



## MAP 4305/5304 DIF EQUA EG & PHY SCI/INTERMED DIFF EQUATNS (Spring 2020)

Instructor: Dr. Mengying Xiao, Little Hall 321

Meeting time and location: MWF 9:35-10:25 AM at PSY Building 103

Office hours: MWF 10:40-11:30 AM or by appointment

email: m.xiao@ufl.edu

### Prerequisites:

MAP 2302 is required (how to solve first order and second order linear ordinary differential equations) and a course in Linear Algebra would be helpful (not required). You will need a good working knowledge of Calculus 1, 2 and 3 (as well as precalculus algebra and trigonometry). In particular, you will be expected to know integration techniques (integration by parts); the chain rule; partial fractions; partial derivatives; and the algebra, calculus, and general properties of sines, cosines, and exponentials. If you are weak in any of these areas, or it's been a while since you took calculus, you will need to spend extra time reviewing or relearning that material. Mistakes in prerequisite material will be graded harshly on exams.

### Textbook:

Fundamentals of Differential Equations and Boundary Value Problems, the 7th edition, Addison-Wesley/Pearson (Publisher), by Nagle, Saff, Snider (required)

### Course Description and Goals

The goal is studying the Series solutions, Matrix methods for systems, and some elementary Partial Differential Equations. We will cover most sections of Chapters 8,9 and 10 of the textbook.

Homework will be assigned regularly (typically every Monday) on Canvas and discussed in class, but not collected or graded. You are expected to participate in classroom for the discussion of lectures, assigned reading and homework.

### Final Grades

The final course grade will be determined from 3 midterm exams (25% each) and several quizzes (25%). All of them are closed book, closed notes, and not cumulative.

Tentative exam dates: Feb 7 (Fri), Mar 20 (Fri), April 22(Wed).

## Grading Scale

The letter grade is assigned using the scale:

A ≥ 90 > B+ ≥ 85 > B ≥ 80 > C+ ≥ 75 > C ≥ 70 > D+ ≥ 65 > D ≥ 60 > E

## Course Policy

A huge part of the transition into your professional careers is being where you are supposed to be when you are supposed to be there. I expect your presence at every lecture.

Students requiring accommodation for disabilities must make arrangements through the Disability Resource Center.

Students are expected to provide feedback on the quality of instruction by completing online evaluations. Typically this process takes place during the last weeks of the semester, students will be given specific times when they are open. The results of the evaluations are available when they are tabulated.

The student should be familiar with the University's Academic Honesty Policies.

<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

Makeup exams will only be given for legitimate reasons like a serious illness, or a University excused absence. However, you **MUST** provide me with official written documentation **PRIOR** to the start of the test. No makeup quiz as your lowest quiz grade will be dropped at the end of the semester.

