WILDLIFE ECOLOGY AND CONSERVATION

This major focuses on developing students' knowledge of the conservation and management of wildlife and habitats for the greatest aesthetic, ecological, economic, and recreational values. Students in the Wildlife Ecology and Conservation major study biology, chemistry, ecology, calculus, soil science, plant taxonomy, entomology, geography, zoology, and sustainability.

About this Program

- **College:** Agricultural and Life Sciences (http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/)
- **Degree:** Bachelor of Science
- **Specializations:** Preprofessional (http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/WEC_BS/WEC_BS04/) | Wildlife Ecology and Conservation (p. 1)
- **Credits for Degree:** 120
- **Contact**

To graduate with this major, students must complete all university, college, and major requirements.

Department Information

The Department of Wildlife Ecology and Conservation fosters education, expands knowledge, and rewards scholarship. This is accomplished by using multidisciplinary approaches for the purpose of understanding, managing, and conserving biological resources.
Website (https://wec.ifas.ufl.edu/)

CONTACT

Email (WECAdvising@ifas.ufl.edu) | 352.846.0643 (tel) | 352.392.6984

P.O. Box 110430
110 NEWINS-ZIEGLER HALL
GAINESVILLE FL 32611-0430
Map (http://campusmap.ufl.edu/#/index/0832)

Curriculum

- Combination Degrees
- Wildlife Ecology and Conservation
- Wildlife Ecology and Conservation Minor

The department also co-administers a major in natural resource conservation with the School of Forest, Fisheries, and Geomatics Sciences.
More Info (http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/NRC_BSF/)

Specializations

Preprofessional

This specialization satisfies the coursework requirements for admission to UF's Doctor of Veterinary Medicine (DVM) program, while simultaneously developing a strong foundation in the ecological and biological principles of wildlife/natural resources management and conservation. Note that coursework requirements may vary among DVM programs.

Wildlife Ecology and Conservation

Students in this specialization train in the biological, social, physical and management sciences, and excel at both the scientific and human dimensions of managing wildlife and natural resources. With appropriate choice of electives and course options, graduates satisfy requirements for certification as an associate wildlife biologist with The Wildlife Society.

Wildlife Ecology and Conservation

Students in this specialization train in the biological, social, physical and management sciences, and excel at both the scientific and human dimensions of managing wildlife and natural resources. With appropriate choice of electives and course options (below), graduates satisfy requirements for certification as an associate wildlife biologist with The Wildlife Society.

Students select a focus area comprised of four courses (minimum of 12 credits) in one of the following areas: ecology, management, human dimensions, quantitative sciences, cooperative education, urban and regional planning, or The Wildlife Society Certification.

All students must file a plan of study for focus area courses with Wildlife Ecology and Conservation (WEC) Student Services before completing 60 credits in the major or before the end of the first term of enrollment for transfer students. The plan must be approved by both the student's faculty advisor and the undergraduate coordinator. Any changes to the plan must be approved by the undergraduate coordinator.

Lists of approved courses are available in the WEC Student Services Office, 102 Newins-Ziegler Hall.
Map (https://campusmap.ufl.edu/#/index/0832)

Coursework for the Major

All majors must complete 26 credits of WEC Core Courses, a minimum of 27 credits of WEC Common Course Requirements, and 12 credits of electives in a self-selected focus area. In addition, students must complete 23 credits of foundational lower division critical tracking coursework for the major.

Minimum grades of C within two attempts, including withdrawals are required in all WEC Core Courses. Students must maintain a cumulative GPA of 2.5 in lower division critical tracking courses. A cumulative 2.0 GPA is required to award the Bachelor of Science in Wildlife Ecology and Conservation.

Required Lower Division Critical Tracking Coursework | 23 Credits

Code	Title	Credits
BSC 2010	Integrated Principles of Biology 1	4
& 2010L	and Integrated Principles of Biology Laboratory	
BSC 2011	Integrated Principles of Biology 2	4
& 2011L	and Integrated Principles of Biology Laboratory 2	
CHM 2045	General Chemistry 1	4
& 2045L	and General Chemistry Laboratory	
ECO 2023	Principles of Microeconomics	4
MAC 2311	Analytic Geometry and Calculus 1	4
STA 2023	Introduction to Statistics 1	3
Total Credits		**23**

To continue in the major, students must attain a cumulative GPA in these graded courses of no less than a 2.5. Students must complete critical tracking courses by the end of Semester 4.

