MRSC A187: MARINE MAMMALS

Item	Value
Curriculum Committee Approval Date	02/09/2022
Top Code	040100 - Biology, General
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
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), • Pass/No Pass (B)
Associate Arts Local General Education (GE)	• OC Physical/Biological Sci - AA (OB)
Associate Science Local General Education (GE)	• OCC Physical/Biological Sci-AS (OSB)
California State University General Education Breadth (CSU GE-Breadth)	• CSU B2 Life Science (B2)

Course Description

Explores the natural history, ecology, population dynamics, evolutionary history, communications, energetics, migrations, intelligence, and conservation of marine mammals – including: whales, dolphins, seals, sea lions, walrus, sea cows, sea otters, and polar bears. ADVISORY: ENGL A099 or ESL A099. Transfer Credit: CSU; UC.

Course Level Student Learning Outcome(s)

1. Describe the taxonomy and characteristics of specific species of marine mammals.
2. Discuss the evolution of marine mammal groups.
3. Describe the various ways that humans currently and historically interact with marine mammal populations.
4. Evaluate marine mammal adaptations that have shaped their ability to live in an aquatic environment.

Course Objectives

- 1. Describe the taxonomy of marine mammals and their physical characteristics.
- 2. Teach others, accurately, the steps in the scientific theory of the evolution of marine mammals.
- 3. Write an essay that documents the general outline of the history of human/marine mammal interaction between roughly 2000 B.C. and 2000 A.D.
- 4. List and discuss elements of the history of marine mammal conservation and management.
- 5. Identify current trends in marine mammal research, equipment used for research, and sites of higher education with regard to marine mammals.
- 6. Employ marine mammal library resources to create a Research Presentation by completing a literature research assignment on an issue involving marine mammals.
- 7. Create a power point or website presentation that documents what they have learned from their research assignment that is presented to the class.
- 8. Identify key large bones in the skeleton of a dolphin of a sea lion.

Lecture Content

Why we study marine mammals. Habitat: the N.E. Pacific Ocean environment and southern California Adaptations for living in an aquatic environment Evolution of Marine Mammals. Marine mammal classification and diversity Class field trip – Whale watch Cruise or Citizen Science project Pacific coast bottlenose dolphins and other marine mammals found in Southern California Use of sound in the ocean Field trip to the L.A. County Museum of Natural History Marine Mammal Warehouse or anatomy instruction in the classroom Feeding behavior, ecology and reproduction of polar bears, otters, sirenians, pinnipeds, mysticetes, and odontocetes. Field trip to the Pacific Marine Mammal Care Center or instruction on rescue and rehabilitation Humans and marine mammals - historical and current Threats to marine mammals Marine mammal research techniques Research Paper and Presentations.

Method(s) of Instruction

- Lecture (02)

Instructional Techniques

Lecture with power point presentations, in class demonstrations, 2-3 separate class field trips, quizzes, exams, semester research paper assignment, reading assignments, and, optional, student initiated field trips appropriate to subject.

Reading Assignments

Chapter reading assignments from required textbook - 60 hours

Writing Assignments

Research paper - 10 hours

Out-of-class Assignments

Students will be required to complete a research project on a marine mammal topic - 20 hours Current event research - 10 hours Field trips - 8 hours Total 38 hours

Demonstration of Critical Thinking

Three to four exams that include essays/brief responses in addition to multiple choice, true and false, and matching questions. Weekly quizzes of chapter reading assignments, participation in field trips, in-class work on skeletal reconstruction assignment, written report of research assignment, and oral presentation to class based on research assignment.

Required Writing, Problem Solving, Skills Demonstration

Each of the exams include essays/and brief response questions. Written assignments completed for each field trip. Research assignment resulting in a written report. Oral presentation of research assignment.

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.

Textbooks Resources

1. Required Davis, R. Marine Mammal Adaptations for an Aquatic Life, 1 ed. Galveston TX: Springer, 2019