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 (https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/).

Common Requirements for the Major (All Options)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescribed Courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL 110</td>
<td>Biology: Basic Concepts and Biodiversity</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 240W</td>
<td>Biology: Function and Development of Organisms</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 110</td>
<td>Chemical Principles I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 111</td>
<td>Experimental Chemistry I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 202</td>
<td>Fundamentals of Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>ECON 104</td>
<td>Introductory Macroeconomic Analysis and Policy</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 202C</td>
<td>Effective Writing: Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 250</td>
<td>Introductory Physics I</td>
<td>4</td>
</tr>
<tr>
<td>SOILS 101</td>
<td>Introductory Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>WFS 446</td>
<td>Wildlife and Fisheries Population Dynamics</td>
<td>3</td>
</tr>
</tbody>
</table>

Prescribed Courses: Require a grade of C or better

- BIOL 220W | Biology: Populations and Communities | 4       |
- WFS 209N | Wildlife and Fisheries Conservation | 3       |
- WFS 300 | The Vertebrates                          | 2       |
- WFS 301 | Vertebrate Laboratory                    | 2       |
- WFS 310 | Wildlife and Fisheries Measurements       | 3       |

Additional Courses

- FOR 350 | Forest Ecosystem Monitoring and Data Analysis  | 3       |
- or STAT 460 | Intermediate Applied Statistics       |         |
- MATH 111 | Techniques of Calculus II                | 2-4     |
- or MATH 141 | Calculus with Analytic Geometry II     |         |
- STAT 240 | Introduction to Biometry                 | 3       |
- or STAT 301 |                                           |         |

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

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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<tbody>
<tr>
<td>Prescribed Courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFS 410</td>
<td>General Fishery Science</td>
<td>3</td>
</tr>
<tr>
<td>WFS 452</td>
<td>Ichthyology</td>
<td>2</td>
</tr>
<tr>
<td>WFS 453</td>
<td>Ichthyology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>WFS 463W</td>
<td>Fishery Management</td>
<td>3</td>
</tr>
</tbody>
</table>

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 |                                             |         |
- FOR 470 | Watershed Management                           |         |
- WFS 422 | Ecology of Fishes                              |         |
- WFS/ERMSCREQUIMENTS |                                             |         |

For the Major: 43

Select 3 credits of the following: 3

- GEOG 160 | Mapping Our Changing World                     |         |
- GEOG 363 | Geographic Information Systems                 |         |
| GEOSC 303 | Introduction to Environmental Geology          |         |
- GEOSC 340 | Geomorphology                                  |         |
- GEOSC 412 | Water Resources Geochemistry                    |         |
| GEOSC 440 | Marine Geology                                 |         |
- GEOSC 452 | Hydrogeology                                   |         |
Wildlife Option (18-19 credits)

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<tbody>
<tr>
<td>FOR 203</td>
<td>Field Dendrology</td>
<td>3</td>
</tr>
<tr>
<td>WFS 407</td>
<td>Ornithology</td>
<td>3</td>
</tr>
<tr>
<td>WFS 408</td>
<td>Mammalogy</td>
<td>3</td>
</tr>
<tr>
<td>WFS 447W</td>
<td>Wildlife Management</td>
<td>3</td>
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Additional Courses

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>WFS 406</td>
<td>Ornithology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>or WFS 409</td>
<td>Mammalogy Laboratory</td>
<td></td>
</tr>
</tbody>
</table>

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

- BIOL 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 and Inter-Domain courses do not meet this requirement.)

- Quantification (GQ): 6 credits
- Writing and Speaking (GWS): 9 credits

Breadth in the Knowledge Domains (Inter-Domain courses do not meet this requirement.)

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

Integrative Studies

- Inter-Domain Courses (Inter-Domain): 6 credits

Exploration

- GN, may be completed with Inter-Domain courses: 3 credits
- GA, GH, GN, GS, Inter-Domain courses. This may include 3 credits of World Language course work beyond the 12th credit level or the requirements for the student's degree program, whichever is higher: 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 (https://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.