

# WILDLIFE ECOLOGY, BS

## REQUIREMENTS

### UNIVERSITY GENERAL EDUCATION REQUIREMENTS

All undergraduate students at the University of Wisconsin–Madison are required to fulfill a minimum set of common university general education requirements to ensure that every graduate acquires the essential core of an undergraduate education. This core establishes a foundation for living a productive life, being a citizen of the world, appreciating aesthetic values, and engaging in lifelong learning in a continually changing world. Various schools and colleges will have requirements in addition to the requirements listed below. Consult your advisor for assistance, as needed. For additional information, see the university Undergraduate General Education Requirements (<https://guide.wisc.edu/undergraduate/#requirementsforundergraduatestudytext>) section of the Guide.

General Education	<ul style="list-style-type: none"> <li>• Breadth–Humanities/Literature/Arts: 6 credits</li> <li>• Breadth–Natural Science: 4 to 6 credits, consisting of one 4- or 5-credit course with a laboratory component; or two courses providing a total of 6 credits</li> <li>• Breadth–Social Studies: 3 credits</li> <li>• Communication Part A &amp; Part B *</li> <li>• Ethnic Studies *</li> <li>• Quantitative Reasoning Part A &amp; Part B *</li> </ul>
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\* The mortarboard symbol appears before the title of any course that fulfills one of the Communication Part A or Part B, Ethnic Studies, or Quantitative Reasoning Part A or Part B requirements.

### COLLEGE OF AGRICULTURAL AND LIFE SCIENCES REQUIREMENTS

In addition to the University General Education Requirements, all undergraduate students in CALS must satisfy a set of college and major requirements. Courses may not double count within university requirements (General Education and Breadth) or within college requirements (First-Year Seminar, International Studies, Science, and Capstone), but courses counted toward university requirements may also be used to satisfy a college and/or a major requirement; similarly, courses counted toward college requirements may also be used to satisfy a university and/or a major requirement.

### COLLEGE REQUIREMENTS FOR ALL CALS BS DEGREE PROGRAMS

Code	Title	Credits
	Quality of Work: Students must maintain a minimum cumulative grade point average of 2.000 to remain in good standing and be eligible for graduation.	

Residency: Students must complete 30 degree credits in residence at UW–Madison after earning 86 credits toward their undergraduate degree.

First year seminar ( <a href="https://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSThirdYearSeminarCourses">https://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSThirdYearSeminarCourses</a> )		1
International studies ( <a href="https://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSIInternationalStudiesCourses">https://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSIInternationalStudiesCourses</a> )		3
Physical science fundamentals		4-5
CHEM 103	General Chemistry I	
or CHEM 108	Chemistry in Our World	
or CHEM 109	Advanced General Chemistry	
Biological science		5
Additional science (biological, physical, or natural)		3
Science breadth (biological, physical, natural, or social)		3
CALS Capstone Learning Experience: included in the requirements for each CALS major (see "major requirements") ( <a href="https://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSCapstoneRequirement">https://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSCapstoneRequirement</a> )		

### MAJOR REQUIREMENTS

Code	Title	Credits
<b>Mathematics and Statistics</b>		
Complete one of the following (or may be satisfied by placement exam):		5-6
MATH 112 & MATH 113	College Algebra and Trigonometry	
MATH 114	Precalculus	
MATH 171	Calculus with Algebra and Trigonometry I	
Complete one of the following:		3
STAT 301	Introduction to Statistical Methods	
STAT 371	Introductory Applied Statistics for the Life Sciences	
<b>Chemistry</b>		
Complete one of the following:		4-5
CHEM 103	General Chemistry I	
CHEM 108	Chemistry in Our World	
CHEM 109	Advanced General Chemistry	
<b>Biology</b>		
Complete one of the following options:		10
Option 1 (recommended):		
BIOLOGY/ BOTANY/ ZOOLOGY 151 & BIOLOGY/ BOTANY/ ZOOLOGY 152	Introductory Biology and Introductory Biology	
Option 2:		
ZOOLOGY/ BIOLOGY 101 & ZOOLOGY/ BIOLOGY 102 & BOTANY/ BIOLOGY 130	Animal Biology and Animal Biology Laboratory and General Botany	
Option 3:		

