WILDLIFE BIOLOGY AND CONSERVATION

College of Natural Science and Mathematics
Department of Biology and Wildlife
907-474-7671
www.bw.uaf.edu

B.S. Degree

Minimum Requirements for Degree: 120 credits

The undergraduate wildlife program provides basic education and training. This degree is designed for students whose objective is to accomplish the research needed to provide additional information on wild animal populations, their habitat and habitat-animal relationships. This degree is also for students whose primary interests involve interpreting, applying or disseminating research findings, rather than their acquisition. A wildlife B.S. degree is appropriate for students contemplating careers in wildlife agency administration, in developing and implementing wildlife management plans and in public information and education. The curriculum provides a solid foundation for graduate study and meets requirement for certification by The Wildlife Society.

The geographic location of the university is particularly advantageous for the study of wildlife biology. Spruce forest, aspen-birch forest, alpine tundra, bogs and several types of aquatic habitats are within easy reach. Studies can be made in many other habitats ranging from the dense forests of southeastern Alaska to arctic tundra. Adequate study collections of plants and animals are available, and a 2,000-acre study area is near the campus. Wildlife biology students have ample opportunity for close association with the personnel of the Alaska Cooperative Fish and Wildlife Research Unit, Institute of Arctic Biology and several local offices of the federal and state conservation agencies. These agencies often provide support for graduate student projects, and program faculty usually hire a number of students for summer fieldwork. Thus, an unusually good opportunity is available for students to gain experience and to make job connections.

Major — B.S. Degree

1. Complete the general university requirements. (See page 132. As part of the core curriculum requirements, complete COMM F141X.)
2. Complete the B.S. degree requirements (page 137).
3. Complete the following program (major) requirements:*  
   a. Complete the following:
      BIOL F115X—Fundamentals of Biology I *** ............................. 4  
      BIOL F116X—Fundamentals of Biology II *** ............................ 4  
      BIOL F239—Introduction to Plant Biology ............................... 4  
      BIOL F271—Principles of Ecology ........................................ 4  
      BIOL F310—Animal Physiology ............................................ 4  
      BIOL F317—Comparative Anatomy of Vertebrates .................... 4  
      BIOL F331—Systematic Botany .......................................... 4  
      or BIOL F488—Arctic Plants and Vegetation
         Ecology-Lecture .................................................................. 2  
      BIOL F362—Principles of Genetics ....................................... 4  
      ENGL F314W—Technical Writing (3) or ENGL F414W—Research Writing (3) ....................................................... 3  
      WLF F101—Survey of Wildlife Science ................................... 1.5  
      WLF F301—Design of Wildlife Studies ................................... 3  
      WLF F322W—Principles and Techniques of Wildlife Management 3  
      WLF F410—Wildlife Populations and Their Management .......... 3  
      WLF F460 O/2—Wildlife Nutrition ....................................... 4  
   b. Complete at least one of the following:
      BIOL F471—Population Ecology .......................................... 3  
      WLF F305—Wildlife Diseases .............................................. 3  
      WLF F433—Conservation Genetics ........................................ 3  
      WLF F469O—Landscape Ecology and Wildlife Habitat ............ 3  
   c. Complete the following:
      CHEM F105X—General Chemistry** ................................. 4  
      CHEM F106X—General Chemistry** ................................. 4  
      MATH F200X—Calculus (4)** ............................................. 4  
      or MATH F200X—Calculus for Life Sciences (3)** ................ 3 – 4  
      PHYS F103X—College Physics (4) or GEOS F101X—The Dynamics of Earth (4) or NRM F380 W—Soils and the Environment .......................................................... 3 – 4  
      STAT F200X—Elementary Probability and Statistics (3)** or STAT F300—Statistics (3)** ....................................................... 3  
      STAT F401—Regression and Analysis of Variance*** ............ 4  
   d. Complete at least one from each of the following pairs:
      WLF F420O—Ecology and Management of Birds (3) or BIOL F426W, O/2 Ornithology ....................................................... 3  
      WLF F421—Ecology and Management of Large Mammals (3) or BIOL F423—Mammalogy ....................................................... 3  
   e. Complete two of the following:
      NRM F204—Public Lands Law and Policy .......................... 3  
      ECON F235—Introduction to Natural Resources Economics 3  
      NRM F407—Environmental Law .................................... 3  
      HIST F411—Environmental History .................................. 3  
      PS F447—Environmental Politics ...................................... 3  
   f. Complete at least one additional course at the 300-level or higher (3 or 4 credits) in biology, wildlife biology, fisheries or natural resources management.*

4. Minimum credits required .............................................. 120  

   * Students must earn a C grade (2.0) or better in each course.
   ** Satisfies a core requirement.
   *** Satisfies a B.S. degree requirement.

Note: B.S. degree candidates are strongly urged to obtain work experience in wildlife-related positions with public resource agencies or private firms. Faculty members can help students contact potential employers.

