



C-ID Descriptor

Physical Geology

Descriptor Details

- **Descriptor Title:** Physical Geology
- **Parent Descriptor:** Physical Geology with Lab GEOL 101
- **C-ID Number:** 100
- **Units:** 3.0
- **Date of Last Revision:** 10/12/2017 11:43:57 PM GMT+0000

General Description

An introduction to the principles of geology with emphasis on Earth processes. This course focuses on the internal structure and origin of the Earth and the processes that change and shape it.

Prerequisites

No information provided

Corequisites

None

Advisories

No information provided

Content

The Physical Geology course must address all of the major categories listed below and at least 75% of the subtopics.

Introduction to Geology

- The Scientific Method
- History of Geology

Earth Materials

- Minerals
- Igneous, Sedimentary and Metamorphic Rocks
- Soils
- Renewable and Non-Renewable Resources
- Metallogenic Provinces

Geologic Time and Earth History

- Geologic Time
- Relative and Absolute Dating
- Fossils and Fossilization

Earth's Internal Forces

- Plate Tectonics
- Earthquakes
- Volcanism and Igneous Rocks
- Mountain Building
- Geological Structures
- Metamorphism and Metamorphic Rocks

Earth's External Processes

- Weathering, Mass Wasting and Erosion
- Sediment and Sedimentary Rocks
- Surface Water Processes
- Groundwater Processes
- Oceans and Coastal Processes
- Desert Processes
- Glacial Processes

Additional

- Optional Field Trip

Lab Activities

No information provided

Objectives

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

1. Explain the scientific method.
2. Demonstrate a conceptual understanding of fundamental concepts, principles, and interactions of Earth's systems applicable to the Geological Sciences.
3. Apply understanding of the internal and external processes that shape and form the Earth.
4. Demonstrate an understanding of the rock cycle and identify and describe the basic properties of rocks and minerals.
5. Demonstrate an understanding of plate tectonics and Earth's resources.
6. Demonstrate an understanding of how geological environments are formed, changed and eroded through geological time.
7. Communicate complex course concepts effectively in writing and diagrams and apply critical thinking and problem solving skills to make informed decisions in life.

Evaluation Methods

Shall include multiple measures of performance that may include, but are not limited to:

- Quizzes
- Exams
- Written Assignments
- Research Assignments

Textbooks

Earth: An Introduction to Physical Geology (Prentice Hall – Tarbuck, Lutgens, Tasa)

Essentials of Geology (Prentice Hall – Lutgens, Tarbuck, Tasa)

Essentials of Geology (WW Norton – Marshak)

Exploring Geology (McGraw-Hill – Reynolds, Johnson, Kelly, Moran, Carter)

Physical Geology (McGraw-Hill – Plummer and Carlson)

Visualizing Geology (Wiley - Murck, Skinner and MacKenzie)