BIOCORE 383 Cellular Biology  
& BIOCORE 384 and Cellular Biology Laboratory  
& BIOCORE 485 and Principles of Physiology  
& BIOCORE 486 and Principles of Physiology  
Laboratory

**Core***Wildlife Ecology and Management*

F&W ECOL 101	Orientation to Wildlife Ecology (Counts for CALS First Year Seminar)	1
F&W ECOL 306	Terrestrial Vertebrates: Life History and Ecology	4
F&W ECOL 318 or BOTANY/ F&W ECOL/ ZOOLOGY 460	Principles of Wildlife Ecology General Ecology	3
F&W ECOL 379	Principles of Wildlife Management	3
F&W ECOL 561	Wildlife Management Techniques	3
F&W ECOL 655	Animal Population Dynamics	3

*Plant Taxonomy*

BOTANY 400 or BOTANY 401	Plant Systematics Vascular Flora of Wisconsin	4
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*Evolution/Genetics*

Complete one of the following:		3-5
ZOOLOGY/ ANTHRO/ BOTANY 410	Evolutionary Biology	
GENETICS 466	Principles of Genetics	
BIOCORE 381 & BIOCORE 382	Evolution, Ecology, and Genetics and Evolution, Ecology, and Genetics Laboratory <sup>1</sup>	

*Vertebrate Taxonomy and Natural History*

Complete one of the following:		5-6
ZOOLOGY/ AN SCI/ F&W ECOL 520 & ZOOLOGY/ AN SCI/ F&W ECOL 521	Ornithology and Birds of Southern Wisconsin	
ZOOLOGY/ ENVIR ST 510 & ZOOLOGY/ ENVIR ST 511	Ecology of Fishes and Ecology of Fishes Lab	

**Major Electives**

Complete 15 credits from across at least 3 different categories (see course list below):		15
Physical Science		
Wildlife Resources and Technical Skills		
Anatomy/Physiology/Disease		
Conservation		
Forestry/Botany		
Ecosystem Ecology		
Policy, Administration, and Law		
Social Aspects of Natural Resources Management		

**Capstone**

Complete one of the following:		3
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F&W ECOL 577 Complexity and Conservation of  
White-tailed Deer

F&W ECOL 599 Wildlife Research Capstone

**Total Credits****69-74**

<sup>1</sup> Only allowed for students who completed the rest of the Biocore  
curriculum listed under biology.

**MAJOR ELECTIVES**

Code	Title	Credits
<i>Physical Science</i>		
CHEM 104	General Chemistry II	5
CHEM 109	Advanced General Chemistry	5
PHYSICS 103	General Physics	4
PHYSICS 104	General Physics	4
PHYSICS 201	General Physics	5
PHYSICS 207	General Physics	5
PHYSICS 208	General Physics	5
GEOSCI 202	Introduction to Geologic Structures	4
GEOSCI 204	Geologic Evolution of the Earth	4
SOIL SCI 301	General Soil Science	3
<i>Wildlife Resources and Technical Skills</i>		
ENVIR ST/ SOIL SCI 575	Assessment of Environmental Impact	3
F&W ECOL 395	Data and GIS Tools for Ecology	3
F&W ECOL 424	Wildlife Ecology Summer Field Practicum	2
F&W ECOL 458	Environmental Data Science	3
F&W ECOL 658	Forest Resources Practicum	3
GEOG/ENVIR ST/ F&W ECOL/ G L E/GEOSCI/ LAND ARC 371	Introduction to Environmental Remote Sensing	3
GEOG/CIV ENGR/ ENVIR ST 377	An Introduction to Geographic Information Systems	4
LAND ARC/ ENVIR ST 581	Prescribed Fire: Ecology and Implementation	3
LAND ARC 668	Restoration Ecology	3
ZOOLOGY 405	Introduction to Museum Studies in the Natural Sciences	2-3
<i>Anatomy/Physiology/Disease</i>		
ANAT&PHY 335	Physiology	5
AN SCI/DY SCI 373	Animal Physiology	3
F&W ECOL/ SURG SCI 548	Diseases of Wildlife	3
ENTOM/M M & I/ PATH-BIO/ ZOOLOGY 350	Parasitology	3
ZOOLOGY 430	Comparative Anatomy of Vertebrates	5
ZOOLOGY 611	Comparative and Evolutionary Physiology	3
<i>Conservation</i>		
ANTHRO 668	Primate Conservation	3

