Minnesota State University Moorhead

BIOL 455: Wildlife Ecology

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 3

Lab Hours/Week: 3

OJT Hours/Week: *.*

Prerequisites:
BIOL 345 - Principles of Ecology

Corequisites: None

MnTC Goals: None

The application of ecological principles to the management of wildlife populations. Population dynamics and field techniques are stressed. With lab and field work.

B. COURSE EFFECTIVE DATES: 08/25/2008 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Introduction; What is Wildlife Management? - Wildlife Terminology
   - What is Conservation Biology?
   - History of Conservation
   - Introduction to Radiotelemetry
2. Capturing, Handling, and Marking Animals
   - Nongame and Endangered Wildlife
   - Endangered Species Preservation
   - Management of Exotic Species
   - Neglect and Exploitation
3. Some Successes in Managing Wildlife
   - Ecosystems and Natural Communities
   - Human Impacts:
   - Population Ecology
   - Animal Behavior and Wildlife Management
   -Introduction to GPS and GIS
4. Food and Cover
   - Wildlife Diseases
   - Pesticides and Wildlife
   - Predators and Predation
   - Animals "Dangerous" to Humans
   - Hunting and Trapping
5. Wildlife and Water
   - Wildlife and Soils
   - Wildlife and Farmland
   - Wildlife and Rangelands
   - Deserts and Overgrazing
   - Grasslands and Tundra
6. Forestry Management and Wildlife
   - Tropical Deforestation
   - Old Growth and Spotted Owls
   - Forestry Research Techniques:
   - Quarter Method
   - Random Pairs Method
   - Bitterlich Method
7. Design of Natural Preserves
   - Island Biogeography
   - Mapping
   - Vegetation Sampling Techniques
   - Collecting Techniques (making a plant collection)
   - Point-intercept method
   - Line-intercept method
   - Belt transect method
8. Identification of Mammals and Birds
   - Population Estimation Techniques
   - Aging Techniques and Reproductive
   - Necropsy Techniques; Making Study Skins

D. LEARNING OUTCOMES (General)

1. To gain an understanding of the historical background of conservation and management of wildlife species and how this has influenced current practices in the United States.
2. To gain a better understanding of the depth and breadth of the field of wildlife ecology.
3. To learn to apply ecological principles to the management and conservation of wild populations.
4. To gain hands-on experience in animal observation and field/lab techniques used to study wild animals.
5. To learn to identify selected species (primarily species of the US Midwest) of birds and mammals and some basic ecology about each species.
6. To learn basic concepts about population ecology, habitat use, selected animal diseases, and conservation of endangered species.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted