

# IOWA STATE UNIVERSITY

Department of Natural Resource Ecology and Management

2020-2021 Animal Ecology Curriculum

## Animal Ecology Core Courses

The following courses are required for *all* Animal Ecology students unless otherwise stated.

### GENERAL EDUCATION

ENGL 150	Critical Thinking & Communication
ENGL 250	Composition
2 Adv. Comm. Electives	AGEDS 311, 327, NREM 330, P R 305, SP CM 312, SP CM 313, ENGL 207, 275, 302, 303, 304, 305, 306, 309, 310, 312, or 314
LIB 160	Information Literacy
SP CM 212	Fundamentals of Public Speaking
Social Science Elective	<i>For list, see <a href="https://tinyurl.com/yas2b3xa">https://tinyurl.com/yas2b3xa</a></i>
Ethics Elective	<i>For list, see <a href="https://tinyurl.com/ycr44mut">https://tinyurl.com/ycr44mut</a></i>
Humanities Elective	<i>For list, see <a href="https://tinyurl.com/ydxb9yxu">https://tinyurl.com/ydxb9yxu</a></i>
U.S. Diversity Elective	<i>For list, see <a href="https://tinyurl.com/y78jf6va">https://tinyurl.com/y78jf6va</a></i>
Int'l Perspective Elective	<i>For list, see <a href="https://tinyurl.com/yayxa4gn">https://tinyurl.com/yayxa4gn</a></i>



### SCIENCE FOUNDATION

MATH 140	College Algebra
STAT 101 <b>or</b> 104	Introduction to Statistics
CHEM 163 +Lab <b>or</b>	College Chemistry
CHEM 177 +Lab & CHEM 178	<i>General Chemistry I &amp; II –For Vet School ONLY</i>
CHEM 231 +Lab <b>or</b>	Elementary Organic Chemistry
CHEM 331 +Lab & CHEM 332	<i>Organic Chemistry I &amp; II –For Vet School ONLY</i>
PHYS 115 +Lab <b>or</b>	Physics for the Life Sciences
PHYS 111	<i>General Physics –For Vet School ONLY</i>



### A ECL FOUNDATION

NREM 110	Orientation to NREM
NREM 120	Introduction to Renewable Resources
NREM 211	Careers in Natural Resources
A ECL 231	Principles of Wildlife & Fisheries Conservation
BIOL 211 +Lab	Principles of Biology I
BIOL 212 +Lab	Principles of Biology II
A ECL 312 <b>or</b> NREM 311X	(Field) Ecology
A ECL 365	Vertebrate Biology



### FREE ELECTIVES

#### **(10-23 credits)**

Miscellaneous classes applied towards graduation but not towards the major requirements. Can include A ECL/FOR/NREM courses after minimum requirements met within option.

**Total Credits to Graduate**

**128 minimum**

#### FIRST YEAR (example)

Semester 1	Semester 2
BIOL 211 +L	4 BIOL 212 +L
NREM 110	1 NREM 120
MATH 140	3 ENGL 150
CHEM 163+L	5 Math Elective
Soc. Elective	3 Statistics
16 credits	
16-18 credits	

#### SECOND YEAR (example)

Semester 1	Semester 2
A ECL 365	4 CHEM 231 +L
AECL 312	4 SP CM 212
Math Elective	4 Int. P. Elective
ENGL 250	3 A ECL 231
LIB 160	1 Option Elective
NREM 211	1
17 credits	
16 credits	

## NREM 104 & Options

### NREM 104: PRACTICAL WORK EXPERIENCE

Required before graduation, students must complete 400 hours of career-related experience. Opportunities should be approved by current adviser prior to the start of the experience. Resources include the NREM job board <https://www.nrem.iastate.edu/employment/> Directly following the experience, summary forms must be submitted and can be found at <http://www.nrem.iastate.edu/workexperience>



### OPTIONS WITHIN ANIMAL ECOLOGY (*areas of specialization*)

#### **Fisheries and Aquatic Sciences**

The Fisheries and Aquatic Sciences option concentrates on aquatic ecosystems. Students learn about a variety of aquatic environments and the physical, chemical and biological characteristics of these ecosystems. They may focus on basic fish biology, aquatic ecology and fishery and watershed management.

Careers include: Fisheries Biologist, Hatchery Manager, Fish & Wildlife Specialist, Aquaculture Specialist, Lake Manager, Aquatic Biologist, Wetland Scientist, Restoration Ecologist, Marine Biologist

#### **Interpretation of Natural Resources**

The Interpretation option focuses on natural history, earth science, and communication techniques. Students in this option will study the natural environment and learn how to teach others about natural resource related topics.

Careers include: Park Ranger, Conservation Law Enforcement Officer, Environmental Educator, Naturalist, Natural Resource Policy or Public Relations



#### **Pre-Vet & Wildlife Care**

The Pre-Vet & Wildlife Care option is suited for two groups of people. One group is interested in continuing their education in the veterinary field and take courses to meet veterinary school admission requirements. The second group is interested in pursuing careers in the field of wildlife care. Courses cover animal physiology, animal disease detection and prevention, and behavior.

Careers include: Zoo Keeper, Wildlife Rehabilitator, Veterinarian, Animal Trainer



#### **Wildlife**

The Wildlife option concentrates on wildlife habitats, interactions within and among populations, and wildlife management. In addition to the in-depth study of wildlife, the option offers courses in policy, administration and law in order to prepare students for the public decision-making process that is necessary in most areas of wildlife management.

Careers Include: Conservation Law Enforcement Officer, Ornithologist, Park Ranger, Wildlife Biologist, Habitat Manager, Ecologist