

Common Course Outline
ERSC/GEOG 142
Oceanography Laboratory
1 Credit

The Community College of Baltimore County

Description

ERSC/GEOG 142 – 1 credit – Oceanography Laboratory provides experience working with oceanographic data and techniques. Students investigate chemical and physical properties of seawater, biological communities, the interaction of the ocean with the atmosphere and coastal and shoreline features.

1 Credit: 2 laboratory hours

Corequisite: ERSC/GEOG 141

Overall Course Objectives

Upon completion of this course students will be able to:

1. apply oceanographic terms to characteristics of ocean objects;
2. manipulate and present oceanic data numerically and graphically;
3. present oceanographic information using written and/or oral communications;
4. use oceanic equipment and data (simulated or real) properly;
5. solve problems using oceanic data and scientific methods involving oceanic topics;
6. draw conclusions about oceanic processes using oceanic profiles;
7. explain how results from observational technologies are used to develop theoretical models of the ocean;
8. evaluate and document appropriate informational resources to research oceanic topics;
9. discuss the roles that oceanic observational technologies have had within various cultures;
10. incorporate scientific and oceanographic information into written and oral communications regarding climate change;
11. interpret oceanographic data using mathematical methods; and
12. compare and contrast how proximity and interaction with the sea have affected people of diverse cultures throughout history and how they have adapted over time.

Major Topics

- I. Analysis of seafloor topography
- II. Earthquakes and plate tectonics
- III. Oceanic/Atmospheric interaction
- IV. Plankton and simple invertebrates
- V. Sea grass
- VI. Currents and tides
- VII. Coastlines

- VIII. Salt marsh
- IX. Intertidal zone
- X. Marine vertebrates
- XI. Climate change
- XII. Global topics in oceanography and their relationships to a diverse world
- XIII. Western standards of academic and scientific integrity

Course Requirements

Grading procedures will be determined by the individual faculty member but will include the following:

Grading/exams

- A minimum of 1 exam, 2 quizzes, and 1 extended project
- A minimum of 1 activity requiring student collaboration.
- Attendance will be taken each class period as per college policy but no points will be rewarded for attendance. However, in-class assignments may be given that can only be completed within a certain class period.

Written Assignments: A minimum of 3 written assignments, the length and nature of, will be determined by the instructor. One common written assignment will account for a minimum of 10 % of the overall course grade and will address 5 of the 7 General education outcomes. Students are required to locate, evaluate, document, and utilize appropriate academic resources.

Extra Credit: Extra and bonus points awarded in the course should not exceed 2% of the overall course grade.

Other Course Information

This course is an approved 1-credit General Education course in the Biological and Physical Sciences category. Successful completion of this course and the companion lecture course, ERSC/GEOG 141 Oceanography, fulfills the laboratory requirement and equals 4 credits. Please refer to the current CCBC Catalog for General Education course criteria and outcomes.