

# Bemidji State University

## GEOL 3600: Stratigraphy and Sedimentation

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Study of sedimentary rocks. Recognition of the physical and biologic factors affecting deposition. Introduction to stratigraphic principles. Lecture and laboratory. Prerequisites: GEOL 1110, GEOL 1120, and GEOL 2110 (Might not be offered every year.)

### B. COURSE EFFECTIVE DATES: 08/26/1997 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Weathering Processes & the Origin of Sediments
2. Factors Controlling the Formation of Soils
3. Sediment Texture
4. Characterization of Sedimentary Structures
5. Application of Textural Analysis in Sedimentology
6. Conglomerates, Sandstones, and Mudstones
7. Depositional Factors that Control the Formation of Bedforms
8. Depositional Processes in Clastic Sediments
9. Development and Use of Facies Models
10. Factors that Control Sediment Transport Mechanisms
11. Formation & Significance of Inorganic & Organic Sedimentary
12. Interpreting Geologic History through Sequence Stratigraphy
13. Lithostratigraphy
14. Methods in Biostratigraphy & Chronostratigraphy
15. Seismic Stratigraphy
16. The North American Code of Stratigraphic Nomenclature
17. Theory & Application of Magnetostratigraphy

### D. LEARNING OUTCOMES (General)

1. demonstrate an understanding of specific knowledge pertaining to stratigraphy and sedimentation.
2. design a strategy for solving problems in sedimentary geology.
3. effectively present sedimentologic and stratigraphic information in oral or written format.
4. learn to identify specific stratigraphic and sedimentologic problems in field and laboratory settings.
5. solve problems in sedimentary geology through formulation and evaluation of hypotheses by collecting and evaluating data in light of geologic principles.

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

None

**F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted