

Math 266

Elementary Differential Equations
Fall, 2007 - Section C
TR 2:10 - 3:25
Carver 160

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413 Carver

Office Hours: TR 1:10 - 2:10, 3:30 - 4:00

Course Webpage: <http://www.public.iastate.edu/~mhalver/classes/F07/diffeq.htm>

Textbook: William E. Boyce and Richard C. DiPrima, *Elementary Differential Equations and Boundary Value Problems*, 8th edition

Course Content: Solution methods for ordinary differential equations. First order equations, linear equations, constant coefficient equations. Eigenvalue methods for systems of first order linear equations. Introduction to stability and phase plane analysis.

Grading: Grading will consist of homework, 3 in class exams, as well as a final exam.

Homework will be assigned once a week on average, but will not always be collected. When homework is collected, not all problems will necessarily be graded. Homework to be collected will be announced at least 2 days in advance, along with which problems will be graded.

The point totals are as follows:

Homework	200 pts
Exams	450 pts (150 pts each)
Final	350 pts
Total	1000 pts

Calculator Policy: Calculators are always allowed unless otherwise noted. Most likely all in-class exams will allow calculators.

Even though you are allowed to use calculators, you should still know how to do all course work without one, in theory. In other words, any calculation you may be required to do, you should know all steps involved as well as how to carry out all calculations for each step.

Homework Policy: Homework is due by 4:00 on the due date. Late work will not be accepted. Homework may be turned in at the end of class, to me in my office, or in my mailbox. Please do not leave homework in my office if I am not there. I can not promise that I will receive it if I do not take it personally. I am not responsible for lost papers if they are left in my office when I am not present. Homework turned in to my mailbox must be given to a member of the office staff to be placed in my mailbox. Please make sure that the office staff member who takes it initials it and records the date and time. Homework without this will be considered late. It is your responsibility to make sure this is recorded.

You may work together on homework. If you choose to work together, you may turn in one paper for the group. Make sure that all names are on the paper that you turn in. If you are working in a group, make sure that you understand the solutions to all problems; group work should help your understanding and performance, not hurt it.

- Tips:
1. Read the sections to be covered before class.
 2. Attempt to memorize all important theorems. If there is an entire section over a particular theorem, it is probably an important one.
 3. Do all homework problems, even if they will not be collected.
 4. Ask Questions.
 5. See me during office hours.
 6. Attend Class!!

Topics To Be Covered:

Unit 1 (Chapters 1 and 2) - approximately 5 weeks
Basic concepts and definitions. Basic derivations of differential equations. Solution methods for first order equations. Applications.

Unit 2 (Chapters 3,4, and 6) - approximately 5 weeks
Second order and higher order equations.

Unit 3 (Chapters 5, 7, 9) - approximately 4 weeks
Systems of differential equations. Non-linear differential equations.

Unit 4 (Chapters 8 and 11) - as time permits
Selected topics on numerical solutions. Boundary value problems.

Course Policies:

1. All work must be done in pencil. Anything else will result in lost points.
2. Multiple page assignments must be **STAPLED** together with a name on all pages. Loose papers will result in lost points.
3. When turning in pages from a spiral notebook - jagged ends must be cut off. Jagged edges will result in lost points.
4. Missed homework cannot be made up. Try not to miss any homework.
5. Exams may be made up. Makeups should be arranged at least one week in advance and requests must be made in writing. Sending a request by email is acceptable. If circumstances prevent prior notification a makeup should be arranged as soon as possible. In all cases, verification of the reason for missing the exam is required.
6. Please turn off or silence all cell phones **before** entering the classroom.
7. All items on this syllabus are subject to change.
8. Please address any special needs or special accommodations with me at the beginning of the semester or as soon as you become aware of your needs. Those seeking accommodations based on disabilities should obtain a Student Academic Accommodation Request (SAAR) form from the Disability Resources (DR) office (515-294-7220). DR is located on the main floor of the Student Services Building, Room 1076.