Requirements for biology teachers (grades 7 – 12)*

1. Complete all the requirements of the wildlife biology B.S. degree.
2. All prospective biology teachers must complete the following:
   BIOL F342—Microbiology ..................................................... 4  
   BIOL F481—Principles of Evolution ...................................... 4  
   BIOL F303—Principles of Metabolism and Biochemistry (4) or CHEM F321 and CHEM F322—Organic Chemistry (6) .................. 4 – 6  
3. All prospective science teachers must complete the following:
   PHIL F481—Philosophy of Science (3) ................................... 3  
   * We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program, so that you can be appropriately advised of the state of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education's post-baccalaureate teacher preparation program, a one-year intensive program, during your senior year. Above requirements apply to all candidates who apply to the UAF School of Education Spring 2006 or later for licensure in biology.

Minor*

1. Complete the following:
   WLF F301—Design of Wildlife Studies .................................. 3  
   WLF F410—Wildlife Populations and their Management .......... 3  
   WLF F460 O/2—Wildlife Nutrition ....................................... 4  
   Approved BIOL and WLF electives* ...................................... 6  
2. Minimum credits required ................................................ ...... 15  
   * Only biology or wildlife electives that are not required for the student’s major.

Note: Prerequisites for required courses include BIOL F115X–F116X, BIOL F271, BIOL F310, STAT F200X or F300, and WLF F322. Depending upon a student’s major, some of these prerequisites may satisfy the 6 elective credits in biology and wildlife required for this minor.

UNIVERSITY OF ALASKA FAIRBANKS

Office of Admissions and the Registrar • P.O. Box 757480 • Fairbanks, AK 99775-7480 • admissions@uaf.edu • www.uaf.edu

UA is an AA/EEO employer and educational institution and prohibits illegal discrimination against any individual: www.alaska.edu/titleIXcompliance/nondiscrimination.
All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.

**Baccalaureate Core Requirements**

*Note: all courses for Core must be at C- or higher.*

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<tr>
<th>COMMUNICATION (9)</th>
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<td>Complete the following:</td>
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<tr>
<td>ENGL F111X</td>
<td>(3)</td>
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<td>ENGL F190H may be substituted.</td>
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<td>Complete one of the following:</td>
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<td>ENGL F211X OR ENGL F213X</td>
<td>(3)</td>
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<td>Complete one of the following:</td>
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<td>COMM F131X OR COMM F141X</td>
<td>(3)</td>
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<th>PERSPECTIVES ON THE HUMAN CONDITION (18)</th>
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<td>Complete all of the following four courses:</td>
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<td>ANTH F100X/SOC F100X</td>
<td>(3)</td>
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<td>ECON F100X OR PS F100X</td>
<td>(3)</td>
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<td>HIST F100X</td>
<td>(3)</td>
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<td>ENGL/FL F200X</td>
<td>(3)</td>
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<td>Complete one of the following three courses:</td>
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<td>ART/MUS/THR F200X, HUM F201X OR ANS F202X</td>
<td>(3)</td>
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<td>Complete one of the following six courses:</td>
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<td>BA F323X, COMM F300X, JUST F300X, NRM F303X, PS F300X OR PHIL F322X</td>
<td>(3)</td>
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**OR complete 12 credits from the above courses PLUS**

- two semester-length courses in a single Alaska Native language or other non-English language OR
- three semester-length courses (9 credits) in American Sign Language taken at the university level.

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<tr>
<th>MATHEMATICS (3)</th>
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<td>Complete one of the following:</td>
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<td>MATH F103X, MATH F107X, MATH F161X OR STAT F200X</td>
<td>(3 – 4)</td>
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<td><em>No credit may be earned for more than one of MATH F107X or F161X.</em></td>
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<td>OR complete one of the following:*</td>
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<td>MATH F200X, MATH F201X, MATH F202X, MATH F262X OR MATH F272X</td>
<td>(4)</td>
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<td><em>Or any math course having one of these as a prerequisite.</em></td>
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**NATURAL SCIENCES (8)**

Complete any two (4-credit) courses:

- ATM F101X
- BIOL F100X
- BIOL F103X
- BIOL F104X
- BIOL F111X
- BIOL F112X
- BIOL F115X
- BIOL F116X
- CHEM F100X
- CHEM F103X
- CHEM F104X
- CHEM F105X
- CHEM F106X
- CHEM F107X
- CHEM F108X
- GEOG F111X
- GEOG F112X
- GEOS F100X
- GEOS F101X
- GEOS F102X
- GEOS F103X
- GEOS F104X
- GEOS F107X
- PHYS F102X
- PHYS F103X
- PHYS F104X
- PHYS F115X
- PHYS F116X
- PHYS F117X
- PHYS F211X
- PHYS F212X
- PHYS F213X

**LIBRARY AND INFORMATION RESEARCH (0 – 1)**

Successful completion of library skills competency test OR LS F100X or F101X prior to junior standing | (0 – 1) |

**UPPER-DIVISION WRITING AND ORAL COMMUNICATION (0)**

Complete the following:

Two writing intensive courses designated (W) | (0) |

and one oral communication intensive course designated (O) | (0) |

**OR** two oral communication intensive courses designated (O/2), at the upper-division level (see degree and/or major requirements) | (0) |

**CORE CREDITS REQUIRED** | 38 – 39 |

Minimum credits required for degree | 120 |