WEC Core Course Requirements | 26 Credits

Code	Title	Credits
SWS 3022	Introduction to Soils in the Environment	4
& 3022L	and Introduction to Soils in the Environment Laboratory	
WIS 2920	Wildlife Colloquium	1
WIS 3401	Wildlife Ecology and Management	3
WIS 3402	Wildlife of Florida	4
& 3402L	and Wildlife of Florida Laboratory	
WIS 3553C	Introduction to Conservation Genetics	4
WIS 4501	Introduction to Wildlife Population Ecology	3
WIS 4601C	Quantitative Wildlife Ecology	3
WIS 4945	Wildlife Techniques	4
& 4945L	and Field Wildlife Techniques	
Total Credits		**26**

Minimum grades of C within two attempts, including withdrawals are required in all WEC Core Courses.

WEC Common Course Requirements | Minimum 27 Credits

Code	Title	Credits
Invertebrate (select one:)		**3-4**
ENY 4210	Insects and Wildlife	
ZOO 4205C	Invertebrate Biodiversity	
ENY 3005	Principles of Entomology	
& 3005L	and Principles of Entomology Laboratory	
Ecology (select one:)		**3-4**
FNR 3500C	Forest Ecology	
PCB 3601C	Plant Ecology	
PCB 4043C	General Ecology	
WIS 3404	Natural Resource Ecology	
Geographic Information and Planning (select one:)		**3-4**
FNR 3400C	Forest Resources Information Systems	
GIS 3043	Foundations of Geographic Information Systems	
GIS 3072C	Geographic Information Systems	
URP 4273	Survey of Planning Information Systems	
Plant Diversity & Taxonomy (select two:)		**6**

BOT 2011C	Plant Diversity	
BOT 2710C	Practical Plant Taxonomy	
BOT 3151C	Local Flora of North Florida	
FNR 3131C	Dendrology/Forest Plants	
ORH 3513C	Environmental Plant Identification and Use	
Vertebrate (select one:)		**3-4**
ANT 3555	Monkeys, Apes, and Lemurs	
WIS 4424	Large Mammal Ecology and Management	
WIS 4934	Topics in Wildlife Ecology and Conservation (Conservation of Amphibians and Reptiles)	
WIS 4934	Topics in Wildlife Ecology and Conservation (Invasion/Ecology of Amphibians and Reptiles)	
WIS 4934	Topics in Wildlife Ecology and Conservation (The Primates)	
ZOO 4307C	Vertebrate Biodiversity	
ZOO 4462C	Herpetology	
ZOO 4472C	Avian Biology	
Human Dimensions (select one:)		**3**
FNR 4070C	Environmental Education Program Development	
FNR 3602	Society and Natural Resources	
FNR 4080	Sustainable Ecotourism Development	
WIS 4551	Diverse Perspectives in Conservation	
WIS 4523	Human Dimensions of Natural Resource Conservation	
Environmental Economics (select one:)		**3-4**
ECP 3302	Environmental Economics and Resource Policy	
FNR 4660	Natural Resource Policy and Economics	
Conservation (select one:)		**3**
WIS 4203C	Landscape Ecology and Conservation	
WIS 4554	Conservation Biology	
Total Credits		**27-32**

WEC Electives in Self-Selected Focus Area | 12 Credits

Code	Title	Credits
Focus Area (select one:)		**12**
Cooperative Education Focus		
Ecology Focus		
Human Dimensions Focus		
Management Focus		
Quantitative Sciences Focus		
Urban and Regional Planning (Dual Degree)		
The Wildlife Society Certification		
Total Credits		**12**

Critical Tracking

Critical Tracking records each student's progress in courses that are required for entry to each major. Please note the critical-tracking requirements below on a per-semester basis.

Equivalent critical-tracking courses as determined by the State of Florida Common Course Prerequisites (https://cpm.flvc.org/advance-search/) may be used for transfer students.

