Wildlife Science Major

Utah State University

Department of Wildland Resources
College of Natural Resources

Published November 2009 **Effective for students beginning degree Summer Sem. 2009 thru Spring Sem. 2010**

Admission Requirements For This Major

1. New freshmen admitted to USU in good standing qualify for admission to this major.

2. Transfer students from other institutions or from other USU majors need at least a 2.5 total GPA to be admitted to the Wildlife Science major in good standing. Special attention will be given to the number of, and performance in, prerequisite math and science courses.

The Program

By common usage, the term *wildlife* refers to free-ranging mammals and birds living in their natural habitats. It has been only a few decades since that term became separated from *game,* which refers to animals hunted for sport. At Utah State University, the undergraduate program in wildlife science covers the ecology, behavior, conservation, and management of wildlife populations and communities in terrestrial ecosystems. There is an emphasis on the indigenous wildlife of the intermountain region of the western USA, although students are exposed to case-studies from all over the world to ensure that graduates are qualified to work as practitioners of wildlife science in any terrestrial ecosystem on any continent. The curriculum is designed to provide students with the flexibility needed for achieving specific career goals, such as meeting the USA federal government's Office of Personnel Management requirements for the post of Wildlife Biologist, or achieving certification by The Wildlife Society, etc. Alternatively, students can select courses to prepare them for entry into a graduate program, where they will specialize within a discipline related to wildlife science, such as ecology, animal damage management, or conservation biology.

The formal requirements for a Wildlife Science major, together with University Studies requirements, are outlined in this program guide, which students are urged to read carefully and discuss with their academic advisor. The Wildlife Science major is an intensive campus-based program designed with the expectation that students will acquire additional practical experience through various summer internship opportunities coordinated within the College of Natural Resources. Furthermore, undergraduate students are encouraged to join the Wildlife Club, which is Utah State University's student chapter of The Wildlife Society. This club provides enjoyable opportunities for getting acquainted with the wildlife profession.

Career Opportunities

The Wildlife Science degree educates students for employment with state and federal wildlife or land management agencies, environmental consulting companies, private industry with environmental divisions, private land owners, and nonprofit environmental organizations. These graduates will typically work as wildlife biologists, conservation officers, habitat managers, or research technicians. In addition, some will further their education in graduate school. Employment opportunities are becoming increasingly favorable for Wildlife Science graduates. This is mainly due to a wave of "baby-boomer" retirements sweeping through federal and state wildlife agencies, combined with modern society's growing awareness of the need for improved understanding and conservation of our valuable wildlife resources.

Degrees and Programs Offered Through This Department

Conservation and Restoration Ecology: Bachelor of Science (BS)

Forestry: BS, Master of Science (MS), and Doctor of Philosophy (PhD)

Rangeland Resources: BS

Range Science: MS and PhD

Wildlife Science: BS

Wildlife Biology: MS and PhD

Ecology: MS and PhD

Natural Resources: Master of Natural Resources (MNR)

Academic Advisement

All students should contact their academic advisor for assistance with course selection, program planning, and meeting graduation requirements. If they do not know who their advisor is, students should contact the Department of Wildland Resources (NR 206) or the College of Natural Resources Academic Service Center (NR 120).

Graduation Requirements: BS Degree in Wildlife Science

Minimum University Requirements*

Total credits	120
Grade point average (most majors require higher GPA)	2.00 GPA
Credits of *C*- or better	100
Credits of upper-division courses (#3000 or above)	40
USU credits	30
(20 of which must be upper division, including 10 required by major)	
Completion of approved major program of study	See department
Credits in minor (if required by department)	12
Credits in American Institutions (ECN 1500; HIST 1700, 2700, or 2710; POLS 1100; or USU 1300)	3
University Studies requirements	See below

*Colleges and departments may require more credits or a higher GPA. See requirements on this sheet.

University Studies Requirements for Wildlife Science Major

Note: Approved University Studies courses and requirements are listed in the *General Catalog*. The most current listings are shown online at: **http://www.usu.edu/generalcatalog/**

General Education Requirements (30-34 credits)

Competency Requirements (9-10 credits)

Communications Literacy (CL1 and CL2) (6 credits)

ENGL 1010 (CL1) (3 credits) or satisfactory AP, CLEP, IBO, ACT, or SAT score

AND

ENGL 2010 (CL2) (3 credits) or satisfactory IBO score

Quantitative Literacy (QL) (3-4 credits)

MATH 1050 (4 credits)

OR

MATH 1100 (3 credits)

OR

Satisfactory AP, CLEP, IBO, ACT, or SAT score

Computer and Information Literacy (0 credits)

Passing grade on six computer and information literacy related examinations. Students must pass all six examinations before earning 37 USU semester credits. (Effective Spring Semester 2010, students must fulfill this requirement prior to enrolling in ENGL 2010.)

