WILDLIFE AND CONSERVATION BIOLOGY MAJOR (B.S.)

https://colsa.unh.edu/natural-resources-environment/program/bs/wildlife-conservation-biology-major

Description

The Wildlife & Conservation Biology major provides students with the knowledge and tools to study, conserve, and manage wildlife and their habitats.

Our students combine science with their passion for nature and the outdoors. Our courses emphasize hands-on experience and place fundamental principles within an applied context. Students are encouraged to conduct research alongside faculty, and faculty actively assist students in obtaining internships.

Our students become wildlife biologists and resource managers at state/federal agencies and non-profit organizations, conservation law officers, and environmental educators. Many go on to obtain an advanced degree.

Requirements

Degree Requirements

Minimum Credit Requirement: 128 credits

Minimum Residency Requirement: 32 credits must be taken at UNH

Minimum GPA: 2.0 required for conferral*

Core Curriculum Required: Discovery & Writing Program Requirements

Foreign Language Requirement: No

All Major, Option and Elective Requirements as indicated.
**Major GPA requirements as indicated.*

Major Requirements

In addition to the Wildlife and Conservation Biology degree requirements (below), students must complete the University Discovery Program and the University Writing Requirements. Given the flexibility of this major, students may also complete a minor or dual major in a second area of interest, or apply for certification by The Wildlife Society.

Code	Title	Credits
Required Courses		
NR 433	Wildlife Ecology	4
BIOL 411	Introductory Biology: Molecular and Cellular	4
BIOL 412	Introductory Biology: Evolution, Biodiversity and Ecology	4
NR 411	Environmental and Resource Economics Perspectives	4
NR 425	Field Dendrology	4
Math Foundations		
MATH 424B	Calculus for Life Sciences	4
or MATH 420	Finite Mathematics	
Chemistry Foundations		
CHEM 411	Introductory Chemistry for Life Sciences	4
or CHEM 403	General Chemistry I	
Introductory Ecology		
NR 527	Forest Ecology	4
or BIOL 541W	Ecology	
NR 415	Natural Resources Field Methods [1]	2
NR 417	Sophomore Seminar: Wildlife and Conservation Biology [1]	2
BIOL 528	Applied Biostatistics I	4
Animal Morphology, Evolution, and Ecology		
Select two courses from the following:		8
NR 506	Forest Entomology	
or ZOOL 555	Introduction to Entomology	
NR 712	Mammalogy	
or MEFB 535	Marine Mammal Biology	
ZOOL 518	Comparative Morphology and Biology of Vertebrates	
ZOOL 542	Ornithology	
or MEFB 510	Field Ornithology	
ZOOL 566	Herpetology	
ZOOL 710	Sharks and Bony Fishes	
or MEFB 741	Sharks: Biology and Conservation	
Communications Skills		
NR 508	Communicating Science	4
or ENGL 501	Introduction to Creative Nonfiction	
or ENGL 502	Professional and Technical Writing	
or ENGL 503	Persuasive Writing	
or CMN 500	Public Speaking	
Evolution/Genetics		
NR 664	Conservation Genetics and Applied Evolution	4
or ZOOL 690	Evolution	
or ZOOL 690W	Evolution	
Physiology/Behavior		
ZOOL 625	Principles of Animal Physiology	3-5
or ZOOL 613W	Animal Behavior	
or ZOOL 726	Conservation Behavior	
Policy		
NR 602	Natural Resources and Environmental Policy	3-4
or MARI 705	Introduction to Marine Policy: Understanding US Ocean, Coastal and Great Lakes Policy	
or POLT 500	American Public Policy	
NR 615	Wildlife Habitats	4
NR 650	Principles of Conservation Biology	4
Geographic Information Systems		
NR 658	Introduction to Geographic Information Systems	4
or ESCI 777	GIS for Earth & Environmental Sciences	
NR 640	Wildlife Population Ecology	4
Advanced Ecology Elective		
NR 641	Wildlife Disease Ecology	4
or NR 642	Introduction to Biogeography	
or NR 713	Quantitative Ecology	
or NR 729	Silviculture	
or NR 730	Terrestrial Ecosystems	
or NR 734	Tropical Ecology	
or NR 751	Aquatic Ecosystems	
or NR 765	Community Ecology	
or BIOL 720	Plant-Animal Interactions	
or MEFB 717	Lake Ecology	
or ZOOL 708	Stream Ecology	
NR 740	Inventory and Monitoring of Ecological Communities	4
Capstone		
NR 750	Sustaining Biological Diversity [2]	4
Total Credits		**90-93**

