Differential Equations, Math 2403K1-5  
Course Syllabus  
Spring Semester 2008

Instructor: Andrzej Swiech  
Lectures: TR 13:35-14:55 PM, Howey Physics L4  
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Office Hours: W 2-3 pm, R 11-12 and by appointment  
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Recitations:  
K1, James Krysiak, MW 2-3 PM, Skiles 256, jkrysiak@gatech.edu  
K2, Chirag Arya, MW 2-3 PM, Skiles 243, chirag@gatech.edu  
K3, Vasudha Chandrasekaran, MW 2-3 PM, Skiles 154, vasudha03@gatech.edu  
K4, Peter Karasev, MW 2-3 PM, D. M. Smith 104, pkarasev@gatech.edu  
K5, Ruoting Gong, MW 2-3 PM, Skiles 170, rgong6@gatech.edu


Course Description: The course introduces the students to the basic theory of differential equations. The main emphasis is put on analytical methods for obtaining solutions of elementary equations. We will also discuss applications, modeling of physical phenomena by differential equations and we will learn the basics of the qualitative analysis of equations. The following topics will be covered:

1. First order differential equations, Sections 2.1-2.6, 3 lectures.
2. Systems of two first order equations, Sections 3.1-3.6, 3 lectures.
3. Second order linear equations, Sections 4.1-4.8, 6 lectures.
4. The Laplace transform, Sections 5.1-5.8, 6 lectures.
5. Systems of first order linear equations, Sections 6.1-6.7, 6 lectures.

Other selected topics may be covered if time allows.

Grading: There will be three tests (February 7, March 6, and April 10), homework assignments, and the final exam. You can have a one-page (one side only) formula sheet during the tests and the final exam. Calculators are allowed. Your final score will be scaled to 100% and calculated according to the following rule: Homework will count for 20% of the final score, each test for 15%, and the final exam for 35%. You will get an A, respectively B, C, and D if your final score is greater than 85%, respectively 70%, 55%, and 40%. These requirements may be lowered if the overall
average score of the class is low (i.e. your grade may get curved up). Improvement will be taken into account in assigning final grades.

Homework: Homework will be collected every other week on Wednesdays in recitations and will be graded by the TA. You are required to do all assigned problems however only selected problems will be graded. Please check the news and announcements section of the course web page for the precise information about what is due and when. Late homework will not be accepted however the worst homework score will be dropped so you can even miss one assignment.

Please be aware of the Georgia Tech Honor Code and follow it carefully. In particular please make sure that all the work you submit is your own.