MRSC A188: MARINE MAMMAL FIELD STUDIES

Item	Value
Curriculum Committee Approval Date	12/08/2021
Top Code	040100 - Biology, General
Units	1 Total Units
Hours	36 Total Hours (Lecture Hours 9; Lab Hours 27)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S)

Course Description

This course offers students the opportunity to survey the ecology, behavior, and life history of various marine mammal groups in a field based setting. In-class meetings will orient students to the specific marine mammal group and the field site that they will explore. The course includes a multi-day field excursion to various locales of ecological interest and may involve camping in primitive wilderness environments. Topics include evolution, human interaction, biology, ecology, life history and conservation of marine mammals. Specific content will vary depending on region and marine mammal life present. ADVISORY: MRSC A187. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Examine current and historical issues surrounding the biology, ecology, evolution and conservation of marine mammals.
2. Investigate different methods for studying animal natural history and employ appropriate methods in a field study of marine mammals

Course Objectives

- 1. Document and analyze field observations
- 2. Relate observations to biological and ecological processes
- 3. Understand impacts due to human interaction
- 4. Understand conservation measures that have been implemented in the past

Lecture Content

Evolutionary relationships to land and other aquatic mammals History of human interaction Hunting Mythical Present human interaction Scientific studies on biology, population status, and behavior Interaction programs Hunting Protecting Biology Adaptations to marine environment Senses Physiology and Anatomy Ecology Reproduction Feeding Symbiotic relationships Predation Conservation Conservation measures Unusual mortality events Observation in the wild

Lab Content

Evolutionary relationships to land and other aquatic mammals Present human interaction Scientific studies on biology, population status, and behavior Interaction programs Protecting Biology Adaptations to marine environment Senses Physiology and Anatomy Ecology Reproduction Feeding Symbiotic relationships Predation Conservation: Observation in the wild Habitat evaluation

Method(s) of Instruction

- Lecture (02)
- Lab (04)

Instructional Techniques

Reading college level textbook, books and journal articles relevant to the target marine mammal Class discussion Student presentations Field observations and data collection Field analysis

Reading Assignments

Reading textbook, journal, and/or various news articles related to the species

Writing Assignments

Student journal of field observations and analysis Current event analysis related to the species

Out-of-class Assignments

Student journal of field observations and analysis Reading textbook, journal, and/or various news articles related to the species

Demonstration of Critical Thinking

Student participation in collection and analysis of field data and observations Student field journals documenting their observations and experience Student writing their synthesis of current events of target marine mammal species

Required Writing, Problem Solving, Skills Demonstration

Student participation in collection and analysis of field data and observations Student field journals documenting their observations and experience Student writing their synthesis of current events of target marine mammal species

Eligible Disciplines

Biological sciences: Masters degree in any biological science OR bachelors degree in any biological science AND masters degree in biochemistry, biophysics, or marine science OR the equivalent. Masters degree required. Ecology: Masters degree in ecology or environmental studies OR the equivalent OR see interdisciplinary studies. Masters degree required.

Textbooks Resources

1. Required Parsons, ECM. An introcution to Marine Mammal Biology and Conservation, 1 ed. Burlington: Jones and Bartlett Learning, 2013 2. Required Davis, R. Marine Mammals Adaptations for an Aquatic Life, ed. Springer International Publishing, 2019