

# WILDLIFE AND FISHERIES SCIENCES - BS, WILDLIFE ECOLOGY AND CONSERVATION OPTION

Graduates are well equipped for post-baccalaureate study in many life science fields (graduate school programs and human and veterinary medicine) or for direct entry into professions such as wildlife management, fisheries management, environmental impact assessment, aquaculture, natural history museum education, zoological park collection management, public school teaching and urban wildlife management. Employers of recent graduates include state and federal resource agencies, scientific foundations, ranches, hunting and fishing clubs, fish farms, environmental consulting firms, museums and secondary schools.

Wildlife Ecology and Conservation; Fisheries, Aquaculture and Aquatic Sciences; and Vertebrate Zoology curriculum options lead to the Bachelor of Science degree. Each student will choose a course of study from among the options within the department's curricula after consultation with the academic advisor. The chosen option is enhanced by a common departmental "core" of courses necessary for a sound education in the wildlife and fisheries conservation professions.

Students are encouraged to develop an emphasis area within their degree option. To build this emphasis area, students will choose directed electives, from related disciplines, in consultation with their academic advisor and faculty members.

## Wildlife Ecology and Conservation Option

This option is designed for students interested in the research, management and conservation of wildlife and its ecosystems. This option provides considerable flexibility when designing a degree program and allows students to focus on both terrestrial and aquatic conservation management. Job opportunities are available with state and federal agencies; private land management individuals and companies; state, national and international organizations; zoos and wildlife centers; environmental consulting firms; and as private consultants. In addition, this degree program can prepare students for further graduate school studies in the wildlife and/or fisheries area. Emphasis areas in this option include:

### Wildlife Ecology Emphasis

The wildlife ecology emphasis is for students interested in research and management of terrestrial animals and ecosystems, including game, non-game, and endangered species. The ability to be certified is becoming increasingly important for employment. Courses taken can go toward course certification requirements of The Wildlife Society.

### Wildlife and Fisheries Management Emphasis

This emphasis is for students interested in understanding and management of both aquatic and terrestrial habitats. Courses taken can go toward course certification requirements of both the American Fisheries Society and The Wildlife Society. The ability to be certified is becoming increasingly important for employment.

## Conservation Biology Emphasis

This emphasis is for students interested in conservation of the earth's biodiversity. This emphasis allows the student to focus on various ecological environments and socio-economic aspects including urban and/or wetland conservation.

## Program Requirements

### First Year

		Semester Credit Hours
<b>Fall</b>		
BIOL 111	Introductory Biology I	4
ECCB 205	Fundamentals of Ecology <sup>1</sup>	3
MATH 140	Mathematics for Business and Social Sciences	3
WFSC 101	Introduction to Wildlife and Fisheries <sup>1</sup>	3
<b>Semester Credit Hours</b>		<b>13</b>

### Spring

BIOL 112	Introductory Biology II	4
MATH 142	Business Calculus	3
American history ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history</a> ) <sup>3</sup>		3
Language, philosophy and culture ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture</a> ) <sup>3</sup>		3
Social and behavioral sciences ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences</a> ) <sup>3</sup>		3
<b>Semester Credit Hours</b>		<b>16</b>

### Second Year

		Semester Credit Hours
<b>Fall</b>		
CHEM 119	Fundamentals of Chemistry I	4
ECCB 302	Diversity and Evolution of Vertebrates <sup>1</sup>	3
ENGL 104	Composition and Rhetoric	3
American history ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history</a> ) <sup>3</sup>		3
Creative arts ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts</a> ) <sup>3</sup>		3
<b>Semester Credit Hours</b>		<b>16</b>

### Spring

CHEM 222 & CHEM 242	Elements of Organic and Biological Chemistry and Elementary Organic Chemistry Laboratory	4
ECCB 215	Fundamentals of Ecology--Laboratory <sup>1</sup>	1
Select one of the following:		3-4
BIOL 388	Principles of Animal Physiology	
ECCB 313	Diversity and Evolution of Invertebrates	
VTPP 423	Biomedical Physiology I	
Government/Political science ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science</a> ) <sup>3</sup>		3

Directed elective <sup>2</sup>		3
<b>Semester Credit Hours</b>		<b>14</b>
<b>Third Year</b>		
<b>Fall</b>		
ENGL 210	Technical and Professional Writing	3
STAT 302	Statistical Methods	3
Government/Political science ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science</a> ) <sup>3</sup>		3
Directed elective <sup>2</sup>		3-4
Directed elective <sup>2</sup>		3
<b>Semester Credit Hours</b>		<b>16</b>
<b>Spring</b>		
COMM 203	Public Speaking	3
GENE 301 & GENE 312	Comprehensive Genetics and Comprehensive Genetics Laboratory	4
Select one of the following: <sup>1</sup>		3
RWFM 308	Fish and Wildlife Laws and Administration	
RWFM 375	Conservation of Natural Resources	
RWFM 436	Natural Resources Policy	
RWFM 470	Environmental Impact Assessment	
Select one of the following:		3
GEOG 203	Planet Earth	
GEOL 101	Principles of Geology	
OCNG 251	Oceanography	
Biodiversity elective <sup>1,4</sup>		3
<b>Semester Credit Hours</b>		<b>16</b>
<b>Fourth Year</b>		
<b>Fall</b>		
PHYS 201	College Physics	4
Select one of the following: <sup>1</sup>		3
ECCB 300/ ENTO 300	Field Studies	
RWFM 484	Internship	
RWFM 485	Directed Studies	
RWFM 491	Research	
Biodiversity elective <sup>1,4</sup>		3
Directed elective <sup>2</sup>		3
Directed elective <sup>2</sup>		3
<b>Semester Credit Hours</b>		<b>16</b>
<b>Spring</b>		
ECCB 304	Conservation Biology <sup>1</sup>	3
Directed elective <sup>2</sup>		3
Directed elective <sup>2</sup>		3
Directed elective <sup>2</sup>		4
<b>Semester Credit Hours</b>		<b>13</b>
<b>Total Semester Credit Hours</b>		<b>120</b>

cultural-diversity-requirements/) courses and 3 hours of Cultural Discourse (<http://catalog.tamu.edu/undergraduate/general-information/degree-information/cultural-discourse-requirements/>) courses. A course satisfying a Core category, a college/department requirement, or a free elective can be used to satisfy this requirement. <sup>4</sup> Select from ENTO 201; ECCB 311, ECCB 315, ECCB 401, ECCB 402.

A total of 120 semester hours will be required for a BS degree.

<sup>1</sup> Must make a grade of C or better.

<sup>2</sup> Directed electives to be chosen in areas related to wildlife management, conservation or animal behavior.

<sup>3</sup> Graduation requirements include a requirement for 3 hours of International and Cultural Diversity (<http://catalog.tamu.edu/undergraduate/general-information/degree-information/international->