicle systems concentration** addresses the performance of surface vehicles of all types (automotive, rail, terrain, watercraft, etc.) through a series of courses in vehicle dynamics, geometric dimensioning and tolerancing, vehicle testing, and vibration and noise control. The emphasis is on projecting performance through analytical skills and computer simulation, and testing using modern instrumentation.

The **general concentration** enables students to select courses from the concentrations described above as well as other Engineering subjects.

Cooperative Education:

Opportunities are available as part of this program for students who are academically qualified. A certificate that documents this practical training is available.

Degree Requirements

Departmental Requirements:

Mathematics

- EGNR340 Advanced Numerical Methods for Engineers 1
- MATH151 Calculus I 4
- MATH152 Calculus II 4
- MATH251 Calculus III 4
- MATH308 Probability & Mathematical Statistics 3
- MATH310 Differential Equations 3

Sciences

- CHEM115 General Chemistry I 5
- PHYS231 Applied Physics for Engineers and Scientists I 4
- PHYS232 Applied Physics for Engineers and Scientists II 4

Engineering

- EGEE210 Circuit Analysis 4
- EGEM220 Statics 3
- EGEM320 Dynamics 3
- EGME110 Manufacturing Processes I 3
- EGME141 Solid Modeling 3
- EGME225 Mechanics of Materials I 3
- EGME275 Engineering Materials I 3
- EGME276 Strength of Materials Lab 1
- EGME337 Thermodynamics 4
- EGME338 Fluid Mechanics 3
- EGME350 Machine Design 4
- EGME431 Heat Transfer 3
- EGME432 Thermal and Fluids Lab 2
- EGNR101 Introduction to Engineering 2
- EGNR140 Linear Algebra & Numerical Methods for Engineers 2
- EGNR265 "C" Programming 3
- EGNR340 Adv Numerical Methods for Engineers 2
- EGRS460 Control Systems 4

Senior Sequence (Complete one of the following sequences):

Industrial Project

- EGNR491 Engineering Design Project I 3
- EGNR495 Engineering Design Project II 3

Co-op Project

- EGNR450 Cooperative Education Project I 4
- EGNR451 Cooperative Education Project II 3
- EGNR491 Engineering Design Project I 3

Research Project

- EGNR260 Engineering Research Methods 2
- EGNR460 Engineering Research Project I 4
- EGNR461 Engineering Research Project II 2

Technical Electives (Complete one of the following concentrations):

Vehicle Systems Concentration (C or better grade required for all classes)

- EGEE280 Introduction to Signal Processing 4
- EGME240 Assembly Modeling and GD&T 3
- EGME310 Vehicle Development & Testing 2
- EGME415 Vehicle Dynamics 2
- EGME425 Vibrations and Noise Control 4
- EGNR362 Vehicle Energy Systems 3

Robotics and Automation Concentration (C or better grade required for all classes)

- EGRS365 Programmable Logic Controllers 3
- EGRS385 Robotics Engineering 3
- EGRS430 Systems Integration and Machine Vision 4
- EGRS435 Automated Manufacturing Systems 4

Select one of the following:

- EGMT216 CAM with CNC Applicatons 3
  or
- EGNR310 Advanced Quality Engineering 3
  or
- EGEE280 Introduction to Signal Processing 4

General Concentration

- EGME240 Assembly Modeling and GD&T 3

Select 14 credits from the list below with at least 5 credits at the 400 level.

- EGEE280 Introduction of Signal Processing 4
- EGME310 Vehicle Development & Testing 2
- EGME415 Vehicle Dynamics 2
- EGME425 Vibrations and Noise Control 4
- EGMT216 CAM with CNC Applications 3
- EGNR261 Energy Systems and Sustainability 3
- EGNR361 Energy Systems and Sustainability Lab 1
- EGNR362 Vehicle Energy Systems 3
- EGNR310 Advanced Quality Engineering 3
- EGRS365 Programmable Logic Controllers 3 (if not used above)
- EGRS385 Robotics Engineering 3
- EGRS430 Systems Integration and Machine Vision 4
- EGRS435 Automated Manufacturing Systems 4

32 credits from Mathematics (including EGNR340) and Natural Sciences is

required.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Medical Laboratory Science: Bachelor of Science

Program Description

The Bachelor of Science Medical Laboratory Science has two available degree concentrations: Medical Laboratory Science, Clinical Concentration and Medical Laboratory Science, Academic Concentration.

Medical laboratory scientists (clinical laboratory scientists, medical technologists) perform most of the clinical tests conducted in hospital, veterinary, state, and health laboratories. Most institutions employing medical laboratory scientists require them to be board-certificated by the American Society for Clinical Pathology (ASCP). (Some institutions also accept certification through the American Medical Technologists (AMT).) The Medical Laboratory Science, Clinical Concentration and the Medical Laboratory Science, Academic Concentration degrees are two alternative routes to obtaining ASCP certification. The Academic Concentration is also excellent preparation for graduate school in many biomedical-related fields.

The Academic Concentration is designed to result in a Bachelor of Science degree in four years. When you finish the Academic Concentration you will receive a Bachelor of Science in Medical Laboratory Science, but you will not be eligible to take the ASCP Board of Certification exam. In order to become eligible to take the certification exam, you must first be accepted into, and complete, a six- to twelve-month clinical experience at an independent hospital-based MLS program that is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). LSSU cannot guarantee acceptance into any of the hospital-based programs.

The Clinical Concentration is designed to be completed in four and a half years. When you finish the Clinical Concentration you will receive a Bachelor of Science in Medical Laboratory Science and you will be eligible to take the ASCP Board of Certification exam. The last six months of the Clinical Concentration consist of a clinical experience at one of our partner hospital labs (our Clinical Affiliates). Because our Clinical Affiliates can accommodate only a limited number of students each year, *admission into the Clinical Concentration is by competitive application in the spring of your junior year.*

Available degrees (See specific degree requirements further down the page):

- **Medical Laboratory Science, Academic Concentration**
- **Medical Laboratory Science, Clinical Concentration**

Degree Requirements

Medical Laboratory Science, Academic Concentration

Departmental Requirements

- BIOL131 General Biology: Cells 4
- BIOL132 General Biology: Organisms 4
- BIOL199 Freshmen Seminar 1
- BIOL204 General Microbiology 4
- BIOL206 Medical Laboratory Practices 2
- BIOL220 Genetics 4
- BIOL280 Biostatistics 3
- BIOL299 Sophomore Seminar 1
- BIOL306 Medical Mycology 3
- BIOL330 Animal Physiology 4
- BIOL337 General Ecology 3
- BIOL380 Hematology 4
- BIOL399 Junior Seminar 1
- BIOL406 Immunohematology 3
- BIOL422 Parasitology 3
- BIOL423 Immunology 4
- BIOL455 Body Fluids Analysis 4
- BIOL480 Advanced Clinical Microbiology 4
- BIOL495 Senior Project 2
- BIOL499 Senior Seminar 1

Support Courses

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
- CHEM226 Organic Chemistry II 4
- CHEM231 Quantitative Analysis 4
- CHEM332 Instrumental Analysis 4
- CHEM351 Introductory Biochemistry 4
- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Science 4
- MATH207 Principles of Statistical Methods 3

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

Medical Laboratory Science, Clinical Concentration

The degree in Medical laboratory science includes the following courses in order to qualify to take the national registry examinations.

Departmental Requirements

- BIOL131 General Biology: Cells 4
- BIOL132 General Biology: Organisms 4
- BIOL199 Freshmen Seminar 1
- BIOL204 General Microbiology 4
- BIOL206 Medical Laboratory Practices 2
- BIOL220 Genetics 4
- BIOL280 Biostatistics 3
- BIOL299 Sophomore Seminar 1
- BIOL306 Medical Mycology 3
- BIOL330 Animal Physiology 4
- BIOL380 Hematology 4
- BIOL399 Junior Seminar 1
- BIOL406 Immunohematology 3
- BIOL422 Parasitology 3
- BIOL423 Immunology 4
- BIOL455 Body Fluids Analysis 4
- BIOL460 Clinical Internship 12*****
- BIOL480 Advanced Clinical Microbiology 4
- BIOL495 Senior Project 2
- BIOL499 Senior Seminar 1

Support Courses

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
- CHEM226 Organic Chemistry II 4
- CHEM231 Quantitative Analysis 4
- CHEM332 Instrumental Analysis 4
- CHEM351 Introductory Biochemistry 4
- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Science 4
- MATH207 Principles of Statistical Methods 3

*****The clinical internship will add an additional six months to the time required to earn this degree.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 135 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Nursing: Bachelor of Science

Program Description

Professional nursing blends a unique body of knowledge from the sciences, social sciences and humanities with a compassionate heart and a sensitive spirit to provide holistic care to those in need.

The School of Nursing offers two curricular tracks to the bachelor of science degree in nursing; the four-year, pre-licensure program and the two-year, completion program for the registered nurse. The programs provide you with the opportunity to acquire knowledge, values and skills necessary for the practice of professional nursing.

Course requirements provide liberal backgrounds in physical science, social science and humanities. This curriculum provides a solid basis for the variety of roles in nursing practice. The nursing curriculum provides an interdisciplinary major and, therefore, does not require a minor to meet graduation requirements. These nursing programs are approved by the Michigan Board of Nursing and the BSN program is accredited by the Accreditation Commission for Education in Nursing.

3343 Peachtree Rd. N.E. Suite 500
Atlanta, GA 30326.
Telephone: 404-975-5000

Mission Statement

To graduate outstanding students who are ready and able to provide professional nursing services using theory and evidence based practice.

Available degrees (see specific degree requirements further down the page):

- Bachelor of Science Nursing
- Bachelor of Science Nursing, Pre-Licensure Program
- Bachelor of Science Nursing, Post-Licensure Completion Program, Completion Program for RN Students

Degree Requirements

Bachelor of Science Nursing, Pre-Licensure Program

Pre-Nursing Entrance Requirements:

To qualify as a pre-nursing major, applicants must satisfy University admission requirements described in the admission section of the Catalog.

High school academic subjects include a minimum of one unit of biology, one of

chemistry, three of English and two of algebra. Additional science and mathematics courses are highly recommended.

Students complete one year in pre-nursing before making application to the School of Nursing for admission to the nursing major. Admission is based upon 1) completing a current application in its entirety by the deadline of each semester, 2) successful completion of selected pre-nursing courses, 3) academic achievement, 4) a negative criminal background report, 5) ability to meet physical demands of program with or without accommodation 6) completion of TEAS and Critital Thinking ATI tests with passing score, and 7) verification of CPR training.

It is recommended that students be able to demonstrate computer literacy — basic word processing, library and Internet searches. Mathematics competency is required prior to the sophomore year. Entrance into nursing requires a grade point average of 2.7 or above in core pre-nursing and nursing courses. A maximum of 24 students will be accepted for each fall and spring semester.

Required academic courses are separated into three groups:

1. Nursing support courses - anatomy and physiology, microbiology, applied chemistry, mathematics, psychology, sociology, nutrition, pharmacology, pathophysiology, informatics in the health sciences, multicultural approach to health care and statistics).
2. General education requirements (English, humanities and speech).
3. Nursing courses

Progression Requirements in Nursing:

A grade of C or above is required in all courses. A grade of D in other general education or elective courses is accepted.

Transfer credit will be granted on an individual basis. Only those courses with a grade of C or better are transferable. Credits for baccalaureate nursing courses and pharmacology are transferable for five years.

Time requirement for program completion is four academic years; however, completion may require more than four years for students who cannot maintain the high credit load each semester. Progression and readmission policies are detailed in the Nursing Student Handbook.

Students are responsible for transportation to and from clinical agencies, as well as all additional costs incurred by enrollment in the nursing program. Costs, academic and general information are listed in the Nursing Student Handbook and viewable on-line.

Licensure:

Graduates of this program are eligible to write the NCLEX-RN examination administered by the Michigan Board of Nursing for licensure as a registered nurse (R.N.). Canadian students must pass the NCLEX-RN examination prior to applying for licensure in Ontario. The Michigan Board of Nursing may deny a graduate the opportunity to take the licensure examination on the basis of conviction for a crime or substance abuse. The Immigration Service may deny a visa for entry to Ontario on the basis of a conviction for a crime or for substance abuse. Applicants with a history of a conviction or substance abuse should consult with the School of Nursing dean and direct questions to the Michigan Board of Nursing and the Immigration Service prior to considering entry in the program.

Nursing (61 credits)

- NURS211 Intro. to Professional Nursing 3
- NURS212 Health Appraisal 4
- NURS213 Fundamentals of Nursing 6
- NURS325 Nursing of Childbearing Families 5
- NURS326 Nursing of Children & Families 5
- NURS327 Adult Nursing I 8
- HLTH328 Multicultural Approaches to Health Care 3
- NURS431 Adult Nursing II 8
- NURS432 Nursing of Populations 5
- NURS433 Community Mental Health Nursing 5
- NURS434 Nursing Research 3
- NURS435 Management in Nursing 4
- NURS436 Nursing Issues 2

Support Courses (43 credits)

- BIOL121 Human Anatomy & Physiology I* 4
- BIOL122 Human Anatomy & Physiology II* 4
- BIOL223 Clinical Microbiology 3
- CHEM108 Applied Chemistry * 3
- CHEM110 Applied Organic & Biochemistry 4
- HLTH208 Principles of Human Nutrition 3
- HLTH209 Pharmacology 3
- HLTH232 Pathophysiology 3
- HLTH235 Healthcare Informatics 2
- MATH207 Principles of Statistical Methods 3
- PSYC101 Introduction to Psychology* 4
- PSYC155 Lifespan Development* 3
- SOCY101 Introduction to Sociology* 4

**Prerequisite courses for entrance to the program.*

General Electives (5 - 6 credits)

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

Bachelor of Science Nursing, Post-Licensure Completion Program, Completion Program for RN Students

Entrance Requirements:

To qualify for admission to the RN completion program, applicants must satisfy University admission requirements as described in the admission section of the Catalog. (This information is also included in the Viewbook).

For students with college-level achievement, the opportunity will be offered, by

means of examination, to obtain course credit or placement into an advanced course.

Applicants must be graduates of state- or provincial-approved associate's degree or diploma nursing programs with a minimum cumulative grade point average of 2.7 in all nursing, nursing support and English courses. Nursing support courses include: chemistry, mathematics, anatomy and physiology, microbiology, statistics, nutrition, pharmacology, pathophysiology, computer applications in health sciences, psychology and sociology courses. Credit may be granted for nutrition and pharmacology upon writing the required NLN tests and achieving scores at the 50th percentile or above. NLN tests may be repeated once; students must enroll in the course if not successful on second writing. Credit by departmental exam is also available to students upon request.

Required Admission Credentials:

Submit to Admissions Office: standard LSSU Application for Admission; transcripts from previous nursing school(s) and college(s). Submit to School of Nursing: copy of current Michigan or Ontario professional nursing license and immunization records. All credentials must be on file preceding semester of entry.

Transfer Credits:

Transfer credits may be granted on an individual basis for equivalent general education and support courses. Only those courses with a grade of C or better may be transferred. A maximum of 32 semester hours credit in basic nursing courses may be transferred. Credit for pharmacology courses is acceptable for five years.

Time required for completion will be two years including two summers.

Progression and readmission policies are detailed in the Nursing Student Handbook.

Students are responsible for transportation to clinical agencies and all additional costs incurred by enrollment in the nursing program. Costs, academic and general information are listed in the Nursing Student Handbook.

The RN completion program is offered on a part-time basis at the LSSU Regional Centers in Petoskey and Escanaba. For further course information contact the main campus School of Nursing at 906-635-2288, the Petoskey Regional Center at 231-348-6623 or the Escanaba Regional Center at 906-217-4123.

