WILDLIFE AND FISHERIES SCIENCE, B.S.

Begin Campus: Any Penn State Campus
End Campus: University Park

Degree Requirements

For the Bachelor of Science in Wildlife and Fisheries Science, a minimum of 120 credits is required for the Wildlife option and a minimum of 122 credits is required for the Fisheries option:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td>45</td>
</tr>
<tr>
<td>Electives</td>
<td>3-9</td>
</tr>
<tr>
<td>Requirements for the Major</td>
<td>87-95</td>
</tr>
</tbody>
</table>

21 of the 45 credits for General Education are included in the Requirements for the Major. This includes: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 3 credits of GWS courses.

Requirements for the Major

To graduate, a student enrolled in the major must earn a grade of C or better in each course designated by the major as a C-required course, as specified by Senate Policy 82-44 (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#82-44).

Common Requirements for the Major (All Options)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
</table>
| Prescribed Courses: Require a grade of C or better
Biol 110   | Biology: Basic Concepts and Biodiversity      | 4       |
Biol 240W  | Biology: Function and Development of Organisms| 4       |
Chem 110   | Chemical Principles I                         | 3       |
Chem 111   | Experimental Chemistry I                      | 1       |
Econ 104   | Introductory Macroeconomic Analysis and Policy| 3       |
Engl 202C  | Effective Writing: Technical Writing          | 3       |
Phys 250   | Introductory Physics I                        | 4       |
Soils 101  | Introductory Soil Science                     | 3       |
Wfs 446    | Wildlife and Fisheries Population Dynamics   | 3       |

Prescribed Courses

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Biol 220W</td>
<td>Biology: Populations and Communities</td>
<td>4</td>
</tr>
<tr>
<td>Wfs 209N</td>
<td>Wildlife and Fisheries Conservation</td>
<td>3</td>
</tr>
<tr>
<td>Wfs 300</td>
<td>The Vertebrates</td>
<td>2</td>
</tr>
<tr>
<td>Wfs 301</td>
<td>Vertebrate Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>Wfs 310</td>
<td>Wildlife and Fisheries Measurements</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>For 350</td>
<td>Forest Ecosystem Monitoring and Data Analysis Or Stat 460</td>
<td>Intermediate Applied Statistics</td>
</tr>
<tr>
<td>Math 111</td>
<td>Techniques of Calculus II</td>
<td>2-4</td>
</tr>
<tr>
<td>Or Math 141</td>
<td>Calculus with Analytic Geometry II</td>
<td></td>
</tr>
<tr>
<td>Stat 240</td>
<td>Introduction to Biometry</td>
<td>3</td>
</tr>
<tr>
<td>Or Stat 301</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select 3-4 credits of the following:</td>
<td>3-4</td>
<td></td>
</tr>
</tbody>
</table>

ANSC 322   | Animal Genetics and Selection           |
Biol 133   | Genetics and Evolution of the Human Species |
Biol 222   | Genetics                               |
Biol 230W  | Biology: Molecules and Cells            |
Select 3 credits of the following:            | 3       |
Aee 440    | Communication Methods and Media         |
Engl 416   | Science Writing                        |
Engl 418   | Advanced Technical Writing and Editing  |
Additional Courses: Require a grade of C or better

MATH 110   | Techniques of Calculus I                 | 4       |
Or MATH 140 | Calculus With Analytic Geometry I       |
Supporting Courses and Related Areas

Select 6 credits in natural resource economics, policy, planning, law, administration, or human dimensions from departmental list

Requirements for the Option

Select an option 18-23

Requirements for the Option

Fisheries Option (22-23 credits)

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
</table>
| Prescribed Courses
Wfs 410  | General Fishery Science                       | 3       |
Wfs 452  | Ichthyology                                   | 2       |
Wfs 453  | Ichthyology Laboratory                        | 2       |
Wfs 463W | Fishery Management                           | 3       |

