Instructor: Nancy Rodríguez
Office: PH 314
Email: mrod@unc.edu
Class time: T and Th 11:00 - 12:15 PM
Room: PH 385
Office Hours: T, W, and Th 1:30-2:30 PM and by appointment.


Course website: https://mrodriguez.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: unc0917 8232. 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 12, 2015.
- Exam 2: Thursday March 26, 2015.

Final exam*: The final exam will be given in compliance with UNC’s final exam regulations and schedule. Our exam is scheduled for Tuesday April 28 at 12:00 pm.

Final project: There will be a final project assigned, for which students can choose between either an applied or theoretical topic. I encourage students (especially those wanting to do an applied project) to take the optional one hour computational lab labeled as Math 290.001. Each student will be required to meet at least once with the instructor before March 20, 2014 to discuss a possible project. A page long project proposal will be due on March 27, 2014. The final project is due the last day of class.

Grading: homework: 15%, exams: 20% each, final project 10%, and final exam: 35%.

*If you have a legitimate conflict you must contact the instructor at least two weeks before the final.
Grading scheme: \( A(93 - 100\%), A^-(90 - 92\%), B^+(87 - 89\%), B(83 - 86\%), B^-(80 - 82\%), C^+(77 - 79\%), C(73 - 76\%), C^-(70 - 72\%), D(60 - 69\%), F(0 - 59\%). \)

Course outline: The course will focus on Chapter 1-4,7,9.

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.