Nursing (63 credits)

- NURS325 Nursing of Childbearing Families 5
- NURS326 Nursing of Children & Families 5
- NURS327 Adult Nursing I 8
- NURS328 Multicultural Approach to Health Care 3
- NURS352 Health Issues of Aging Populations 3
- NURS360 Professional Nursing Concepts 4
- NURS363 Comprehensive Health Appraisal 3
- NURS365 Family Nursing Theory 3
- NURS431 Adult Nursing II 8
- NURS432 Nursing of Populations 5
- NURS433 Community Mental Health Nursing 5
- NURS434 Nursing Research 3
- NURS435 Management in Nursing 4
- NURS436 Contemporary Issues in Nursing 2

- NURS437 Professional Nursing Leadership 2

Health Sciences (11 credits)

- HLTH208 Principles of Human Nutrition* 3
- HLTH209 Pharmacology* 3
- HLTH232 Pathophysiology 3
- HLTH235 Healthcare Informatics 2

Other Disciplines (25 credits)

- BIOL121 Human Anatomy & Physiology I* 4
- BIOL122 Human Anatomy & Physiology* 4
- BIOL223 Clinical Microbiology* 3
- CHEM108 Applied Chemistry* 3
- MATH207 Principles of Statistical Methods 3
- PSYC101 Introduction to Psychology* 4
- SOCY101 Introduction to Sociology* 4

**Prerequisite courses for entrance to the program.*

General Electives

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

**Credit by departmental exam (or NLN examination, passing at a 50 percentile or higher) is also available to students upon request. For further information, contact the main campus School of Nursing at 906-635-2288, the Petoskey Regional Center at 231-348-6623 or the Escanaba Regional Center at 906-217-4123.*

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Parks and Recreation: Bachelor of Science

Program Description

The bachelor of science degree in parks and recreation combines an associates degree in natural resources technology with additional course work relative to human resource management in the outdoor environment. Many jobs can be found in the public, private and commercial settings.

A one-semester internship is required for this degree.

Degree Requirements

Program Requirements (36 credits)

- RECS101 Introduction to Recreation 3
- RECS105 Program Development and Leadership 3
- RECS262 Outdoor Recreation 3
- RECS295 Recreation Practicum 1
- RECS360 Facilitation and Interpretation 3
- RECS362 Land Management for Recreation Purposes 3
- RECS365 Expedition Management 3
- RECS390 Recreation Leader Apprenticeship 1
- RECS397 Recreation Studies Junior Research Seminar 1
- RECS435 Research in Recreation and Leisure Sciences 3
- RECS437 Recreation Studies Senior Research Seminar 1
- RECS481 Professional Development Seminar 1
- RECS482 Administration of Recreation and Leisure Services 4
- RECS492* Recreation Internship 6

Cognate Requirements (32 credits)

- BIOL107 Field Biology 3
- BIOL126 Interpretation of Maps and Aerial Photography 2
- BIOL230 Introduction to Soils 4
- BIOL240 Natural History of Vertebrates 3
- BIOL284 Principles of Forestry 4
- BIOL286 Watershed Management 3
- CHEM108 Survey of General Chemistry 3
- CHEM109 Survey of General Chemistry Lab 1
- EVRN131 Introduction to GIS and GPOLI 3
- EVRN231 Intermediate GIS 2
- NSCI103 Environmental Science 3

- NSCI104 Environmental Science Lab 1

Support Requirements (30 credits)

- ACTG132 Principles of Accounting I 4
  COMM101 Fund. of Speech Communication 3
- EMED189 Medical First Responder 3
- FIRE102 Wildland and Rural Fire Control 3
- SOWK480 Grantwriting 3
- MATH111 College Algebra 3
- POLI130 Introduction to State and Local Government 4
- PSYC101 Introduction to Psychology 4
- PSYC210 Statistics 3
  or
- MATH207 Principles of Statistical Methods 3

**RECS492 may be completed during the summer of the student's junior or senior year, in accordance with academic prerequisites.*

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Physical Science: Bachelor of Science

Program Description

This program is an approved secondary teaching major leading to Michigan Teacher Certification in Physical Science (endorsement code DP). This program combines an interdisciplinary preparation in the natural sciences (chemistry and physics) with your interest in a career as a teacher at the secondary level, grades 6-12.

When completing option A the candidate is not required to complete a teaching minor. Option B candidates must complete a teaching minor from those listed on the Secondary Teaching pages of the website. Secondary teacher certification enables the candidate to teach chemistry, physics and physical science in grades 6-12. Contact the School of Education for additional information.

In addition to classroom teaching, graduates can pursue careers as science educators and curriculum specialists, or enter graduate study in science, science education or related fields.

The LSSU chemistry program has been approved by the American Chemical Society, and may provide certified degrees in Chemistry, Forensic Chemistry, Biochemistry Pre-Professional, and Environmental Chemistry degrees if a student chooses this track. In addition, the B.S. in Chemistry for Secondary Education degree may also be certified by the ACS. Graduates completing the prescribed requirements are awarded an ACS certificate signifying their completion of the approved degree and can qualify for membership in the Society upon graduation.

Degree Requirements

Complete one of the two options listed below (A or B), and all departmental cognates, general education requirements, teacher education courses and free electives for a minimum of 124 credits.

A. Comprehensive Physical Science Major: no minor required (56 credits)

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
- CHEM226 Organic Chemistry II 4
- CHEM231 Quantitative Analysis 4
- CHEM261 Inorganic Chemistry 4
- CHEM332 Instrumental Analysis 4
- CHEM351 Introductory Biochemistry 4
- CHEM361 Physical Chemistry I 4
- CHEM362 Physical Chemistry II 4

- CHEM363 Physical Chemistry Lab 1
- CHEM395 Junior Seminar 1
- CHEM499 Senior Seminar 1
- PHYS221 Principles of Physics I 4
- PHYS222 Principles of Physics II 4
- PHYS Electives 3

For American Chemical Society certified degree, additionally required (total lab hours must be at least 400 hrs). See Department Chair for special rules regarding ACS certification:

- CHEM Elective 300 or higher (3 cr min)
- CHEM495 Senior Project 2

Complete one of the following methods courses:

- EDUC443 Secondary Methods: Science 3
- EDUC453 Directed Study: Science Methods 3

B. Group Physical Science Major: teachable minor required (47 credits)

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
- CHEM231 Quantitative Analysis 4
- CHEM261 Inorganic Chemistry 4
- CHEM351 Introductory Biochemistry 4
- CHEM332 Instrumental Analysis 4
- CHEM361 Physical Chemistry I 4
- CHEM362 Physical Chemistry II 4
- CHEM363 Physical Chemistry Lab 1
- PHYS221 Principles of Physics I 4
- PHYS222 Principles of Physics II 4

Complete one of the following methods courses:

- EDUC443 Secondary Methods: Science 3
- EDUC453 Directed Study: Science Methods 3

In addition to the program option A or B, complete the following:

Support Courses (11 credits)

- MATH151 Calculus I 4
- MATH152 Calculus II 4
- BUSN211 Business Statistics **or**
- MATH207 Principles of Statistical Methods 3

Professional Education Requirements see Secondary Teaching.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for

graduation with a cumulative gpa of 2.70 or higher. A gpa of 2.00 or higher is required in your general education requirements and a major/minor gpa of 2.70 or higher (B- minimum in each EDUC course) is required.

NOTE: A candidate may double count math courses from the cognate section when completing a math teaching minor.

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Political Science: Bachelor of Arts/Science

Program Description

Political science is the systematic study of government, politics and public policy. It is one of a number of liberal arts majors that prepare students for a broad range of career opportunities.

Political science majors choose one of three tracks or concentrations: general political science, pre-law or public administration. Each concentration provides a combination of knowledge and skills especially appropriate for those with particular career goals. However, choosing one concentration over the others does not limit you to a particular career path — each of the tracks provides a solid grounding in political science and a broad liberal arts background.

General education requirements and sufficient elective credits must be completed so that at least 124 semester credits have been earned.

Other Qualifications — Graduate degrees are required for some positions; thus, a law degree is required for work as an attorney and a Ph.D. is required for appointment to permanent teaching and research positions in colleges and universities.

Available degrees (see specific degree requirements further down the page):

Bachelor of Arts/Science Political Science-General
Bachelor of Arts/Science Political Science-Pre-Law
Bachelor of Science Political Science-Public Administration

Degree Requirements

Bachelor of Arts/Science Political Science--General

The general political science concentration is designed to provide a broad education in political science. It is most appropriate for students who plan to attend graduate school in political science and for those with an interest in government and politics who wish to get a broad, liberal education. Students who continue their education in graduate school most often pursue careers as professors, researchers, consultants or government officials. Students who do not pursue graduate study choose from a wide variety of career options in government, politics, teaching, journalism and business.

Political Science Courses

- POLI110 Introduction to American Government and Politics 4
- POLI211 Political Science Research and Statistics 4

A minimum of one course in each of four political science fields, and two courses in one of the fields:

- American Politics (POLI325, POLI364, POLI367, POLI467) 3-4
- Comparative Politics (POLI160, POLI331, POLI334, POLI335, POLI340) 3-4
- International Relations (POLI241, POLI411, POLI413, POLI420) 3-4
- Political Philosophy (POLI351, POLI352) 4
- POLI491 Senior Seminar I 4
- POLI492 Senior Seminar II 4
- Additional political science electives to reach 42 credits 10-13

A minimum of 21 credits must be at the 300/400 level, with at least nine of these at the 400 level.

General Political Science Cognates

- COMM302 Argumentation and Advocacy 3 **or**
  COMM320 Public Relations 4
- CSCI101 Intro. to Microcomputer Applications 3
- ECON201 Principles of Macroeconomics 3
- ENGL310 Advanced Writing 3 **or**
  ENGL221 Creative Writing 3
- HIST Full-year history sequence (usually HIST101-HIST102 or HIST131-HIST132) 8
- PHIL204 Introduction to Philosophy 3 **or**
  PHIL205 Logic 3

Complete one of the following (Bachelor of Arts or Bachelor of Science Cognates):

Bachelor of Arts Cognates (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.

Bachelor of Science Cognates (A minimum of 9 credits from the following)

- ECON202 Principles of Microeconomics 3
- PSYC101 Introduction to Psychology 4
- SOCY101 Introduction to Sociology 3
- SOCY213 Introduction to Anthropology 3

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

Bachelor of Arts/Science Political Science--Pre-Law

The pre-law concentration is designed to provide students interested in legal careers with a planned curriculum that prepares them especially well for law school

and for careers in law. Students who choose this option are often interested in careers as attorneys, prosecutors or judges. It should be noted that this is not a mandatory pre-law curriculum; it is a curriculum for pre-law students who have a special interest in government and politics.

Political Science Courses

- POLI110 Introduction to American Government and Politics 4
- POLI120 Introduction to Legal Processes 3
- POLI130 Introduction to State and Local Government 4
- POLI211 Political Science Research and Statistics 4
- POLI222 Introduction to the Legal Profession 3

A minimum of one course in each of three political science fields:

- Comparative Politics (POLI160, POLI331, POLI334, POLI335, POLI340) 3-4
- International Relations (POLI241, POLI411, POLI413, POLI420) 3-4
- Political Philosophy (POLI351, POLI352) 4
- POLI467 Constitutional Law and Civil Liberties 4
- POLI491 Senior Seminar I 4
- POLI492 Senior Seminar II 4
- Additional political science electives to reach 42 credits 0-2

A minimum of 21 credits must be at the 300/400 level. (At least nine of these credits must be at the 400 level.)

Pre-Law Cognates

- ACTG230 Fundamentals of Accounting (or ACTG132 or OFFC119) 4
- COMM302 Argumentation and Advocacy 3
- CSCI101 Intro. to Microcomputer Applications 3
- ENGL310 Advanced Writing 3

  or
- ENGL221 Creative Writing 3
- HIST Full-year history sequence (usually HIST101-HIST102 or HIST131-HIST132) 8
- LAWS102 Legal Research and Case Analysis 3
- LAWS202 Legal Writing and Analysis 3
- PHIL205 Logic 3

Two law courses from the following:

- LAWS Any legal Assistant courses 2-4
- CJUS202 Canadian Criminal Law 3
- CJUS319 Substantive Criminal Law 3
- CJUS406 Advanced Canadian Jurisprudence 3
- CJUS409 Procedural Criminal Law 3
- BUSN350 Business Law I 3
- BUSN355 Business Law II 3

Complete one of the following (Bachelor of Arts or Bachelor of Science Cognates):

Bachelor of Arts Cognates (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.

Bachelor of Science Cognates (A minimum of 9 credits from the following)

- ECON201 Principles of Macroeconomics 3
- ECON202 Principles of Microeconomics 3
- PSYC101 Introduction to Psychology 4
- SOCY101 Introduction to Sociology 3
- SOCY213 Introduction to Anthropology 3

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

Bachelor of Science Political Science--Public Administration

The public administration concentration is most appropriate for students who plan to work in an administrative capacity in public agencies or nonprofit organizations with public missions. Students who choose this option are preparing for careers of public service. Such careers may be pursued through positions in government agencies at the local, state or provincial, and national levels. Other positions may be found in nonprofit organizations involved in public concerns, such as Common Cause, the Environmental Defense Fund, and the Michigan Health Council. Some of these careers of public service may be pursued with only a bachelor's degree. Others may require completion of a master's degree in public administration or a related field.

Political Science Courses

- POLI110 Introduction to American Government and Politics 4
- POLI130 Introduction to State and Local Government 4
- POLI201 Introduction to Public Administration 3
- POLI211 Political Science Research and Statistics 4
- POLI301 Policy Analysis and Evaluation 4
- POLI401 Principles of Public Administration 3

A minimum of one course in each of three political science fields:

- Comparative Politics (POLI160, POLI331, POLI334, POLI335, POLI340) 3-4
- International Relations (POLI241, POLI411, POLI413, POLI420) 3-4
- Political Philosophy (POLI351, POLI352) 4
- POLI491 Senior Seminar I 4
- POLI492 Senior Seminar II 4
- POLI499 Public Administration Internship 3

Public Administration Cognates

- ACTG230 Fundamentals of Accounting (or ACTG132 or OFFC119) 4
- COMM302 Argumentation and Advocacy 3 **or**
- COMM320 Public Relations 4
- CSCI101 Introduction to Microcomputer Applications 3
- ECON201 Principles of Macroeconomics 3
- ECON305 Public Finance 3
- ENGL310 Advanced Writing 3 **or**
- ENGL221 Creative Writing 3
- HIST Full-year history sequence (usually HIST101-HIST102 or HIST131-HIST132) 8
- MGMT360 Management Concepts & Applications 3
- MGMT365 Human Resource Management 3
- PSYC228 Organizational Behavior 3 **or**
- SOCY313 Work and Organization 3

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Prelaw (non-degree)

Program Description

There is essentially a three-step process in becoming a licensed attorney. First, an individual must complete an undergraduate degree at a college or university. Second, one must then go on to law school to obtain a juris doctorate degree. Finally, successful completion of the state bar exam is required for licensure. In being admitted into law school, the two most important factors that are evaluated by most law schools are undergraduate grades and Law School Admission Test (LSAT) scores — an entrance exam required of nearly all law schools in the United States and some in Canada.

The American Bar Association and most law schools do not recommend any particular undergraduate major before going on to law school. Consequently, a student should choose a major in which he/she has both interest and aptitude. Yet, there are important skills, values, and certain knowledge that can be acquired prior to law school which will assist a student in being successful at law school. Such values and knowledge include: analytical and problem-solving skills, critical reading abilities, writing skills, oral communication and listening abilities, research skills, task organization and management skills, ethical values, and, of course, knowledge of the law. In fact, a prelaw minor is available at LSSU which consists of courses that will assist a prelaw student in further developing these skills, values and knowledge.

Since there is no required prelaw major, the American Bar Association and law schools strongly recommend that law school bound students contact the Prelaw Advisor at their university as early in the educational process as possible. At LSSU, our approach to advising prelaw students is very individualized. We want to help each student fulfill their goals and to be successful at law school and beyond.

The Prelaw Advisor at LSSU can provide individualized guidance with regard to selecting an undergraduate curriculum (both a major and a minor); recommending particular courses that will enhance necessary skills, values and knowledge; assisting in the law school admission process; and providing relevant career and professional trend information.

Degree Requirements

Although there is no recommended or required prelaw curriculum, there are some excellent options that students may want to consider at LSSU. The following LSSU programs include key components with regard to legal knowledge as well as writing, analytical and research skills:

- Political Science—Prelaw Concentration (major)
- Prelaw (minor)

Students should seek guidance from LSSU's Prelaw Advisor as early as possible to ensure they are individually counseled with regards to their respective interests, undergraduate curriculum choice, as well as personal and professional goals.

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Biology: Bachelor of Science

Program Description

The Bachelor of Science degree in biology combines theory and concepts of biology with intensive, hands-on experiences in our state-of-the-art laboratories and a wealth of close-by field sites. Students build on a core of biology classes by selecting the physiology and taxonomy classes and other electives that best fit their interests.

