

Virginia Western Community College

GOL 105

Physical Geology

Prerequisites

A placement recommendation for ENG 111, co-enrollment in ENF 3/ENG 111, or successful completion of all developmental English requirements.

Course Description

Introduces the composition and structure of the earth and modifying agents and processes. Investigates the formation of minerals and rocks, weathering, erosion, earthquakes, and crustal deformation.

Semester Credits: 4

Lecture Hours: 3

Laboratory Hours: 3

Required Materials

No required materials.

Course Outcomes

At the completion of this course, the student should be able to:

- Understand the difference between minerals and rocks and how each contributes to the solid framework of the earth.
- Discuss the major properties of minerals and use simple laboratory tests to demonstrate these properties to identify common rock-forming minerals.
- Differentiate between the three main types of rocks and use simple laboratory tests to identify common rocks.
- Understand and describe processes shaping the earth (e.g. weathering, stream action, wind, glaciers, ground water, etc.)
- Understand the most important aspects of the earth's interior structure.
- Be aware of how plate tectonics influences the shaping of the earth through volcanism, earthquakes, and mountain building.
- Develop a better understanding of the earth's energy resources and how they influence our everyday lives.
- Utilize their basic knowledge of geology to live a more fulfilling and effective life as a global citizen.

Topical Description

(Outline chapters and sections to be covered in the class– may include timeline)

<u>Topics</u>	<u>Unit</u>
1. Understanding Earth: A Dynamic and Evolving Planet	1
2. Plate Tectonics: A Unifying Theory	2
3. Minerals—the Building Blocks of Rocks	3
4. Igneous Rocks and Intrusive Igneous Activity	4
5. Volcanoes and Volcanism	5
6. Weathering, Soil, and Sedimentary Rocks	6
7. Metamorphism and Metamorphic Rocks	7
8. Earthquakes and Earth's Interior	8
9. Deformation, Mountain Building, and the Continents	10
10. Mass Wasting	11
11. Running Water	12
12. Groundwater	13
13. Shorelines and Shoreline Processes	16

Notes to Instructors

None.