



Zoology 379

Introduction to Marine Biology

Tentative Course Outline and Schedule for Winter semester Reading week, 2010.

Instructor : Dr. Carol Gibbons Kroeker
Office : A2156
Phone: 410-2000, ext 5910
Email: ckroeker@ambrose.edu

This course will introduce students to the organisms found in the open ocean as well as in the coastal and inter-tidal zones, how these organisms adapt to the environment, and the factors that control their productivity, distribution and abundance. The course will be multi-disciplinary, including aspects of animal biology, physiology, and ecology. The course will incorporate lectures with class discussions and will emphasize field work with organisms found in the coastal waters of British Columbia. Independent research papers will provide further opportunity for students to explore specific aspects of the biological oceanography of Barkley Sound and the Pacific Northwest.

For this course, we will travel to Bamfield Marine Station, which borders Pacific Rim National Park on Vancouver Island, BC. We will spend several days doing hands-on activities that will incorporate lecture material in Marine Biology. There will be readings to be completed before the travel portion of the course, as well as papers to be completed when we return.

The laboratory portion of the course will include:

- Observations in open coast intertidal areas (sandy, rocky, cobbles): natural history, intertidal zonation, adaptations, interactions between species.
- Semi-protected coast intertidal studies (quantitative and qualitative studies)
- Plankton collection and microscopic examination
- Natural history of docks and pilings
- Collection and analysis of oceanography data (temperature and salinity)
- Open ocean dredging to examine subtidal sea life
- Open ocean surveys of seabirds and marine mammals
- Laboratory instruction on marine invertebrates, and "hands-on" knowledge
- Laboratory studies of seaweed ecology, diversity and human use
- Laboratory studies of behaviour, physiology, taxonomy, etc. of specific groups of marine organisms in display tanks and sea water tables
- Slide shows and educational workshops (marine mammals, species at risk, biodiversity and conservation, kelp forest ecology)
- Lab studies of marine mammal and seabird adaptations.
- Temperate rainforest ecology and ethnobotany walks