C-ID Descriptor
Historical Geology Laboratory

Descriptor Details

- **Descriptor Title**: Historical Geology Laboratory
- **Parent Descriptor**: Historical Geology with Lab GEOL 111
- **C-ID Number**: 110
- **Suffix**:
  - Lab Course (L)
- **Units**: 1.0
- **Date of Last Revision**: 10/12/2017 11:43:50 PM GMT+0000

General Description

The laboratory component to an introduction to Earth's history and the life it supports. Subjects include geologic dating, plate tectonics, stratigraphy, fossils, biological evolution, the planet's origin and the processes that have influenced paleogeography during the past 4.6 billion years.

Prerequisites

Historical Geology (110)

Corequisites

None

Advisories

No information provided

Content

No information provided

Lab Activities

1. Basic introduction to identifying rocks and minerals
2. Identify major groups of fossil organisms
3. Examine modes of fossil preservation
4. Constructing and interpreting cladograms
5. Interpret geologic maps
6. Interpret geologic cross sections
7. Interpret stratigraphic columns
8. Relative dating and interpreting sequences of geologic events
9. Introduction to absolute dating
10. Paleogeographic reconstruction
11. Field Trips

Objectives

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

1) Apply the principles of the scientific method

2) Apply concepts and principles of Historical Geology including:

- Fossilization
- Ecology, Evolution, Extinction and the Fossil Record
- Plate Tectonics
- Geologic Time and Dating Methods
- The Supercontinent Cycle and Paleoclimate

3) Identify representative physical samples of fossils and rocks

4) Apply knowledge of tectonic processes to interpret geologic events

5) Interpret geologic maps, cross sections and stratigraphic columns

6) Apply principles of relative dating to interpret sequences of geologic events

7) 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:

- Lab reports and activities
- Quizzes
- Exams
- Field Trip reports

Textbooks

Historical Geology: Interpretations and Applications (Prentice Hall – Poort and Carlson)

Insights: A Laboratory Manual for Historical Geology (Kendall Hunt – Ossian)

Laboratory Studies in Earth History (McGraw Hill – Levin and Smith)