Semester 1

- Complete 1 of 6 critical-tracking courses, excluding labs: BSC 2010/BSC 2010L, BSC 2011/BSC 2011L, CHM 2045/CHM 2045L, AEB 2014 or AEB 3103 or ECO 2023, MAC 2311, STA 2023
- 2.5 GPA on required math and science courses combined
- 2.0 UF GPA required

Semester 2

- Complete 1 additional critical-tracking course, excluding labs
- 2.5 GPA on required math and science courses combined
- 2.0 UF GPA required

Semester 3

- Complete 2 additional critical-tracking courses, excluding labs
- 2.5 GPA on required math and science courses combined
- 2.0 UF GPA required

Semester 4

- Complete 2 additional critical-tracking courses, including labs
- 2.5 GPA on required math and science courses combined
- 2.0 UF GPA required

Semester 5

- Complete 1 additional critical-tracking course
- 2.5 GPA on required math and science courses combined
- 2.0 upper division GPA required
- 2.0 UF GPA required

Semester 6

- Complete 1 additional critical-tracking course
- 2.0 upper division GPA required
- 2.0 UF GPA required

Semester 7

- Complete 1 additional critical-tracking course
- 2.0 upper division GPA required
- 2.0 UF GPA required

Semester 8

- Complete 1 additional critical-tracking course
- 2.0 upper division GPA required
- 2.0 UF GPA required

Model Semester Plan

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold. These courses must be completed by the terms as listed above in the Critical Tracking criteria.

Students must earn a minimum grade of C within two attempts in all required core courses. Students must maintain a 2.5 or higher GPA on all lower division critical-tracking courses. A 2.0 cumulative GPA is also required to successfully complete the degree.

This semester plan represents an example progression through the major. Actual courses and course order may be different depending on the student's academic record and scheduling availability of courses. Prerequisites still apply.

Course	Title	Credits
Semester One		
BSC 2010 & 2010L	Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory (**Critical Tracking**; Gen Ed Biological Sciences)	4
WIS 2920	Wildlife Colloquium	1
State Core Gen Ed Composition (http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext); Writing Requirement: 6,000 words		3
State Core Gen Ed Humanities (http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext)		3
Elective		2
	Credits	**13**
Semester Two		
Quest 1 (Gen Ed Humanities)		3
Economics course (select one:)		3-4
AEB 2014	Current Economic Issues, Food and You (**Critical Tracking**)	
AEB 3103	Principles of Food and Resource Economics (**Critical Tracking**)	

ECO 2023	Principles of Microeconomics (**Critical Tracking**; Gen Ed Social and Behavioral Sciences)	
BSC 2011 & 2011L	Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2 (**Critical Tracking**; Gen Ed Biological Sciences)	4
STA 2023	Introduction to Statistics 1 (**Critical Tracking**; State Core Gen Ed Mathematics)	3
State Core Gen Ed Social and Behavioral Sciences (http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext)		3
	Credits	**16-17**
Semester Three		
AEC 3030C	Effective Oral Communication	3
AEC 3033C	Research and Business Writing in Agricultural and Life Sciences (Writing Requirement: 6,000 words)	3
CHM 2045 & 2045L	General Chemistry 1 and General Chemistry Laboratory (**Critical Tracking**; State Core Gen Ed Biological Sciences and Physical Sciences)	4
Ecology course (select one:)		3-4
FNR 3500C	Forest Ecology	
PCB 3601C	Plant Ecology	
PCB 4043C	General Ecology	
WIS 3404	Natural Resource Ecology	
Gen Ed Composition; Writing Requirement: 6,000 words		3
	Credits	**16-17**
Semester Four		
Quest 2 (Gen Ed Social and Behavioral Sciences)		3
MAC 2311	Analytic Geometry and Calculus 1 (**Critical Tracking**; Gen Ed Mathematics)	4
SWS 3022 & 3022L	Introduction to Soils in the Environment and Introduction to Soils in the Environment Laboratory (Gen Ed Physical Sciences)	4
WIS 3402 & 3402L	Wildlife of Florida and Wildlife of Florida Laboratory	4
	Credits	**15**
Semester Five		
Plant Diversity and Taxonomy course (1 of 2; select one:)		3-4
BOT 2011C	Plant Diversity	
BOT 2710C	Practical Plant Taxonomy	
BOT 3151C	Local Flora of North Florida	
FNR 3131C	Dendrology/Forest Plants	
ORH 3513C	Environmental Plant Identification and Use	
Invertebrates course (select one:)		3-4
ENY 3005 & 3005L	Principles of Entomology and Principles of Entomology Laboratory	
ENY 4210	Insects and Wildlife	
ZOO 4205C	Invertebrate Biodiversity	
Geographic and Planning course (select one:)		3-4
FNR 3400C	Forest Resources Information Systems	
GIS 3043	Foundations of Geographic Information Systems	
GIS 3072C	Geographic Information Systems	
URP 4273	Survey of Planning Information Systems	
WIS 3401	Wildlife Ecology and Management (**Critical Tracking**)	3
Vertebrate course (select one:)		3-4
ANT 3555	Monkeys, Apes, and Lemurs	
WIS 4424	Large Mammal Ecology and Management	
WIS 4934	Topics in Wildlife Ecology and Conservation (Conservation of Amphibians and Reptiles)	
WIS 4934	Topics in Wildlife Ecology and Conservation (Invasion/Ecology of Amphibians and Reptiles)	
WIS 4934	Topics in Wildlife Ecology and Conservation (The Primates)	
ZOO 4307C	Vertebrate Biodiversity	
ZOO 4462C	Herpetology	
ZOO 4472C	Avian Biology	
Elective		1
	Credits	**16-20**
Semester Six		
Select one Plant Diversity and Taxonomy course (2 of 2):		3-4
BOT 2011C	Plant Diversity	