Breadth Requirements (18-20 credits)

Select at least one approved course from each of the following six categories: **American Institutions (BAI), Creative Arts (BCA), Humanities (BHU), Life Sciences (BLS), Physical Sciences (BPS),** and **Social Sciences (BSS)**. (CLEP or AP credit may be used.) At least two of the six breadth courses must be University Studies courses with a **USU prefix** (excluding USU 1000, 1010, 1100, 3330, 4900, and 6900). BIOL 1620 (BLS) and CHEM 1110 (BPS), 1120 (BPS), or 1220 (BPS) may be used toward this requirement. ENVS 2340 (BSS) is recommended.

Exploration Requirement (3-4 credits)

Choose an additional class from one of the following General Education categories: QL, BAI, BCA, BHU, BLS, BPS, or BSS. Since MATH 1050 and 1100 are both required for the Wildlife Science major, one of these courses will fulfill the Quantitative Literacy requirement and the other will fulfill the Exploration requirement.

Depth Education Requirements

Communications Intensive (CI) (2 courses)

WILD 3300 and 4750 will meet this requirement.

Quantitative Intensive (QI) (1 course)

STAT 2000 or 3000 will meet this requirement.

Depth Course Requirements (4 credits minimum, including 2 credits minimum completed in *each* of two courses)

Complete at least 2 credits in approved 3000-level or above courses from each of the following two categories: **Humanities and Creative Arts (DHA)** and **Social Sciences (DSS)**. ENVS 4000 (DSS) may be used toward this requirement. PHIL 3510 (DHA) is recommended.

Wildlife Science Major (80 credits)

All courses required for the major must be taken on an *A-B-C-D-F* basis. A grade of *C-* or better is required for all WILD courses used to meet the requirements for a major in Wildlife Science. The grade point average for all courses taught by the College of Natural Resources must be 2.5 or higher.

A. General Science Foundation Courses (34 credits) **Credits**

- ☐ **BIOL 1610** Biology I (F). . . . 4
- ☐ **BIOL 1620 (BLS)**[1] Biology II (Sp) 4
- ☐ **MATH 1050 (QL)** College Algebra (F,Sp,Su) 4
- ☐ **MATH 1100 (QL)** Calculus Techniques (F,Sp,Su) 3
- ☐ **SOIL 3000** Fundamentals of Soil Science (F) 4
- ☐ **STAT 2000 (QI)** Statistical Methods (F,Sp) (3 cr) **or**
- ☐ **STAT 3000 (QI)** Statistics for Scientists (F,Sp,Su) (3 cr) 3
- ☐ **NR 2220** General Ecology (F,Sp) 3

Select one of the following chemistry series (9 credits):

General Chemistry Series

- ☐ **CHEM 1110 (BPS)** General Chemistry I (F,Sp) 4
- ☐ **CHEM 1115** General Chemistry Laboratory (F,Sp) 1
- ☐ **CHEM 1120 (BPS)** General Chemistry II (Sp) 4

Chemistry Principles Series

- ☐ **CHEM 1210** Principles of Chemistry I (F,Sp) 4
- ☐ **CHEM 1215** Chemical Principles Laboratory I (F,Sp) 1
- ☐ **CHEM 1220 (BPS)** Principles of Chemistry II (F,Sp,Su) 4

B. Departmental Common Courses (24 credits) **Credits**

- ☐ **WILD 2000** Introduction to Wildland Resources (F,Sp) 1
- ☐ **WILD 3600** Wildland Plant Ecology and Identification (F) 4
- ☐ **WILD 3610** Wildland Animal Ecology and Identification (F) 4
- ☐ **WILD 3800** Wildland Ecosystems (Sp) 3
- ☐ **WILD 3810** Plant and Animal Populations (Sp) 3
- ☐ **WILD 4750 (CI)** Monitoring and Assessment in Natural Resource and Environmental Management (F) 3
- ☐ **WILD 4850** Vegetation and Habitat Management (F) 3
- ☐ **WILD 4910** Assessment and Synthesis in Natural Resource Science (Sp) 3

C. Degree Program Courses (22 credits)

- ☐ **BIOL 5560** Ornithology (Sp) (3 cr) **or**
- ☐ **BIOL 5570** Herpetology (Sp) (3 cr) 3
- ☐ **BIOL 5580** Mammalogy (F) 3
- ☐ **ENVS 3000** Natural Resources Policy and Economics (F) 4
- ☐ **ENVS 4000 (DSS)** Human Dimensions of Natural Resource Management (F) 3
- ☐ **WILD 3300 (CI)** Management Aspects of Wildlife Behavior (Sp) 3
- ☐ **WILD 4500** Principles of Wildlife Management (Sp) 3
- ☐ **WILD 4880** Genetics in Conservation and Management (F) 3

D. Electives

Students may take the remainder of the 120 credits from any department. The guidelines described previously under "Breadth Requirements" and "Depth Education Requirements" should be consulted to ensure meeting University Studies Requirements.

Students who transfer to USU with an Associate of Arts (AA) or Associate of Science (AS) degree from an approved institution will have satisfied the General Education portion of the University Studies requirements, but will still need to complete the Depth Education portion.

[1]University Studies designations, including (BLS), (BPS), (DSS), (CI), (QI), and (QL), indicate that these courses may be counted for University Studies requirements, as well as for the Wildlife Science major.