The program is an excellent preparation for biology or related careers. Our graduates are currently employed as doctors, dentists, veterinarians, biological researchers, laboratory technicians, consultants and teachers. Many careers in biology require education beyond the baccalaureate degree and LSSU's biology program has a proven record of excellent preparation for professional and graduate school.

Pre-Medical concentration - prepares students for medical, dental, optometry, podiatry, chiropractic, and physician assistant graduate studies. Biology students will work with a pre-professional advisor to select the electives best suited for the health professional program of their choice while also providing a well-rounded biology education. This program has an embedded chemistry minor that meets the requirements of most U.S. medical schools. The LSSU Biology department is recognized by all health professional schools in Michigan as a top rate biology program.

LSSU participates in the Michigan State University College of Human Medicine's Early Assurance Program. During their junior year, students who excel in the LSSU biology pre-medical program may apply to the College of Human Medicine, and selected students will be assured of admission and begin a relationship with MSU College of Human Medicine during their senior year of college.

Pre-Veterinary concentration - with an embedded chemistry minor, prepares students to enter veterinary college after graduation from LSSU. It was designed to meet the specific requirements for the Michigan State University-College of Veterinary Medicine, but our students go to vet schools all over the country, for example North Carolina State, Oklahoma State and University of Illinois. This program stresses not only academics, but also the animal care experience that is critical for gaining admission to a veterinary college.

Available degrees (see specific requirements further down the page):

- Bachelor of Science Biology
- Bachelor of Science Biology, Pre-Medical Concentration
- Bachelor of Science Biology, Pre-Veterinary Concentration

Degree Requirements

Bachelor of Science Biology

Biology Core (27 credits)

- BIOL131 General Biology: Cells 4
- BIOL132 General Biology: Organisms 4
- BIOL199 Freshman Seminar 1
- BIOL220 Genetics 4
- BIOL250 Quantitative Biology 3
- or
- MATH207 Statistics 3
- BIOL280 Biostatistics 3
- BIOL299 Sophomore Seminar 1
- BIOL337 General Ecology 3
- BIOL399 Junior Seminar 1
- BIOL495 Senior Project 2
- BIOL499 Senior Seminar 1

Physiology Elective (1 course from)

- BIOL315 Plant Physiology 4
- BIOL330 Animal Physiology 4
- BIOL421 Cell Biology 4

Taxonomy Elective (1 course from)

- BIOL202 Field Botany 3
- BIOL204 General Microbiology 4
- BIOL302 Invertebrate Zoology 3
- BIOL303 General Entomology 4
- BIOL306 Medical Mycology 3
- BIOL310 Ichthyology 3
- BIOL311 Mammalogy 3
- BIOL312 Ornithology 3
- BIOL422 Parasitology 3
- BIOL475 Aquatic Entomology 3

Biology Electives (21 credits)

A minimum of 17 credits must be from 300 or 400 level courses. At least one elective must be a 400 level class. Courses not used to satisfy the physiology or taxonomy requirement may be used as 'other' electives.

Support Courses

- CHEM115 General Chemistry I 5
- CHEM116 General Chemistry II 5
- CHEM225 Organic Chemistry I 4
- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Science 4
- Physical Science (CHEM, PHYS, GEOL) course with lab 4

Free Electives

A minimum of 12 free elective credits must be non-biology courses.

General Education: All LSSU bachelor's degree candidates must complete the LSSU general education core requirements, or have earned the MACRAO Stamp (Michigan Community College transfer students), or have completed the general education certification (Sault College transfer students), or have already earned a bachelor's degree (honors bachelor degree from a Canadian University).

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Core Requirements.

Bachelor of Science Biology, Pre-Medical Concentration

Biology Core (27 credits)

- BIOL131 General Biology: Cells 4
- BIOL132 General Biology: Organisms 4
- BIOL199 Freshman Seminar 1
- BIOL220 Genetics 4
- BIOL250 Quantitative Biology 3
- or
- MATH207 Statistics 3
- BIOL280 Biometrics 3
- BIOL299 Sophomore Seminar 1
- BIOL337 General Ecology 3
- BIOL399 Junior Seminar 1
- BIOL495 Senior Project 2
- BIOL499 Senior Seminar 1

Physiology Elective (1 course from)

- BIOL330 Animal Physiology* 4
- BIOL421 Adv Cell & Molecular Biology* 4

Taxonomy Elective (1 course from)

- BIOL204 General Microbiology* 4
- BIOL306 Medical Mycology 3
- BIOL422 Parasitology 3

Other Biology (21 credits from)

- BIOL243 Vertebrate Anatomy* 4
- BIOL423 Immunology* 4
- BIOL433 Histology* 3
- BIOL285 Epidemiology 3
- BIOL332 Embryology 3
- BIOL380 Hematology 4
- BIOL406 Immunohematology 3
- BIOL420 Evolutionary Analysis 3

- BIOL425 Virology 3
- BIOL434 Histopathology 1
- BIOL455 Body Fluids Analysis 3
- BIOL480 Advanced Microbiology 4

*These courses are highly recommended by medical and dental schools in Michigan, Ontario and around the country.

A minimum of 17 credits from 300/400 level courses. At least one elective must be a 400 level class. Courses not used to satisfy the physiology or taxonomy requirement may be used as 'other' electives.

Support Courses

- PHYS221 Principles of Physics I 4
- PHYS222 Principles of Physics II 4
- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Science 4
- PSYC101 General Psychology 4
- SOCY101 Sociology 4
- HLTH328 Multicultural Approaches to Health Care 3

Chemistry Minor - Option B (22 credits)

Free Electives

General Education: All LSSU bachelor's degree candidates must complete the LSSU general education core requirements, or have earned the MACRAO Stamp (Michigan Community College transfer students), or have completed the general education certification (Sault College transfer students), or have already earned a bachelor's degree (honors bachelor degree from a Canadian University).

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.75 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Core Requirements.

Bachelor of Science Biology, Pre-Veterinary Concentration

Biology Core (27 credits)

- BIOL131 General Biology: Cells 4
- BIOL132 General Biology: Organisms 4
- BIOL199 Freshman Seminar 1
- BIOL220 Genetics 4
- BIOL250 Quantitative Biology 3
- or
- MATH207 Statistics 3
- BIOL280 Biometrics 3
- BIOL299 Sophomore Seminar 1
- BIOL337 General Ecology 3
- BIOL399 Junior Seminar 1
- BIOL495 Senior Project 2

BIOL499 Senior Seminar 1

Physiology Elective (1 course from)

- BIOL330 Animal Physiology 4
- BIOL421 Adv Cell & Molecular Biology* 4

Taxonomy Elective (1 course from)

- BIOL204 General Microbiology* 4
- BIOL306 Medical Mycology 3
- BIOL422 Parasitology 3

Other Biology (21 credits from)

- BIOL243 Vertebrate Anatomy 4
- BIOL332 Embryology 3
- BIOL335 Animal Nutrition* 3
- BIOL380 Hematology 4
- BIOL405 Animal Behavior 3
- BIOL423 Immunology 4
- BIOL425 Virology 3
- BIOL426 Ecology of Animial Disease 3
- BIOL433 Histology 3
- BIOL434 Histopathology 1
- BIOL480 Advanced Microbiology 4

*****These courses required by MSU-CVM.

A minimum of 17 credits from 300/400 level courses. At least one elective must be a 400 level class. Courses not used to satisfy the physiology or taxonomy requirement may be used as 'other' electives.

Support Courses

- PHYS221 Principles of Physics I 4
- PHYS222 Principles of Physics II 4
- MATH111 College Algebra 3
- MATH112 Calculus for Business & Life Science 4

Chemistry Minor - Option B (22 credits)

Free Electives

General Education: All LSSU bachelor's degree candidates must complete the LSSU general education core requirements, or have earned the MACRAO Stamp (Michigan Community College transfer students), or have completed the general education certification (Sault College transfer students), or have already earned a bachelor's degree (honors bachelor degree from a Canadian University).

A minimum of 125 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.75 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Core Requirements.

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Pre-Pharmacy (transfer program)

Program Description

Most pharmacy schools require students to take two years of pre-pharmacy preparation prior to being admitted to their four-year professional program. Admission into the professional pharmacy programs is very competitive and is based, to a large extent, on grades in specific required courses. Many pharmacy colleges also require applicants to take the Pharmacy College Admission Test (P.C.A.T.). This exam is generally taken mid-way through your second pre-pharmacy year.

Pre-pharmacy requirements vary greatly between different colleges that offer professional programs in pharmacy. In general, most require a pre-pharmacy program that emphasizes math and science as well as strong communication skills. Recently, a majority of the nation's schools began to move toward awarding the doctor of pharmacy (Pharm.D.) as the only professional degree in pharmacy. Because many pharmacy curricula are currently being modified, pre-pharmacy requirements are also subject to change.

The modifications in professional pharmacy curricula, combined with the variability in pre-pharmacy requirements, make it imperative for a pre-pharmacy student to determine the requirements for admission at the schools he or she desires to attend. A pre-pharmacy curriculum at Lake Superior State University can then be designed to help you obtain your goals. It is your responsibility to contact the directors of admissions at the pharmacy schools to which you are planning to apply so you can remain informed of their most recent requirements for admission.

Degree Requirements

Following is an example of typical minimum requirements for admission to many pharmacy programs:

- Biology (with lab) 1 year
- General Chemistry (with lab) 1 year
- Organic Chemistry (with lab) 1 year
- Physics (with lab) 1 year
- Economics 1 course
- Calculus at least 1 course
- English Composition 1 year
- Speech 1 course
- Social Science 1 year

In addition, several schools have specific pre-pharmacy requirements that are not on this list.

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Psychology: Bachelor of Arts/Science

Program Description

A comprehensive four-year program with emphasis on research, experimentation, computer applications and a senior-research sequence. Excellent preparation for graduate work at the master's or Ph.D. level in a wide variety of psychology disciplines.

Other Qualifications — A master's degree in psychology is usually the minimum requirement for the sample careers shown. The Ph.D. is essential for most senior-level positions and is required for appointment to permanent teaching and research positions in colleges and universities.

Degree Requirements

Required Psychology Credits (35-36 credits)

- PSYC101 Introduction to Psychology 4
- PSYC210 Statistics 3 **or**
- MATH207 Principles of Statistical Methods 3
- PSYC212 Experimental Psychology 4
- PSYC311 Learning and Motivation 3
- PSYC357 Personality Theory 3
- PSYC396 Tests and Measurements 3
- PSYC456 History & Systems of Psychology 3
- PSYC457 Cognition 3
- PSYC459 Physiological Psychology 3
- PSYC495 Senior Research Practicum 3
- PSYC498 Senior Research I 3
- PSYC499 Senior Research II 1

Elective Psychology Credits (6 credits)

- PSYC Elective - any level 3
- PSYC217 Social Psychology
  or
- PSYC259 Abnormal Psychology 3
  or
- PSYC265 Child & Adolescent Behavior

Select One Course from:

- BIOL105 Function of the Human Body 4

- BIOL122 Human Anatomy & Physiology II 4
- BIOL131 General Biology: Cells 4

Required & Electives Total (41-42 credits)

Acceptable Minors 21 credits

Psychology majors may select an approved minor (21 credits) or may complete 21 credits in courses approved in lieu of the minor by their advisor. Nine credits must be at the 300-400 level.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

Bachelor of Arts degree: 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.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Secondary Education: Bachelor of Arts/Science

Program Description

The Secondary Education program is highlighted by in-depth study in a subject major and a subject minor, extended field experience in secondary school settings, and focused development of the knowledge and skills critical for effective teachers. The program leads to a bachelor of arts or a bachelor of science degree in the student's major area.

Secondary-level teacher certification in Michigan permits individuals to teach the subject areas, in which they hold endorsements, at grades 6-12. The subject majors and minors provide the required coursework for the related endorsements. Completing the coursework and passing the corresponding Michigan Test for Teacher Certification subject test enable graduates to meet the requirements of No Child Left Behind and to be highly qualified in their subject areas.

Subject major and minor options are listed below. Specfiic requirements for these are found in the appropriate sections of this catalog.

Majors	Minors
Chemistry	Chemistry
English Language and Literature	Computer Science
Mathematics	Mathematics
Physical Science	

Students begin their studies in the secondary education program with a focus on general education requirements, an academic major and an academic minor. They complete the initial professional education coursework in their sophomore year, and apply for formal admission to the program at the end of that year. By that time, they will have also passed the Michigan Test for Teacher Certification Professional Readiness Examination.

Upper level professional education coursework, along with the completion of the major and minor, is the focus for the junior and senior years. Student teaching, a semester-long culminating experience, may be completed in the spring of the fourth year or the fall of the fifth year, depending on the individual student's progress through the program. Generally, this student teaching experience will be in the Eastern Upper Peninsula or in Sault Ste. Marie, Ontario. The Michigan Test for Teacher Certification subject test in the major must be passed prior to beginning student teaching.

Degree Requirements

The components of the Secondary Education: Bachelor of Arts/Sciences programs are:

Academic Major: Choose one from the above (see requirements under the subject area in this catalog)

Academic Minor: Choose one from list above (see requirements in the Minors section of this catalog)

Professional Education Sequence

- EDUC250 Student Diversity & Schools 4
- EDUC301 Learning Theory and Teaching Practice 3
- EDSE301 Introduction to Special Education 3
- EDUC350 Integrating Technology into 21st Century Learning Environments 3
- EDUC415 General Instructional Methods 2
- EDUC440 Reading in the Content Area 3
- EDUC44X or EDUC45X Methods in major and in minor (minimum credits) 3
- EDUC460 Classroom Management 2
- EDUC480 Directed Teaching: Seminar 2
- EDUC492 Directed Teaching 10

Education Cognates (3 credits)

- MATH207 Principles of Statistical Methods 3

Formal admission to the program, qualification for student teaching, and successful completion of the program requires the following:

- Completion of the Professional Education Sequence courses with a grade of B- (2.70) or higher
- Completion of all required courses in the education cognates, teaching major and teaching minor with a GPA of 2.70 or higher and no grade below a C (2.00).
- Completion of the General Education Core Requirements with a GPA of 2.00 or higher.
- Passing scores on all required Michigan Test for Teacher Certification tests.

The Secondary Education program undergoes periodic review, evaluation, and alignment with the Michigan Department of Education standards. Since program approval and renewal cycles vary, individuals should contact the School of Education regularly to confirm the current requirements of each program component. Graduates must meet the standards that are in place at the time of completion of their programs, in order to be recommended to the Department of Education for teacher certification.

General Education: All bachelor's degree candidates must complete the LSSU General Education Requirements.

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.

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Social Science: Bachelor of Arts/Science

Program Description

The social science degree helps prepare students to be effective citizens and develops skills useful in various employment areas, both in the public and private sectors. Both degree programs allow you to take a large number of electives, providing flexibility in accommodating a number of career plans.

Degree Requirements

Major Area Requirements:

Introductory Sequences (27-31 credits)

Students must select four full-year introductory sequence courses from the following six areas:

- Economics 6
- Geography 8
- History 8
- Political Science 8
- Psychology 7
- Sociology 6

Lower-level Courses from the Six Areas of the Major (9 credits)

- Students must choose at least nine credits from the 100-200 level in the six areas.

Upper-level Courses from the Six Areas of the Major (21 credits)

- Students must choose 21 credits from the 300-400 level offerings in the six areas. No more than 12 credits can be in any one discipline.

Methodology courses (5-7 credits)

Students choose one course from List A and one course from List B:

List A: Statistics (choose one)

- SOCY302 Statistics for Social Science
- PSYC210 Statistics
- POLI211 Political Science Research and Statistics

List B: Methods (choose one)

- SOCY202 Social Research Methods
- PSYC212 Experimental Psychology
- HIST496 Historical Methods

Minor or Cognate: To earn a bachelor of arts degree, students must take eight credits of a foreign language as well as an additional 12 approved credits from English, humanities, speech, journalism or philosophy (beyond general education requirements).

For a bachelor of science degree, students will take an approved minor in natural science or social science (20-28 credits).

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

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.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Previous page: Bachelor (Four-Year Programs) ^ Top
Next page: Associate (Two-Year Programs)

Sociology: Bachelor of Arts/Science

Program Description

This major prepares you to enter a variety of fields with a bachelor degree. It also provides an excellent foundation from which to continue educational preparation for a number of professions.

