

# Common Course Outline

## ERSC 121

### Physical Geology

3.00 Semester Hours

## The Community College of Baltimore County

### Description

#### **Physical Geology**

Provides an overview of how the Earth works, including its composition, structure, and surface features and dynamic processes; includes minerals and rocks, volcanoes, weathering and erosion, running water and ground water, deserts, shorelines, faulting and earthquakes, mountain building and plate tectonics.

Prerequisite: (ENGL 052, LVE 2 or ESOL 052), (RDNG 052, LVR 2 or ESOL 054), (MATH 082, LVM 2)

### Overall Course Objectives

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

1. describe the operation of Earth's internal and external heat engines.
2. describe the origin and structure of the Earth.
3. describe the operation of Earth's tectonic system.
4. describe the crustal rock cycle.
5. describe the composition and structure of common minerals of the crust.
6. describe the origin and characteristics of the common rocks of the crust.
7. describe the origin and results of volcanic activity.
8. describe the processes involved in weathering and the resultant landforms.
9. distinguish between relative and absolute time and describe methods of measuring each.
10. describe methods of matching rock units from one location to another.
11. describe the action and effects of running water on Earth's surface.
12. describe the activity of ground water.
13. describe the origin and effects of glaciers.
14. describe the processes that shape desert landscape.
15. describe the processes operating along the coastline.
16. describe the processes that influence deformation of rock material.
17. describe the topography of the sea floor

### Major Topics

- I Earth cycles
- II Crystals and minerals

- III Volcanoes and intrusive igneous activity
- IV Weathering and the formation of sedimentary rocks
- V Metamorphism
- VI Geologic time
- VII Mass wasting
- VIII Running water and ground water
- IX Deserts and shorelines
- X Deformations, earthquakes and Earth's interior
- XI Sea floor topography
- XII Continental drift and plate tectonics

### **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 122, Physical Geology Laboratory may be used as a lab science to fulfill 4 credits of the 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