

OCEAN 101: Survey of Oceanography

Holistic view of fundamental principles of ocean science; the geography and geology of ocean basins; chemistry of sea water; physical dynamics of currents, waves, and tides; coastal processes; and the biology of diverse ecosystems such as deep sea vents, coral reefs, and estuaries. Intended for nonmajors.

Course description

This course will introduce you to the fundamental principles of oceanography by focusing on the waters that surround us – the Washington coast and Puget Sound. Topics including the geologic history of the Pacific Northwest, the physics and chemistry of coastal waters, marine foodwebs and ecology, and environmental concerns will be introduced using relevant and timely case studies.

A lab section is run concurrently with the lectures. The lab work is designed to give students hands-on experience with the topics introduced in lecture and in the text.

Student learning goals

Upon completion of this course, you will be able to:

Explain the geologic history of the Pacific Northwest, and understand why our region is susceptible to seismic and volcanic activity and tsunamis

Describe the fundamental physical and chemical properties of seawater, and explain the temporal and spatial variation in these properties

Describe the major water currents and circulation off the Washington coast and in Puget Sound

Explain the formation of waves, and understand the differences between the major wave types

Explain why coastal waters are biological highly productive and diverse, and why the future productivity of such regions is uncertain

Explain how the ocean influences life on land, and the role it plays in global climate

General method of instruction

The class is structured as three lectures and one lab every week.

The lab section is run concurrently with the lectures. Lab activities are designed to enhance and enforce concepts introduced in lecture and in the text.

Class participation is expected, and attendance in lab is mandatory.

Recommended preparation

This course is intended for nonmajors. There are no prerequisites for this course, and a background in the sciences is not required.

Class assignments and grading

Class participation is expected, and there will be several in-class activities and discussions in lecture. There will be a weekly assignment to be completed in lab. In addition, there will be several homework assignments that involve library and/or internet research. There will be two midterms and a cumulative final exam.

Grading

Your final grade in the class will be determined by the following percentages:

Midterms (2):	30%
Final exam:	20%
Lab assignments and homework:	35%
In-class activities and participation:	15%