

Wildlife Biology

College of Natural Science and Mathematics
Department of Biology and Wildlife
(907) 474-7671
<http://mercury.bio.uaf.edu/biolwild/>

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 do 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 107. As part of the core curriculum requirements, complete: COMM 141X.)
2. Complete the B.S. degree requirements (page 114).
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
BIOL 471—Population Ecology	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—Nutrition and Physiological Ecology of Wildlife	3
 - b. 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 200—Elementary Probability and Statistics (3)***	
or STAT 300—Statistics (3)***	3
STAT 401—Regression and Analysis of Variance***	4
 - c. Complete 3 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 480—Water Pollution Biology	3
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):*

- Complete all the requirements of the wildlife biology B.S. degree.
- 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
- 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

- Complete the following:
 - WLF 303W—Wildlife Management Techniques 3
 - WLF 410—Wildlife Populations and Their Management 3
 - WLF 460—Nutrition and Physiological Ecology of Wildlife..... 3
 - Approved BIOL and WLF electives* 6
 - 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 200 or STAT 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.*
- Note: Page numbers refer to the UAF 2005-2006 academic catalog, which can be viewed online at www.uaf.edu/catalog/.**

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 107X, MATH 161X OR MATH 103X (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

