

# Bemidji State University

## MATH 3260: Mathematical Problem Solving

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Investigation of problems and the process of problem solving across a variety of mathematical areas. Development and application of strategies used to solve problems with emphasis on multistep and nonroutine problems. Application of the process of mathematical modeling to real situations. Prerequisite: MATH 2210. (Might not be offered every year.)

**B. COURSE EFFECTIVE DATES:** 08/22/1997 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Strategies and tactics for problem solving
2. Symmetry and invariants
3. The Extreme Principle; The Pigeonhole Principle
4. Generating functions
5. Partitions and bijections

### D. LEARNING OUTCOMES (General)

1. Understand general and specific strategies for problem solving.
2. Apply mathematical modeling to various situations.

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted