Instructor: Dr. Emily Stone  
Office: MATH 004B  
Office Hours: TBA

Course Description: In this course we will cover material from Chapters 1, 2, and 3 in the textbook. The topics include dimensional analysis and characteristic scales, analysis of linear and nonlinear ODEs, perturbation methods and boundary layer analysis, and calculus of variations.

Texts: • *Applied Mathematics*  
        J. Logan, John Wiley and Sons.

Prerequisite: Math 311, 412 or 414

Important Dates:
- **Sept. 1:** Labor Day Holiday - no classes
- **Sept. 15:** Last day to drop via Cyberbear
- **Oct. 27:** Last day to drop classes/change sections with form
- **Nov. 4:** Election Day Holiday - no classes
- **Nov. 11:** Veteran’s Day Holiday - no classes
- **Nov. 26-28:** Thanksgiving Day Holiday - no classes
- **Dec. 5:** Last Day for Drop Petitions

Homework Assignments: Homework from the text will be assigned, and answers will be available as pdf files on the course web site. Assigned homework will not be handed in and graded, instead each student will be responsible for presenting solutions to homework problems during designated homework days in class. A homework grade will be assigned based on this work.

Grading: The course grade will be determined by the following:

1. The assigned homework presentations will be worth 15% of your grade.

2. Three take-home tests, each worth 20% of your grade. The first will be on chapter 1 and is tentatively scheduled for Sept. 26. The second will cover material in chapter 2 and is tentatively scheduled for Oct. 30th. The third will cover the material in chapter 3 and is tentatively scheduled for Nov. 21st. THESE ARE PROVISIONAL DATES.

3. Comprehensive Final Problem/Project: Any interesting real life problem in applied mathematics will most likely take more than an hour or two to complete. In the last three weeks of class you will pick out an applied problem to solve. The solution will be due on Wed., Dec. 14th at 12:00 p.m., and should be written up in an expository style. More information on what is expected of a satisfactory paper will be given in class. Also part of the project is a 25 minute presentation to the class of the problem, in the last week of classes. The finished paper and presentation are worth 25% of your grade.