Additional Courses

Select 3-4 credits of the following: 3-4

ANSC 201  | Animal Science                               |
Biol 141  | Introduction to Human Physiology             |
Biol 142  | and Physiology Laboratory                    |
Biol 446  | Physiological Ecology                        |
Select 3 credits of the following: 3
Wfs 407   | Ornithology                                  |
Wfs 408   | Mammalogy                                    |
Wfs 447W  | Wildlife Management                          |
Select 3 credits of the following: 3
Ent 425   | Freshwater Entomology                        |
For 470   | Watershed Management                         |
Wfs 422   | Ecology of Fishes                            |
Wfs/erm 435 |                                             |

Wildlife Option (18-19 credits)

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
</table>
| Prescribed Courses
For 203  | Field Dendrology                              | 3       |
Wfs 407  | Ornithology                                  | 3       |
WFS 408  Mammalogy  3
WFS 447W  Wildlife Management  3

Additional Courses

WFS 406  Ornithology Laboratory  2
or WFS 409  Mammalogy Laboratory

Select 2-3 credits of the following:  2-3
WFS 410  General Fishery Science
WFS 422  Ecology of Fishes
WFS 452  Ichthyology
WFS 453  Ichthyology Laboratory
WFS 463W  Fishery Management

Select 3 credits of the following:  3
 Bihar 414  Taxonomy of Seed Plants
FOR 308  Forest Ecology
HORT 101  Horticultural Science
HORT 138  Ornamental Plant Materials
HORT 445  Plant Ecology

General Education

Connecting career and curiosity, the General Education curriculum provides the opportunity for students to acquire transferable skills necessary to be successful in the future and to thrive while living in interconnected contexts. General Education aids students in developing intellectual curiosity, a strengthened ability to think, and a deeper sense of aesthetic appreciation. These are requirements for all baccalaureate students and are often partially incorporated into the requirements of a program. For additional information, see the General Education Requirements (https://bulletins.psu.edu/undergraduate/general-education/baccalaureate-degree-general-education-program/) section of the Bulletin and consult your academic adviser.

The keystone symbol appears next to the title of any course that is designated as a General Education course. Program requirements may also satisfy General Education requirements and vary for each program.

Foundations (grade of C or better is required.)
- Quantification (GQ): 6 credits
- Writing and Speaking (GWS): 9 credits

Knowledge Domains
- Arts (GA): 6 credits
- Health and Wellness (GHW): 3 credits
- Humanities (GH): 6 credits
- Social and Behavioral Sciences (GS): 6 credits
- Natural Sciences (GN): 9 credits

Integrative Studies (may also complete a Knowledge Domain requirement)
- Inter-Domain or Approved Linked Courses: 6 credits

University Degree Requirements

First Year Engagement
All students enrolled in a college or the Division of Undergraduate Studies at University Park, and the World Campus are required to take 1 to 3 credits of the First-Year Seminar, as specified by their college First-Year Engagement Plan.

Other Penn State colleges and campuses may require the First-Year Seminar; colleges and campuses that do not require a First-Year Seminar provide students with a first-year engagement experience.

First-year baccalaureate students entering Penn State should consult their academic adviser for these requirements.

Cultures Requirement
6 credits are required and may satisfy other requirements
- United States Cultures: 3 credits
- International Cultures: 3 credits

Writing Across the Curriculum
3 credits required from the college of graduation and likely prescribed as part of major requirements.

Total Minimum Credits
A minimum of 120 degree credits must be earned for a baccalaureate degree. The requirements for some programs may exceed 120 credits. Students should consult with their college or department adviser for information on specific credit requirements.

Quality of Work
Candidates must complete the degree requirements for their major and earn at least a 2.00 grade-point average for all courses completed within their degree program.

Limitations on Source and Time for Credit Acquisition
The college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. Credit used toward degree programs may need to be earned from a particular source or within time constraints (see Senate Policy 83-80 (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#83-80)). For more information, check the Suggested Academic Plan for your intended program.