

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: 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 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 131. As part of the core curriculum requirements, complete COMM F141X.)
2. Complete the B.S. degree requirements (page 136).
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
BIOL F362—Principles of Genetics	4
BIOL F425—Mammalogy	3
BIOL F426W,O/2—Ornithology	3
ENGL F314W,O/2—Technical Writing (3)	
or ENGL F414W—Research Writing (3)	3
NRM F101—Natural Resources Conservation and Policy	3
NRM F204—Public Lands Law and Policy (3)	
or NRM F407—Environmental Law (3)	3
WLF F101—Survey of Wildlife Science	1
WLF F201—Wildlife Management Principles	3
WLF F303W—Wildlife Management Techniques	3
WLF F410—Wildlife Populations and Their Management	3
WLF F460—Wildlife Nutrition	4

- b. Complete at least one of the following:

BIOL F471—Population Ecology	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
STAT F200X—Elementary Probability and Statistics (3)***	
or STAT F300—Statistics (3)***	3
STAT F401—Regression and Analysis of Variance***	4
 - d. Complete three of the following:

BIOL F303—Principles of Metabolism and Biochemistry	4
BIOL F406—Entomology	4
BIOL F427—Ichthyology	3
BIOL F441W,O/2—Animal Behavior	3
BIOL F472W—Community Ecology	3
BIOL F473W—Limnology	4
BIOL F474—Plant Ecology	4
BIOL F481—Principles of Evolution	3
NRM F312—Introduction to Range Management	3
NRM F338—Introduction to Geographic Information Systems	3
NRM F435—GIS Analysis	4
NRM F370—Introduction to Watershed Management	3
NRM F380W—Soils and the Environment	3
NRM F450—Forest Management	3
WLF F305—Wildlife Diseases	3
WLF F419O/2—Waterfowl and Wetlands Ecology and Management	4
 4. Complete electives
 5. Minimum credits required 130
- * 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
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- * 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 F303W—Wildlife Management Techniques.....3
 - WLF F410—Wildlife Populations and Their Management.....3
 - WLF F460—Wildlife Nutrition.....4
 - Approved BIOL and WLF electives*.....6
 2. Minimum credits required15
- * 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 F201. 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 completed with 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



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