

**Biology and Conservation of Marine Mammals  
FW302**

**Credit hours:** 4

**Term offered:** Summer

**Instructor:** Jim Sumich

**Course objectives:**

The successful student will be able to:

- List the major taxonomic groups of extant marine mammal groups and provide a species example of each.
- Examine the known evolutionary history of cetaceans and pinnipeds.
- Describe the zoogeographic patterns of selected species of marine mammals.
- Illustrate the patterns of apneustic breathing and the anatomical and physiological adaptations used for long breath holds.
- Describe the relationships between cetacean migratory cycles, reproductive patterns, and cycles of marine phytoplankton production.
- Describe the anatomic and acoustic bases of echolocation in cetaceans.
- Formulate a program for the conservation of a hypothetical stock of a seriously depleted marine mammal stock or species.

**Course content:** An examination of the biology of whales, pinnipeds, and other marine mammals, include general adaptations to a marine existence; systematics and biogeography; reproduction; diving physiology; communication and echolocation; feeding and migratory behavior; and marine mammal/human interactions. Emphasis will be placed on species occurring in the North Pacific Ocean.

**Prerequisite(s):** One year of introductory biology (enforced)

**Text(s):** Berta, A., J. Sumich, and K. Kovacs. 2006. *Marine mammals: Evolutionary Biology*. Academic Press.

**Term paper(s):** Research paper

**Testing:** Midterm and final

**Students for whom the course is intended:** Students interested in the conservation of marine mammals and ecosystems.