

# Minnesota State University Moorhead

## MATH 355: Mathematical Modeling

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: \*.\*

Prerequisites:

This course requires the following prerequisite

MATH 323 - Multi-Variable and Vector Calculus

Corequisites: None

MnTC Goals: None

Techniques of developing and analyzing mathematical descriptions of physical phenomena.

**B. COURSE EFFECTIVE DATES:** 06/01/1995 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Practical aspects of model building.
2. Axiom systems and models.
3. Simulation models.
4. Stochastic models.
5. Linear programming models.

### D. LEARNING OUTCOMES (General)

1. Solve real world problems using mathematical/logical systems.
2. Express mathematical/logical ideas clearly in writing.
3. Apply a variety of higher-order problem-solving and modeling strategies.
4. Analyze the assumptions made in a modeling process.

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted