**WILDLIFE AND FISHERIES SCIENCES - BS, VERTEBRATE ZOOLOGY 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, aquatic ecology, 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 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.

**Vertebrate Zoology Option**

This emphasis provides the rigorous training needed for careers in the various aspects of natural resources related to the fields of ichthyology, herpetology, mammalogy and ornithology, including behavior, ecology, evolution, genetics, molecular biology, physiology and systematics. It is a flexible program which permits the inclusion of courses specifically required by schools graduate programs as well as schools of dentistry, law, medicine and veterinary medicine.

For students interested in biological diversity and the ecological processes and population interactions that sustain it, courses in this option are designed to provide a strong foundation in basic and applied organismal biology that will prepare students for graduate studies as well as careers within governmental and nongovernmental agencies and environmental firms dealing with biological conservation.

Students who are interested in mathematical and statistical approaches to conservation of endangered species, management of exploited populations, and their habitats will be equipped in basic ecological data analysis and modeling. The demand for professionals who can integrate quantitative methods and ecological concepts is rapidly increasing among government agencies, academia, and the private sector. Possible careers include entry-level assistant positions in fisheries management, wildlife management, environmental consulting, and research at conservation agencies, hospitals, and universities. This is also suitable for students who plan to obtain a post baccalaureate degree (M.S. or PhD) in ecology and related fields later in order to pursue higher level positions.

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**Program Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Semester Credit Hours</th>
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</thead>
</table>
| **Wildlife and Fisheries Sciences Core Courses**

CHEM 101  Fundamentals of Chemistry I

CHEM 111  and Fundamentals of Chemistry Laboratory I

CHEM 227  Organic Chemistry I

CHEM 237  Organic Chemistry Laboratory

ENGL 210  Technical and Business Writing

GENE 301  Comprehensive Genetics

GENE 312  and Comprehensive Genetics Laboratory

PHYS 201  College Physics

REN 205  Fundamentals of Ecology

STAT 302  Statistical Methods

WFSC 101  Introduction to Wildlife and Fisheries

WFSC 302  Natural History of the Vertebrates

WFSC 304  Wildlife and Fisheries Conservation

Choose one physiology course

WFSC 335  Natural History of the Invertebrates

VTTP 423  Biomedical Physiology I

BIOL 388  Principles of Animal Physiology

Field experience

Select one of the following:

WFSC 300  Field Studies

ENTO 300

WFSC 484  Internship

WFSC 485  Directed Studies

WFSC 491  Research

**Vertebrate Zoology Option**

BICH 303  Elements of Biological Chemistry

or BICH 410  or Comprehensive Biochemistry I

CHEM 102  Fundamentals of Chemistry II

& CHEM 112  and Fundamentals of Chemistry Laboratory II

CHEM 228  Organic Chemistry II

& CHEM 238  and Organic Chemistry Laboratory

PHYS 202  College Physics

Biodiversity electives

Select two of the following:

WFSC 311  Ichthyology

WFSC 315  Herpetology

WFSC 401  General Mammalogy

WFSC 402  General Ornithology

ENTO 313  Biology of Insects

Directed electives

**University Core Curriculum**

BIOL 111  Introductory Biology I

BIOL 112  Introductory Biology II

COMM 203  Public Speaking

ENGL 104  Composition and Rhetoric
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>MATH 131</td>
<td>Mathematical Concepts—Calculus</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 142</td>
<td>or Business Calculus</td>
<td></td>
</tr>
<tr>
<td>PHIL 240</td>
<td>Introduction to Logic</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 14</td>
<td>or Finite Mathematics</td>
<td></td>
</tr>
<tr>
<td>RENR 215</td>
<td>Fundamentals of Ecology—Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

American history electives ([http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history](http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history)) 3

Creative arts elective ([http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts](http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts)) 3

Government/Political science electives ([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)) 6

Language, philosophy and culture elective ([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)) 3

Social and behavioral science elective ([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)) 3

**Total Semester Credit Hours** 120

1 Students currently enrolled at Texas A&M who wish to transfer to a Wildlife and Fisheries Sciences major must have achieved a grade of C or higher in introductory biology and mathematics courses required in the University Core Curriculum. Enrollment in Wildlife and Fisheries Sciences (WFSC) option courses will be restricted to students who have achieved a grade of C or higher in prerequisite courses.

2 Directed electives to be chosen to meet prerequisite requirements for admission to professional schools.

3 The Graduation requirements include a requirement for 6 hours of international and cultural diversity courses. A course satisfying a Core category, a college/department requirement, or a free elective can be used to satisfy this requirement.

Students are required to make a C or better in all WFSC and RENR 205/RENR 215 courses.

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