

# CONSERVATION BIOLOGY, BS

## 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).

## Program Learning Outcomes

- **Foundation:** Students in the Conservation Biology program will thoroughly research and synthesize the primary literature for information relevant to a current scientific investigation or experiential learning project.
- **Capstone Project – Capstone project:** Students in the Conservation Biology program will design and conduct a scientific investigation or experiential learning project (ELP) using appropriate tools and techniques in order to demonstrate skill in the practice of conservation biology.
- **Communication and outreach –** Students in the Conservation Biology program will effectively communicate the results or outcomes of their independent project in multiple formats.
- **Professionalism –** Students in the Conservation Biology program will engage in professional activities related to the study, conservation, or management of natural resources.
- **Post-graduation – careers and further education –** Graduates of the Conservation Biology program will go on to careers in conservation biology or proceed to graduate school to further their education.

## Bachelor of Science Conservation Biology

Code	Title	Hours
<b>Departmental Requirements</b>		
BIOL 131	General Biology: Cells	4
BIOL 132	General Biology: Organisms	4
NRES 199	Freshman Seminar	1

NRES 203	Fund of Natural Resources	3
BIOL 220	Genetics	4
NRES 230	Introduction to Soil Science	4
NRES 250	Quantitative Biology	3
BIOL 280	Biostatistics	3
NRES 284	Principles Forest Conservation	4
NRES 286	Principles of Watersheds	3
NRES 287	Conservation Biology	3
NRES 299	Sophomore Seminar	1
NRES 304	The Human Environment	3
BIOL 337	General Ecology	3
BIOL 420	Evolutionary Analysis	3
NRES 470	Restoration Ecology	3
NRES 499	Senior Capstone	1

### Support Courses

CHEM 115	General Chemistry I	5
CHEM 116	General Chemistry II	5
EVRN 131	Introduction to GIS and GPS	3
EVRN 225	Intermediate GIS	3
EVRN 311	Environmental Law	3
MATH 111	College Algebra	3
MATH 112	Calculus Business/Life Science	4

### Global Perspective

Select one of the following:		3
ECON 307	Environmental Economics	
SOCY 227	Population and Ecology	
POLI 342	Internatl Environmental Policy	
Study Abroad		

### Options

Select one of the following options:		3-4
Experiential Learning Project Option		
NRES 398	Plan Experiential Lrn Project	
NRES 497	Experiential Learning Project	
Research Option		
NRES 399	Research Project Design	
NRES 495	Senior Project	

Free Electives to total 124 credits <sup>1</sup>

**Total Hours** **82-83**

<sup>1</sup> At least six 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

Code	Title	Hours
<b>Departmental Requirements</b>		
BIOL 131	General Biology: Cells	4
BIOL 132	General Biology: Organisms	4
NRES 199	Freshman Seminar	1
NRES 203	Fund of Natural Resources	3
BIOL 220	Genetics	4
NRES 230	Introduction to Soil Science	4
NRES 250	Quantitative Biology	3
BIOL 280	Biostatistics	3
NRES 284	Principles Forest Conservation	4
NRES 286	Principles of Watersheds	3
NRES 287	Conservation Biology	3
NRES 299	Sophomore Seminar	1
NRES 304	The Human Environment	3
BIOL 337	General Ecology	3
BIOL 420	Evolutionary Analysis	3
NRES 470	Restoration Ecology	3
NRES 499	Senior Capstone	1
<b>Support Courses</b>		
CHEM 115	General Chemistry I	5
EVRN 131	Introduction to GIS and GPS	3
EVRN 225	Intermediate GIS	3
EVRN 311	Environmental Law	3
MATH 111	College Algebra	3
<b>Marketing &amp; Management <sup>1</sup></b>		
Select one of the following:		3
MGMT 360	Management Concepts & Apps	
MRKT 281	Marketing Principles/ Strategy	
MRKT 385	Services Marketing	
<b>Political Science <sup>1</sup></b>		
POLI 130	Intro State/Local Government	3-4
or POLI 201	Intro to Public Administration	
<b>Communication <sup>1</sup></b>		
Select one of the following:		3-4
COMM 280	Understanding Mass Media	
COMM 302	Argumentation & Advocacy	
COMM 320	Public Relations	
COMM 416	Communication in Leadership	
<b>Global Perspective <sup>1</sup></b>		
Select one of the following:		3
ECON 307	Environmental Economics	
SOCY 227	Population and Ecology	
POLI 342	Internatl Environmental Policy	
	Study Abroad	
<b>Options</b>		
Select one of the following options:		3-4
<b>Internship Option</b>		
NRES 398	Plan Experiential Lrn Project	

NRES 497	Experiential Learning Project	
<b>Research Option</b>		
NRES 399	Research Project Design	
NRES 495	Senior Project	
<b>Free Electives to total 124 credits</b>		
<b>Total Hours</b>		<b>82-85</b>

<sup>1</sup> At least 2 of the designated electives must be 300 or 400 level.

**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.**