

Common Course Outline
ERSC 141/GEOG 141
Introduction to Oceanography
3.00 Semester Hours

The Community College of Baltimore County

Description

Introduction to Oceanography

Introduces students to the physical, chemical, biological, and geological aspects of the oceans and to the methods and techniques of research; explores dynamic processes shaping and affecting the earth and its oceans with respect to marine populations.

Prerequisite: ENGL 052, RDNG 052, MATH 082

Overall Course Objectives (List only those objectives that will be common to all sections of the course.)

Upon completion of this course the student will be able to:

1. describe, in general terms, the formation of the earth and its oceans.
2. describe the general extent of the world ocean.
3. describe the major subdivisions of oceanography.
4. describe the general history of ocean exploration.
5. describe the general topography of the ocean floor
6. describe the internal structure of the earth and the major ideas of plate tectonics.
7. describe the chemical and physical properties of seawater.
8. describe the components and operation of a functioning ecosystem.
9. describe the form and lifestyle of the major groups of invertebrates in the sea
10. describe the composition and circulation of the atmosphere.
11. describe the general surface and deep water circulation of the ocean.
12. describe the movement of water in the form of waves and tides
13. describe the processes that shape the coastline and the resulting landforms
14. describe the characteristics and values of the salt marsh and estuaries.
15. describe the major types and distribution of sea floor sediments
16. describe conditions and life in the intertidal zone.
17. describe the form and lifestyle of the major swimming organisms
18. describe the form and lifestyle of marine reptiles and birds.
19. describe the form and lifestyle of various marine mammals.

Major Topics

- I Origin of the solar system and oceans
- II Topography of sea floor and workings of Earth

- 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:

Several exams will be scheduled during the course of the semester, including a final exam. All of the exam questions will be based upon a list of learning objectives provided by the instructor with the individual section syllabus. In-class sections will have frequent quizzes to help prepare for the exams. Telecourse sections will take the exams in the campus testing center. Review sessions will be arranged for telecourse sections. Extra-credit field trip projects will be available.

Writing: The individual faculty member will determine specific writing assignments.

Other Course Information

This course is a General Education core course and a Science elective.

This course is also offered as a telecourse.

This course together with ERSC 142, Oceanography Laboratory, fulfills the 4-credit General Education requirement in Physical and Biological Sciences.

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.

Date Revised: 2/15/00