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 population.

3 Credits

Prerequisites: ACLT 052 or ACLT 053; and MATH 082
Corequisite: ERSC/GEOG 142

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. manipulate and present oceanographic data numerically and graphically;
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 and how they have adapted over time;
7. describe how results from various observations and technologies are used in the solution of oceanographic problems;
8. use and document appropriate informational sources to research oceanography topics;
9. use oceanographic terms to describe the features and natures of objects examined in oceanography using oral and written communications;
10. use technology to gather data or research topics and/or problems in oceanography; and
11. apply the fundamental principles, concepts, vocabulary, and methods essential for the acquisition of knowledge basic to oceanography.
12. discuss professional behavior and decision-making within the scientific community and explore the impact of decisions and the use of data from an oceanography perspective.

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
X. Interaction of the ocean with the atmosphere
XI. Global topics in earth science and their relationships to a diverse world
XII. 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 4 exams and 3 quizzes
- 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, assignments may be given that can only be completed within a certain class period.

Written Assignments: A minimum of five written assignments will be required, the specific nature of and length will be determined by the individual course instructor. The assignments will address specific course objectives as determined by the individual course instructor. One common written assignment will account for a minimum of 10% of the overall course grade. Students are required to 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 3-credit General Education course in the Biological and Physical Sciences category that by itself does not fulfill the laboratory requirement. Successful completion of this course and the companion laboratory, ERSC 142 Oceanography Laboratory, fulfills the laboratory requirement and equals 4 credits. Please refer to the current CCBC Catalog for General Education course criteria and outcomes.

Date Revised: 1/9/15