Many entry-level positions in private and public sector organizations require the understanding of organizations and human relations provided by the Sociology major. The sociology program emphasizes research skills, knowledge about diversity, critical thinking and writing skills, all of which will enhance your value to employers. With assistance from your advisor and your career goals in mind, you will select one or two minors. This combination of broad knowledge about social organizations from the Sociology major together with a set of specific job skills and knowledge from the minor(s) will give you a competitive edge in securing employment and in making career changes as opportunities present themselves and the labor market demands change.

If you are preparing for graduate studies or professional school, you will find that the Sociology major, together with one or two carefully selected minor(s), provides competitive preparation for a number of areas of advanced study, such as social work, business, international relations, survey researcher, public relations, urban planning and more. If you are planning to undertake graduate studies in Sociology, you are encouraged to take both a major and a minor in Sociology. Or, if you are planning to apply to professional schools, such as law or medicine, you will find that the Sociology program, more than any other major, allows you extensive time within the four-year program to take courses strategically selected to best prepare you for the desired professional program.

Degree Requirements

Required Credits for Major (33-35 credits)

The sociology major consists of 17 credit hours of core courses, completion of either a cognate area in research (7 credits) or community outreach (9 credits), and 9 credit hours of 300/400 level sociology electives.

Core (17 credits)

Required sociology courses are:

- SOCY101 Introduction to Sociology 4
- SOCY238 Social Psychology 4
- SOCY301 Social Research Methods 3
- SOCY310 Development of Sociological Theory 3

- SOCY311 Contemporary Sociological Theory 3

Students will need to complete all requirements in ONE of the following cognate areas:

Research Cognate (7 credits)

- SOCY399 Junior Seminar 1
- SOCY401 Social Research I 1
- SOCY402 Social Research II 1
- SOCY495 Senior Project I 2
- SOCY496 Senior Project II 2

Community Outreach Cognate (9 credits)

- SOCY314 Social Change 3
- SOWK480 Grant Writing 3
- SOCY497 Community Action Project 3

Elective Sociology Credits (9 credits)

Students must select an additional nine credit hours of sociology courses at the 300/400 level.

Minor (20 credits)

Students will complete an approved LSSU minor. This minor could be in sociology, giving the student a double concentration, which provides a solid background for graduate work in sociology. At least nine credit hours must be at the 300/400 level.

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

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.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Previous page: Bachelor (Four-Year Programs) ^ Top
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Sport and Recreation Management: Bachelor of Arts/Science

Program Description

The bachelor of science/bachelor of arts in sport and recreation management is a professional degree which focuses on leading, planning, managing and directing athletic, recreation and leisure opportunities for all ages of clientele, in a variety of public, private and commercial settings. A business minor is included in the degree to enhance management knowledge and skills. Career specialization can be achieved through additional minors or concentrations. A bachelor of arts includes eight hours of foreign language requirements.

A one-semester internship is required for both the bachelor of science and bachelor of arts degrees.

Available degrees (see specific degree requirements further down the page):

- Bachelor of Arts Sport and Recreation Management
- Bachelor of Science Sport and Recreation Management

Degree Requirements

Bachelor of Arts Sport and Recreation Management

Program Requirements (33 credits)

- RECS101 Introduction to Recreation and Leisure Services 3
- RECS105 Program Development & Leadership 3
- RECS270 Sports Management 3
- RECS295 Practicum 1
- RECS375 Commercial Recreation 3
- RECS390 Recreation Leader Apprenticeship 1
- RECS397 Recreation Studies Junior Research Seminar 1
- RECS435 Research in Recreation and Leisure Sciences 3
- RECS437 Recreation Studies Senior Research Seminar 1
- RECS450 Philosophy of Leisure and Human Performance 3
- RECS481 Professional Development Seminar 1
- RECS482 Administration of Recreation and Leisure Services 4
- RECS492* Internship 6

**It is recommended that RECS492 be completed during the summer of the student's senior year.*

Business Requirements (25 credits)

- ACTG132 Principles of Accounting I 4
- BUSN231 Business Communications 3
- BUSN350 Business Law I 3
- ECON201 Principles of Macroeconomics 3
- ECON202 Principles of Microeconomics 3
- FINC245 Principles of Finance 3
- MRKT281 Marketing Principles and Strategy 3
- MGMT360 Principles of Management 3

Cognate Requirements (19 credits)

- BIOL105 Functions of the Human Body 4
- EMED181 First Aid 1
- SOWK480 Grantwriting 3
- Foreign Language 8
- PSYC210 Statistics 3

School Electives (12 credits)

- EXER140 Health and Fitness 3
- EXER141 Introduction to Movement 3
- EXER230 Athletic Injury and Illness Prevention 3
- EXER234 Preventative Taping Techniques 1
- EXER248 Psychology of Sport and Performance and Coaching 3
- RECS212 Instructional Methods in Adapted Aquatics 2
- RECS220 Methods in Arts & Crafts 3
- RECS262 Outdoor Recreation 3
- RECS280 Readiness in Games, Activities and Sports 3
- RECS295 Practicum 1-3
- RECS320 Dance and Rhythmic Activities for Recreation 3
- RECS344 Adapted Sports and Recreation 3
- RECS362 Land Management for Recreation Purposes 3
- RECS365 Expedition Management 3
- RECS367 National Parks, National Monuments and National Culture 3
- RECS370 Recreation for the Elderly 3
- RECS390 Recreation Leader Apprenticeship 1
- RECS496 Selected Research Topics 1-3

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

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.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

Bachelor of Science Sport and Recreation Management

Program Requirements (33 credits)

- RECS101 Introduction to Recreation & Leisure Services 3
- RECS105 Program Development & Leadership 3
- RECS270 Sports Management 3
- RECS295 Practicum 1
- RECS375 Commercial Recreation 3
- RECS390 Recreation Leader Apprenticeship 1
- RECS397 Recreation Studies Junior Research Seminar 1
- RECS435 Research in Recreation and Leisure Sciences 3
- RECS437 Recreation Studies Senior Research Seminar 1
- RECS450 Philosophy of Leisure and Human Performance 3
- RECS481 Professional Development Seminar 1
- RECS482 Administration of Recreation and Leisure Services 4
- RECS492* Internship 6

**It is recommended that RECS492 be completed during the summer of the student's senior year.*

Business Requirements (25 credits)

- ACTG132 Principles of Accounting I 4
- BUSN231 Business Communications 3
- BUSN350 Business Law I 3
- ECON201 Principles of Macroeconomics 3
- ECON202 Principles of Microeconomics 3
- FINC245 Principles of Finance 3
- MRKT281 Marketing Principles and Strategy 3
- MGMT360 Principles of Management 3

Cognate Requirements (17-19 credits)

- BIOL105 Function of the Human Body 4
- EMED181 First Aid 1
- SOWK480 Grantwriting 3
- POLI130 Intro. to State & Local Government 4
  or
- POLI160 Intro. to Canadian Government 3
- PSYC101 Introduction to Psychology 4
  or
- PSYC155 Lifespan Development 3
- PSYC210 Statistics 3

School Electives (12 credits)

- EXER140 Health and Fitness 3
- EXER141 Introduction to Movement 3
- EXER230 Athletic Injury and Illness Prevention 3
- EXER234 Preventitive Taping Techniques 1
- EXER248 Psychology of Sport and Performance and Coaching 3

- RECS212 Instructional Methods in Adapted Aquatics 2
- RECS220 Methods of Arts & Crafts 3
- RECS262 Outdoor Recreation 3
- RECS280 Readiness in Games, Activities and Sports 3
- RECS295 Practicum 1-3
- RECS320 Dance and Rhythmic Activities for Recreation 3
- RECS344 Adapted Sports and Recreation 3
- RECS362 Land Management for Recreation Purposes 3
- RECS365 Expedition Management 3
- RECS367 National Parks, National Monuments and National Culture 3
- RECS370 Recreation for Elderly 3
- RECS390 Recreation Leader Apprenticeship 1
- RECS496 Selected Research Topics 1-3

General Education: All LSSU bachelor's degree candidates must complete the LSSU General Education Requirements.

A minimum of 124 credits (at the 100 level or higher) must be earned for graduation with a cumulative gpa of 2.00 or higher. A gpa of 2.00 or higher is also required in your Major, as well as in your General Education Requirements.

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Next page: Associate (Two-Year Programs)

Lake Superior State University: Academic Catalog 2015-16

Programs: Bachelor (Four-Year Programs)

- Accounting: Bachelor of Science
- Athletic Training: Bachelor of Science
- Biochemistry Pre-Professional: Bachelor of Science
- Biology: Bachelor of Science
- Business Administration - Bachelor of Science
- Business Administration - Entrepreneurship: Bachelor of Science
- Business Administration - International Business: Bachelor of Science
- Business Administration - Management: Bachelor of Science
- Business Administration - Marketing: Bachelor of Science
- Chemistry: Bachelor of Arts/Science
- Communication: Bachelor of Arts
- Computer Engineering: Bachelor of Science
- Computer Networking: Bachelor of Science
- Computer Science: Bachelor of Science
- Conservation Biology: Bachelor of Science
- Criminal Justice - Corrections: Bachelor of Science
- Criminal Justice - Criminalistics: Bachelor of Science
- Criminal Justice - Generalist: Bachelor of Science
- Criminal Justice - Homeland Security: Bachelor of Science
- Criminal Justice - Law Enforcement: Bachelor of Science
- Criminal Justice - Law Enforcement Certification: Bachelor of Science
- Criminal Justice - Law Enforcement Certification with NRT: Bachelor of Science
- Criminal Justice - Loss Control: Bachelor of Science
- Criminal Justice - Public Safety: Bachelor of Science
- Early Childhood Education: Bachelor of Science
- Electrical Engineering: Bachelor of Science
- Electrical Engineering Technology: Bachelor of Science
- Elementary Education: Bachelor of Arts/Science
- Elementary Education: Special Education - Learning Disabilities: Bachelor of Science
- English Language and Literature: Bachelor of Arts
- Environmental Health: Bachelor of Science
- Environmental Science: Bachelor of Science
- Exercise Science: Bachelor of Science
- Finance and Economics: Bachelor of Science
- Fine Arts Studies: Bachelor of Arts
- Fire Science - Engineering Technology: Bachelor of Science
- Fire Science - Generalist: Bachelor of Science
- Fire Science - Generalist Non Certification: Bachelor of Science

- Fish Health: Bachelor of Science
- Fisheries and Wildlife Management: Bachelor of Science
- Forensic Chemistry: Bachelor of Science
- General Studies: Bachelor of Arts/Science
- Geology: Bachelor of Science
- History: Bachelor of Arts/Science
- Individualized Studies: Bachelor of Arts/Science
- Industrial Technology: Bachelor of Science
- Language Arts: Bachelor of Arts
- Literature: Bachelor of Arts
- Literature - Creative Writing: Bachelor of Arts
- Manufacturing Engineering Technology: Bachelor of Science
- Mathematics: Bachelor of Science
- Mechanical Engineering: Bachelor of Science
- Medical Laboratory Science: Bachelor of Science
- Nursing: Bachelor of Science
- Parks and Recreation: Bachelor of Science
- Physical Science: Bachelor of Science
- Political Science: Bachelor of Arts/Science
- Prelaw (non-degree)
- Pre-Medical
- Pre-Pharmacy (transfer program)
- Pre-Veterinary
- Psychology: Bachelor of Arts/Science
- Secondary Education: Bachelor of Arts/Science
- Social Science: Bachelor of Arts/Science
- Sociology: Bachelor of Arts/Science
- Sport and Recreation Management: Bachelor of Arts/Science

Previous page: Degree Programs ^ Top
Next page: Associate (Two-Year Programs)

Lake Superior State University: Academic Catalog 2016-17

Programs: Associate (Two-Year Programs)

- Chemical Technology
- Chemistry
- Computer Science
- Criminal Justice-Corrections
- Criminal Justice-Homeland Security
- Criminal Justice-Law Enforcement
- Early Childhood Education
- Electrical Engineering Technology
- Fire Science
- General Engineering
- General Engineering Technology
- General Studies
- Health/Fitness Specialist
- Health Studies
- Internet/Network Specialist
- Liberal Arts
- Manufacturing Engineering Technology
- Marine Technology
- Natural Resources Technology
- Paramedic Technology
- Small Business Administration
- Social Work
- Substance Abuse Prevention and Treatment
- Technical Accounting

Previous page: Bachelor (Four-Year Programs) ^ Top
Next page: Certificates (One-Year Programs)

Lake Superior State University: Academic Catalog 2015-16

Programs: Associate (Two-Year Programs)

- Chemical Technology
- Chemistry
- Computer Science
- Criminal Justice-Corrections
- Criminal Justice-Homeland Security
- Criminal Justice-Law Enforcement
- Early Childhood Education
- Electrical Engineering Technology
- Fire Science
- General Engineering
- General Engineering Technology
- General Studies
- Health Care Provider
- Health/Fitness Specialist
- Internet/Network Specialist
- Liberal Arts
- Manufacturing Engineering Technology
- Marine Technology
- Natural Resources Technology
- Paramedic Technology
- Personal Computer Specialist
- Small Business Administration
- Social Work
- Substance Abuse Prevention and Treatment
- Technical Accounting

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Next page: Certificates (One-Year Programs)

Lake Superior State University: Academic Catalog 2016-17

Certificates (One-Year Programs)

- International Studies
- Manufacturing
- Paramedic Training
- Practical Nursing

Previous page: Associate (Two-Year Programs) ^ Top
Next page: Minors

Lake Superior State University: Academic Catalog 2015-16

Certificates (One-Year Programs)

- International Studies
- Manufacturing
- Paramedic Training
- Practical Nursing

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Equity in Athletics 2015

Institution: Lake Superior State University (170639) User ID: E1706391

Screening Questions

Please answer these questions carefully as your responses will determine which subsequent data entry screens are appropriate for your institution.

1. How will you report Operating (Game-day) Expenses?

- (•) By Team
- ( ) Per Participant

2. Select the type of varsity sports teams at your institution.

- [x] Men's Teams
- [x] Women's Teams
- [ ] Coed Teams

3. Do any of your teams have assistant coaches?

- (•) Yes
  - [x] Men's Teams
  - [x] Women's Teams
  - [ ] Coed Teams
- ( ) No

If you save the data on this screen, then return to the screen to make changes, note the following:
1) If you select an additional type of team remember to include associated data for that type of team on subsequent screens;
2) If you delete a type of team but have already entered associated data on other screens, all associated data for that type of team will be deleted from subsequent screens. However, because the survey system has to recalculate the totals, you must re-save every screen.

Institution: Lake Superior State University (170639) User ID: E1706391

Sports Selection - Men's and Women's Teams

Select the varsity sports teams at your institution.

Sport	Men's	Women's	Sport	Men's	Women's
Archery	☐	☐	Badminton	☐	☐
Baseball	☐		Basketball	☑	☑
Beach Volleyball	☐	☐	Bowling	☐	☐
Cross Country	☐	☐	Diving	☐	☐
Equestrian	☐	☐	Fencing	☐	☐
Field Hockey		☐	Football	☐	
Golf	☑	☑	Gymnastics	☐	☐
Ice Hockey	☑	☐	Lacrosse	☐	☐
Rifle	☐	☐	Rodeo	☐	☐
Rowing	☐	☐	Sailing	☐	☐
Skiing	☐	☐	Soccer	☐	☐
Softball		☑	Squash	☐	☐
Swimming	☐	☐	Swimming and Diving (combined)	☐	☐
Synchronized Swimming		☐	Table Tennis	☐	☐
Team Handball	☐	☐	Tennis	☑	☑
Track and Field (Indoor)	☐	☐	Track and Field (Outdoor)	☐	☐
Track and Field and Cross Country (combined)	☑	☑	Volleyball	☐	☑
Water Polo	☐	☐	Weight Lifting	☐	☐
Wrestling	☐	☐	Other Sports **(Specify sports in the caveat box.)***	☐	☐

CAVEAT

* If you indicated in the caveat box that your other sports are Dancing and/or Cheerleading, please also specify in the caveat box that your institution has a letter from the Office for Civil Rights confirming that the OCR has determined that Dancing and/or Cheerleading are varsity sports at your institution.

If you save the data on this screen, then return to the screen to make changes, note the following:
1) If you select an additional team remember to include associated data for that sport on subsequent screens;
2) If you delete a sport but have already entered associated data on other screens, all associated data for that sport will be deleted from subsequent screens. However, because the survey system has to recalculate the totals, you must re-save every screen.

