

# Bemidji State University

## GEOL 3400: Glacial and Pleistocene Geology

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Modern concepts of glaciology and glacial geology. Interpretation of the phenomena and effects on the landscape. Lecture and laboratory. Prerequisite: GEOL 1110.

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

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Introduction and properties of ice
2. Types of glaciers, glacial movement, mass budgets
3. Glacial erosion, processes and landscapes
4. Erosional landscapes
5. Depositional mechanisms
6. Landforms of Glacial deposition.
7. Glacial depositional landforms
8. Glacio-fluvial deposits
9. Glaciomarine and Glaciolacustrine settings
10. Quaternary stratigraphy
11. The Cenozoic ice ages
12. Climate change and glaciations

### D. LEARNING OUTCOMES (General)

1. learn to identify specific problems related to glacial geology
2. demonstrate an understanding of specific knowledge pertaining to glacial geology
3. solve problems in glacial geology through formulation and evaluation of hypotheses and by evaluating data in light of geologic principles
4. design a strategy for solving problems relating to glacial geology
5. effectively present information about specific topics in glacial geology in oral and written format;

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted