

# FOR 106: PRINCIPLES OF WILDLIFE MANAGEMENT AND ECOLOGY

## Citrus College Course Outline of Record

Heading	Value
Effective Term:	Fall 2021
Credits:	3
Total Contact Hours:	54
Lecture Hours :	54
Lab Hours:	0
Hours Arranged:	0
Outside of Class Hours:	108
Strongly Recommended:	ENGL 101.
Transferable to CSU:	Yes
Transferable to UC:	Yes - Approved
Grading Method:	Standard Letter, Pass/No Pass

## Catalog Course Description

A lecture course examining wildlife management as a science, through which a brief history of wildlife management, ecosystems, population ecology, animal behavior, food and cover, wildlife diseases, predation, endangered species, economics of wildlife, and fisheries are discussed. 54 lecture hours.

## Course Objectives

- outline the major steps of how wildlife management began in the United States
- identify ecological factors which effect diversity and stability of wildlife populations
- explain the need for food, water and cover by wildlife in relation to reproduction and survival
- describe the relationship of predators and predation as part of wildlife ecology and management
- demonstrate the role of economics in wildlife management
- explain the principles of wildlife management including stream management, population management and ecological principles
- outline society's role in wildlife and fisheries management

## Major Course Content

1. Historical Highlights in Wildlife Conservation
  - a. definition
  - b. brief history
  - c. passenger pigeon - an American tragedy
2. Ecosystems
  - a. matter and energy
  - b. range of tolerance
  - c. niche
  - d. natural communities
  - e. diversity and stability
3. Population Ecology
  - a. logistic equation
  - b. births and deaths
  - c. population model
4. Animal Behavior
  - a. habitat selection
  - b. courtship behavior
  - c. reproductive physiology and behavior
  - d. territorial behavior
  - e. dispersal
  - f. migration
5. Food and Cover
  - a. quality of food
  - b. quantity of food
  - c. cover as shelter
  - d. cover as concealment
  - e. edges
6. Water
  - a. ecological influences of water
  - b. water and wildlife populations
  - c. physiological and behavioral responses
  - d. acid rain
  - e. water developments and wildlife
7. Forest Management and Wildlife
  - a. basics of forest management
  - b. clearcutting and wildlife
  - c. snags
  - d. dead and down woody material
  - e. forest fires and wildlife
  - f. old growth forests
8. Wildlife Diseases
  - a. role of wildlife diseases
  - b. diseases and habitat
  - c. diseases and populations
  - d. diseases and biological controls
  - e. lead poisoning
9. Predation
  - a. predation in natural communities
  - b. theoretical predator-prey systems
  - c. predation on domestic animals
  - d. effect of coyote control on other animals
10. Exotic Wildlife
  - a. the case for exotic game
  - b. transplants within North America
11. Endangered Wildlife
  - a. definition
  - b. brief history
  - c. management of endangered species
12. Economics of Wildlife
  - a. wildlife in the market place
  - b. nonconsumptive value of wildlife
  - c. economics of sport hunting
  - d. wildlife values and benefit/cost analysis
  - e. beyond dollars and cents
13. Wildlife and Society

- a. hunting and fishing values
  - b. landowners and sports hunters
  - c. law enforcement: a tool of management
  - d. political considerations
  - e. role of social sciences
  - f. public relations and communication
14. Fisheries Management
- a. basic principles
  - b. stream habitat management
  - c. management of warm water ponds and reservoirs
  - d. trout hatcheries
  - e. fish diseases

## Examples of Required Writing Assignments

Answer a question on an exam such as: Wildlife biologists use the capture-recapture method to estimate the size of a population. It requires capturing, marking, and releasing a known number of animals and then resampling the population later. In class, we showed how this technique (the Lincoln or Peterson Index) is preformed with popcorn seeds. Discuss the pros and cons of this estimation technique and use the following four-year population data set to determine an estimated overall size of this population. You must show all work for full-credit.

## Examples of Outside Assignments

Chapter 2 - Neglect and Exploitation – Study Questions

1. What is market hunting?
2. In 1807, what did the pioneer ornithologist Alexander Wilson, who was upset with the consumption of the robin (*Turdus migratorius*), write about in a newspaper story?
3. Explain the plight of following animals: Bison, Passenger Pigeon, Labrador duck, heath hen, greater prairie chicken, Attwater prairie chicken, Carolina parakeet, great auk, Hawaiian rail
4. What does extinction mean?

## Instruction Type(s)

Lecture, Online Education Lecture