Information for students in Math 325, Spring 2001

Instructor: Nancy Stanton 301 CCMB, 631-7436
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Texts:
Boyce and DiPrima, *Elementary Differential Equations and Boundary Value Problems*, Seventh Edition
Coombes, et al, *Differential Equations with Maple*, Second Edition

Syllabus: I expect to cover the following topics in Boyce and DiPrima:

- chapter 4, higher order linear equations
- part of chapter 8, numerical methods
- chapter 7, systems of linear equations
- part of chapter 9, nonlinear systems
- most of chapter 10, partial differential equations and Fourier series
- chapter 6, the Laplace transform

(in that order) and the related parts of *Differential Equations with Maple*.

Please read each section of Boyce and DiPrima and of Differential Equations with Maple before it is covered in class. To do well, you **must** keep up with the homework and review frequently.

Computers: I will occasionally send an email message to the class. I will use the computer algebra system Maple 6 in class and some of the assignments will require the use of Maple. *Differential Equations with Maple* describes Maple V Release 4. When you are likely to encounter a difference between this and Maple 6, I will post an announcement on the course web page. Some quiz and exam questions will involve Maple. Some assignments will require the use of Matlab.

Web Page: The web page for this course is
http://www.nd.edu/∼nancy/Math325/info.html
On this page you will find general information about the course (including a copy of this handout), homework assignments, announcements, hints for Maple assignments, and Maple demonstrations. If any last minute corrections to the homework assignments are necessary, they will be posted as announcements. The Maple demonstrations will also be in the afs directory
/usr/local/courses/math/math325.01/Demos

Examinations: There will be a midterm, eleven quizzes and a final exam.

Midterm: Wednesday, March 7.

Final: Wednesday, May 9, 4:15-6:15 p.m.

Quizzes: On Fridays, beginning January 26, weekly except the week of the midterm.

Quiz problems will be similar to lecture examples, text examples and homework problems. More than half the points on exams will be problems similar to lecture examples, text examples and homework problems. You may use calculators on quizzes and exams.

Homework: The first homework assignment is posted on the course web page. Future assignments will be posted by the due date of the previous assignment. Each assignment will include reading and problems. The homework is due at the end of class on the due date, which will be one or two weeks after it is handed out. I will not accept unexcused late homework.

Group Projects: There will be two group projects. You will work on these in groups of three or four. The projects will require learning some additional material related to the material covered in class and doing some computer work involving that material.

Grading:

Midterm 100 points
Quizzes 100 points (10 points each, the lowest quiz score will be dropped)
Final 150 points
Homework 100 points (after scaling)
Group projects 100 points (50 points each)

Absence from examinations and quizzes: If you are absent from an examination or quiz without an official excuse, you will receive a grade of zero for that examination or quiz. If you are officially excused, you will not be penalized. If you miss a test or quiz for any reason, send me an email message, call me or call the Mathematics Department as soon as possible.

Honor Code: Testing will be done under the Honor Code. On homework, you are allowed and encouraged to work together and discuss the problems. However, you should not copy anyone else's work.