

**NRM 84 Course Outline as of Fall 2021****CATALOG INFORMATION**

Dept and Nbr: NRM 84 Title: INTRO FISH/WILDLIFE CONS

Full Title: Introduction to Fish and Wildlife Conservation

Last Reviewed: 1/25/2021

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	3.00	8	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

Introduction to the study of fish and wildlife conservation management principles, techniques, and issues, including habitat management and population estimation. Students will become familiar with local and regional wildlife species, as well as develop expertise in wildlife identification and common field techniques used by wildlife managers.

**Prerequisites/Corequisites:****Recommended Preparation:**

Eligibility for ENGL 100 or ESL 100 or appropriate placement based on AB705 mandates

**Limits on Enrollment:****Schedule of Classes Information:**

Description: Introduction to the study of fish and wildlife conservation management principles, techniques, and issues, including habitat management and population estimation. Students will become familiar with local and regional wildlife species, as well as develop expertise in wildlife identification and common field techniques used by wildlife managers. (Grade or P/NP)

Prerequisites/Corequisites:

Recommended: Eligibility for ENGL 100 or ESL 100 or appropriate placement based on AB705 mandates

Limits on Enrollment:

Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>	Transferable	Effective: Spring 1999	Inactive:
<b>UC Transfer:</b>		Effective:	Inactive:

**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Demonstrate knowledge of local and regional wildlife species using common field techniques including population estimation.
2. Compare and contrast fish and wildlife conservation management principles and practices.
3. Discuss and analyze techniques and issues relating to habitat management.

### **Objectives:**

At the conclusion of this course, the student should be able to:

1. Identify common wildlife species using keys and reference books.
2. Summarize the basic survival requirements of fish and wildlife species.
3. Describe the habitat requirements of various game and non-game species.
4. Evaluate the use of various wildlife management techniques involved in habitat modification and population estimation.
5. Compare and contrast the specific tools for determining fish and wildlife population numbers.
6. Differentiate among several wildlife management concepts and select an appropriate one when given a set of criteria.
7. Describe the life histories of several wildlife species.
8. Evaluate the impact of human beings on wildlife management.
9. Assess the effectiveness of wildlife management in endangered species recovery.

### **Topics and Scope:**

#### **I. Introduction**

- A. Neglect and exploitation
- B. History of fish and wildlife conservation in the United States
  1. Resource exploitation and settlement of the U.S.

- 2. Conservation movement and species protection
  - 3. Development of agencies and regulations protecting wildlife
  - 4. Endangered Species Act and the inherent value of wildlife
- C. Wildlife management concepts
- D. California wildlife
  - 1. Bird topography and feather morphology
  - 2. Common birds of California
  - 3. Common mammals of California
  - 4. Fish of California
- II. Wildlife Ecology
  - A. Ecological niche
  - B. Wildlife behavior
  - C. Home range vs. territory
  - D. Dispersal and migration
  - E. Food quality, quantity, and seasonal forage requirements
  - F. Cover
    - 1. Types
    - 2. Shelter and concealment requirements
  - G. Water availability and habitat types
  - H. Competition
  - I. Predation
- III. Wildlife Population Ecology
  - A. Population structure
  - B. Natality to mortality
  - C. Sex and age ratios
  - D. Population dynamics
  - E. Population estimation techniques and tools
- IV. Wildlife Habitat Management
  - A. Succession
  - B. Forest management for wildlife
  - C. Managing rangelands for wildlife
  - D. Identifying limiting factors
  - E. Habitat modification
- V. Techniques
  - A. Record keeping and field journals
  - B. Sexing criteria
  - C. Aging criteria
  - D. Trapping techniques
  - E. Banding and marking techniques
  - F. Food analysis
- VI. Wildlife Diseases
  - A. Significance of wildlife diseases
  - B. Parasites and pathogens
  - C. Diseases and habitat
- VII. Hunting and Trapping
  - A. General theory of harvesting animals
  - B. Managing for the hunter
  - C. Minimizing conflicts
- VIII. Biodiversity and Conservation Biology
  - A. Role of conservation biology in wildlife management
    - 1. Wildlife in parks and refuges
    - 2. State and federal refuges and wildlife areas

3. Habitat corridors and fragmentation
4. Urban wildlife
5. Exotic species
- B. Non-game and endangered species management and recovery
  1. Managing to save
  2. Successful examples of recovery
- C. Overpopulation
- D. Wildlife as a public trust

Concepts presented in lecture are applied and practiced in lab.

### Assignment:

#### Lecture Related Assignments:

1. Weekly reading assignments (20-30 pages)
2. One oral presentation of research on one wildlife species (15 minutes)
3. Final exam

#### Lab Related Assignments:

1. Field work and lab exercises on: population enumeration; trapping and marking; sexing and aging techniques
2. Field work and lab telemetry exercise
3. Two to five short written lab reports on large mammals, birds, and fish with a complete description of each species, their preferred habitat, feeding habits, and life cycle (2-5 pages)
4. Midterm lab exam

### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Lab reports	Writing 10 - 30%
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**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Field work, lab exercises	Problem solving 20 - 40%
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**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Oral presentation	Skill Demonstrations 20 - 40%
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**Exams:** All forms of formal testing, other than skill performance exams.

Final exam	Exams 10 - 30%
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**Other:** Includes any assessment tools that do not logically fit into the above categories.

None

Other Category  
0 - 0%

**Representative Textbooks and Materials:**

Wildlife Ecology and Management, 5th ed. Eric G. Bolen and William Robinson. Prentice Hall. 2002 (classic)

Managing our Wildlife Resources, Anderson, S. Prentice Hall, 2001 (classic)

Field Guide To California, National Audobon Society. Knopf, A. 1998 (classic)

Introduction to Wildlife and Fisheries: An Integrated Approach. 2nd ed. Willis, David and Scalet, Charles. Macmillan learning. 2009 (classic)

Instructor prepared materials