MRSC A124: ECOLOGY OF THE GRAY WHALE

Item	Value
Curriculum Committee Approval Date	04/14/2021
Top Code	030100 - Environmental Science
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), • Pass/No Pass (B)

Course Description

Gray whales are unique among cetaceans in their migrations, feeding strategy, and their history of interactions with humans. This course highlights the gray whale's evolution, anatomy and physiology, and ecology. It consists of a lecture component and field excursions that provides an opportunity to view these whales in the wild. The course may also be offered as a study abroad class that includes a multi-day field excursion that provides an opportunity to view these whales in close proximity in at least one of their calving lagoons in Baja California, Mexico. Field trip required. Enrollment Limitation: ESEC A124; students who complete MRSC A124 may not enroll in or receive credit for ESEC A124. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Describe the history of hunting gray whales and how hunting has affected its population.
2. Outline the life history of the Eastern Pacific stock of gray whales including their migration, birthing, and feeding activities.
3. Compare and contrast human influence, past and present, on the Eastern Pacific stock of gray whales.

Course Objectives

- 1. Explain gray whale biology and ecology.
- 2. Solve unfamiliar problems and questions dealing with gray whale natural history.
- 3. Put together a talk about gray whales aboard a local whale watch boat operated by a local landing.
- 4. Taxonomically classify gray whales.
- 5. Understand the evolution of gray whales and other baleen whales.
- 6. Knowledge of the gray whales that have been kept in captivity.

Lecture Content

A. Introduction to the Gray Whale other marine mammal classification taxonomy. B. Evolutionary and natural history of cetaceans and the gray whale. Pre-human populations and distribution. C. Historic human/Gray Whale interaction until whale watch era. Aboriginal and commercial whaling. D. Recent human/Gray Whale interaction. From whale watch era on to present. E. Gray Whale in captivity - The Gigi Story. Gray Whale predators. The southward migration and lagoon activity and behavior. F. The migration northward and feeding in the Bering and Arctic Seas. G. Protection, conservation, management, and research - Gray Whales today!

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- Lab (04)
- DE Live Online Lab (04S)

Instructional Techniques

Lecture and discussion, video, field studies, interactive computer demonstrations/animations, guest speakers, and hands-on field experience.

Reading Assignments

Assigned textbook: 1 hour per week for 8 weeks.

Writing Assignments

Students are required to keep a journal documenting their learning in class, reading of the text, and field studies. 2.5 hours per week for 8 weeks.

Out-of-class Assignments

Research: 1 hour per week for 8 weeks.

Demonstration of Critical Thinking

Weekly quizzes, comprehensive final exam including true/false, multiple choice, matching, fill-in, essay questions, and final project.

Required Writing, Problem Solving, Skills Demonstration

Students are required to keep a journal documenting their learning in class, reading of the text, and field studies.

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 James Sumich. E. robustus: The Biology and Human History of Gray Whales , 1st ed. Whale Cove Marine Education, 2014