



C-ID Descriptor

Earth Science

Descriptor Details

- **Descriptor Title:** Earth Science
- **Parent Descriptor:** Earth Science with Lab GEOL 121
- **C-ID Number:** 120
- **Units:** 3.0
- **Date of Last Revision:** 10/12/2017 11:43:50 PM GMT+0000

General Description

An introduction to the essentials of Earth Science including the geosphere, atmosphere, hydrosphere, and solar system. This course focuses on the interactions between physical and chemical systems of the Earth such as the tectonic cycle, rock cycle, hydrologic cycle, weather and climate.

Prerequisites

No information provided

Corequisites

None

Advisories

No information provided

Content

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

Studying Earth Science

- What is Earth Science
- Introduction to the Scientific Method

Earth's Internal Forces

- Plate Tectonics
- Geologic Structures
- Mountain Building
- Earthquakes
- Volcanoes

Earth's Materials

- Minerals
- Igneous, Sedimentary and Metamorphic Rocks
- Soils

Earth History

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

Earth's External Processes

- Surface Water and Groundwater
- Glaciers
- Deserts

Oceanography

- Ocean Currents
- Tides
- Shorelines

Atmosphere

- Composition of the Atmosphere

- Seasons
- Atmospheric Moisture
- Weather Patterns and Severe Weather
- Climate

Astronomy

- The Solar System
- Stars and Stellar Evolution
- Interstellar Matter
- Formation of the Universe

Additional

- Optional Field Trip

Lab Activities

No information provided

Objectives

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

- 1) Demonstrate a fundamental understanding of concepts, principles and interactions of Earth's systems including:
 - Hydrologic Cycle
 - Rock Cycle
 - Plate Tectonics Cycle
 - Solar System
 - Geologic Time
 - Weather and Climate
- 2) Be able to explain basic properties of minerals and rocks
- 3) Explain the processes that shape the Earth and how they change over geologic time
- 4) Explain the Scientific Method

5) Communicate complex course concepts effectively in writing and diagrams

Evaluation Methods

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

- Quizzes
- Exams
- Written Assignments
- Research Assignments

Textbooks

Earth Science (Prentice Hall – Tarbuck, Lutgens and Tasa)

Foundations of Earth Science (Prentice Hall – Lutgens, Tarbuck and Tasa)

The Good Earth: Introduction to Earth Science (McGraw-Hill – McConnell, Steer, Owens and Knight)

Visualizing Earth Science (Wiley – Merali and Skinner)