Institution: Lake Superior State University (170639) User ID: E1706391

Athletics Participation - Men's and Women's Teams

Enter the number of participants as of the day of the first scheduled contest.

Varsity Teams	**Men's Teams**	**Women's Teams**
Basketball	14	15
Golf	10	7
Ice Hockey	29	
Softball		17
Tennis	10	6
Track and Field and Cross Country (combined)	61	60
Track and Field (Indoor)	24	24
Track and Field (Outdoor)	25	24
Cross Country	12	12
Volleyball		14
Total Participants Men's and Women's Teams	124	119
Unduplicated Count of Participants (This is a head count. If an individual participates on more than one team, count that individual only once on this line.)	88	83

CAVEAT
(For each men's or women's team that includes opposite sex participants, specify the number of male and the number of female students on that team in this caveat box. This does not apply for coed teams. Additionally, provide any other clarifying information here.)

If you save the data on this screen, then return to the screen to make changes, please note you must re-save every screen because the survey system has to recalculate the totals.

Institution: Lake Superior State University (170639) User ID: E1706391

Head Coaches - Men's Teams

For each men's team, indicate whether the head coach is male or female, was assigned to the team on a full-time or part-time basis, and whether the coach was employed by the institution on a full-time basis or on a part-time or volunteer basis, by entering a 1 in the appropriate field.

The Swimming and Diving (combined) fields allow up to 2 head coaches. The Track and Field and Cross Country (combined) fields allow up to 3.

	Male Head Coaches				Female Head Coaches				
Varsity Teams	Assigned to Team on a Full-Time Basis	Assigned to Team on a Part-Time Basis	Full-Time Institution Employee	Part-Time Institution Employee or Volunteer	Assigned to Team on a Full-Time Basis	Assigned to Team on a Part-Time Basis	Full-Time Institution Employee	Part-Time Institution Employee or Volunteer	Total Head Coaches
Basketball	1		1						1
Golf		1		1					1
Ice Hockey	1		1						1
Tennis		1	1						1
Track and Field and Cross Country (combined)		1	1						1
Coaching Position Totals	2	3	4	1	0	0	0	0	5

CAVEAT

The Head Golf coach's salary is allocated by the number of participants of each gender. For example if the entire golf team is 10 athletes and 2 are female and 8 are male, then 80% is allocated to Men's Golf.

Institution: Lake Superior State University (170639) User ID: E1706391

Head Coaches - Women's Teams

For each women's team, indicate whether the head coach is male or female, was assigned to the team on a full-time or part-time basis, and whether the coach was employed by the institution on a full-time basis or on a part-time or volunteer basis, by entering a 1 in the appropriate field.

The Swimming and Diving (combined) fields allow up to 2 head coaches. The Track and Field and Cross Country (combined) fields allow up to 3.

	Male Head Coaches				Female Head Coaches				
Varsity Teams	Assigned to Team on a Full-Time Basis	Assigned to Team on a Part-Time Basis	Full-Time Institution Employee	Part-Time Institution Employee or Volunteer	Assigned to Team on a Full-Time Basis	Assigned to Team on a Part-Time Basis	Full-Time Institution Employee	Part-Time Institution Employee or Volunteer	Total Head Coaches
Basketball					1		1		1
Golf		1		1					1
Softball					1		1		1
Tennis		1	1						1
Track and Field and Cross Country (combined)		1	1						1
Volleyball					1		1		1
Coaching Position Totals	0	3	2	1	3	0	3	0	6

CAVEAT

Institution: Lake Superior State University (170639) User ID: E1706391

Head Coaches' Salaries - Men's and Women's Teams

Enter only salaries and bonuses that your institution pays head coaches as compensation for coaching. Do not include benefits on this screen.
Do not include volunteer coaches in calculating the average salary and the Full-Time Equivalent (FTE) Total.
For help calculating the FTE total click on the Instructions link on this screen.

	Men's Teams	Women's Teams
Average Annual Institutional Salary per Head Coach (for coaching duties only)	64,877	40,415
Number of Head Coaches Used to Calculate the Average	5	6
Number of Volunteer Head Coaches (Do not include these coaches in your salary or FTE calculations.)	0	0
Average Annual Institutional Salary per Full-time equivalent (FTE)	81,096	48,498
Sum of Full-Time Equivalent (FTE) Positions Used to Calculate the Average	4.00	5.00

CAVEAT

Institution: Lake Superior State University (170639) User ID: E1706391

Assistant Coaches - Men's Teams

For each men's team, indicate whether the assistant coach is male or female, was assigned to the team on a full-time or part-time basis, and whether the coach was employed by the institution on a full-time basis or on a part-time or volunteer basis, by entering a 1 in the appropriate field.

	Male Assistant Coaches				Female Assistant Coaches				
Varsity Teams	Assigned to Team on a Full-Time Basis	Assigned to Team on a Part-Time Basis	Full-Time Institution Employee	Part-Time Institution Employee or Volunteer	Assigned to Team on a Full-Time Basis	Assigned to Team on a Part-Time Basis	Full-Time Institution Employee	Part-Time Institution Employee or Volunteer	Total Assistant Coaches
Basketball	1	1	2						2
Golf									0
Ice Hockey	2		2						2
Tennis									0
Track and Field and Cross Country (combined)		1		1					1
Coaching Position Totals	3	2	4	1	0	0	0	0	5

CAVEAT

Institution: Lake Superior State University (170639) User ID: E1706391

Assistant Coaches - Women's Teams

For each women's team, indicate whether the assistant coach is male or female, was assigned to the team on a full-time or part-time basis, and whether the coach was employed by the institution on a full-time basis or on a part-time or volunteer basis, by entering a 1 in the appropriate field.

	Male Assistant Coaches				Female Assistant Coaches				
Varsity Teams	Assigned to Team on a Full-Time Basis	Assigned to Team on a Part-Time Basis	Full-Time Institution Employee	Part-Time Institution Employee or Volunteer	Assigned to Team on a Full-Time Basis	Assigned to Team on a Part-Time Basis	Full-Time Institution Employee	Part-Time Institution Employee or Volunteer	Total Assistant Coaches
Basketball					1		1		1
Golf									0
Softball						1		1	1
Tennis									0
Track and Field and Cross Country (combined)		1		1					1
Volleyball						1		1	1
Coaching Position Totals	0	1	0	1	1	2	1	2	4

CAVEAT

Institution: Lake Superior State University (170639) User ID: E1706391

Assistant Coaches' Salaries - Men's and Women's Teams

Enter only salaries and bonuses that your institution pays assistant coaches as compensation for coaching. Do not include benefits on this screen.
Do not include volunteer coaches in calculating the average salary and the Full-Time Equivalent (FTE) Total.
For help calculating the FTE total click on the Instructions link on this screen.

	Men's Teams	Women's Teams
Average Annual Institutional Salary per Assistant Coach (for coaching duties only)	53,167	10,062
Number of Assistant Coaches Used to Calculate the Average	5	4
Number of Volunteer Assistant Coaches. (Do not include these coaches in your salary or FTE calculations.)	0	0
Average Annual Institutional Salary per Full-time equivalent (FTE)	75,953	20,124
Sum of Full-Time Equivalent (FTE) Positions Used to Calculate the Average	3.50	2.00

CAVEAT

Institution: Lake Superior State University (170639) User ID: E1706391

Athletically Related Student Aid - Men's and Women's Teams

Athletically related student aid is any scholarship, grant, or other form of financial assistance, offered by an institution, the terms of which require the recipient to participate in a program of intercollegiate athletics at the institution. Other student aid, of which a student-athlete simply happens to be the recipient, is not athletically related student aid. If you do not have any aid to report, enter a 0.

	Men's Teams	Women's Teams	Total
Amount of Aid	805,601	677,625	1,483,226
Ratio (percent)	54	46	100%

CAVEAT

We include summer Grant in Aid and book Grant in Aid with our totals.

Institution: Lake Superior State University (170639) User ID: E1706391

Recruiting Expenses - Men's and Women's Teams

Recruiting expenses are all expenses an institution incurs attributable to recruiting activities. This includes, but is not limited to, expenses for lodging, meals, telephone use, and transportation (including vehicles used for recruiting purposes) for both recruits and personnel engaged in recruiting, and other expenses for official and unofficial visits, and all other expenses related to recruiting. If you do not have any recruiting expenses to report, enter a 0.

	Men's Teams	Women's Teams	Total
Total	43,890	12,863	56,753

CAVEAT

Institution: Lake Superior State University (170639) User ID: E1706391

Operating (Game-Day) Expenses - Men's and Women's Teams by Team

Operating expenses are all expenses an institution incurs attributable to home, away, and neutral-site intercollegiate athletic contests (commonly known as "game-day expenses"), for (A) Lodging, meals, transportation, uniforms, and equipment for coaches, team members, support staff (including, but not limited to team managers and trainers), and others; and (B) Officials.

For a sport with a men's team and a women's team that have a combined budget, click here for special instructions.
Report actual numbers, not budgeted or estimated numbers. Please do not round beyond the next dollar.

	Men's Teams			Women's Teams			
Varsity Teams	**Participants**	**Operating Expenses per Participant**	**By Team**	**Participants**	**Operating Expenses per Participant**	**By Team**	**Total Operating Expenses**
Basketball	14	8,578	120,089	15	5,534	83,013	203,102
Golf	10	3,561	35,613	7	4,040	28,279	63,892
Ice Hockey	29	16,839	488,334				488,334
Softball				17	2,909	49,460	49,460
Tennis	10	1,721	17,207	6	4,397	26,382	43,589
Track and Field and Cross Country (combined)	61	798	48,660	60	811	48,660	97,320
Volleyball				14	2,658	37,215	37,215
Total Operating Expenses Men's and Women's Teams	124		709,903	119		273,009	982,912
CAVEAT							

Note: This screen is for game-day expenses only.

Institution: Lake Superior State University (170639) User ID: E1706391

Total Expenses - Men's and Women's Teams

Enter all expenses attributable to intercollegiate athletic activities. This includes appearance guarantees and options, athletically related student aid, contract services, equipment, fundraising activities, operating expenses, promotional activities, recruiting expenses, salaries and benefits, supplies, travel, and any other expenses attributable to intercollegiate athletic activities.

Report actual numbers, not budgeted or estimated numbers. Please do not round beyond the next dollar.

Varsity Teams	Men's Teams	Women's Teams	Total
Basketball	592,545	406,535	999,080
Golf	114,681	96,751	211,432
Ice Hockey	1,414,310		1,414,310
Softball		259,163	259,163
Tennis	150,057	154,705	304,762
Track and Field and Cross Country (combined)	209,789	209,790	419,579
Volleyball		260,661	260,661
Total Expenses of all Sports, Except Football and Basketball, Combined	1,888,837	981,070	2,869,907
Total Expenses Men's and Women's Teams	2,481,382	1,387,605	3,868,987
Not Allocated by Gender/Sport (Expenses not attributable to a particular sport or sports)			147,878
Grand Total Expenses			4,016,865
CAVEAT			

Institution: Lake Superior State University (170639) User ID: E1706391

Total Revenues - Men's and Women's Teams

Your total revenues must cover your total expenses.

Enter all revenues attributable to intercollegiate athletic activities. This includes revenues from appearance guarantees and options, an athletic conference, tournament or bowl games, concessions, contributions from alumni and others, institutional support, program advertising and sales, radio and television, royalties, signage and other sponsorships, sport camps, state or other government support, student activity fees, ticket and luxury box sales, and any other revenues attributable to intercollegiate athletic activities.

Report actual numbers, not budgeted or estimated numbers. Please do not round beyond the next dollar.

Varsity Teams	Men's Teams	Women's Teams	Total
Basketball	592,545	406,535	999,080
Golf	114,681	96,751	211,432
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Total Revenues Men's and Women's Teams	2,481,382	1,387,605	3,868,987
Not Allocated by Gender/Sport (Revenues not attributable to a particular sport or sports)			147,878
Grand Total for all Teams (includes by team and not allocated by gender/sport)			4,016,865
CAVEAT			

Institution: Lake Superior State University (170639) User ID: E1706391

Summary - Men's and Women's Teams

Your Grand Total Revenues must be equal to or greater than your Grand Total Expenses or you will not be able to lock your survey.

		Men's Teams	Women's Teams	Total
1	Total of Head Coaches' Salaries	324,385	242,490	566,875
2	Total of Assistant Coaches' Salaries	265,835	40,248	306,083
3	Total Salaries (Lines 1+2)	590,220	282,738	872,958
4	Athletically Related Student Aid	805,601	677,625	1,483,226
5	Recruiting Expenses	43,890	12,863	56,753
6	Operating (Game-Day) Expenses	709,903	273,009	982,912
7	Summary of Subset Expenses (Lines 3+4+5+6)	2,149,614	1,246,235	3,395,849
8	Total Expenses for Teams	2,481,382	1,387,605	3,868,987
9	Total Expenses for Teams Minus Subset Expenses (Line 8 – Line 7)	331,768	141,370	473,138
10	Not Allocated Expenses			147,878
11	Grand Total Expenses (Lines 8+10)			4,016,865
12	Total Revenues for Teams	2,481,382	1,387,605	3,868,987
13	Not Allocated Revenues			147,878
14	Grand Total Revenues (Lines 12+13)			4,016,865
15	Total Revenues for Teams minus Total Expenses for Teams (Line 12-Line 8)	0	0	0
16	Grand Total Revenues Minus Grand Total Expenses (Line 14- Line 11)			0

To return to a data entry screen, click on the link in the Navigation Menu.
To proceed to the Supplemental Information screen, click on the link in the Navigation Menu or click on the “Next” button on this screen.

Institution: Lake Superior State University (170639) User ID: E1706391

Supplemental Information (optional)

This screen may be used to help the reader better understand the data you have provided, or to help a prospective student-athlete make an informed choice of an athletics program.
This information will be viewable on the EADA public website. Please do not include the names of individuals or write messages to the help desk.
To explain specific data entered on a previous screen, please use the caveat box on that screen.

Print Form(s) Get PDF File Go Back

LAKE SUPERIOR STATE UNIVERSITY

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Study abroad is your opportunity to live in a foreign country and attend a foreign university.

- See the world
- Learn different education styles
- Explore a new culture
- Practice language skills
- Make lifelong friends
- Be more independent

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BEYOND BORDERS

SAVE THE DATE!

STUDY ABROAD INFO. FAIR

September 19, 2016
Meet with representatives from our Study Abroad partners and past LSSU travelers.
Details coming soon.

Experience Scotland in 2016-2017

LSSU has joined the Wisconsin Experience Scotland Program for 2016-2017!
This program is one of the most affordable study abroad options available today!

Set in the historical Dalkeith House or "Palace" as the locals refer to it, this rich, cultural immersion experience is a safe and comfortable way to take your education beyond your borders. Partnerships with the University of Edinburgh Student Associations and non-residential host families provide enriching opportunities for expanding your education. Explore the UK while studying with Experience Scotland.

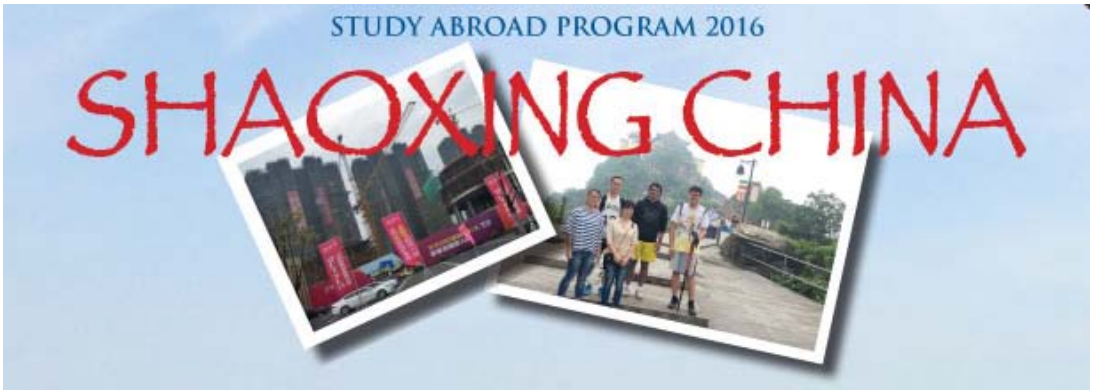
Learn More

Follow us with the Scotland Blogger!

