**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, 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 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**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall</strong></td>
<td></td>
</tr>
<tr>
<td>BIOL 111</td>
<td>Introductory Biology I 4</td>
</tr>
<tr>
<td>RENR 205</td>
<td>Fundamentals of Ecology 3</td>
</tr>
<tr>
<td>WFSC 101</td>
<td>Introduction to Wildlife and Fisheries 1</td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>MATH 140</td>
<td>Mathematics for Business and Social Sciences</td>
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<tr>
<td>MATH 141</td>
<td>Finite Mathematics</td>
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<tr>
<td>PHIL 240</td>
<td>Introduction to Logic</td>
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<tr>
<td>Directed elective 1</td>
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<thead>
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<th><strong>Spring</strong></th>
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<tbody>
<tr>
<td>BIOL 112</td>
<td>Introductory Biology II 4</td>
</tr>
<tr>
<td>MATH 142</td>
<td>Business Calculus 3</td>
</tr>
<tr>
<td>or MATH 131</td>
<td>or Mathematical Concepts—Calculus</td>
</tr>
<tr>
<td>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>)</td>
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<tr>
<td>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>)</td>
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<tr>
<td>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>)</td>
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<td>Semester Credit Hours</td>
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<thead>
<tr>
<th>Second Year</th>
<th>Semester Credit Hours</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
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<tr>
<td>CHEM 119</td>
<td>Fundamentals of Chemistry I 4</td>
</tr>
<tr>
<td>ENGL 104</td>
<td>Composition and Rhetoric 3</td>
</tr>
<tr>
<td>WFSC 302</td>
<td>Natural History of the Vertebrates 3</td>
</tr>
<tr>
<td>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>)</td>
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<tr>
<td>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>)</td>
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<tr>
<td>Semester Credit Hours</td>
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<th><strong>Spring</strong></th>
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<tbody>
<tr>
<td>CHEM 222</td>
<td>Elements of Organic and Biological Chemistry 4</td>
</tr>
<tr>
<td>CHEM 242</td>
<td>and Elementary Organic Chemistry Laboratory</td>
</tr>
<tr>
<td>RENR 215</td>
<td>Fundamentals of Ecology–Laboratory 1</td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>BIOL 388</td>
<td>Principles of Animal Physiology</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------------------------------</td>
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<tr>
<td>VTPP 423</td>
<td>Biomedical Physiology I</td>
</tr>
<tr>
<td>WFSC 335</td>
<td>Natural History of the Invertebrates</td>
</tr>
<tr>
<td>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>)</td>
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<td>Directed elective</td>
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**Third Year**

**Fall**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
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<tbody>
<tr>
<td>ENGL 210</td>
<td>Technical and Business Writing</td>
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</tr>
<tr>
<td>STAT 302</td>
<td>Statistical Methods</td>
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<tr>
<td>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>)</td>
<td>3</td>
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<tr>
<td>Directed elective</td>
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<td>3</td>
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<tr>
<td>Directed elective</td>
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**Spring**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>COMM 203</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>GENE 301</td>
<td>Comprehensive Genetics</td>
<td>4</td>
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<tr>
<td>&amp; GENE 312</td>
<td>Comprehensive Genetics Laboratory</td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>ESSM 406</td>
<td>Natural Resources Policy</td>
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<tr>
<td>RENR 375</td>
<td>Conservation of Natural Resources</td>
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<tr>
<td>RENR 470</td>
<td>Environmental Impact Assessment</td>
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<tr>
<td>WFSC 303</td>
<td>Fish and Wildlife Laws and Administration</td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>GEO 101</td>
<td>Principles of Geology</td>
<td></td>
</tr>
<tr>
<td>&amp; GEOL 102</td>
<td>and Principles of Geology Laboratory</td>
<td></td>
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<tr>
<td>OCNG 251</td>
<td>Oceanography</td>
<td></td>
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<tr>
<td>&amp; OCNG 252</td>
<td>and Oceanography Laboratory</td>
<td></td>
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<tr>
<td>GEOG 203</td>
<td>Planet Earth</td>
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<tr>
<td>&amp; GEOG 213</td>
<td>and Planet Earth Lab</td>
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<tr>
<td>Biodiversity elective</td>
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**Fourth Year**

**Fall**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
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<tbody>
<tr>
<td>PHYS 201</td>
<td>College Physics</td>
<td>4</td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>WFSC 300/ ENTO 300</td>
<td>Field Studies</td>
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</tr>
<tr>
<td>WFSC 484</td>
<td>Internship</td>
<td></td>
</tr>
<tr>
<td>WFSC 485</td>
<td>Directed Studies</td>
<td></td>
</tr>
<tr>
<td>WFSC 491</td>
<td>Research</td>
<td></td>
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<tr>
<td>Biodiversity elective</td>
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<tr>
<td>Directed elective</td>
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</tr>
<tr>
<td>Directed elective</td>
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**Spring**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>WFSC 304</td>
<td>Wildlife and Fisheries Conservation</td>
<td></td>
</tr>
<tr>
<td>Directed elective</td>
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<tr>
<td>Directed elective</td>
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</table>

**Directed elective**

**Semester Credit Hours**

- **Fall**: 15
- **Spring**: 17
- **Total Semester Credit Hours**: 120

1. Directed electives to be chosen in areas related to wildlife management, conservation or animal behavior.

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

3. Select from ENTO 201; WFSC 311, WFSC 315, WFSC 401, WFSC 402.

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.