MATH 383H (Sec 001): A first course in differential equations - Spring 2017

Instructor: Nancy Rodríguez
Office: PH 314
Email: nrod@unc.edu
Class time: T and Th 11:00 - 12:15 PM
Room: Graham Memorial 213
Office Hours: T and Th 3:30-4:30 PM, W 10-11 AM and by appointment.

Textbook: *Elementary Differential Equations*, 10th edition, W. E. Boyce and R. C. Diprima.

Course website: http://nrodriguez.web.unc.edu/math383h/

Prerequisites: Calculus (up to and including Math 233) and College Algebra. All students must have a cumulative GPA of 3.00.

Course description: This is the honors introductory course to differential equations. The course will cover some basic linear algebra and have a heavier emphasis on the theory. In this course students will learn how to solve subclasses of differential equations and understand the qualitative behavior of the solutions. Course topics include first and second order differential equations, well-posedness, systems of linear equations, and a brief introduction of non-linear equations.

Homework assignment: Homework will be assigned on a weekly basis through WebAssign and will be due on Thursdays (unless otherwise specified). Students must self-enroll to WebAssign with the key: *unc 5652 0802*. Additional more challenging problems will also be assigned on a weekly basis. Late homework will NOT be accepted and NO make-up homework will be given. To compensate for this, the two lowest homework grades will be dropped. Students are responsible for all technical requirements. There might be some computer assignments that require the use of Matlab or a similar program.

Exams: There will be two exams given during the semester. Make-up exams will be given only if students have a valid reason and students must make their case to the instructor within two days of missing the exam. The **tentative** dates are:

- Exam 1: Thursday February 16, 2017.

- Exam 2: Tuesday March 28, 2017.

Final exam*: The final exam will be given in compliance with UNC's final exam regulations and schedule. Our exam is scheduled for Monday, May 1st at 12:00 pm in GM 213.

Class participation: We will be working through worksheets in many of the lectures. The worksheets will be graded and can be regarded as a participation grade. Late worksheets will NOT be accepted. To make up for this the two lowest grades will be dropped.

Grading: homework: 15%, exams: 20% each, in-class worksheets 10%, and final exam: 35%.

Course outline: The course will focus on Chapter 1-5,7,9.

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*If you have a legitimate conflict you must contact the instructor at least two weeks before the final.

Academic honesty: As a UNC student, you have agreed to abide by the University's academic honor code. All academic work must meet the standards described in The Instrument of Student Judicial Governance which can be found on the web at http://www.studentconduct.unc.edu. Students are welcome to discuss lectures and work together; however, each student must turn in their own assignment. Questions related to course assignments and the academic honesty policy should be directed to the instructor.

Syllabus changes: The instructor reserves the right to amend the syllabus at any time during the semester. The possible changes include, but are not limited to, exam dates and course outline. These changes will be announced as early as possible.