F&W ECOL/ ENVIR ST/ ZOOLOGY 360	Extinction of Species (Meets CALS International Studies Requirement)	3	AMER IND/ ENVIR ST/ GEOG 345	Caring for Nature in Native North America	3
F&W ECOL/ BOTANY/ENVIR ST/ ZOOLOGY 516	Conservation Biology	3	AMER IND/ GEOG 410	Critical Indigenous Ecological Knowledges	3
F&W ECOL/ ZOOLOGY 660	Climate Change Ecology	3	AMER IND/ ENVIR ST 341	Indigenous Environmental Communicators	3
GEOG/ ENVIR ST 339	Environmental Conservation	4	C&E SOC/ F&W ECOL/ SOC 248	Environment, Natural Resources, and Society	3
<i>Forestry/Botany</i>			C&E SOC/SOC 541	Environmental Stewardship and Social Justice	3
F&W ECOL/ ENVIR ST 100	Forests of the World (Meets CALS International Studies Requirement)	3	F&W ECOL/ ZOOLOGY 335	Human/Animal Relationships: Biological and Philosophical Issues	3
F&W ECOL 300	Forest Measurements	4	<b>UNIVERSITY DEGREE REQUIREMENTS</b>		
F&W ECOL 305	Forest Operations	2	Total Degree	To receive a bachelor's degree from UW–Madison, students must earn a minimum of 120 degree credits. The requirements for some programs may exceed 120 degree credits. Students should consult with their college or department advisor for information on specific credit requirements.	
F&W ECOL/ BOTANY 402	Dendrology: Woody Plant Identification and Ecology	3	Residency	Degree candidates are required to earn a minimum of 30 credits in residence at UW–Madison. "In residence" means on the UW–Madison campus with an undergraduate degree classification. "In residence" credit also includes UW–Madison courses offered in distance or online formats and credits earned in UW–Madison Study Abroad/Study Away programs.	
F&W ECOL 410	Principles of Silviculture	3	Quality of Work	Undergraduate students must maintain the minimum grade point average specified by the school, college, or academic program to remain in good academic standing. Students whose academic performance drops below these minimum thresholds will be placed on academic probation.	
F&W ECOL 411	Practices of Silviculture	1			
F&W ECOL 448	Disturbance Ecology	3			
F&W ECOL 449	Disturbance Ecology Lab (I): Herbivores and Fire	1			
F&W ECOL 450	Disturbance Ecology Lab (II): Forest Pathogens	1			
F&W ECOL/ BOTANY 455	The Vegetation of Wisconsin	4			
F&W ECOL 550	Forest Ecology	3			
<i>Ecosystem Ecology</i>					
AGROECOL 370	Grassland Ecology	3			
LAND ARC/ ENVIR ST 361	Wetlands Ecology	3			
ZOOLOGY 304	Marine Biology	2			
ZOOLOGY/ ENVIR ST 315	Limnology–Conservation of Aquatic Resources	2			
ZOOLOGY 316	Laboratory for Limnology– Conservation of Aquatic Resources	2-3			
<i>Policy, Administration, and Law</i>					
ENVIR ST/ GEOG 337	Nature, Power and Society	3			
ENVIR ST/HISTORY/ LEGAL ST 430	Law and Environment: Historical and Contemporary Perspectives	3			
ENVIR ST/ GEOG 439	US Environmental Policy and Regulation	3-4			
ENVIR ST/ ECON/POLI SCI/ URB R PL 449	Government and Natural Resources	3-4			
F&W ECOL/ ENVIR ST 515	Natural Resources Policy	3			
<i>Social Aspects of Natural Resource Management</i>					
A A E/ENVIR ST 244	The Environment and the Global Economy	4			
A A E/ECON/ ENVIR ST 343	Environmental Economics	3-4			
AMER IND/ ENVIR ST 306	Indigenous Peoples and the Environment	3			