Scotland Blogger

Faculty-Led Programs

China 2016



This Program is Closed

Departure Information for LSSU Travelers

- Health and Safety Reminders for LSSU Travelers (pdf)
- Financial Aid Consortium Form for Study Abroad Federal Aid Recipients (pdf)
- HTH Mandatory Health Insurance

LSSU Partners for Study Abroad

Japan Center for Michigan Universities (JCMU) http://jcmu.isp.msu.edu/

International Studies Abroad (ISA) http://studiesabroad.com/

College Consortium for International Studies (CCIS) http://www.ccisabroad.org/

Council on International Education Exchange (CIEE) https://www.ciee.org/

- Quick View of Programs

Application Materials

- How to Apply & Applications
- Mandatory Study Abroad Health Insurance program
  For all LSSU study abroad students. *Enroll in the LSSU group plan using access code: FLD-11348.* This study abroad health insurance must be purchased separately, using a personal credit cards.

Financial Aid

- Scholarships & Financial Aid

Resources »

- Academics
- Provost's Office

Upcoming Events »

MAY
17

Innocademy
12:00PM to 10:00PM

Additional Links

- Shared Governance
- Employment
- Map

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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LAKE SUPERIOR STATE UNIVERSITY

Disability Services

Disability Services at LSSU

Disability Services and Lake Superior State University is committed to making individuals with disabilities full participants in it's programs, services and activities.

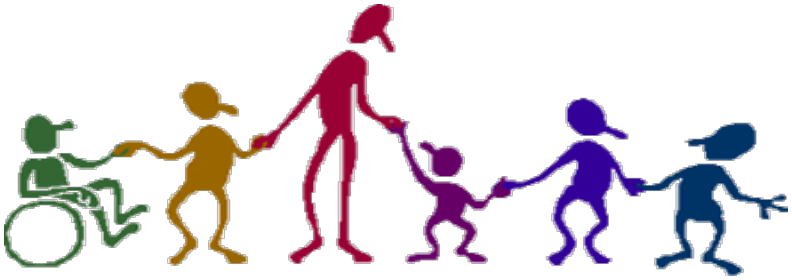
It is LSSU's policy that no otherwise qualified individual with a disability shall be denied access to, or participation in, any program, service, or activity offered by the university.

LSSU supports equal educational opportunities for all students. Students are entitled to accessible, accommodating, and supportive teaching and learning environments.

ADAAA (Americans with Disabilities Act Amendments Act of 2008):

All students who identify themselves to faculty as having a disability or suspect that they have a disability are encouraged to contact Disability Services (DS).

Faculty is not obligated to provide accommodations without proper notification from the DS Office. Students may also contact DS staff by telephone to make an intake appointment at 906-635-2355.



Individuals with disabilities have a right to:

- Request accommodations.
- Receive accommodations appropriate to their disability in order to fully participate in, or benefit from, the university's programs, services, and activities in a non-discriminatory, integrated manner.

To develop the necessary accommodations, students are responsible for:

- Meeting with the Disability Services Director and registering for services.
- Providing supporting documentation regarding the disabling condition.

LSSU Grievance Procedures

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

Below is a link to the LSSU Grievance Policy and Procedures that students should follow if they have a discrimination complaint:

http://www.lssu.edu/cmscatalog1314/equal-opportunity.php

Why register for services?

In compliance with Lake Superior State University policy and equal access laws, disability-related accommodations or services are available. Students who desire such services are urged to meet with their professor in a timely manner, preferably the first week of class, to discuss their disability-related needs.

However, students will not receive services until they are properly register with Disability Services.

Proper registration will enable Disability Services to verify the disability and determine reasonable and effective academic accommodations. Disability Services is located in the KJS Library Room 149, extension 2355.

Students making a successful transition to higher education bring with them:

- The documentation that permits reasonable accommodation,
- A desire to actively participate in the accommodation process,
- And the ability to compete on a playing field made level by those accommodations mandated by law.

Students are encouraged to contact post secondary institutions as early as ninth grade to learn more about admission requirements, disability services and the array of educational opportunities available to them as individuals with disabilities.

NOTE: All documentation is kept confidential; by ACES. Upon receipt and evaluation of the documentation, ACES will provide the accommodation information to the faculty and staff involved. It is the responsibility of the faculty, staff and student to work with ACES to make sure all parties needs are addressed. ACES has a responsibility to maintain confidentiality regarding the student's evaluation under FERPA/HIPPA.

Office hours

- 8:00 AM to 5:00 PM Monday through Friday.
- Evening hours by appointment only
- Summer hours 8:00 AM to 4:00 PM

A sampling of services offered

- Extra testing time
- Test readers or scribes
- Access to distraction reduced testing environment
- Assistance with class assignments
- Alternative testing formats
- Request digital or audio textbooks

(request form)

- Classroom audio taping
- Note-taking services
- Assistive technology
- Alternative seating in classrooms

Vicki Fox

Alternative formats of this web page are available upon request.

Resources »

- FERPA
- College Funding for Students with Disabilities
- Assistive Technology

Upcoming Events »

There are no submitted events for today.

Additional Links

- Shared Governance
- Employment
- Map

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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NATIONAL CENTER FOR EDUCATION STATISTICS

IPEDS DATA FEEDBACK REPORT 2015

What Is IPEDS?

The Integrated Postsecondary Education Data System (IPEDS) is a system of survey components that collects data from about 7,500 institutions that provide postsecondary education across the United States. IPEDS collects institution-level data on student enrollment, graduation rates, student charges, program completions, faculty, staff, and finances.

These data are used at the federal and state level for policy analysis and development; at the institutional level for benchmarking and peer analysis; and by students and parents, through the College Navigator (http://collegenavigator.ed.gov), an online tool to aid in the college search process. For more information about IPEDS, see http://nces.ed.gov/ipeds.

What Is the Purpose of This Report?

The Data Feedback Report is intended to provide institutions a context for examining the data they submitted to IPEDS. The purpose of this report is to provide institutional executives a useful resource and to help improve the quality and comparability of IPEDS data.

What Is in This Report?

As suggested by the IPEDS Technical Review Panel, the figures in this report provide selected indicators for your institution and a comparison group of institutions. The figures are based on data collected during the 2014-15 IPEDS collection cycle and are the most recent data available. This report provides a list of pre-selected comparison group institutions and the criteria used for their selection. Additional information about these indicators and the pre-selected comparison group are provided in the Methodological Notes at the end of the report.

Where Can I Do More with IPEDS Data?

Each institution can access previous Data Feedback Reports as far back as 2005 and customize this latest report by using a different comparison group and IPEDS variables of its choosing. To download archived reports or customize the current Data Feedback Report (DFR), please visit our web site at http://nces.ed.gov/ipeds/Home/UseTheData.

Lake Superior State University
Sault Ste Marie, MI

COMPARISON GROUP

Comparison group data are included to provide a context for interpreting your institution's statistics. If your institution did not define a custom comparison group for this report by July 17, NCES selected a comparison group for you. (In this case, the characteristics used to define the comparison group appears below.) The Customize Data Feedback Report functionality on the IPEDS Data Center (http://nces.ed.gov/ipeds/datacenter/) can be used to reproduce the figures in this report using different peer groups.

Using some of your institution's characteristics, a group of comparison institutions was selected for you. The characteristics include Carnegie Classification of Baccalaureate Colleges--Diverse Fields, public and enrollment of a similar size. This comparison group includes the following 30 institutions:

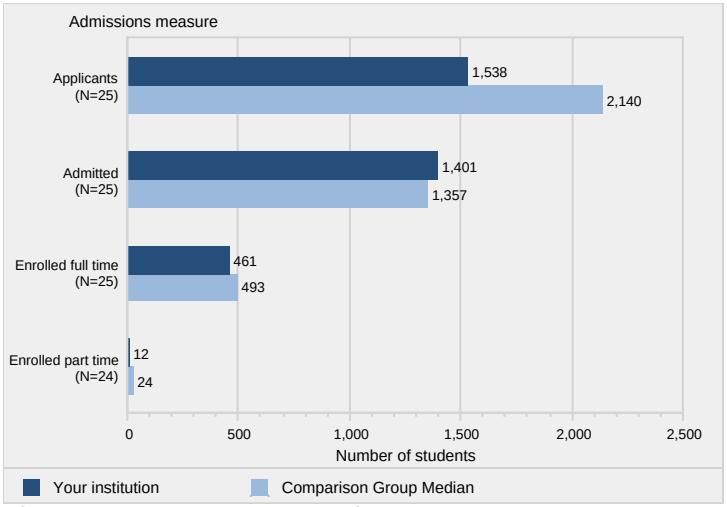
- Athens State University (Athens, AL)
- Chadron State College (Chadron, NE)
- Clayton State University (Morrow, GA)
- Concord University (Athens, WV)
- CUNY York College (Jamaica, NY)
- Elizabeth City State University (Elizabeth City, NC)
- Farmingdale State College (Farmingdale, NY)
- Fort Valley State University (Fort Valley, GA)
- Georgia Gwinnett College (Lawrenceville, GA)
- Indiana University-East (Richmond, IN)
- Indiana University-Kokomo (Kokomo, IN)
- Lander University (Greenwood, SC)
- Lewis-Clark State College (Lewiston, ID)
- Metropolitan State University of Denver (Denver, CO)
- Missouri Southern State University (Joplin, MO)
- Missouri Western State University (Saint Joseph, MO)
- Nevada State College (Henderson, NV)
- Northern State University (Aberdeen, SD)
- Oregon Institute of Technology (Klamath Falls, OR)
- Pennsylvania State University-Penn State Altoona (Altoona, PA)
- Pennsylvania State University-Penn State Berks (Reading, PA)
- Purdue University-North Central Campus (Westville, IN)
- SUNY Maritime College (Throggs Neck, NY)
- University of Arkansas at Pine Bluff (Pine Bluff, AR)
- University of Houston-Downtown (Houston, TX)
- University of Pittsburgh-Johnstown (Johnstown, PA)
- University of South Carolina-Aiken (Aiken, SC)
- University of South Carolina-Upstate (Spartanburg, SC)
- Utah Valley University (Orem, UT)
- West Liberty University (West Liberty, WV)

The figures in this report have been organized and ordered into the following topic areas:

1) Admissions (only for non-open-admissions schools),
2) Student Enrollment,
3) Awards,
4) Charges and Net Price,
5) Student Financial Aid,
6) Military Benefits*,
7) Retention and Graduation Rates,
8) Finance,
9) Staff, and
10) Libraries*.

*These figures only appear in customized Data Feedback Reports (DFR), which are available through Use the Data portal on the IPEDS website.

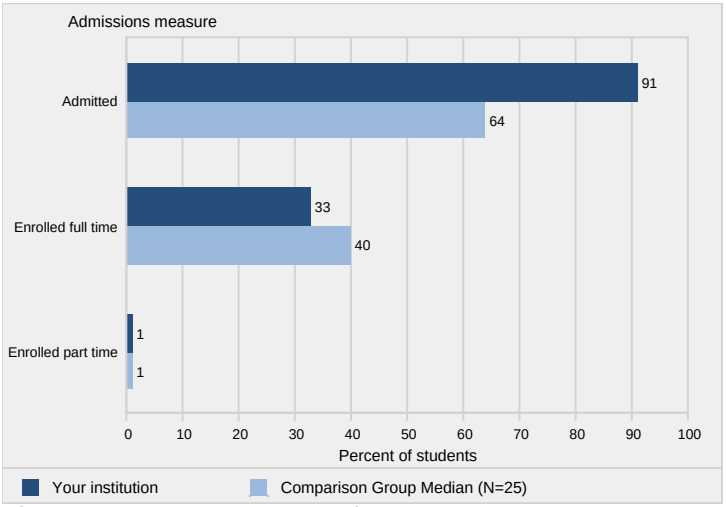
Figure 1. Number of first-time undergraduate students who applied, were admitted, and enrolled full and part time: Fall 2014



NOTE: Admissions data are presented only for institutions that do not have an open admission policy, and apply to first-time, degree/certificate-seeking undergraduate students only. For details, see the Methodological Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Winter 2014-15, Admissions component.

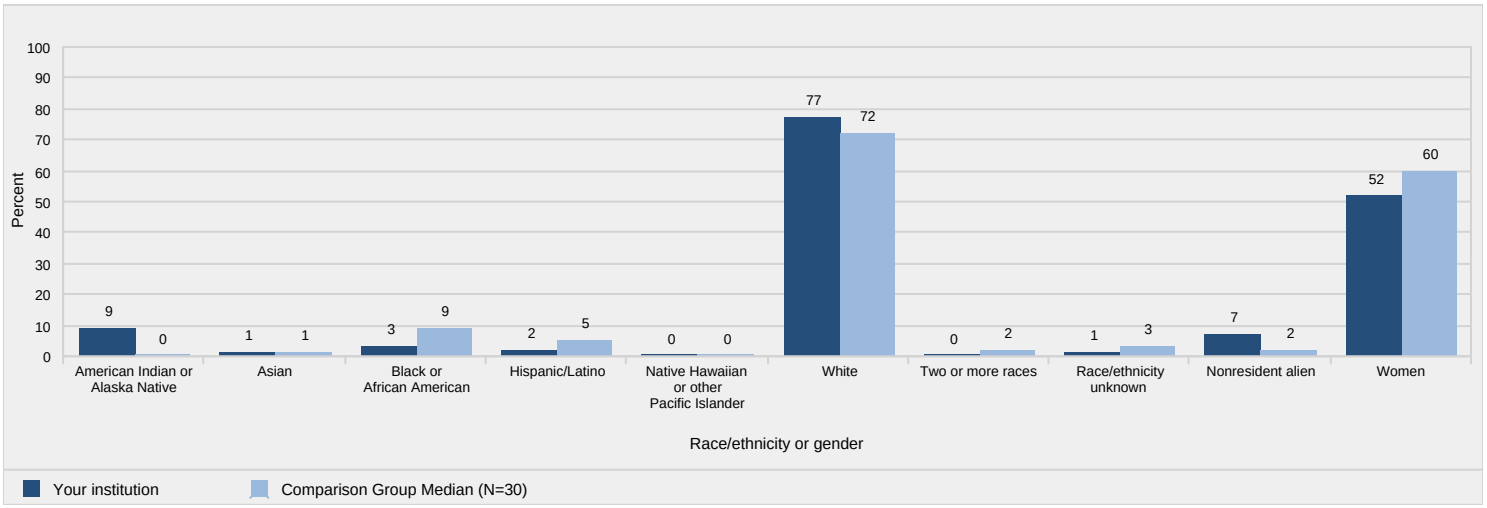
Figure 2. Percent of first-time undergraduate applicants admitted, and percent of admissions enrolled, by full- and part-time status: Fall 2014



NOTE: Admissions data are presented only for institutions that do not have an open admission policy, and apply to first-time, degree/certificate-seeking undergraduate students only. For details, see the Methodological Notes. Median values for the comparison group will not add to 100%. See "Use of Median Values for Comparison Group" for how median values are determined. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Winter 2014-15, Admissions component.

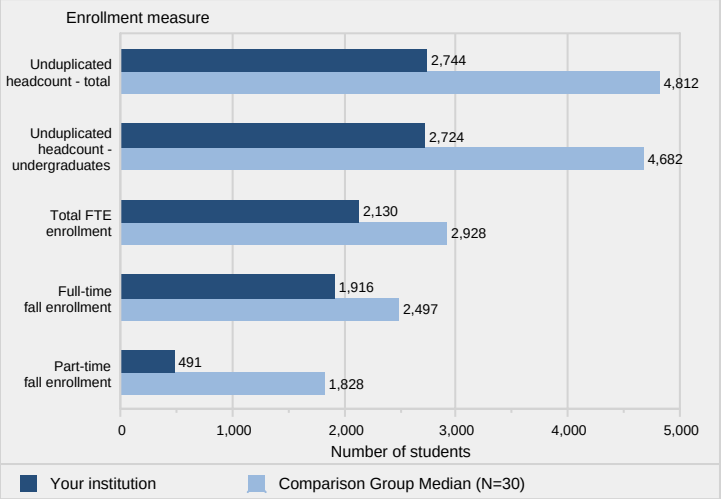
Figure 3. Percent of all students enrolled, by race/ethnicity, and percent of students who are women: Fall 2014



NOTE: For more information about disaggregation of data by race and ethnicity, see the Methodological Notes. Median values for the comparison group will not add to 100%. See "Use of Median Values for Comparison Group" for how median values are determined. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Spring 2014, Fall Enrollment component.

