BACHELOR OF SCIENCE IN WILDLIFE SCIENCE

Wildlife science is the application of ecological knowledge in a manner that strikes a balance between the needs of wildlife populations and the needs of people. Coursework and faculty expertise span the animal kingdom and the planet, with a programmatic emphasis on North American species, policies, and practices. The focus is applied ecology, and students gain the skills, knowledge, and abilities required to meet contemporary and future challenges facing wildlife such as restoring habitat, securing populations of rare and vulnerable species, mitigating human-wildlife conflicts, controlling invasive species and disease, managing sustainable harvests, and ensuring species persistence under climate change. The curriculum prepares students for working in state or federal wildlife agencies, non-governmental conservation organizations, or consulting firms and also prepares students for continuing on to a graduate degree program, which may greatly expand employment opportunities and is often necessary for career track positions.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>APM 105</td>
<td>Survey Of Calc &amp; Appl I</td>
<td>4</td>
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<tr>
<td>APM 391</td>
<td>Intro/Probability&amp;Stats</td>
<td>3</td>
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<tr>
<td>EFB 101</td>
<td>Gen Bio I:Organismal Bio&amp;Ecol</td>
<td>3</td>
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<tr>
<td>EFB 102</td>
<td>General Biology I Laboratory</td>
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<td>EFB 103</td>
<td>Gen Bio II:Cell Bio &amp; Genetics</td>
<td>3</td>
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<tr>
<td>EFB 104</td>
<td>General Biology II Laboratory</td>
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<tr>
<td>EFB 120</td>
<td>The Global Environment &amp; Society</td>
<td>3</td>
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<tr>
<td>EFB 132</td>
<td>Orientation Seminar:EFB</td>
<td>1</td>
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<tr>
<td>EFB 202</td>
<td>Ecol Monitor &amp; Bio Assessmnt</td>
<td>3</td>
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<tr>
<td>EFB 210</td>
<td>Diversity of Life I</td>
<td>3</td>
</tr>
<tr>
<td>EFB 211</td>
<td>Diversity of Life II</td>
<td>3</td>
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<tr>
<td>EFB 307</td>
<td>Principles Of Genetics</td>
<td>3</td>
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<tr>
<td>EFB 308</td>
<td>Prin Of Genetics Lab</td>
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<td>Course</td>
<td>Codes*</td>
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<tr>
<td>General Education Course in two of the following categories: US History &amp; Civic Engagement, The Arts, World History and Global Awareness, World Languages</td>
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<td>6</td>
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### Directed Electives

To ensure that Wildlife Science undergraduates obtain both strength and breadth of knowledge, and position themselves for professional certification by The Wildlife Society, 18 elective credits must be obtained in the following subject areas (A-D), through specific courses that are designed for juniors or seniors (i.e. courses numbered 300 or higher)

1. **Field experience (3 credits):**
   - This requirement can be satisfied during any year, and is normally done via coursework at Cranberry Lake Biological Station. ESF field courses offered during semester break, field courses offered by other institutions or organizations (e.g, School for Field Studies), independent research projects, or job-related internships during the summer session.

2. **Vertebrate Structure and Function (3 credits):**
   - Choose at least one course from the following:
     - EFB 385 Comparative Vertebrate Anatomy (4 cr.) S
     - EFB 462 Animal Physiology: Environmental and Ecological (4 cr.) F
     - EFB 480 Principles of Animal Behavior (4 cr.) F

3. **Botany and Plant Science (6 credits)**
   - Choose at least two courses from the following:
     - EFB 326 Plant Evolution, Diversification and Conservation (3 cr.) S
     - EFB 336 Dendrology (3 cr.) F
     - EFB 337 Field Ethnobotany (3 cr.) CLBS
     - EFB 340 Forest Shade and Tree Pathology (3 cr.) F
     - EFB 427 Plant Anatomy and Development (3 cr.) F
     - EFB 429 Plant Physiology (3 cr.) S
     - EFB 435 Flowering Plants: Diversity, Evolution and Systematics (3 cr.) F
     - EFB 440 Mycology (3 cr.) F
     - EFB 445 Plant Ecology and Global Change (3 cr.) S
     - EFB 446 Ecology of Mosses (3 cr.) S
     - EFB 496 Wetland Plants & Communities of Adirondacks (3 cr.) CLBS
     - EFB 496 Flora of Central NY (3 cr.) Maymester

4. **Wildlife Specialization (6 credits):** choose at least two courses from one or more categories as listed below:
1. a. Population and habitat management:
   - EFB 370 Population Ecology and Management (3 cr.) S
   - EFB 438 Ecology and Management of Waterfowl (3 cr.)
   - EFB 449 Wetlands Conservation and Management (3 cr.) S, even years
   - EFB 487 Fisheries Science and Management (3 cr.) F
   - EFB 502 Ecology and Management of Invasive Species (3 cr.) S
   - EFB 518 Systems Ecology: Ecological Modelling and Design
   - FOR 232 Natural Resources Ecology (3 cr.) S
   - FOR 442 Watershed Ecology and Management (3 cr.) F
   - FOR 496 Forest Management and Wildlife (3 cr.) S

b. Wildlife Health:
   - EFB 360 Epidemiology (3 cr.) F
   - EFB 400 Toxic Health Hazards (3 cr.) F
   - EFB 453 Parasitology (3 cr.) F
   - EFB 462 Animal Physiology: Environmental and Ecological (4 cr.) S

c. Biodiversity
   - EFB 352 Entomology (3 cr.) F
   - EFB 355 Invertebrate Zoology (4 cr.) S
   - EFB 413 Introduction to Conservation Biology (3 cr.) F
   - EFB 486 Ichthyology (3 cr.) S
   - EFB 485 Herpetology (3 cr.) F

d. Human dimensions of conservation
   - EFB 305 Indigenous Issues and the Environment (3 cr.) S
   - EST 353 Behavior Change and the Environment (3 cr.) F
   - EST 390 Social Processes and the Environment (3 cr.) S
   - EST 366 Attitudes, Values and the Environment (3 cr.) S, even years
   - EST 460 Land Use Law (3 cr.) S
   - EST 312 Sociology of Natural Resources (3 cr.) S
   - EST 493 Environmental Communication Workshop (3 cr.) S

**Total Minimum Credits For Degree: 126**