

ERSC/GEOG 142

Introduction to Oceanography Lab

1 Credit

Community College of Baltimore County
Common Course Outline

Description

ERSC/GEOG 142 – Introduction to Oceanography Lab: is a course that provides students with hands-on experience using 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.

Pre-requisites: ACLT 053 or (ESOL 052 and ESOL 054) and MATH 082

Co-requisites: ENGL 101 and concurrent enrollment in or successful completion, with a “C” or better, of ERSC/GEOG 141: Introduction to Oceanography.

Overall Course Objectives

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

1. use appropriate scientific terminology to describe features examined in oceanography;
2. draw conclusions about oceanic processes using scientific data;
3. apply the scientific method in analysis as related to oceanography;
4. use appropriate technology to investigate oceanographic issues;
5. explain how results from data are used to develop theoretical models of the ocean;
6. assess the effect of individual behavior on marine ecosystems;
7. incorporate scientific information regarding the effect of human behavior on the sustainability of fisheries into written and/or oral communications;
8. examine how proximity and interaction with the sea affect diverse local and global populations;
9. present oceanographic information using effective written and/or oral communications;
10. apply mathematical methods to the interpretation of oceanographic data;
11. interpret data numerically and graphically; and
12. find, evaluate, use, and cite academic resources pertaining to oceanography.

Major Topics

- I. Analysis of seafloor topography
- II. Earthquakes and plate tectonics
- III. Oceanic and atmospheric interactions
- IV. Marine biology
 - a. Plankton
 - b. Marine Invertebrates
 - c. Marine Vertebrates
 - d. Sea grasses and algae
- V. Physical oceanography

The Common Course Outline (CCO) determines the essential nature of each course.

For more information, see your professor’s syllabus.

- a. Currents
 - b. Waves
 - c. Tides
- VI. Coastlines and intertidal zones
 - VII. Climate change
 - VIII. Ocean acidification

Course Requirements

Grading will be determined by the individual faculty member, but shall include the following, at minimum:

- 10 written laboratory reports, assignments, or exams
- a group or collaborative project
- Student must actively participate in the lab in order to receive credit for the activity. There are no make-up labs for this course, however, alternative assignments may be offered at the discretion of the instructor.

Written assignments and research projects: Students are required to use appropriate academic resources in their research and cite sources according to the style selected by their professor.

This companion lab supplements ERSC/GEOG 141: Introduction to Oceanography. ERSC/GEOG 141 infuses the CCBC General Education Program Outcomes into the course. The assessment of those outcomes occurs in the requisite lecture course.

Other Course Information

This course is an approved 1 credit General Education course in the Biological and Physical Sciences and fulfills the laboratory requirement.

Successful completion of this course and the companion lecture course, ERSC/GEOG 141: Introduction to Oceanography, fulfills the laboratory requirement and equals 4 credits. Please refer to the current CCBC Catalog for General Education course criteria and outcomes.

Date Revised: 10/18/2022