M383 sec 001 (005) 10:00-10:50 PH 367 (9:00-9:50 PH 381)

M 383 Course Policies and Procedures Fall 2009

"Mathematical reasoning may be regarded rather schematically as the exercise of a combination of two facilities, which we may call intuition and ingenuity."Alan Turing

Instructor: Keith Mertens **E-mail**: mertens@email.unc.edu **Phone**: 843-2142
Office: Phillips 370 **Office Hours**: Tues 3-4:30
Webpage: www.unc.edu/~mertens Wed 11:12:30
Prerequisite: Basic proficiency in Calculus and Algebra
Registration Deadlines: .

Last day for late registration: Monday, August 31
Last day to "free" drop or change grade to pass/fail: Monday, October 19
Last day to W-drop: Monday, October 26

Textbook: Boyce-DiPrima: Elementary Differential Equations and Boundary Value Problems special 9th edition. This book is special order for the University of North Carolina and can only be obtained at the UNC bookstore. You are expected to study the text as a primary source of information. Class sessions supplement the text.
Computer: You will need access to a computer which has some sort of mathematical software installed. Software is available to students through UNC. You will be expected to use your computer to complete Computer Labs described below. Some questions on the homework will also require the use of a computer. .
Course content: First and second order linear ordinary differential equations, some basic matrix algebra, systems of equations , some basic numerical approaches and an introduction to non-linear equations.
Course goals: The goals of this course are for you to
• understand the applicability and importance of differential equations in the context of explaining the world around us.
• become proficient with the techniques, calculations, and procedures characteristic of introductory Ordinary Differential Equations;
• be able to use techniques from ODEs to model "real-world" situations and solve "applied" problems; and
• be able to write complete, well-organized, logically correct solutions to problems and responses to questions.
Mid-term exams: There will be three common mid-term exams given. Mid-term exams will be scored on the basis of 100 points. An alternate exam time will be scheduled *only* for students who have an unavoidable, documentable time conflict with a scheduled mid-term exam. Details will be announced well advance of each exam.
Final Exam: The final exam will be the week of Dec 11-18 see University final exam schedule at http://regweb.unc.edu/calendars/finals089.php. The final exam will cover the entire course and will be scored on the basis of 200 points. The format of the final exam will be announced in advance. A final exam can be rescheduled only if the student obtains a written excuse from his or her dean. Attendance at the final exam is required. (Don't ask to take the final early!)
Special Needs: Students who have special needs, including needing special accommodations for taking exams, should discuss their situation as soon as practical with their instructor or the Course Coordinator.

Homework: Homework from the textbook will be assigned and scored regularly. There will typically be one homework assignment collected each week. Problems will be given each day covering the relevant material. Missing homework will be scored 0 points. Late homework will not be accepted. The top 80% of your scores on assigned homework will count for your final grade. Homework will count 100 points toward your final grade as described below.

Quizzes: There will be several short Quizzes designed to assess your understanding of important concepts and knowledge of critical techniques. These quizzes are meant to strengthen your ability to communicate your understanding clearly before exams. Exams will include questions like those on the Quizzes. These Quizzes will be graded by standards similar to those used to grade similar questions on exams. Concept Quizzes will count 50 points toward your final grade as described below.

Missed Concept Quizzes can be made up only in the case of absence because of participation in official university activities, documented illness, or other extenuating circumstances.

Computer Labs: There will be several (2-3) laboratory investigations that require using a computer which has some type of mathematical programming software installed. Most commonly used are Matlab, Maple, or Mathematica. A written report is required for each investigation. Lab reports will count 50 points toward final grade as described below.

Grading Standards: The 700 points possible in this course are calculated as follows:

Point Total = Homework (100 pts) + Quizzes (50 points) + Computer Labs (50 pts)
+ 3 Mid-term scores (300 pts) + Final exam score (200 pts)

Final grades will be determined from point totals using a grading scale no more restrictive than the following:

90% – 100%.....	630 – 700	A	55% – 60%	385 – 419	D
80% – 89%.....	560 – 629	B	less than 55%	0 – 384	F
60% – 79%.....	420 – 559	C			

Plus/minus grades may be assigned in exceptional situations. A grade of incomplete (I) will be assigned only in extenuating circumstances (beyond the student's control and could not reasonably have been anticipated or avoided) and with approval of the Course Coordinator and the Associate Department Head.

Policy on Academic Honesty: Students in this course are bound by the UNC Honor System. You may (and probably should) work together on class preparation, homework, and exam preparation, but papers should clearly indicate the contributions of each individual and should properly credit any outside sources used. Exams will be closed-book individual efforts. Students are asked to sign the Pledge at the end of each exam to attest that they followed the Honor System while taking it.