MAP 2302 Elementary Differential Equations Section 3151

Time and Location

M W F Period 8 (3:00 – 3: 50 pm), LIT 203

Final Exam Time and Date

April 30, 3:00 – 5:00 PM, LIT 203

Description, Content, and Goals

MAP 2302 is a 3 credit course which gives the basic elementary
knowledge necessary for understanding, applying, and solving differential
equations of the most usual types (Chapters 1, 2, 4, 6, and 7 of the text). The purpose of this course is to introduce the student to the study of ordinary differential equations, which are used to describe the evolution and behavior of physical processes in most fields of scientific endeavor, from physics and engineering to economics and sociology. The course starts with the concepts of differential equation, its solution, direction field, initial value problem and Euler's method. The next chapter 2 covers certain important classes of ordinary differential equations of first order. Methods of solutions include separability, exactness, integrating factors, first order linear equations, Bernoulli's equations, and second order equations reducible to first order ones.
The course continues with second order linear equations methods (Chapter 4). Mainly, we consider linear equations with constant coefficient, including particular solutions and general solutions by the method of undetermined coefficients and the method of Variations of parameters. Applications include mass-spring oscillators and electrical circuits.
In Chapter 6 generalize methods of results of Chapter 4, via discussing linear differential equations of higher orders.
Chapter 7 covers Laplace transform methods, including properties of
the Laplace transform, solution of initial value problems, and applications.

Literature:

R. Kent Nagle, Edward B. Saff and Arthur David Snider: *Fundamentals of Differential Equations and Boundary Value Problems, 6th Edition,* Pearson Education Inc.

Office hours:

LIT 436, M7, W7 or by appointment. The students are also
welcome to call me or use e-mail:
rudyak@ufl.edu for communication. For more details, see my
schedule.

Quizzes and Exams Policy

We will have 3 quizzes, 15 points each, I will drop the worst one. We have 2 midterm exams, 20 points each, and we have final (cumulative) exam that worths 30 points. So 100 points together. No formula sheet, no notes, no book, no any kind of electronic devices are allowed on quizzes. For exams, one formula sheet (A4 format, two sided) written by yourself, no Xerox, no torn book pages, etc. are allowed.
Homework assignments are not graded, but it is essential that you do them thoroughly in order to be in a position to do well on the exams.
We will also assign a voluntary quiz, 5 points (one point to each problem, no partial credits), to those students who wants to make-up their scores.

Tentative Schedule of Tests

1/31(Quiz), 2/21(Quiz), 3/14(Exam), 4/4(Quiz), 4/18(Exam), 4/23 (Voluntary Quiz).

Grading Scale

The total score of the student is equal to the sum of points. The resulting score determines the letter grade according
to the following table (minus grades will not be used for letter grades):

Letter Grade	**A**	**B+**	**B**	**C+**	**C**	**D+**	**D**	**E**
Score	**100>>90**	**89>85**	**84>>79**	**78>>73**	**72>>67**	**66>>60**	**59>>54**	**53>>0**

UF Policy

Make-up. If a student misses a quiz/exam and is willing to make-up the test, s/he must submit an excusable documentation

Concerning students with disability . Students requesting classroom accommodation must first with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

Information on current UF grading policies for assigning grade points.
This may be achieved by including a link to the web page:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

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Evaluations
Students are expected to provide feedback on the quality of instruction in this course by
completing online evaluations at https://evaluations.ufl.edu

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Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/

Homework Assignments

Solutions to Tests