

**Common Course Outline**  
**ERSC/GEOG 141**  
**Oceanography**  
**3 Credits**

**Community College of Baltimore County**

**Description**

**ERSC/GEOG 141 – 3 Credits – Oceanography** introduces the physical, chemical, biological, and geological aspects of the oceans and the methods and techniques of oceanographic research. Students explore dynamic processes shaping and affecting the Earth, its atmosphere and its oceans with respect to marine populations.

**3 credits**

**Prerequisites:** ACLT 052 or ACLT 053 and MATH 082

**Overall Course Objectives**

Upon completion of this course students will be able to:

1. apply the scientific method in solving problems related to oceanography;
2. present oceanographic information using written and/or oral communications;
3. describe, numerically and graphically, various presentations of oceanographic data;
4. interpret oceanographic data using mathematical methods;
5. describe conditions that promote various marine ecosystems and appraise the impacts of human endeavors on the viability of marine populations;
6. compare and contrast how proximity and interaction with the sea have affected people of diverse cultures throughout history;
7. describe how results from various observations and technologies are used in the solution of oceanographic problems;
8. utilize informational sources to research oceanography topics; and
9. use oceanographic terms to describe the features and natures of objects examined in oceanography.

**Major Topics**

- I. Origin of the solar system and oceans
- II. Topography of sea floor and tectonic processes
- III. Chemical and physical properties of water
- IV. Ecosystems and invertebrate life
- V. Movement of water – currents and waves
- VI. Shoreline processes
- VII. Swimming organisms
- VIII. Deep ocean life

## IX. Marine vertebrates

### **Course Requirements**

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

- A minimum of 4 exams
- A minimum of 1 activity requiring student collaboration

Writing: A minimum of 5 written assignments which will be determined by the instructor. Students are required to utilize appropriate academic resources.

### **Other Course Information**

This course is an approved 3-credit Biological and Physical Sciences General Education course. When successfully completed, along with the companion course ERSC/GEOG 142, Oceanography Laboratory, the combined courses constitute an approved 4-credit Biological and Physical Sciences General Education course.

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