Wildlife Ecology and Management Degree: Federal and Professional Society Requirements

Updated 11Feb22

Wildlife Biology Series, 0486
Educational Requirements for Wildlife Biology Credentials

The undergraduate program in Wildlife Ecology and Management at Utah State University is designed to provide students with the skills necessary for both professional employment in wildlife management and the pursuit of graduate studies in ecology and natural resources. A wide variety of subjects, including biophysical sciences, resource policy and economics, human-environment relationships, and resource assessment and planning, are integrated into a broad curriculum.

The undergraduate program is designed to meet the federal Office of Personnel Management (OPM) requirements for the Wildlife Biology Series 0486, although interpretation sometimes varies by the particular application screener. Because student coursework may vary slightly depending on electives or transferred courses, students should use this as a template to fill in courses from their own transcripts. We recommend that in federal applications, the customized table be included as a page of the applicant’s CV to make sure it is reviewed.

<table>
<thead>
<tr>
<th>OPM Requirements (21Oct20)</th>
<th>USU Wildlife Ecology and Management Undergraduate Degree Program Courses</th>
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<tr>
<td>Degree Requirement: A degree that includes each of the following:</td>
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<td>At least 9 semester hours in such wildlife subjects as mammalogy, ornithology, animal ecology, wildlife management, or research courses in the field of wildlife biology</td>
<td>BIOL 5560 (Ornithology) (3 sem. hrs.) -OR- BIOL 5570 (Herpetology) (3 sem. hrs.) -OR- WILD 5560 (Applied Avian Ecology) (3 sem. hrs.) BIOL 5580 Mammalogy (3 sem. hrs.) WILD 4500 Principles of Wildlife Management (3 sem. hrs.) WILD 4600 Conservation Biology (3 sem. hrs.) <strong>TOTAL = 12 sem. hrs.</strong></td>
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<tr>
<td>At least 12 semester hours in zoology in such subjects as general zoology, invertebrate zoology, vertebrate zoology, comparative anatomy, physiology, genetics, ecology, cellular biology, parasitology, entomology, or research courses in such subjects (Excess courses in wildlife biology may be used to meet the zoology requirements where appropriate.)</td>
<td>WILD 3810 Plant &amp; Animal Populations (3 sem. hrs.) WILD 3300 Mgt Aspects of Wildlife Behavior (3 sem. hrs.) WILD 4880 Genetics in Conservation and Management (3 sem. hrs.) WATS 2220 General Ecology (3 sem. hrs.) <strong>TOTAL = 12 sem. hrs.</strong></td>
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<td>At least 9 semester hours in botany or the related plant sciences.</td>
<td>WILD 3830 Range Plant Taxonomy &amp; Function -OR- WILD 3820 Forest Plants: Identification, Biology &amp; Function (3 sem. hrs.) WILD 3800 Wildland Plants and Ecosystems (3 sem. hrs.) WILD 3850 Vegetation &amp; Habitat Mgt (3 sem. hrs.) <strong>TOTAL = 9 sem. hrs.</strong></td>
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Educational requirements for The Wildlife Society (TWS) Associate Wildlife Biologist Certification

https://wildlife.org/learn/professional-development-certification/certification-programs/

The following table shows how the Wildlife Ecology and Management degree requirements meet the TWS educational requirements for the Associate Wildlife Biologist Certification. Because student coursework may vary slightly depending on electives or transferred courses, **students should use this as a template to modify with their specific degree programs.** In addition to these educational requirements, TWS requires a specific number of years of professional experience. See the TWS website link above for more information.

