

Mathematics 330: Differential Equations.

UT Martin Department of Math and Statistics. Fall 2005.

Essential information

Class meetings: Tuesday, Thursday 1:00-2:15. Humanities 414.

Instructor: Matthew Harvey

Office: Clement Hall, room 377

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Website: <http://www.utm.edu/staff/mharvey/math330.html>

Office hours:

	Monday	Tuesday	Wednesday	Thursday	Friday
8-9					
9-10					
10-11	office hours	m140 room 414	office hours	m140 room 414	office hours
11-12	m140 room 414		m140 room 414		m140 room 414
12-1					
1-2		m330 room 414		m330 room 414	
2-3	m160 room 414		m160 room 414		m160 room 414
3-4	office hours				
4-5					
5-6					

Course description

The prerequisite for this class is Math 252.

The textbook for this course is *Fundamentals of Differential Equations*, 6th ed by R. Kent Nagle, Edward B. Saff, and Arthur David Snider. For this course, a calculator will be of limited assistance, but you will find a decent graphing calculator helpful for some problems. Although you are expected to know how to perform all the computations in this course, I will use Maple to help with calculations during lecture, and you are strongly encouraged to use Maple to help with the homework assignments.

In this course we will discover methods to solve certain types of differential equations. In particular: first order differential equations, linear equations, and systems of first order equations. We will study the Laplace transform and its application to the study of differential equations. We will also look at some elementary applications of differential equations. The relevant sections of Nagle, Saff, and Snider are: 1.1-1.4, 2.1-2.5, 3.1, 3.2, 3.4, 4.1-4.7, 5.1-5.5, 6.1-6.4, 7.1-7.7, 8.1-8.4.

Grades

You will be assigned homework problems approximately once a week. Homework should be neat, well-organized, and stapled. Answers should be clear and well-reasoned. By itself, a correct final answer may not be worth full credit. Homework will be due at the beginning of class. There will

be no penalty, however, for homework turned in before 4:45 p.m. on that day. After that, there will be a 25% penalty for each day the homework is late. When tallying final grades, the lowest two homework grades will be dropped.

During the semester there will be three one-hour tests. These are tentatively scheduled on: September 27, November 3, and December 6. These dates are subject to change. No make-up exams will be given unless you can present a valid documented excuse. In this case, you will either take a make-up exam or be given a grade based on other assignments, whichever I feel is more appropriate. Be warned that no test grades will be dropped. At the end of the semester you will have a two-hour comprehensive final exam.

Final grades will be decided according to these percentages:

A	90%-100%
B	80%-89%
C	70%-79%
D	55%-69%
F	0-54%

Homework 20%
Three Tests 60%
Final Exam 20%

Cheating

Cheating will not be tolerated— any student caught cheating will receive an F for the course and/or be reported to the Office of Student Affairs.