

ERSC 101

Earth Science

4 Credits: (3 hours lecture, 2 hours lab)

Community College of Baltimore County
Common Course Outline

Description

ERSC 101 – Earth Science: is a course that surveys geology, meteorology, oceanography, and astronomy and applies a variety of scientific procedures and methods 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.

Pre-requisites: ACLT 053 or (ESOL 052 and ESOL 054) 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 clear written and/or oral communication;
4. analyze earth science data numerically and graphically;
5. interpret earth science data using mathematical methods;
6. compare and contrast how people across cultures have been affected by earth processes unique to their geographical region;
7. examine how results from various observations and technologies are used in the solution of earth science problems;
8. find, evaluate, use, and cite appropriate informational sources to research earth science topics;
9. use appropriate terminology to describe the features and nature of objects examined in the earth sciences;
10. evaluate professional behavior within the scientific community including 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 processes 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

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For more information, see your professor's syllabus.

- 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. Academic and scientific integrity

Course Requirements

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

- three exams and a cumulative final exam
- five quizzes
- an activity requiring student collaboration
- seven laboratory assignments
- two lab exams
- three written assignments, the length and nature of which will be determined by the instructor that will address the General Education Outcomes.

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 4–credit General Education course in the Biological and Physical Sciences and fulfills 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.

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