

Professor: Dr. Talitha Washington

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Office hours: Monday & Friday 9-12:00, Tuesday & Thursday 9:00-10:00, and Wednesday 8-10, and by appointment

Text: *A First course in Differential Equations*, 8th Edition, Dennis G. Zill

Catalog Description: Math 324 Differential Equations (3) Includes standard first and second order methods, systems, difference equations, power series, Laplace transforms and numerical and nonlinear methods, with applications for all of these. Prerequisite: Mathematics 323. Fall, spring.

Course Learning Objectives: This is an introductory course in differential equations. By the end of this semester, you should be able to identify a differential equation, and what it means to have a solution of a differential equation. We will look at methods for finding solutions of some of the simpler types of differential equations, and we will look at qualitative methods for describing the behavior of solutions of some types of differential equations. We will also look at some physical problems that lead to differential equations, and we will investigate the use of Laplace transforms for solving various types of equations.

Methods of Instruction: The method of instruction for most classes will be a lecture/discussion. Most classes will begin with a discussion of homework problems followed by an introduction of new material. Students are encouraged to participate in class by asking questions, contributing to discussions, and working problems. Outside of class, students are expected to read the text, complete all assigned homework, and come to my office hours and ask questions about the homework. We will use online java versions of dfield and pplane found at: <http://math.rice.edu/~dfield/dfpp.html>

Grading: There will be three hour exams worth 100 points each (**Feb 10, Mar 17, Apr 21**). The final exam will be worth 175 points and will be comprehensive (**01-May 5 12:30, 02-May 4 12:30**). Quizzes and projects will be worth 125 points. The course grade will be given on a 90-80-70-60 curve based on total points. Individual tests are not curved.

Course requirements and policies:

a. Calculators and Computers: You may use a calculator on all exams and quizzes. Calculators with symbolic algebra capability (e.g. TI-89 or TI-92) **will not** be allowed during exams. Computers **will not** be allowed during exams.

b. Attendance: You are expected to attend class on time every day. However, if you miss a day, it is up to **you** (not me, or your classmates) to catch up and learn what you have missed.

c. Quizzes: The word “quiz” may mean a variety of things – an announced in-class quiz (see schedule), selected homework problems to turn in, and in-class group activity, an out-of-class activity, or a take-home quiz. There are **NO** make-ups for quizzes. At the end of the semester, the 2 lowest quiz scores of each student will be dropped.

d. Homework: These will be assigned daily. These problems are for your practice and will not be graded; **HOWEVER**, you should do all these homework problems and are responsible for knowing how to work them. Many questions on the quizzes and exams will be strikingly similar to those given in the homework.

e. Make-ups: Assignments that are to be completed outside of class (projects, reading assignments, quizzes, homework, etc.) will not be accepted late for any reason. Your 2 lowest quiz scores will be dropped. Absolutely no project scores will be dropped. Make-ups for announced in-class quizzes will be

dealt with on a case-by-case basis. Make-up exams will be given only in extreme circumstances that are documented university approved excused absences, and only if I am aware of the circumstances prior to the exam. In particular, make-ups will never be given to accommodate travel plans.

f. Honor Code: It is expected that students are familiar with and will comply with the terms of the University's Academic Honor Code. Collaboration on homework is allowed and encouraged, but giving or receiving help of any kind on exams and quizzes is strictly prohibited.

g. Accessibility: Please let me know immediately if you have a learning or physical disability requiring accommodation. For more information, contact the Office of Counseling and Health Education at 488-2663.

h. Advice from a UE student:

- Try homework before asking for help
- Read book before class
- Be active in class
- Devote more time to math
- Seek better understanding
- Prepare for tests other than the night before
- Question why things are done a certain way
- Correct all old tests

Schedule

Week #	Monday	Wednesday	Friday
1		1/11/06 Intro, 1.1	1/13/06 1.2 (Take Home) Quiz 1
2	1/16/06 No School – MLK Day	1/18/06 1.3	1/20/06 2.1, Quiz 2
3	1/23/06 2.1, 2.2	1/25/06 2.2	1/27/06 2.3, Quiz 3
4	1/30/06 2.4	2/1/06 2.4, 2.5	2/3/06 2.5, Quiz 4
5	2/6/06 2.6	2/8/06 Review	2/10/06 Exam 1
6	2/13/06 4.1	2/15/06 4.1	2/17/06 4.2, Quiz 5
7	2/20/06 4.2, 4.3	2/22/06 4.3	2/24/06 4.4, Quiz 6
8	2/27/06 4.4, 4.6	3/1/06 4.6	3/3/06 4.7, Quiz 7
9	3/13/06 4.8	3/15/06 Review	3/17/06 Exam 2
10	3/20/06 3.1	3/22/06 3.1, 3.3	3/24/06 3.3, Quiz 8
11	3/27/06 5.1	3/29/06 5.1, 7.1	3/31/06 7.1, Quiz 9
12	4/3/06 7.2	4/5/06 7.3	4/7/06 7.3, 7.4, Quiz 10
13	4/10/06 7.4	4/12/06 7.5	4/14/06 No School
14	4/17/06 No School	4/19/06 Review	4/21/06 Exam 3
15	4/24/06 6.1	4/26/06 6.1	4/28/06 Review, Quiz 11
16	5/1/06 Review		

Final Exam Schedule: 01 - Friday, May 5 12:30 02 - Thursday, May 4 12:30

Please note that this schedule may vary according to our progress in class.