

Common Course Outline

ERSC 101

Earth Science

4 Credits

Community College of Baltimore County

Description

ERSC 101 – 4 credits – Earth Science surveys geology, meteorology, oceanography, and astronomy and applies a variety of scientific methods and procedures commonly employed in the earth sciences. Students investigate processes in the land, water, and regions of the Earth and how they are affected by the Earth's place in the solar system. Course offered in the fall, spring, and may be offered during additional sessions.

4 Credits: 3 lecture hours; 2 laboratory hours

Prerequisites: ACLT 052 or ACLT 053; AND MATH 082

Overall Course Objectives

Upon completion of this course students will be able to:

1. apply scientific methods in solving problems related to the earth sciences;
2. explain the effects of interactions among processes operating within the geosphere, hydrosphere, atmosphere, and exosphere;
3. present earth science information using written and/or oral communication;
4. analyze and present earth science data numerically and graphically,
5. interpret earth science data using mathematical methods;
6. compare and contrast how people of diverse cultures have been affected by earth processes unique to their geographical region;
7. examine and analyze how results from various observations and technologies are used in the solution of earth science problems;
8. locate, evaluate, use and document appropriate informational sources to research earth science topics;
9. use earth science terms to describe the features and natures of objects examined in the earth sciences using earth science terminology;
10. evaluate professional behavior within the scientific community and explain the ramifications of misconduct; and
11. use technology to gather data or research topics and/or problems in the earth sciences.

Major Topics

- I. Earth cycles and materials
- II. Constructive geological processes affecting the landscape
- III. Destructive geological process affecting the landscape
- IV. Properties and processes of the atmosphere
- V. Relationships between atmospheric processes and weather/climate phenomena

- VI. Properties and movement of ocean water
- VII. Interactions between the hydrosphere, atmosphere, geosphere, and exosphere
- VIII. Fundamental laws related to celestial motions
- IX. Formation and properties of the solar system
- X. Relationships among solar system objects
- 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 5 quizzes
- A minimum of one activity requiring student collaboration
- A minimum of 3 laboratory reports, including 1 formal laboratory report
- Attendance will be taken each class period as per college policy but no points will be rewarded just for attendance. However, assignments may be given that can only be completed within a certain class period.

Written Assignments: A minimum of 5 written assignments, the length and nature of, will be determined by the instructor. One common written assignment will account for a minimum of 10% of the overall course grade and will address 5 of the 7 General education outcomes. Students are required to locate, evaluate, document, and 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 4-credit General Education course in the Biological and Physical Sciences category that fulfills the laboratory requirement. Please refer to the current CCBC Catalog for General Education course criteria and outcomes.