Math 108 **Spring Semester, 2008**

Class Meetings:

MWF 3:05–3:55 PM
Room 259, Physics Bldg.

Instructor:

Jian-Guo Liu
295 Physics Bldg., Tel: 660-2841
jliu@math.duke.edu
http://www.math.duke.edu/∼jliu/math108.html

Office Hours:

TuTh 1:00–2:00 PM or by appointment.
I will be in classroom 15 minutes before each class to answer questions you may have related to homework problems.

Textbook: Elementary Differential Equations and Boundary Value Problems by Boyce and DiPrima, 8th edition, John Wiley & Sons, Inc. (ISBN 0-471-43338-1)

Reference book: Differential Equations with MATLAB, 2nd edition, John Wiley & Sons, Inc. (ISBN 0-471-71812-2).

We may use Matlab/Maple for a few homework problems. We assume in this course that you already have some familiarity with these softwares.

Homework: Homework will be collected each Wednesday in class. It may be helpful for you to work on homework with other students, but your written answers should be your own work. The homework scores will count as 15% of the course grade. Your **ten** highest scores will be counted towards the course grade.

Tests and Exam: There will be two midterm exams during the semester and a final exam. The two midterm exams will be on Friday, February 22 and Friday, April 4. The final exam will be on Friday, May 2, 2:00–5:00 PM. (This is the math block time. The room for the final exam will be announced later.) Calculators will NOT be permitted on theses exams.

Course Grades: I will base the course grades on scores with the homework counting 20%; each midterm exam 25%; and the final exam 30%.

Course Description. First and second order ordinary differential equations with applications, Laplace transforms, series solutions and qualitative behavior, Fourier series, partial differential equations, boundary value problems, Sturm-Liouville theory. Intended primarily for engineering and science students. Prerequisite: Math 107. Not open to students who have had Math 131.