

Earth Sciences 584: Principles of Oceanography for Educators

Quarter Credit Hours - 3 under/grad

Prerequisites

In-service teacher, non-formal educator, or education major with junior rank or above by summer of enrollment OR permission of instructor.

Objectives

The goal of this course is to develop an understanding of the global ocean, its characteristics, its important fundamental processes, and the interrelationships of its physical, chemical, biological, and geological systems. We will also develop an appreciation of the important effects of the ocean on global climate and global change, and discuss/demonstrate ways to illustrate oceanographic principles in the classroom.

Texts

To Be Announced

Grades

Grades will be assigned on the basis of class participation (50%) and laboratory exercises (50%).

Tentative Schedule

Sunday evening	Introduction, history of oceanography
Monday morning	Physiography of the oceans (Ex. 1, 2, 3)
Monday afternoon	<u>Biolab</u> cruise; lab session
Monday evening	Formation/evolution of ocean basins (Ex. 4, 5, Supplemental Lab)
Tuesday morning	Physics/chemistry of seawater (Ex. 7, 8)
Tuesday afternoon	Ocean circulation (Ex. 9, 10)
Tuesday evening	Open
Wednesday morning	Kelley's Island fieldtrip
Wednesday afternoon	Ocean circulation (Supplemental Labs)
Wednesday evening	Open
Thursday morning	Waves and tides (Ex. 11, 13, Supplemental Labs)
Thursday afternoon	Biological systems in the ocean (Ex. 14, 15, 16)
Thursday evening	Biological systems (if necessary)
Friday morning	Field trip: Lake Erie shore
Friday afternoon	Field trip: Lake Erie shore
Friday evening	Marine sediments (Ex. 6)
Saturday morning	Tides; Finish exercises

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