

ERSC 141

Introduction to Oceanography

3 Credits

Community College of Baltimore County
Common Course Outline

Description

ERSC 141 – Introduction to Oceanography: is a course that introduces the physical, chemical, biological, and geological properties of the oceans and the methods of oceanographic research. Students explore dynamic processes shaping and affecting the Earth, its atmosphere, and its oceans with respect to marine ecosystems. For students needing a lab course, ERSC 142: Introduction to Oceanography Laboratory serves as the accompanying lab.

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

Co-requisite: ENGL 101

Overall Course Objectives

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

1. engage in problem solving of oceanographic issues;
2. present oceanographic information using effective written and/or oral communications;
3. create graphical representations of data using appropriate technology;
4. describe data numerically and graphically;
5. describe conditions that promote various marine ecosystems;
6. evaluate the impact human activities have on the viability of marine populations or fisheries;
7. compare how proximity and interaction with the sea have affected people of diverse cultures;
8. apply results from scientific observations to the solution of oceanographic problems;
9. describe how results from various observations and technologies are used in the solution of oceanographic problems;
10. discuss the impact of decisions made within the scientific community on the public from an oceanography perspective;
11. use appropriate scientific terminology to describe features examined in oceanography;
12. develop informed views based on critical evaluation of both scholarly and popular resources; and
13. find, evaluate, use, and cite academic resources pertaining to oceanography.

Major Topics

- I. Topography of the ocean floor
- II. Tectonic processes
- III. Chemical and physical properties of water
- IV. Ecology and biodiversity of marine ecosystems
- V. Interactions between the ocean and the atmosphere

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

For more information, see your professor's syllabus.

- VI. Climate change
- VII. Ocean acidification
- VIII. Marine invertebrates and vertebrates
- IX. Marine biomes
- X. Global marine resources
- XI. Global shoreline processes
- XII. The movement of waves, tides, and currents

Course Requirements

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

- three exams and two quizzes
 - total exam points must be worth 50-60% of the overall course grade
 - the final exam is cumulative
- an activity requiring student collaboration
- an in-class activity or presentation
- two written assessments based on supplementary materials

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.

Other Course Information

This course is an approved 3–credit General Education course in the Biological and Physical Sciences but does not fulfill the laboratory requirement.

One or more assignments will infuse CCBC General Education Program outcomes and will account for a minimum of 10% of the total course grade. The assignment(s) will allow students to demonstrate at least 5 of the 7 General Education program outcomes.

When successfully completed, along with the companion course, ERSC 142, Introduction to Oceanography Laboratory, the combined courses constitute an approved 4-credit Biological and Physical Sciences General Education course.

Date Revised: 10/18/2022