COURSE INFORMATION
Engineering Differential Equations, 22m:41, Fall 1997

Instructor: Fred Goodman
Office: 325G McLean Hall
Phone: 335-0791
Office Hours: still to be arranged

Course goals:

A thorough knowledge of elements of ordinary differential equations and applications. Growth in mathematical strength and self-reliance.

Book:

Boyce and diPrima, *Elementary Differential Equations and Boundary Value Problems*, 6th edition.

Course plan:

The basic course plan is Chapters 1-4 and 6-7 or the text, with some material from Chapters 8 or 9 if time allows.

Homework:

Homework will be assigned weekly on Thursdays and will be due the following Thursday; many problems will be assigned, and among them *a few* will be singled out as *presentation problems.* These are to be written out carefully and completely, with the logical steps explained.

The criterion for having done this well is that a person who knows about as much as you do about the subject, but has not done these problems, should be able to understand completely what the problem is and how it is solved, by reading your paper. The examples in the text could serve as a model for your write-up of the presentation problems. In particular, what you hand in as presentation problems will *not* be the scratch paper on which you first figure out the problem! Some of these presentation problems will be graded. The non-presentation problems will be spot checked for reasonable completeness.

I will make available to you exercises and demonstrations using using *Mathematica. Mathematica* is available in computer centers throughout the university and on all common platforms: Mac, Windows 95, Unix workstations.

Exams, etc:

There may be occasional **quizzes** covering recent assignments. All of the exercises from these assignments will be covered, not just the presentation problems.

There will be **two midterm exams** at approximately 4-5 week intervals, Exact dates will be arranged in class. There will be a **two hour, comprehensive final exam** at the time announced in the Course Schedule.

Grades:

Homework will count 10%, quizes and midterms 50%, and the final 40%. Since this distribution of credit is somewhat arbitrary, I will actually average the scores according to several slightly different schemes and give you the best of the average scores; so your most successful exams will count most.

Attendance and absences:

You are responsible for the material covered in class, whether or not you attend. You are responsible for announcements made in class, which may concern changes in the assignments, syllabus, exams, etc. Absence from exams will require a compelling reason, and must be arranged in advance.

Web page

I will maintain a web page for this course at http://www.math.uiowa.edu/~goodman. The web page will contain information about assignments and exams, as well as computer materials and possibly links to other resources.

University policies:

Students with disabilities are entitled to special arrangements. Please inform me confidentially if you require such special arrangements.

I expect that you will have a good time in this course and learn a lot. However, if you have any difficulty or disagreement with the conduct of the course, please contact me to discuss the matter. If we cannot resolve the difficulty ourselves, you are welcome to appeal first to the Department of Mathematics, and then to appropriate offices in your College.