[1] NR 415 Natural Resources Field Methods & NR 417 Sophomore Seminar: Wildlife and Conservation Biology are 2-credit courses. Students should meet with their advisor for guidance on course load (e.g., 14-15 *or* 18 cr.) that best accommodate these courses while meeting the 128-credit which requires 32 credits per year (on average).

[2] Capstone can also be met with NR 663 Applied Directed Research in New Zealand UNH EcoQuest (or similar, approved experience) if taken as a senior, in the final year. An Honors Thesis/UROP/URA/SURF/

Independent Study (or similar) **cannot** count as a Capstone for this major.

Degree Plan

Sample Degree Plan

This sample degree plan serves as a general guide; students collaborate with their academic advisor to develop a personalized degree plan to meet their academic goals and program requirements.

First Year		
Fall		**Credits**
NR 433	Wildlife Ecology	4
NR 425	Field Dendrology	4
BIOL 411	Introductory Biology: Molecular and Cellular	4
ENGL 401	First-Year Writing	4
	Credits	**16**
Spring		
MATH 424B	Calculus for Life Sciences	4
BIOL 412	Introductory Biology: Evolution, Biodiversity and Ecology	4
NR 411	Environmental and Resource Economics Perspectives	4
Discovery Elective		4
	Credits	**16**
Second Year		
Fall		
NR 415	Natural Resources Field Methods	2
NR 527	Forest Ecology	4
CHEM 411	Introductory Chemistry for Life Sciences	4
ZOOL 613W	Animal Behavior	5
	Credits	**15**
Spring		
NR 417	Sophomore Seminar: Wildlife and Conservation Biology	2
NR 658	Introduction to Geographic Information Systems	4
BIOL 528	Applied Biostatistics I	4
Discovery Elective		4
Animal Morphology, Evolution and Ecology Elective		4
	Credits	**18**
Third Year		
Fall		
NR 615	Wildlife Habitats	4
ENGL 501	Introduction to Creative Nonfiction	4
ZOOL 690 or ZOOL 690W	Evolution or Evolution	4
Discovery Elective		4
	Credits	**16**
Spring		
NR 602	Natural Resources and Environmental Policy	4
NR 650	Principles of Conservation Biology	4
Discovery Elective		4
Elective		4
	Credits	**16**
Fourth Year		
Fall		
NR 642	Introduction to Biogeography	4
NR 740	Inventory and Monitoring of Ecological Communities	4
Elective		4
Elective		4
	Credits	**16**
Spring		
NR 640	Wildlife Population Ecology	4
NR 750	Sustaining Biological Diversity	4
Elective		4
Animal Morphology, Evolution and Ecology Elective		4
	Credits	**16**
	Total Credits	**129**

Student Learning Outcomes

Program Learning Outcomes

Students will:

- Understand the ecological and societal value of biodiversity, sustainability, and environmental stewardship;
- learn/understand ecological concepts and fundamental principles and techniques to manage and conserve wildlife habitat and populations;
- know the taxonomy, ecology, and natural history of the majority of native flora and fauna in New England;
- locate, evaluate, and summarize information from both print and electronic media relevant to wildlife and conservation biology issues;
- effectively communicate scientific information in written and oral formats;
- master mathematical, statistical, and study design knowledge and skills, and use state-of-the-art software, hardware, and analytical techniques relevant to wildlife and conservation biology;
- be familiar with a variety of natural resource laws and regulations;
- understand how to integrate relevant social sciences and human dimensions approaches to address wildlife and conservation biology issues as part of multidisciplinary teams.