

## **MATH 371 Math Modeling Seminar**

### 1. Catalog Description

#### **MATH 371 Math Modeling Seminar**

**2 units**

Prerequisite: Consent of instructor.

Directed group study of mathematical modeling techniques. Open to undergraduate students only. Class members are expected to participate in the annual Mathematical Competition in Modeling. Total credit limited to 8 units. 2 seminars.

### 2. Required Background or Experience

Consent of instructor.

### 3. Learning Objectives

The students should:

- a. Learn a variety of modeling techniques.
- b. Gain an ability to mathematically model physical and social problems in a logical manner.
- c. Present models in a coherent and legible format.

### 4. References

- Giordano, Frank R., et al., *A First Course in Mathematical Modeling*
- Kemeny, John G., *Mathematical Models in the Social Sciences*
- *UMAP Journal*
- *Journal of Mathematical Modeling*
- *UMAP Modules*
- *MAA Team Project Learning Modules*

### 5. Minimum Student Materials

Access to computing equipment.

### 6. Minimum University Facilities

Classroom with ample chalkboard space for class use, computing equipment, library facilities.

### 7. Content

Selected problems are assigned and students present their solutions with emphasis on the method used to solve the problem.

8. Methods of Assessment

Classroom participation and in-class examinations.