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,O/2—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)**
  - or MATH F272X—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 F425—Mammalology 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.

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.)

COMMUNICATION (9)

Complete the following:
ENGL F111X .....(3) _____
ENGL F190H may be substituted.

Complete one of the following:
ENGL F211X **OR** ENGL F213X .....(3) _____

Complete one of the following:
COMM F131X **OR** COMM F141X .....(3) _____

PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete all of the following four courses:
ANTH F100X/SOC F100X .....(3) _____
ECON F100X **OR** PS F100X .....(3) _____
HIST F100X.....(3) _____
ENGL/FL F200X .....(3) _____

Complete one of the following three courses:
ART/MUS/THR F200X, HUM F201X **OR** ANS F202X .... (3) _____

Complete one of the following six courses:
BA F323X, COMM F300X, JUST F300X, NRM F303X,
PS F300X **OR** PHIL F322X .....(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 F103X, MATH F107X, MATH F161X **OR**
STAT F200X .....(3 – 4) _____
** No credit may be earned for more than one of MATH F107X or F161X.*

OR complete one of the following:*
MATH F200X, MATH F201X, MATH F202X,
MATH F262X **OR** MATH F272X.....(4) _____
**Or any math course having one of these as a prerequisite.*

NATURAL SCIENCES (8)

Complete any two (4-credit) courses:
ATM F101X.....(4) _____
BIOL F100X .....(4) _____
BIOL F103X .....(4) _____
BIOL F104X .....(4) _____
BIOL F111X .....(4) _____
BIOL F112X .....(4) _____
BIOL F115X .....(4) _____
BIOL F116X .....(4) _____
CHEM F100X.....(4) _____
CHEM F103X.....(4) _____
CHEM F104X.....(4) _____
CHEM F105X.....(4) _____
CHEM F106X.....(4) _____
GEOG F111X.....(4) _____
GEOS F100X.....(4) _____
GEOS F101X.....(4) _____
GEOS F112X.....(4) _____
GEOS F120X.....(4) _____
GEOS F125X.....(4) _____
MSL F111X.....(4) _____
PHYS F102X.....(4) _____
PHYS F103X.....(4) _____
PHYS F104X.....(4) _____
PHYS F115X.....(4) _____
PHYS F116X.....(4) _____
PHYS F175X.....(4) _____
PHYS F211X.....(4) _____
PHYS F212X.....(4) _____
PHYS F213X.....(4) _____

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

UNIVERSITY OF ALASKA FAIRBANKS
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