

MAP2302 Differential Equations

Course Content and Objectives.

We will cover much of Chapters 2,4,7 and some Chapter 8. This includes First Order Equations (Linear,Exact, Bernoulli etc), second order equations and some applications to circuits and mechanics and Laplace transforms. Series solutions will be covered in Chapter 8.

Instructor and Office Hours

Murali Rao, 494 Little Tlf: 352-294-2327

MWF: 4 th period.

Homework, Problems and Exams

Homework will be regularly assigned. There will be three tests each of 34 points on Feb 7, March 13 and Apr 20. IMPORTANT: ALL TESTS ARE CUMULATIVE.

Grading

Grading scale: A: 90 or above; A-: 87-89; B+: 84-86; B: 80-83; B-: 77-79; C+: 74-76; C: 70-73; C-: 67-69; D+: 64-66; D: 60-63; E: < 60.

ABSOLUTELY NO MAKEUPS WITHOUT MEDICAL DOCUMENTATION. NO REQUESTS FOR EXTRA CREDITS OR EXTRA ANYTHING.

NO BARGAINING FOR, OR CHANGING OF, GRADES OR POINTS.

Tentative weekly schedule.

Week 1: Separable Equations, Linear Equations . Week 2: Continued. Week 3: Exact Equations. Integrating Factors. Week 4: Substitutions and Transformations. Week 5: Second Order Equations, Homogeneous Equations and General Solution. Week 6: Equations with constant Coefficients. Auxiliary Equations. Roots.

Week 7: . Continued. Week 8: Nonhomogeneous Equations, Superposition Principle and the Method of Undetermined Coefficients. Week 9: Variation of Parameters and Variable Coefficient Equations. Week 10: Laplace and Inverse Laplace Transforms. Week 11: Continued. Week 12: Solving Initial value problems and Discontinuous Forcing. Week 13: Convolutions, Impulses and Dirac Delta Functions..

Review...

Course policies:

<u>Closed-book policy:</u> No use of calculators, or books will be allowed during any in-class tests/quizzes.

Policy related to make-up exams or other work: There will be no opportunities to make up for work not submitted. However, if a student provides a legitimate excuse well in advance, scores will be prorated. Work with due date should be turned in at the beginning of class on the stated due date. Late work will not be accepted and will be deemed work not submitted.

<u>Policy on class attendance</u>: Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at:

https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

University's honesty policy: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code". On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Creating Access for Students with Disabilities – Updated Mandatory Course Accessibility Statement for all SyllabiThe scope of the Disability Resource Center (DRC) is to help access barriers in online and on-campus courses. The DRC staff approves academic accommodations that provide equitable opportunities for learning. Given that there are over 3,600 students connected with the DRC at the University of Florida, it is likely that faculty have students with disabilities in their courses. It is important that faculty inform students with disabilities how to request accommodations. The following accessibility statement is required to be included on all course syllabi: Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting disability.ufl.edu/students/get-started. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester Faculty can expect to receive a student's accommodation letter within the first 3 weeks of classes; however, if a student registers with the DRC later in the semester faculty are still obligated to facilitate accommodations. Neither faculty nor administrators may

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independently deny a request for accommodation that is approved by the Disability Resource Center. View the Policy on Course Syllabi.

For students with disabilities: Students requesting classroom accommodation must first register 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.

Students' evaluations of the course: Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at https://evaluations.ufl.edu. 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.

Honor Code: In this course authorized aid on homework consists of talking to me, other students, and looking at the notes for this course. This means that you are not allowed to look in other books for solutions to the homework or at the written solutions of other students. Class Attendance: Most students benefit a great deal from attending class regularly. Arriving late and/or leaving early, reading the newspaper, looking at your cell phone, etc. disrupts the class and is rude and unprofessional. Excused Absences: In certain circumstances a student will be able to make up a missed exam. These circumstances could include medical situations, family emergencies, travel for University activities (eg. band, debating club, etc), and religious observances. In these cases the student must inform me before or within one week after the missed work and provide written documentation.

Additional Information:

Grades: Grading will be in accord with the UF policy stated at https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx.

Honor Code: "UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class."

Class Attendance: "Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx."

Accommodations for Students with Disabilities: "Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, https://www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will

receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester."

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

Contact information for the Counseling and Wellness Center:

http://www.counseling.ufl.edu/cwc/Default.aspx, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.



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