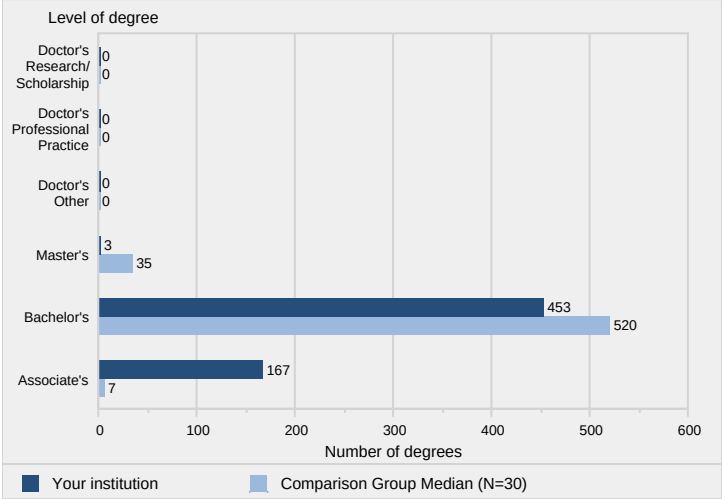
Figure 4. Unduplicated 12-month headcount of all students and of undergraduate students (2013-14), total FTE enrollment (2013-14), and full- and part-time fall enrollment (Fall 2014)



NOTE: For details on calculating full-time equivalent (FTE) enrollment, see Calculating FTE in the Methodological Notes. Total headcount, FTE, and full- and part-time fall enrollment include both undergraduate and postbaccalaureate students, when applicable. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Fall 2014, 12-month Enrollment component and Spring 2015, Fall Enrollment component.

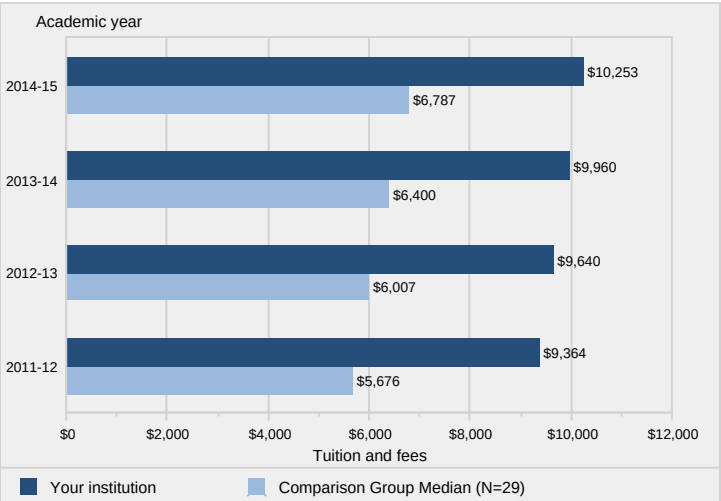
Figure 5. Number of degrees awarded, by level: 2013-14



NOTE: For additional information about postbaccalaureate degree levels, see the Methodology Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Fall 2014, Completions component.

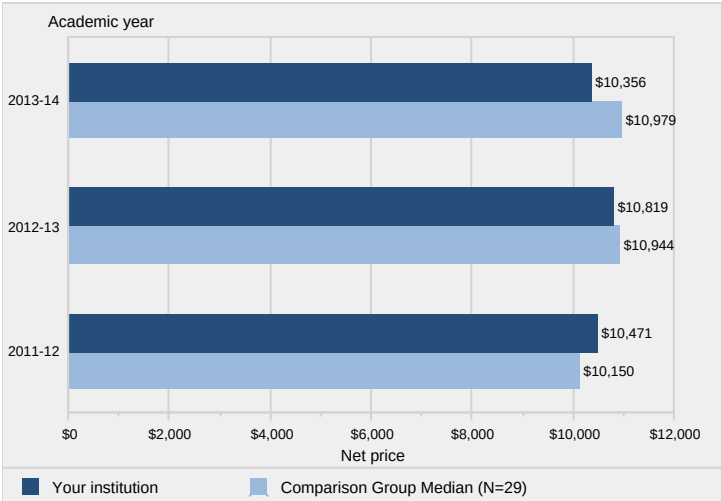
Figure 6. Academic year tuition and required fees for full-time, first-time degree/certificate-seeking undergraduates: 2011-12 to 2014-15



NOTE: The tuition and required fees shown here are the lowest reported from the categories of in-district, in-state, and out-of-state. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Fall 2014, Institutional Characteristics component.

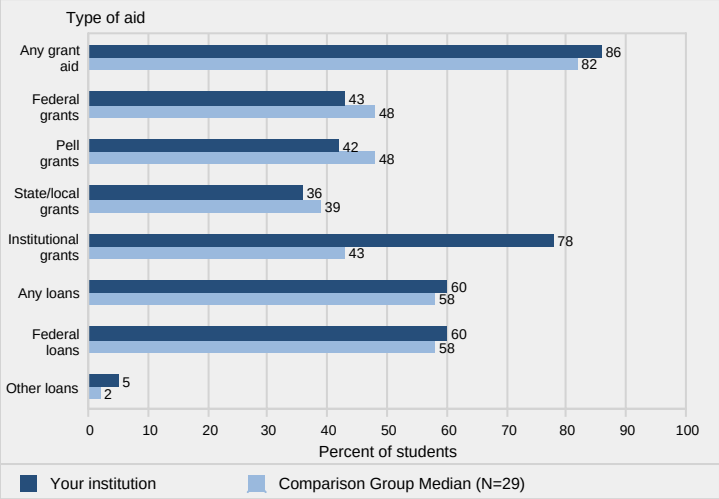
Figure 7. Average net price of attendance for full-time, first-time degree/certificate-seeking undergraduate students receiving grant or scholarship aid: 2011-12 to 2013-14



NOTE: Average net price is for full-time, first-time degree/certificate-seeking undergraduate students and is generated by subtracting the average amount of federal, state/local government, and institutional grant and scholarship aid from the total cost of attendance. Total cost of attendance is the sum of published tuition and required fees, books and supplies, and the average room and board and other expenses. For details, see the Methodological Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Fall 2014, Institutional Characteristics component; Winter 2014-15, Student Financial Aid component.

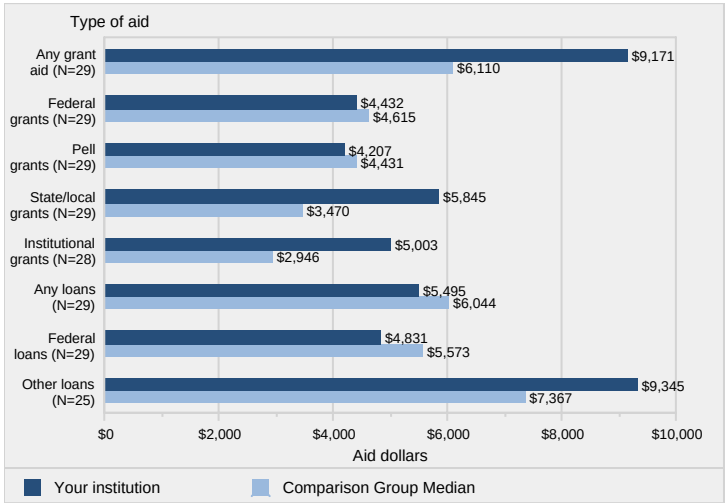
Figure 8. Percent of full-time, first-time degree/certificate-seeking undergraduate students who received grant or scholarship aid from the federal government, state/local government, or the institution, or loans, by type of aid: 2013-14



NOTE: Any grant aid above includes grant or scholarship aid from the federal government, state/local government, or the institution. Federal grants includes Pell grants and other federal grants. Any loans includes federal loans and other loans to students. For details on how students are counted for financial aid reporting, see Cohort Determination in the Methodological Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Winter 2014-15, Student Financial Aid component.

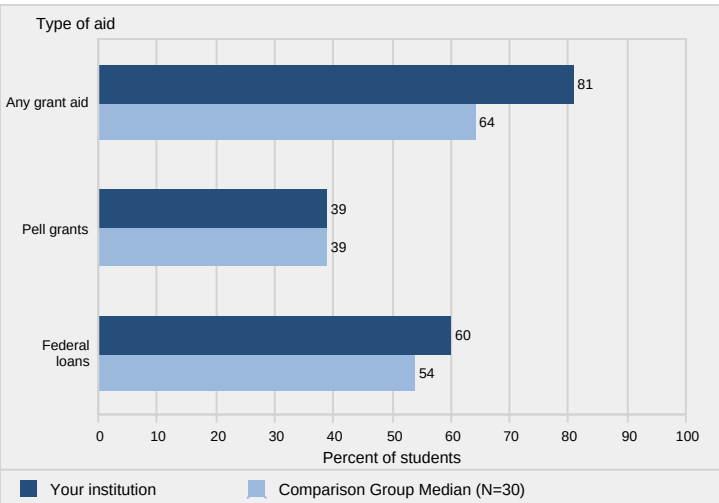
Figure 9. Average amounts of grant or scholarship aid from the federal government, state/local government, or the institution, or loans received for full-time, first-time degree/certificate-seeking undergraduate students, by type of aid: 2013-14



NOTE: Any grant aid above includes grant or scholarship aid from the federal government, state/local government, or the institution. Federal grants includes Pell grants and other federal grants. Any loans includes federal loans and other loans to students. Average amounts of aid were calculated by dividing the total aid awarded by the total number of recipients in each institution. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Winter 2014-15, Student Financial Aid component.

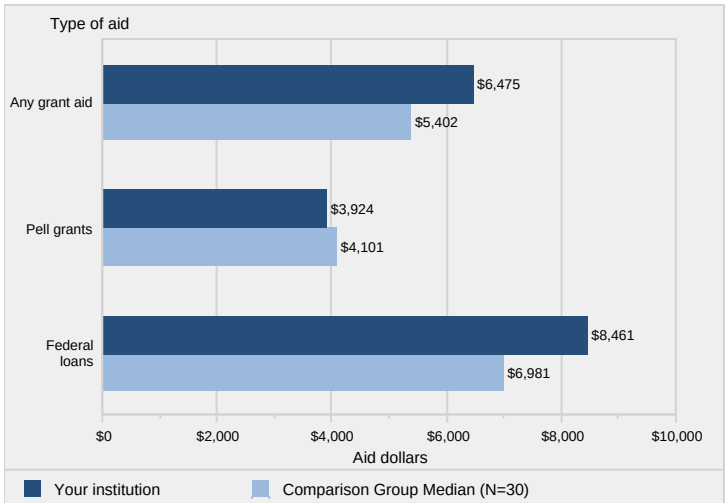
Figure 10. Percent of all undergraduates receiving aid, by type of aid: 2013-14



NOTE: Any grant aid above includes grant or scholarship aid from the federal government, state/local government, the institution, or other sources. Federal loans includes only federal loans to students. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Winter 2014-15, Student Financial Aid component.

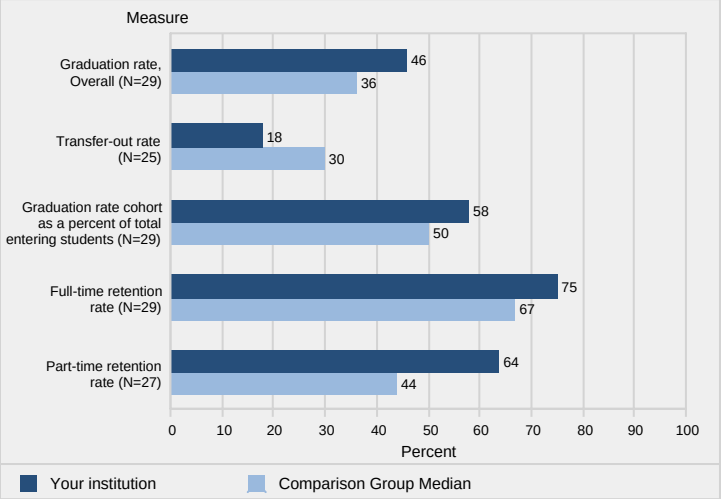
Figure 11. Average amount of aid received by all undergraduates, by type of aid: 2013-14



NOTE: Any grant aid above includes grant or scholarship aid from the federal government, state/local government, the institution, or other sources. Federal loans includes federal loans to students. Average amounts of aid were calculated by dividing the total aid awarded by the total number of recipients in each institution. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Winter 2014-15, Student Financial Aid component.

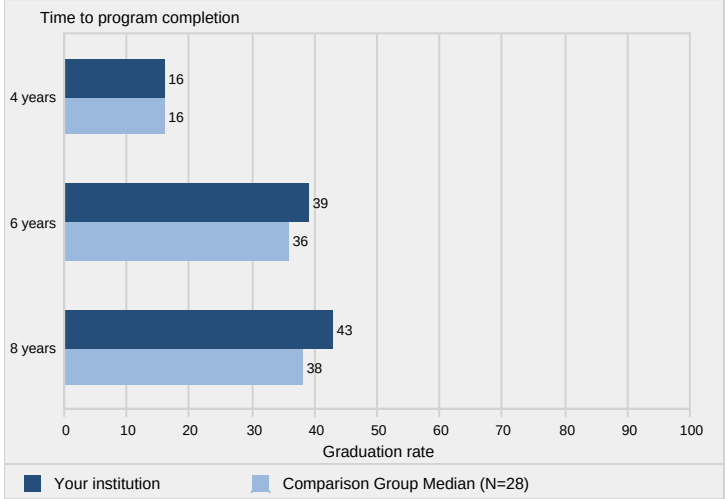
Figure 12. Graduation rate and transfer-out rate (2008 cohort); graduation rate cohort as a percent of total entering students and retention rates of first-time students (Fall 2014)



NOTE: Graduation rate cohort includes all full-time, first-time degree/certificate-seeking undergraduate students. Graduation and transfer-out rates are the Student Right-to-Know rates. Only institutions with mission to prepare students to transfer are required to report transfer out. Retention rates are measured from the fall of first enrollment to the following fall. Four-year institutions report retention rates for students seeking a bachelor's degree. For more details, see the Methodological Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Winter 2014-15, Graduation Rates component and Spring 2014, Fall Enrollment component.

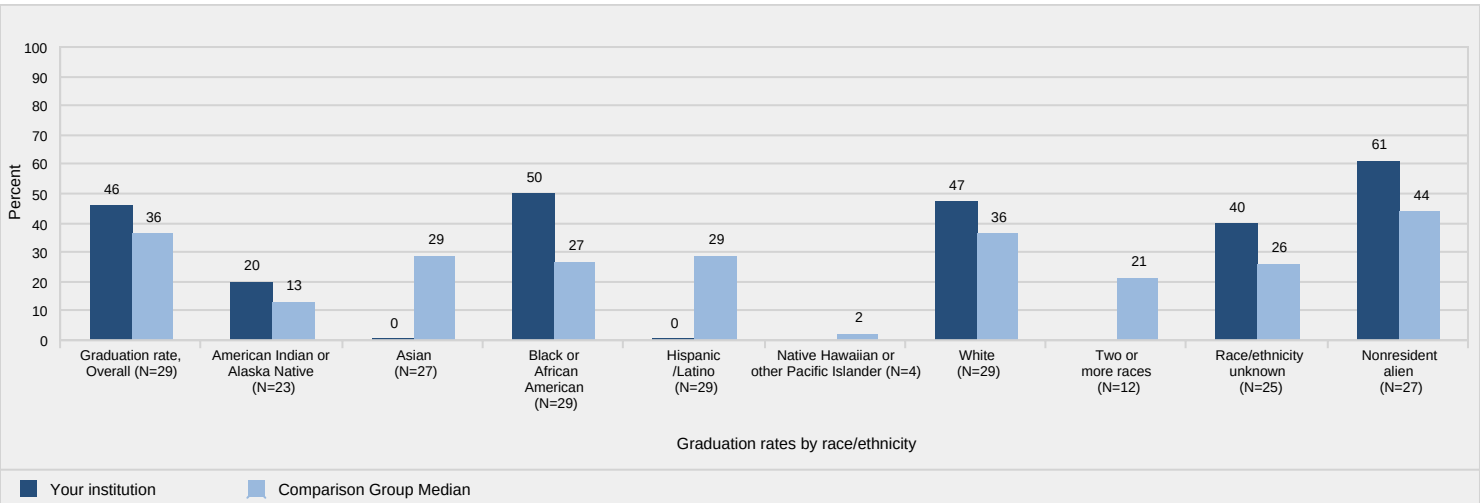
Figure 13. Bachelor's degree graduation rates of full-time, first-time degree/certificate-seeking undergraduates within 4 years, 6 years, and 8 years: 2006 cohort



NOTE: The 6-year graduation rate is the Student Right-to-Know (SRK) rate; the 4- and 8-year rates are calculated using the same methodology. For details, see the Methodological Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Winter 2014-15, 200% Graduation Rates component.

