

# MATH 4428 Mathematical Modeling

## Spring 2007

MWF 12:20pm—1:10pm  
206 Vincent Hall

**Description:** Modeling is a process by which one extracts a mathematical problem from an observed phenomenon so that one can investigate its properties and make predictions. We will use first principles in developing the models, and simple mathematical tools to analyze their properties.

**Textbook:** *A Concrete Approach to Mathematical Modeling*, by Mesterton-Gibbons. There will be other material taken from various sources.

**Rough syllabus:** Chapters 1 through 5, Appendix 1; more material if time permits.

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**Office Hours:** Tuesdays and Thursdays 10:10am—11:00am or by appointment

**Grade:** 50% homework (8 to 10 sets).  
20% midterm  
30% final

Note that some homework sets will involve solving problems numerically using Matlab.