



BIOL 117 - Wildlife Biology Course Outline

Approval Date: 12/17/2020

Effective Date: 08/13/2021

SECTION A

Unique ID Number CCC000255118

Discipline(s) Biological Sciences

Division Science and Engineering

Subject Area Biology

Subject Code BIOL

Course Number 117

Course Title Wildlife Biology

TOP Code/SAM Code 0401.00 - Biology, General / E - Non-Occupational

Rationale for adding this course to the curriculum Textbook update; add minimum qualifications to Discipline; add Degree/transfer applicability

Units 3

Cross List N/A

Typical Course Weeks 18

Total Instructional Hours

Contact Hours

Lecture 54.00

Lab 0.00

Activity 0.00

Work Experience 0.00

Outside of Class Hours 108.00

Total Contact Hours 54

Total Student Hours 162

Open Entry/Open Exit No

Maximum Enrollment

Grading Option Letter Grade or P/NP

Distance Education Mode of Instruction On-Campus

SECTION B

General Education Information:

SECTION C

Course Description

Repeatability May be repeated 0 times

Catalog Description An introduction to the biology, ecology, and management of terrestrial wildlife, with emphasis on California fauna. Includes one Saturday field trip to a wildlife refuge.

Schedule Description

SECTION D

Condition on Enrollment

- 1a. **Prerequisite(s):** *None*
- 1b. **Corequisite(s):** *None*
- 1c. **Recommended:** *None*
- 1d. **Limitation on Enrollment:** *None*

SECTION E

Course Outline Information

1. Student Learning Outcomes:

- A. Identify common, local species of California wildlife from photographs or laboratory specimens.
- B. Describe important life history characteristics of various California wildlife species.
- C. Describe basic principles and methods of wildlife management.

2. Course Objectives: Upon completion of this course, the student will be able to:

- A. Identify (by photograph and description) common species of California mammals, birds, reptiles, and amphibians that might be found locally.
- B. Differentiate between major taxonomic groups of birds and mammals.
- C. Explain the scientific method and its application to the study of wildlife.
- D. Discuss the structure and dynamics of animal populations, including population size, growth, age structure, and variability.
- E. Discuss basic principles of genetics and evolution as they pertain to wildlife populations.
- F. Identify different reproductive strategies used by wildlife.
- G. Discuss migration of birds.
- H. Differentiate between different biomes and habitat types, with a focus on those found in North America.
- I. Explain how the distribution of wildlife is related to habitat structure and the process of succession.
- J. Describe ecosystem processes of energy flow and material cycling in relation to wildlife populations.
- K. Describe methods of sampling wildlife such as trapping and remote sensing; identify what types of data are gathered from wildlife; and discuss how these data are analyzed and used.
- L. Discuss how wildlife habitats are assessed, effects of habitat degradation on wildlife, and how habitats can be managed to benefit wildlife.
- M. Understand the major federal and state legislation that protects wildlife species, including endangered and threatened species and migratory birds.
- N. Discuss some ways in which human users affect wildlife and how human uses of wildlife can be managed.
- O.

3. Course Content

- A. Wildlife Basics
 - a. Defining wildlife
 - b. Ecological concepts

- c. Evolution and natural selection
- B. Wildlife Taxonomy and Identification
 - a. Mammals
 - b. Birds
 - c. Reptiles and amphibians
- C. Sampling and Studying Wildlife
 - a. Wildlife sampling methods
 - b. Data collection
 - c. Data analysis
- D. Habitat
 - a. Habitat assessment
 - b. Habitat management
 - c. Habitat degradation
- E. Human Uses and Interactions
 - a. Wildlife protection legislation
 - b. Hunting
 - c. Endangered and threatened species
 - d.

4. Methods of Instruction:

Activity:

Discussion: Group discussion of relevant research and topics

Field Trips:

Lecture: Lecture covering topics in course content with images

5. Methods of Evaluation: Describe the general types of evaluations for this course and provide at least two, specific examples.

Typical classroom assessment techniques

- Exams/Tests --
- Quizzes --
- Class Work --
- Home Work --

Additional assessment information:

GRADES WILL BE BASED UPON:

1. Examinations - Lecture examinations will consist of objective questions in a variety of formats including short answer, multiple choice, and essay questions.

Example of exams:

Exam 1 topics include definitions, key concepts in ecology and evolution.

Exam 2 topics include the identification of local wildlife from specimens and photographs.

2. Quizzes - Quizzes are short examinations dealing with lecture material.

3. Examples of Homework Assignments:

Analyzing population models

Discuss issues that arise from wildlife populations living in agricultural areas

Letter Grade or P/NP

6. Assignments: State the general types of assignments for this course under the following categories and provide at least two specific examples for each section.

A. Reading Assignments

Students will read assigned materials from their textbook and supplemental readings placed on reserve in the college library.

Example 1: Read chapter 4 to prepare for lecture on genetics in wildlife and fisheries.

Example 2: Read journal article from "The Journal of Wildlife Management" concerning mountain lion population management in the Western states.

Example 3: Read handout: Background information on the federal Endangered Species Act.

Example 4: Read handout: Natural history of wildlife seen on the field trip.

B. Writing Assignments

Written homework assignments will be used to supplement the instruction, allowing students to investigate topics in greater depth than the lecture material.

Example 1: Describe the natural history of a local wildlife species.

Example 2: Summarize the key points of the Endangered Species Act.

C. Other Assignments

Problem sets will be given as homework assignments allowing students to problem solve and to independently investigate topics.

Example 1: Solve population level genetic problem set.

7. Required Materials

A. EXAMPLES of typical college-level textbooks (for degree-applicable courses) or other print materials.

Book #1:

Author: Mahoney,S., Geist, V.

Title: The North American Model of Wildlife Conservation (Wildlife Management and Conservation)

Publisher: Johns Hopkins University Press

Date of Publication: 2019

Edition:

Book #2:

Author: Fryxell, J., A. Sinclair,G. Caughley

Title: Wildlife Ecology, Conservation, and Management

Publisher: Wiley

Date of Publication: 2014

Edition: 3rd

B. Other required materials/supplies.