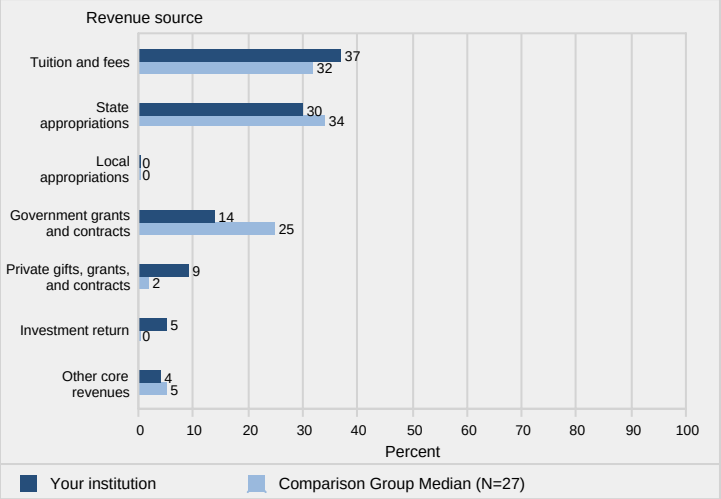
Figure 14. Graduation rates of full-time, first-time degree/certificate-seeking undergraduates within 150% of normal time to program completion, by race/ethnicity: 2008 cohort



NOTE: For more information about disaggregation of data by race and ethnicity, see the Methodological Notes. The graduation rates are the Student Right-to-Know (SRK) rates. Median values for the comparison group will not add to 100%. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Winter 2014-15, Graduation Rates component.

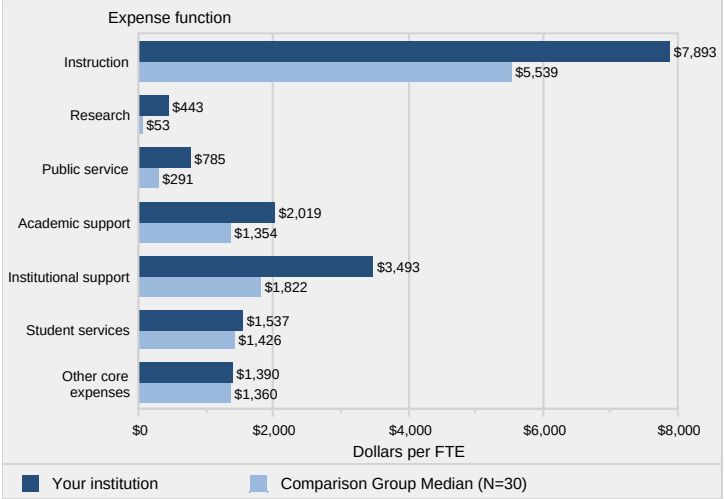
Figure 15. Percent distribution of core revenues, by source: Fiscal year 2014



NOTE: The comparison group median is based on those members of the comparison group that report finance data using the same accounting standards as the comparison institution. For a detailed definition of core revenues, see the Methodological Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Spring 2014, Finance component.

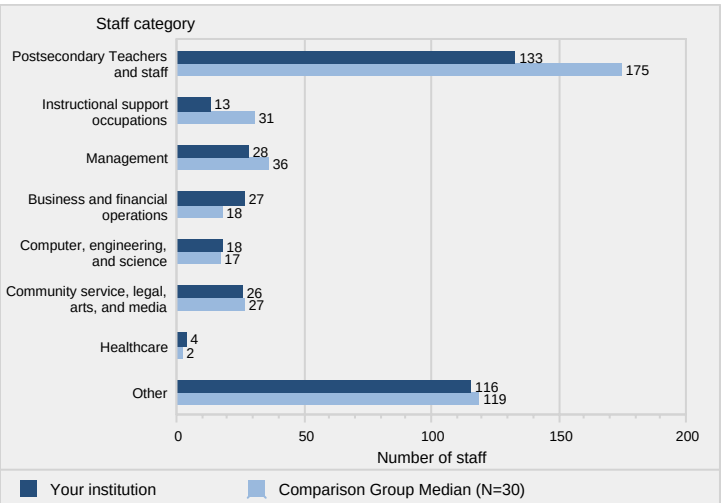
Figure 16. Core expenses per FTE enrollment, by function: Fiscal year 2014



NOTE: Expenses per full-time equivalent (FTE) enrollment, particularly instruction, may be inflated because finance data includes all core expenses while FTE reflects credit activity only. For details on calculating FTE enrollment and a detailed definition of core expenses, see the Methodological Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Fall 2014, 12-month Enrollment component and Spring 2015, Finance component.

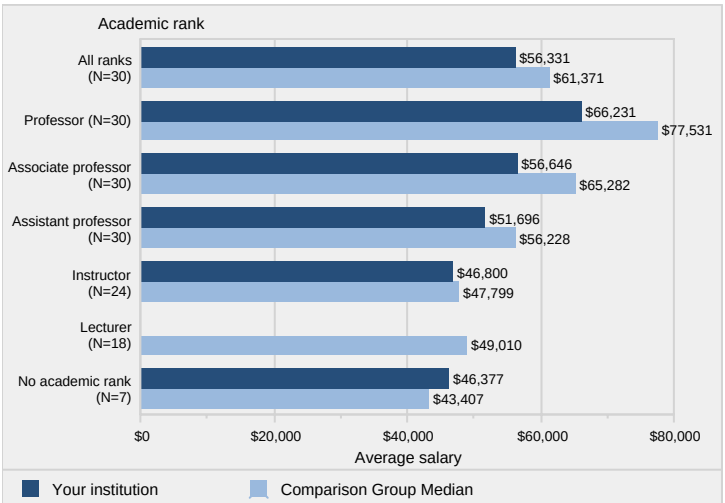
Figure 17. Full-time equivalent staff, by occupational category: Fall 2014



NOTE: Graduate assistants are not included. For calculation details, see the Methodological Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Spring 2014, Human Resources component.

Figure 18. Average salaries of full-time instructional non-medical staff equated to 9-month contracts, by academic rank: Academic year 2014-15



NOTE: Average salaries of full-time instructional non-medical staff equated to 9-month contracts was calculated by multiplying the average monthly salary by 9. The average monthly salary was calculated by dividing the total salary outlays by the total number of months covered by staff on 9, 10, 11 and 12-month contracts.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Spring 2014, Human Resources component.

METHODOLOGICAL NOTES

Overview

This report is based on data supplied by institutions to IPEDS during the 2014-15 data collection year. Response rates exceeded 99% for most surveys. Detailed response tables are included in IPEDS First Look reports, which can be found at http://nces.ed.gov/pubsearch/getpubcats.asp?sid=010.

Use of Median Values for Comparison Group

The value for the comparison institution is compared to the median value for the comparison group for each statistic included in the figure. If more than one statistic is presented in a figure, the median values are determined separately for each indicator or statistic. Medians are not reported for comparison groups with fewer than three values. Where percentage distributions are presented, median values may not add to 100%. To access all the data used to create the figures included in this report, go to 'Use the Data' portal on the IPEDS website (http://nces.ed.gov/ipeds).

Missing Statistics

If a statistic is not reported for your institution, the omission indicates that the statistic is not relevant to your institution and the data were not collected. Not all notes may be applicable to your report.

Use of Imputed Data

All IPEDS data are subject to imputation for total (institutional) and partial (item) nonresponse. If necessary, imputed values were used to prepare your report.

Data Confidentiality

IPEDS data are not collected under a pledge of confidentiality.

Disaggregation of Data by Race/Ethnicity

When applicable, some statistics are disaggregated by race/ethnicity. Data disaggregated by race/ethnicity have been reported using the 1997 Office of Management and Budget categories. Detailed information about the race/ethnicity categories can be found at http://nces.ed.gov/ipeds/reic/resource.asp.

Cohort Determination for Reporting Student Financial Aid and Graduation Rates

Student cohorts for reporting Student Financial Aid and Graduation Rates data are based on the reporting type of the institution. For institutions that report based on an academic year (those operating on standard academic terms), student counts and cohorts are based on fall term data. Student counts and cohorts for program reporters (those that do not operate on standard academic terms) are based on unduplicated counts of students enrolled during a full 12-month period.

Description of Statistics Used in the Figures

Admissions and Test Score Data
Admissions and test score data are presented only for institutions that do not have an open admission policy, and apply to first-time, degree/certificate-seeking undergraduate students only. Applicants include only those students who fulfilled all requirements for consideration for admission and who were notified of one of the following actions: admission, non-admission, placement on a wait list, or application withdrawn (by applicant or institution). Admitted applicants (admissions) include wait-listed students who were subsequently offered admission. Early decision, early action, and students who began studies during the summer prior to the fall reporting period are included. For customized Data Feedback Reports, test scores are presented only if they are required for admission.

Average Institutional Net Price

Average net price is calculated for full-time, first-time degree/certificate-seeking undergraduates who were awarded grant or scholarship aid from the federal government, state/local government, or the institution anytime during the full aid year. For public institutions, this includes only students who paid the in-state or in-district tuition rate. Other sources of grant aid are excluded. Average net price is generated by subtracting the average amount of federal, state/local government, and institutional grant and scholarship aid from the total cost of attendance. Total cost of attendance is the sum of published tuition and required fees, books and supplies, and the average room and board and other expenses.

For the purpose of the IPEDS reporting, aid received refers to financial aid that was awarded to, and accepted by, a student. This amount may differ from the aid amount that is disbursed to a student.

Core Revenues

Core revenues for public institutions reporting under GASB standards include tuition and fees; state and local appropriations; government grants and contracts; private gifts, grants, and contracts; sales and services of educational activities; investment income; other operating and non-operating sources; and other revenues and additions (federal and capital appropriations and grants and additions to permanent endowments). Core revenues for private, not-for-profit institutions (and a small number of public institutions) reporting under FASB standards include tuition and fees; government appropriations (federal, state, and local); government grants and contracts; private gifts, grants, and contracts (including contributions from affiliated entities); investment return; sales and services of educational activities; and other sources. Core revenues for private, for-profit institutions reporting under FASB standards include tuition and fees; government appropriations, grants, and contracts (federal, state, and local); private grants and contracts; investment income; sales and services of educational activities; and other sources. At degree-granting institutions, core revenues exclude revenues from auxiliary enterprises (e.g., bookstores, dormitories), hospitals, and independent operations. Nondegree-granting institutions do not report revenue from auxiliary enterprises in a separate category. These amounts may be included in the core revenues from other sources.

Core Expenses

Core expenses include expenses for instruction, research, public service, academic support, institutional support, student services, scholarships and fellowships (net of discounts and allowances), and other expenses. Expenses for operation and maintenance of plant, depreciation, and interest are allocated to each of the other functions. Core expenses at degree-granting institutions exclude expenses for auxiliary enterprises (e.g., bookstores, dormitories), hospitals, and independent operations. Nondegree-granting institutions do not report expenses for auxiliary enterprises in a separate category. These amounts may be included in the core expenses as other expenses.

Equated Instructional Non-Medical Staff Salaries

Institutions reported total salary outlays by academic rank and gender, and the number of staff by academic rank, contract length (9-, 10-, 11-, and 12-month contracts), and gender. The total number of months covered by salary outlays was calculated by multiplying the number of staff reported for each contract length period by the number of months of the contract, and summing across all contract length periods. The weighted average monthly salary for each academic rank and gender was calculated by dividing the total salary outlays by the total number of months covered. The weighted average monthly salary was then multiplied by 9 to determine an equated 9-month salary for each rank.

FTE Enrollment

The full-time equivalent (FTE) enrollment used in this report is the sum of the institution's FTE undergraduate enrollment and FTE graduate enrollment (as calculated from or reported on the 12-month Enrollment component). Undergraduate and graduate FTE are estimated using 12-month instructional activity (credit and/or contact hours). See "Calculation of FTE Students (using instructional activity)" in the IPEDS Glossary at http://nces.ed.gov/ipeds/glossary/.

FTE Staff

The full-time-equivalent (FTE) of staff is calculated by summing the total number of full-time staff and adding one-third of the total number of part-time staff. Graduate assistants are not included.

Graduation Rates and Transfer-out Rate

Graduation rates are those developed to satisfy the requirements of the Student Right-to-Know Act and Higher Education Act, as amended, and are defined as the total number of individuals from a given cohort of full-time, first-time degree/certificate-seeking undergraduates who completed a degree or certificate within a given percent of normal time to complete all requirements of the degree or certificate program before the ending status date of August 31, 2014; divided by the total number of students in the cohort of full-time, first-time degree/certificate-seeking undergraduates minus any allowable exclusions. Institutions are permitted to exclude from the cohort students who died or were totally and permanently disabled; those who left school to serve in the armed forces or were called up to active duty; those who left to serve with a foreign aid service of the federal government, such as the Peace Corps; and those who left to serve on an official church mission. Transfer-out rate is the total number of students from the cohort who are known to have transferred out of the reporting institution (without earning a degree/award) and subsequently re-enrolled at another institution within the same time period; divided by the same adjusted cohort (initial cohort minus allowable exclusions) as described above. Only institutions with a mission that includes providing substantial preparation for students to enroll in another eligible institution are required to report transfers out.

Retention Rates

Full-time retention rates is a measure of the rate at which students persist in their educational program at an institution, expressed as a percentage. For four-year institutions, this is the percentage of first-time bachelors (or equivalent) degree-seeking undergraduates from the previous fall who are again enrolled in the current fall. For all other institutions this is the percentage of first-time degree/certificate-seeking students from the previous fall who either re-enrolled or successfully completed their program by the current fall. The full-time retention rate is calculated using the percentage of full-time, first-time degree/certificate-seeking undergraduates, while the part-time rate is calculated using the percentage of part-time, first-time degree/certificate-seeking undergraduates.

Total Entering Undergraduate Students

Total entering students are students at the undergraduate level, both full- and part-time, new to the institution in the fall term (or the prior summer term who returned in the fall). This includes all first-time undergraduate students, students transferring into the institution at the undergraduate level, and non-degree/certificate-seeking undergraduates entering in the fall. Only degree-granting, academic year reporting institutions provide total entering student data.

Tuition and Required Fees

Tuition is defined as the amount of money charged to students for instructional services, and required fees are those fixed sum charges to students for items not covered by tuition that are required of such a large proportion of all students that the student who does not pay the charge is an exception. The amounts used in this report are for full-time, first-time degree/certificate-seeking undergraduates and are those used by the financial aid office to determine need. For institutions that have differential tuition rates for in-district or in-state students, the lowest tuition rate is used in the figure. Only institutions that operate on standard academic terms will have tuition figures included in their report.

Additional Methodological Information

Additional methodological information on the IPEDS components can be found in the publications available at http://nces.ed.gov/pubsearch/getpubcats.asp?sid=010.
Additional definitions of variables used in this report can be found in the IPEDS online glossary available at http://nces.ed.gov/ipeds/glossary/.

LAKE SUPERIOR STATE UNIVERSITY

Types of Financial Aid

Grants | Scholarships | Loans | Student Employment | Other Sources

Resources »

Upcoming Events »

MAY 17

Michigan Association of Campus Law Enforcement Administrators Conference

8:00AM to 5:00PM

MAY 17

Innocademy

12:00PM to 10:00PM

MAY 18

Michigan Association of Campus Law Enforcement Administrators Conference

8:00AM to 5:00PM

MAY 18

Innocademy

12:00PM to 10:00PM

Additional Links

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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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LAKE SUPERIOR STATE UNIVERSITY

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. 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.

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.

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. 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. Information regarding the requirements and procedures for students seeking to withdraw officially is also available at 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.

Resources »

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8:00AM to 5:00PM

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