<table>
<thead>
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<th>TWS Requirements (22Oct21)</th>
<th>USU Wildlife Ecology and Management Undergraduate Program Courses (from Sample 4 Year Plan)</th>
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</table>
| **A. Wildlife Management and Biology:** Minimum 12 semester hours in courses emphasizing the principles and practices of wildlife management and an understanding of the biology of wildlife species and their habitat relationships as a basis for management. | BIOL 5580 Mammalogy (3 cr.)  
WILD 4500 Principles of Wildlife Management (3 cr.)  
WILD 4600 Conservation Biology (3 cr.)  
WILD 3300 Mgt Aspects of Wildlife Behavior (3 cr.)  
WILD 2400 Wildland Techniques (3 cr.)  
WILD 2000 Nat Res Professional Orientation (1 cr.)  
**TOTAL = 16 sem. hrs.** |
| **B. Ecology:** Minimum 3 semester hours. Courses in general plant or animal ecology (excludes human ecology). | WATS 2220 General Ecology (3 sem. hrs.)  
**TOTAL = 3 sem. hrs.** |
| **C. Zoology:** Minimum 9 semester hours. Courses in the taxonomy, biology, behavior, physiology, anatomy, and natural history of vertebrates and invertebrates. | BIOL 5560 (Ornithology) (3 sem. hrs.) -OR-  
BIOL 5570 (Herpetology) (3 sem. hrs.) -OR-  
WILD 5560 (Applied Avian Ecology) (3 sem. hrs.)  
WILD 3810 Plant & Animal Populations (3 sem. hrs.)  
WILD 4880 Genetics in Conservation and Management (3 sem. hrs.)  
**TOTAL = 9 sem. hrs.** |
| **D. Botany:** Minimum 9 semester hours. | WILD 3830 Range Plant Taxonomy & Function -OR-  
WILD 3820 Forest Plants: Identification, Biology & Function (3 sem. hrs.)  
WILD 3800 Wildland Plants and Ecosystems (3 sem. hrs.)  
WILD 3850 Vegetation & Habitat Mgt (3 sem. hrs.)  
**TOTAL = 9 sem. hrs.** |
| **E. Physical Sciences:** Minimum 9 semester hours. Includes courses such as chemistry, physics, geology, or soils with at least two disciplines represented. | PSC 3000 Fundamentals of Soil Science (4 cr.)  
CHEM 1110 General Chemistry I (4 cr.)  
CHEM 1120 General Chemistry II (4 cr.)  
CHEM 1125 General Chemistry lab (1 cr.)  
**TOTAL = 13 sem. hrs.** |
| **F. Basis Statistics:** Minimum 3 semester hours. Course(s) in basic statistics. | STAT 3000 Statistics for Scientists (3 cr.)  
**TOTAL = 3 sem. hrs.** |
| **G. Quantitative Sciences:** Minimum 6 semester hours. Courses in calculus, biometry, college algebra, advanced algebra, trigonometry, systems analysis, mathematical modeling, sampling, computer science, or other quantitative science. | MATH 1050 College Algebra (4 cr.)  
MATH 1100 Calculus Techniques (3 cr.)  
**TOTAL = 7 sem. hrs.** |
| **H. Humanities and Social Sciences:** Minimum 9 semester hours. Courses such as economics, sociology, psychology, political science, government, history, literature, or foreign language. | Lower division breadth humanities course (3 cr.)  
Lower division breadth American institutions course (3 cr.)  
Upper division depth humanities & creative arts (3 cr.)  
APEC 3012 Intro to Nat Res and Regional Econ (3 cr.)  
**TOTAL = 12 sem. hrs.** |
| **I. Communications:** | ENGL 1010 Intro to Writing (3 cr.) |
Minimum 12 semester hours. Courses designed to improve communication skills such as English composition, technical writing, journalism, public speaking, or use of mass media.

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<th>ENGL 2010 Intermediate Writing (3 cr.)</th>
<th>WILD 4750 Monitoring &amp; Assessment in NR Mgt (Communication Intensive) (4 cr.)</th>
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<td>WILD 5560 (Applied Avian Ecology)</td>
<td>-OR-</td>
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<tr>
<td>(Communication Intensive) (3 cr.)</td>
<td>WILD 4100 Scientific Communication for NR Professionals</td>
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<td>(Communication Intensive) (3 cr.)</td>
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<td><em>TOTAL = 12 or 13 sem. hrs.</em></td>
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J. **Policy, Administration, and Law:**
Minimum 6 semester hours. Courses that demonstrate significant content or focus on natural resource policy and/or administration, wildlife or environmental law, or natural resource/land use planning will apply, in addition to courses that document contributions to the understanding of social, political, and ethical decisions for wildlife and natural resources management.

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<th>ENVS 4000 Human Dimensions of Nat Res Mgt (3 cr.)</th>
<th>ENVS 3010 Fund of Nat Res and Envtal Policy (3 cr.)</th>
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<td><em>TOTAL = 6 sem. hrs.</em></td>
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