

MA214-003 Calculus IV: Ordinary Differential Equations Spring 2010

Instructor	P. D. Hislop
Office:	753 POT
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Text: . E. Boyce and R. C. DiPrima:	<i>Elementary Differential Equations and Boundary Value Problems</i> , 8 th Edition, Wiley 2005
Class Meetings:	MWF 11:00–11:50PM CB 339
Office Hours:	to be decided, in the Lab CB 313
	M 4-5; F 4-5 and by appointment
Weekly Problem Session:	to be scheduled
COURSE MATERIAL AND INFORMATION	www.ms.uky.edu/~hislop

Grading Policy

Item	Date	Total Points
6 Quizzes at 10 points each	approximately every two weeks	60
4 Lab Projects	15 points each	60
First Hour Exam	19 February (target)	100
Second Hour Exam	9 April (target)	100
Final Exam	5 May 2010, 10:30AM–12:30PM	180
TOTAL		500

The minimum cut-offs for letter grades are: A 450-500; B 400-449; C 350-399; D 300-349; E below 300. If your final total of all scores is within one of these intervals, you are guaranteed to receive the corresponding letter grade or higher. Homework will be assigned and discussed in the weekly problem session. *Cheating in any form will not be tolerated.*

Course Content

MA214 is a basic course in *ordinary differential equations*. The basic problem is to determine an unknown function from an equation that involves only the derivatives of the function. Differential equations are used to model a wide variety of physical and biological phenomena, from atoms to animal populations. We'll study basic equations for which the unknown function—the solution—depends on one real variable only, like time or position. This is the meaning of the adjective *ordinary*. We will study first- and second-order ordinary differential equations extensively, especially linear differential equations. Approximate course material: Chapter 1, Chapter 2 (sections 2.1, 2.2, 2.3, 2.5, 2.7), Chapter 3, and Chapter 6.

This class will have a lab component using the University of Illinois IODE package that runs on MatLab. There will be four projects during the semester. **Our orientation will be on Wednesday, 20 January, 11:00-11:50 in the computer Lab CB 313.** Please go there instead of the usual room.
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Special Dates

18 January	Martin Luther King, Jr. Day - No classes
3 February	Last day to drop with no W
8 March	Midterm of Spring 2010 Semester
15-20 March	Spring Break
2 April	Last day to withdraw from a course
30 April	Last Class
5 May	10:30AM-12:30PM Final Exam