
Differential Equations

Math 341 Spring 2005
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MWF 8:30 - 9:25am Fowler North 4
<http://faculty.oxy.edu/ron/math/341>

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SYLLABUS The official syllabus for this course is on the web at
<http://faculty.oxy.edu/ron/math/341/>.

OFFICE HOURS I am almost always in my office (Fowler Academic Office Number 14) until at least 5pm. My official office hours in Spring 2005 are MTWR from 10:00am to 12 noon. I am also in my office MW 3:30-5:00pm.

I am readily accessible by electronic mail at ron@oxy.edu and by phone at x2536. My AOL Instant Message name is **ProfBuckmire** or **MadProfessah**. If you need to see me at a time not specified here, do not hesitate to contact me and make an appointment and I'll be happy to meet with you. I think out-of-classroom student interactions with faculty are important and I encourage students to work together on homework assignments. You are also strongly encouraged to visit me in office hours several times during the semester. If you don't then you really aren't getting your money's worth!

CLASSROOM We will meet in Fowler North 4, MWF from 8:30am-9:25am.

TEXTBOOK *A First Course in Differential Equations (with Modeling Applications)*, Eighth Edition by Dennis G. Zill (Brooks-Cole, 2005).

GOALS OF THE CLASS By the end of the class you should be able to: Solve differential equations analytically; formulate mathematical models using differential equations; and analyze the solutions in terms of the original model.

NATURE OF THE CLASS This is a first course in differential equations. I will expect familiarity and expertise with the concepts found in Differential and Integral Calculus. Differential Equations is a huge, varied and fascinating field of study. I will expect students to come to class prepared so that we can use class time as efficiently as possible to facilitate learning the course material. We will not be able to "cover" the entire subject, but I should be able to give you a significant introduction to some of the most important topics in the field. Since I am an applied mathematician and this is the first time I am teaching the course, the style of the course will be skewed towards practical application of the material, and not very theoretical in nature. However, this is a 300-level math class and I will expect a corresponding level of mathematical rigor and student responsibility.

FORMAT OF THE CLASS We will be making regular use of computers to help us visualize information that can be obtained from differential equations, which includes approximating their solution numerically. We will use the included textbook CD rom, web-based Java applets and computer algebra systems. I expect a lot of participation in class and will facilitate this through the use of daily class formats (worksheets), group work, in-class computer exercises, abbreviated lectures and online communication.

HOMEWORK Homework should be done in **pencil**. Before the beginning of each week you will be given the homework problems for that week. Homework should be done after every class but will not be collected until the end of the week. It should be written legibly and multiple pages should be stapled together. You are **strongly** encouraged to work on homework together. Whatever you hand in **must represent your own understanding of the material**. Copying homework is cheating and will be dealt with accordingly.

QUIZZES There will be quizzes given every week. These quizzes will almost always be take-home quizzes given out on class on one day to be handed in in class in the next class. They will consist of relatively simple homework problems which you work on by yourself and will be a way in which you can assure yourself you are keeping up with the course. The quiz, and hints to the quiz will be posted on the web messageboard.

TESTS There will be **two (2)** mid-term exams in this course. The mid-terms are currently scheduled for **Wednesday March 9** and **Wednesday April 20**. These dates are subject to change until 1 week before the scheduled date. You may not be excused from a test without notifying me at least 1 week before the scheduled test date.

FINAL EXAM The final exam is scheduled for **Wednesday May 4 from 1pm-4pm**.

GRADES Your course grade will be composed of the following:

- Homework **25%**
- Two (2) Tests **20 % (10 % each)**
- Quizzes **25 %**
- Final Exam **20 %**
- Participation **10 %**

POLICIES This a (non-exhaustive) list of course policies

- Make-up tests will not be given except for compelling reasons which have been communicated to me well-in advance (i.e. at least 7 days) of the test date.
- If you are late to a test, you will only be allowed the time remaining in which to complete your test.
- Late quizzes will not be accepted under any condition since the solutions are made available on the same day that they are collected in class.

ACADEMIC HONESTY I expect the highest level of academic honesty from my students. If you have any questions about academic honesty you should read the sections on “Spirit of Honor” (front cover) and “Academic Policies” (pp 111-112) found in the Student Handbook. Any instances of plagiarism or cheating will be dealt with strictly and in accordance with procedures outlined in the Handbook.

OTHER NOTES We will not have class on Monday February 21 (President’s Day). Spring Break is March 14-18. I will let you know at least one week ahead of time if there may be other days on which class is cancelled.

ON-LINE MATERIALS There is a class mailing list, to which all registered students are subscribed, at math214-L@oxy.edu. I have produced a website for the course, where more detailed (and current) information about the class will be published. The URL is <http://faculty.oxy.edu/ron/math/341/> . Part of the website includes a link to a Blackboard discussion board, where students are encouraged to interact with each other, with me and continue engagement with the course material outside the classroom. The course web-page will act as the official syllabus for the course, which is subject to change.