ESEC A124: ECOLOGY OF THE GRAY WHALE

Item	Value
Curriculum Committee Approval Date	12/02/2020
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
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)

Course Description

Ecology and natural history of the California Gray Whale and the Orange County Whale Watch program. Completion qualifies students as docents on whale watching boats. Field trip required. Enrollment Limitation: MRSC A124; students who complete ESEC A124 may not enroll in or receive credit for MRSC A124. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Describe the influence of humans on gray whale populations, including past and present hunting practices, protective legislation, scientific exploration, and whale watching.
2. Outline the life history of the Eastern Pacific stock of gray whales including their migration, mating, birthing, and feeding activities.
3. Explain the possible reasons that gray whales undergo the extensive migration from Alaska to Baja and adaptations to survive the trip.

Course Objectives

- 1. Explain Gray Whale ecology as it relates to living in the ocean and the organisms it interacts with.
- 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.
- 7. Provide examples of how gray whales have adapted to live in the ocean.
- 8. Explain the migration of Eastern Pacific gray whales.

Lecture Content

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

Lab Content

Field trip to see gray whales in their natural environment. Make observations of gray whale activities in their natural environment. Keep a journal of the gray whale field trip.

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: Master's degree in any biological science OR bachelor's degree in any biological science AND master's degree in biochemistry, biophysics, or marine science OR the equivalent. Master's degree required. Ecology: Master's degree in ecology or environmental studies OR the equivalent OR see interdisciplinary studies. Master's degree required.

Textbooks Resources

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