Wildlife Biology

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: 130 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 field work. 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 116. As part of the core curriculum requirements, complete COMM 141X.)
2. Complete the B.S. degree requirements (page 121).
3. Complete the following program (major) requirements:*
   a. Complete the following:
      BIOL 105X—Fundamentals of Biology I*** 4
      BIOL 106X—Fundamentals of Biology II*** 4
      BIOL 239—Introduction to Plant Biology 4
      BIOL 271—Principles of Ecology 4
      BIOL 310—Animal Physiology 4
      BIOL 317—Comparative Anatomy of Vertebrates 4
      BIOL 331—Systematic Botany 4
      BIOL 362—Principles of Genetics 4
      BIOL 425—Mammalogy 3
      BIOL 426W,O/2—Ornithology 3
      ENGL 314W,O/2—Technical Writing (3)
         or ENGL 414W—Research Writing (3) 3
      NRM 101—Natural Resources Conservation and Policy 3
      NRM/WLF 431—Wildlife Law and Policy (3)
         or NRM 407—Environmental Law (3) 3
      WLF 101—Survey of Wildlife Science 1
      WLF 201—Wildlife Management Principles 3
      WLF 303W—Wildlife Management Techniques 3
      WLF 410—Wildlife Populations and Their Management 3
      WLF 460—Wildlife Nutrition 3
   b. Complete at least one of the following:
      BIOL 471—Population Ecology 3
      WLF 433—Conservation Genetics 3
      WLF 469O—Landscape Ecology and Wildlife Habitat 3
   c. Complete the following:
      CHEM 105X—General Chemistry** 4
      CHEM 106X—General Chemistry** 4
      MATH 200X—Calculus (4)**
         or MATH 272X—Calculus for Life Sciences (3)** 3–4
      PHYS 103X—College Physics 4
      STAT 200X—Elementary Probability and Statistics (3)***
         or STAT 300—Statistics (3)*** 3
      STAT 401—Regression and Analysis of Variance*** 4
   d. Complete three of the following:
      BIOL 303—Principles of Metabolism and Biochemistry 4
      BIOL 406—Entomology 4
      BIOL 407—Aquatic Entomology 3
      BIOL 427—Ichthyology 3
      BIOL 441W,O/2—Animal Behavior 3
      BIOL 444—Reproductive Biology 3
      BIOL 472—Community Ecology 3
      BIOL 473W—Limnology 4
      BIOL 474—Plant Ecology 4
      BIOL 481—Principles of Evolution 3
      NRM 312—Introduction to Range Management 3
      NRM 338—Introduction to Geographic Information Systems 3
      NRM 341—GIS Analysis 4
      NRM 370—Introduction to Watershed Management 3
      NRM 380W—Soils and the Environment 3
      NRM 450—Forest Management 3
      WLF 305—Wildlife Diseases 3
      WLF 419O/2—Waterfowl and Wetlands Ecology and
         Management 4
4. Complete electives
5. Minimum credits required 130

** Student must earn a C grade 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 342—Microbiology 4
   BIOL 481—Principles of Evolution 4
   BIOL 303—Principles of Metabolism and Biochemistry (4)
      or CHEM 321 and CHEM 322—Organic Chemistry (6) 4–6
3. All prospective science teachers must complete one of the following:
   PHIL 380—Conceptual Foundations of Science (3)
      or PHIL 382—Science and Technological limits (3)
      or PHIL 481—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 303W—Wildlife Management Techniques.....3
   WLF 410—Wildlife Populations and Their Management.....3
   WLF 460—Wildlife Nutrition.....3
   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 105X-106X, BIOL 271, BIOL 310, STAT 200X or 300, and WLF 201. Depending upon a student's major, some of these prerequisites may satisfy the 6 elective credits in biology and wildlife required for this minor.

Baccalaureate Core Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.

COMMUNICATION (9)

Complete the following:
ENGL 111X .....(3) _____
ENGL 190H may be substituted.

Complete one of the following:
ENGL 211X OR ENGL 213X .....(3) _____

Complete one of the following:
COMM 131X OR COMM 141X .....(3) _____

PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete all of the following four courses:
ANTH 100X/SOC 100X.....(3) _____
ECON 100X OR PS 100X.....(3) _____
HIST 100X.....(3) _____
ENGL/FL 200X.....(3) _____

Complete one of the following three courses:
ART/MUS/THR 200X, HUM 201X OR ANS 202X ..... (3) _____

Complete one of the following six courses:
BA 323X, COMM 300X, JUST 300X, NRM 303X,
PS 300X OR PHIL 322X.....(3) _____
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.

MATHEMATICS (3)

Complete one of the following:
MATH 103X, MATH 107X, MATH 161X OR STAT 200X .....(3-4) _____
** No credit may be earned for more than one of MATH 107X or 161X.*

OR complete one of the following:*
MATH 200X, MATH 201X, MATH 202X,
MATH 262X OR MATH 272X .....(4) _____
**Or any math course having one of these as a prerequisite*

NATURAL SCIENCES (8)

Complete any two (4-credit) courses:
ATM 101X .....(4) _____
BIOL 100X.....(4) _____
BIOL 103X.....(4) _____
BIOL 104X.....(4) _____
BIOL 105X.....(4) _____
BIOL 106X.....(4) _____
BIOL 111X.....(4) _____
BIOL 112X.....(4) _____
CHEM 100X .....(4) _____
CHEM 103X .....(4) _____
CHEM 104X .....(4) _____
CHEM 105X .....(4) _____
CHEM 106X .....(4) _____
GEOG 205X .....(4) _____
GEOS 100X .....(4) _____
GEOS 101X .....(4) _____
GEOS 112X .....(4) _____
GEOS 120X .....(4) _____
GEOS 125X .....(4) _____
MSL 111X.....(4) _____
PHYS 102X.....(4) _____
PHYS 103X.....(4) _____
PHYS 104X.....(4) _____
PHYS 115X.....(4) _____
PHYS 116X.....(4) _____
PHYS 175X.....(4) _____
PHYS 211X.....(4) _____
PHYS 212X.....(4) _____
PHYS 213X.....(4) _____

LIBRARY AND INFORMATION RESEARCH (0–1)
Successful completion of library skills competency test OR
LS 100X or 101X prior to junior standing ..... (0–1) _____

UPPER-DIVISION WRITING AND ORAL COMMUNICATION (0)

Complete the following:
Two writing intensive courses designated (W) .....(0) _____
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) _____

TOTAL CREDITS REQUIRED 38–39

UNIVERSITY OF ALASKA FAIRBANKS
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