MAP2302 Differential Equations » Murali Rao » University of Florida

MAP 2302 Differential Equations

- **Course Content and Objectives**
  We will cover much of Chapters 2,4,7 and some of 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 Hall.

  MW: 5th period, F: 4th period.

- **Homework, Problems and Exams**
  Homework will be regularly assigned.

  There will be three tests each of 33 points on
  Feb 7, March 21 and April 21.

  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

1/6-1/10 : Separable Equations and Linear Equations.

1/13–1/17 : Exact Equations. Integrating Factors.

1/20-1/24 : Substitutions and Transformations.

1/27-1/31 : Second Order Equations, Auxiliary Equations and
Complex roots.

2/3-2/7 : Nonhomogeneous Equations, Superposition
Principle and the Method of Undetermined Coefficients.

2/10-2/14 : The Method of Undetermined Coefficients(continued.)
Variation of Parameters.

2/17-2/21 : Variation of Parameters. Variable Coefficient Equations

2/24-2/28 : Variable Coefficient Equations. Reduction of Order.

3/10-3/14 : Laplace and Inverse Laplace Transforms.

3/17-3/21 : Solving Initial value problems.

3/24-3/28 : Discontinuous Functions. The Unit Step.

3/31-4/4 : Periodic Functions. Convolutions.

4/7-4/11 : Convolutions and Impulse Response.

4/14- 4/23 : The Dirac Delta Function. Review.

- **Course Information**
  http://www.math.ufl.edu/~mrao/mac2302_fall2013.html

  - **Course policies:**

  - Closed-book policy: 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.

  - Policy on 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 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