Note: Students wanting to pursue federal employment should check the following U.S. Office of Personnel Management website for a listing of required coursework:
http://www.opm.gov/qualifications/SEC-IV/B/GS0400/0486.HTM

Wildlife Science Major Recommended Four-Year Plan of Study

Students should meet regularly with their faculty advisor and carefully plan their academic program, keeping in mind that many upper-division courses have prerequisites and must be taken in sequence. Students following the recommended schedule listed below should be able to complete degree requirements in four years (eight semesters).

A. First Year (28 credits)

Fall Semester (14 credits) **Credits**

- ☐ **BIOL 1610** Biology I. . . . 4
- ☐ **ENGL 1010 (CL1)** Introduction to Writing: Academic Prose 3
- ☐ **ENVS 2340 (BSS)** Natural Resources and Society (3 cr) **or**
- ☐ Other approved Breadth Social Sciences (BSS) course (3 cr) 3
- ☐ **USU 1300 (BAI)** U.S. Institutions (3 cr) **or**
- ☐ Other approved Breadth American Institutions (BAI) course (3 cr) . . . 3
- ☐ **WILD 2000** Introduction to Wildland Resources 1

Spring Semester (14 credits)

- ☐ **BIOL 1620 (BLS)** Biology II 4
- ☐ **MATH 1050 (QL)** College Algebra 4
- ☐ **USU 1320 (BHU)** Civilization: Humanities (3 cr) **or**
- ☐ Other approved Breadth Humanities (BHU) course (3 cr) 3
- ☐ **USU 1330 (BCA)** Civilization: Creative Arts (3 cr) **or**
- ☐ Other approved Breadth Creative Arts (BCA) course (3 cr) 3

B. Second Year (29-30 credits)

Fall Semester (15-16 credits) **Credits**

- ☐ **CHEM 1110 (BPS)** General Chemistry I (4 cr) **or**
- ☐ **CHEM 1210** Principles of Chemistry I (4 cr) 4
- ☐ **MATH 1100 (QL)** Calculus Techniques 3
- ☐ **NR 2220** General Ecology 3
- ☐ Approved Depth Humanities and Creative Arts (DHA) course 2-3
- ☐ Elective course(s) 3

Spring Semester (14 credits)

- ☐ **CHEM 1115** General Chemistry Laboratory (1 cr) **or**
- ☐ **CHEM 1215** Chemical Principles Laboratory I (1 cr) 1
- ☐ **CHEM 1120 (BPS)** General Chemistry II (4 cr) **or**
- ☐ **CHEM 1220 (BPS)**[2] Principles of Chemistry II (4 cr) 4
- ☐ **ENGL 2010 (CL2)** Intermediate Writing: Research Writing in a Persuasive Mode 3
- ☐ **STAT 2000 (QI)** Statistical Methods (3 cr) **or**
- ☐ **STAT 3000 (QI)** Statistics for Scientists (3 cr) 3
- ☐ Elective course(s) 3

[2]CHEM 1220 may conflict with other courses taught this semester. This course could be taken during spring semester of the senior year.

C. Third Year (30 credits)

Fall Semester (15 credits)

- ☐ **SOIL 3000** Fundamentals of Soil Science 4
- ☐ **WILD 3600** Wildland Plant Ecology and Identification. 4
- ☐ **WILD 3610** Wildland Animal Ecology and Identification. 4
- ☐ **WILD 4880** Genetics in Conservation and Management 3

Spring Semester (15 credits)

- ☐ **WILD 3300 (CI)** Management Aspects of Wildlife Behavior 3
- ☐ **WILD 3800** Wildland Ecosystems 3
- ☐ **WILD 3810** Plant and Animal Populations. 3
- ☐ Elective courses. 6

D. Fourth Year (32 credits)

Fall Semester (16 credits) **Credits**

- ☐ **BIOL 5580** Mammalogy 3
- ☐ **ENVS 3000** Natural Resources Policy and Economics. 4
- ☐ **ENVS 4000 (DSS)** Human Dimensions of Natural Resource Management 3
- ☐ **WILD 4750 (CI)** Monitoring and Assessment in Natural Resource and Environmental Management 3
- ☐ **WILD 4850** Vegetation and Habitat Management 3

Spring Semester (16 credits)

- ☐ **BIOL 5560** Ornithology (3 cr) **or**
- ☐ **BIOL 5570** Herpetology (3 cr) 3
- ☐ **WILD 4500** Principles of Wildlife Management 3
- ☐ **WILD 4910** Assessment and Synthesis in Natural Resource Science . 3
- ☐ Elective courses[3] 7

[3]As part of these electives, it is recommended that students complete a 3-credit course having an economic emphasis.

Requirement Changes

Graduation requirements shown on this sheet are subject to change. Students should check with their faculty advisor regarding possible changes or for additional information regarding degree requirements, course sequencing, and departmental specialization options and their related coursework.

Materials for Persons with Disabilities

This requirement sheet is available in digital format, recordings, or large print upon request to the USU Disability Resource Center.

For information contact

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