BOT 2710C	Practical Plant Taxonomy	
BOT 3151C	Local Flora of North Florida	
FNR 3131C	Dendrology/Forest Plants	
ORH 3513C	Environmental Plant Identification and Use	
WIS 3553C	Introduction to Conservation Genetics (**Critical Tracking**)	4
WIS 4945	Wildlife Techniques	3
Focus course		3
	Credits	**13-14**
Summer After Semester Six		
WIS 4945L	Field Wildlife Techniques	1
	Credits	**1**
Semester Seven		
FNR 4660	Natural Resource Policy and Economics	3-4
or ECP 3302	or Environmental Economics and Resource Policy	
Human Dimension course (select one:)		3
FNR 4070C	Environmental Education Program Development	
FNR 3602	Society and Natural Resources	
FNR 4080	Sustainable Ecotourism Development	
WIS 4523	Human Dimensions of Natural Resource Conservation	
WIS 4551	Diverse Perspectives in Conservation	
WIS 4554	Conservation Biology	3
or WIS 4203C	or Landscape Ecology and Conservation	
WIS 4601C	Quantitative Wildlife Ecology (**Critical Tracking**)	3
Focus course		3
	Credits	**15-16**
Semester Eight		
WIS 4501	Introduction to Wildlife Population Ecology (**Critical Tracking**)	3
Focus courses		6
Electives		6
	Credits	**15**
	Total Credits	**120-128**

Additional electives may be needed to complete the 120 credits required for graduation. Students can select any courses as electives.

State core courses can be selected to meet the university's requirements for writing, international focused courses.

Academic Learning Compact

The primary focus of the Wildlife Ecology and Conservation major is to develop students' knowledge of the conceptual and applied aspects of scientific, social, and ethical thought in wildlife ecology and conservation. Emphasis is placed on the biology, ecology, natural history, and behavior of Florida wildlife species and the management of wildlife, their habitats, and their population dynamics for the greatest aesthetic, ecological, economic, and recreational values. Students will learn to think critically about major problems in the conservation of biological diversity and to apply biological principles to the preservation of this diversity.

Before Graduating Students Must

- Pass the wildlife ecology and conservation competency exam, given as part of WIS 4203C or WIS 4554 .
- Achieve minimum grades of C in AEC 3030C and AEC 3033C. These courses are graded using rubrics developed by a faculty team.
- Complete requirements for the baccalaureate degree, as determined by faculty.

Students in the Major Will Learn to

Student Learning Outcomes | SLOs

Content

1. Acquire knowledge of scientific, social, and ethical arenas of wildlife ecology and conservation; acquire skills for critical reasoning in conservation management; acquire knowledge of Florida wildlife species and their biology, ecology, natural history, and behavior; describe principles and applications of wildlife management practices, population dynamics, and habitat management; and apply biological principles to solve problems in wildlife conservation and preserve biological diversity.

Critical Thinking

2. Apply ecological, mathematical, and statistical concepts to interpret, understand and communicate wildlife ecology and conservation data.

Communication

3. Create, interpret and analyze written text, oral messages, and multimedia presentations used in agricultural and life sciences.

Curriculum Map

I = Introduced; R = Reinforced; A = Assessed

Courses	SLO 1	SLO 2	SLO 3
AEC 3030C			I,R,A
AEC 3033C			I,R,A
WIS 2920	I	I	I
WIS 3401	R	R	R
WIS 3402 and WIS 3402L	R		R
WIS 4203C or WIS 4554	A	A	R
WIS 4945			I,R,A

Assessment Types

- Exams
- Final course grades