

# Minnesota State University Moorhead

## GEOS 116: Historical Geology

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 03 - Natural Science

Earth history from its beginning to present, including formation of continents, origin and destruction of mountain ranges, advances and retreats of oceans, processes that formed layers of rock and the principles by which they are "read", and what fossils tell about ancient living communities and the environments they lived in. Lab included. MnTC Goal 3.

**B. COURSE EFFECTIVE DATES:** 12/26/2001 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Time and rates of Change
2. Science and Historical Geology
3. Evolution and the changes experienced by communities of life through time
4. The tools and importance of Stratigraphy
5. Plate Tectonics and Mountain Building
6. The significance of Mountains to the Earth System
7. The Origins and Evolution of the Earth through Time

### D. LEARNING OUTCOMES (General)

1. Student can solve a variety of geological problems using a variety of approaches.
2. Student can explain how particular geological conclusions were drawn.
3. Student can engage in critical thinking and reasoning as applied to geological problems.
4. Student can understand and interpret geological features in the field.
5. Student can recognize and interpret the meaning of common rock types.
6. Student can read and interpret a variety of geologically relevant graphs and diagrams.
7. Students can understand and use the tools for interpreting Earth History.

## **E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

### **Goal 03 - Natural Science**

1. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
2. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
3. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.
4. Demonstrate understanding of scientific theories.

## **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

## **G. SPECIAL INFORMATION**

None noted