Math 54, Lecture 4, Summer 2009
Syllabus

Course:
Lecture: M-F 12 PM - 2 PM, 4 Evans
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Math 54 is an introduction to linear algebra and differential equations. We will begin by studying systems of linear equations, which will motivate the study of matrices and vector spaces. We'll continue with linear algebra for the first five weeks of the course, before turning our attention to differential equations. We will primarily study linear differential equations, which will draw heavily from the linear algebra covered in the first two thirds of the course.

Both parts of the course will feature a balance between concrete computational problems and abstract theoretical questions. It will never be enough to simply know how to repeat given examples; you will also be expected to understand the relevent theory. The balance will be different in the the linear algebra part of the course will involve more theoretical thinking than the differential equations part of the course, which will give us an opportunity to practice abstract problem solving skills.

A special note for summer session courses: 8 weeks is a very short period of time to cover a semester's worth of material. Summer classes move very quickly, and missing a single class or homework assignment will require effort to catch up. Please be dilligent about making sure you don't fall behind, and contact me or come to office hours if you think that this has happened to you.

During most lectures, I'll be talking about specific section(s) of the textbooks, but using different words and different examples. This is to make reading the section in the book before and/or after class more helpful. I strongly encourage you to do this.

Texts: The required texts are David Lay, *Linear Algebra and Its Applications*, and Nagle, Saff, and Snider, *Fundamentals of Differential Equations and Boundary Value Problems*. For both books, the paperback Berkeley edition is encouraged. They are for sale at local bookstores.

Exams: The dates for the exams are: Midterm 1 - July 10, Midterm 2 - July 31, Final exam - August 14. There will be no make up exams; plan on being in class on those days. If something serious comes up, please let me know as soon as possible.

Quizzes: We will have quizzes on Tuesday and Friday of every week, with a couple of exceptions: the first week we will have only one quiz, on Thursday, and the second week's Friday quiz will be moved to Thursday for the holiday. Quizzes will be 2-3 questions, and last 15-20 minutes. The point of the quizzes is to make sure you're keeping up with material, and to give you a chance to practice an exam environment without the pressure. There will be 12 total quizzes, with the lowest 3 quiz grades dropped. Because of the dropped quizzes, there will be absolutely no make up quizzes.

Homework: Homework is *important.* It is your chance to practice the concepts discussed in class (you wouldn't learn how to play a piano by watching someone else do it, would you?). Homework will be due in class twice a week, on Monday and Thursday, and a few problems from each assignment will be graded. The details of each assignment will be posted on the course website. There will be 15 total assignments, and you will be able to drop your lowest 3 homework grades. Because of the dropped homeworks and the fast pace of the course, late homework will not be accepted.

Grading: The course grade will be divided as follows:

Homework	15%
Quizzes	15%
Midterm 1	20%
Midterm 2	25%
Final	35%
	110%

My grading philosophy is that your grade should primarily be determined by how well you do on your better work, and that this work should be held to a high standard. To this end, I'll take 10% away from whichever exam will benefit you most. The percentages for homework and quizzes are fixed at 15%.