

# Minnesota State University Moorhead

## GEOS 417L: Problems in Geochemistry

### A. COURSE DESCRIPTION

Credits: 2

Lecture Hours/Week: 2

Lab Hours/Week: 0

OJT Hours/Week: \*.\*

Prerequisites:

This course requires any of these three prerequisites

GEOS 109 - Processes & History of a Dynamic Planet

GEOS 209L - Problems in Introductory Geology

CHEM 150 - General Chemistry I

Corequisites: None

MnTC Goals: None

This independent study self-learning module provides a guided opportunity to practice applying concepts from GEOS 415 (Reading Geochemical Fingerprints) through science reasoning challenges, real-world geology problems, and self-guided labs. Problems include applying geochemical principles to interpretation of archaeological and environmental data with consideration of statistics, analytical methods, phase chemistry, isotopes, and chemical partitioning. Pre-requisite = GEOS 109 or 209L, co-enrollment in GEOS 415 Reading Geochemical Fingerprints recommended.

**B. COURSE EFFECTIVE DATES:** 02/10/2022 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Statistics
2. Geochemistry
3. Geoarchaeology
4. Environmental geology

### D. LEARNING OUTCOMES (General)

1. Interpret data in light of statistical variation.
2. Recognize appropriate analytical methods for different situations.
3. Analyze a variety of geochemical data applied to real world problems.

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted