

# Minnesota State University Moorhead

## GEOS 102: Geology in the National Parks

### 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

Study of the processes that have shaped the Earth, including earthquakes, volcanoes, erosion, glaciation, sedimentation, structural deformation; and the geologic history of North America, including mountain building and ocean advances and retreats. Focus on the geological features seen in our National Parks. MnTC Goal 3.

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

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Petrology
2. Stratigraphy
3. Geomorphology
4. Geophysics
5. Structural Geology
6. Plate Tectonics
7. Volcanology
8. Glaciology
9. Geochemistry

### 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. Student can explain the basic geology of a variety of national parks.
8. Student can answer questions addressing the basic tenets of geology.

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

### Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.
2. 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.
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.

## **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

## **G. SPECIAL INFORMATION**

None noted