MATH 315.001: DIFFERENTIAL EQUATIONS
Spring 2015

CONTACT INFORMATION:

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DESCRIPTION AND POLICIES:

1. Class Schedule: TR 11:00-12:15p, BIN 326. Please attend the regular office hours scheduled before class meetings for any questions.


3. Website & Internet: An eCollege website has been created for the course which may be accessed from student myLEO accounts following the eCollege and then the My Courses tabs. All files and documents, lecture notes and outlines, links to video content, and software modules that the instructor shares with the class will be posted in the Doc Sharing folder in the course website. All material posted at the course website is copyrighted ©. You are allowed to retain one copy of each file for your personal use, but the files should not be distributed in any form without instructor’s written consent.

4. Course Description: First order equations, second order linear equations, the power series solutions, Laplace Transformations, and applications. Prerequisite Math 192.

5. Homework: Homework will be assigned in every class meeting on a regular basis. Selected assignments and problems will be graded only, but all homework problems should be worked out. The assignments will be turned in electronically (in form of a Mathematica notebook) by due dates to the Dropbox for that week at the eCollege website. Student name and homework number should be printed at the top of each notebook. You may work in groups unless otherwise instructed, however the paper you turn in must be your own work. Late homework is not accepted. Homework score is worth 50 points of the total semester grade.
6. SOFTWARE: Mathematica software is required for the course. It will be used for carrying out computations in discussion sessions, homework exercises, exams and projects. Mathematica 10 is installed and available in Mathematics computer lab in BIN 328, and in computer labs at the Metroplex center. Personal student licenses may be purchased online at the Wolfram Mathematica website http://www.wolfram.com/mathematica/how-to-buy/education/. A TI-84 is recommended.

7. TESTS & PROJECTS: There will be two tests/projects (100 points each) and a comprehensive final (200 points). Test problems would be similar to homework exercises. No make-up test will be given without an official, written, university accepted excuse. The student must contact the instructor the next working day and present the documented excuse to make up a test.

8. LEARNING OUTCOMES: Students who complete this course successfully will
a) learn the terminology of differential equations;
b) learn the methods employed in the field of differential equations;
c) learn the applications of theoretical results to practical problems.

9. TENTATIVE COURSE OUTLINE: We cover parts of these topics as time permits.
   1. Introduction to Mathematica
   2. First, Second and Higher Order Differential Equations
   3. Series Solutions
   4. Laplace Transform
   5. Systems of Differential Equations
   6. Numerical Methods
   7. Nonlinear Differential Equations
   8. Partial Differential Equations
   9. Boundary Value Problems

10. TENTATIVE EXAM SCHEDULE:
   Test 1 100 pts Tuesday February 24, 2015 in class
   Test 2 100 pts Tuesday March 31, 2015 in class
   Final 200 pts Tuesday May 12, 2015 10:30-12:30a

11. GRADE DISTRIBUTION: The test scores and the homework/attendance score will be added and a letter grade will be assigned according to the following table.
   A  406 - 450 pts
   B  361 - 405 pts
   C  316 - 360 pts
   D  271 - 315 pts
   F  0 - 270 pts
12. **Other Important Dates:**
   - March 16-20, 2015  Spring break
   - May 08, 2015  Last class day

13. **Miscellaneous:** Your enrollment in this course indicates that you agree to observe all the conditions and regulations of this syllabus and the Student Handbook. Your test and homework scores may be filed to be used anonymously for educational research.

   It is your responsibility to secure the software licenses and other resources (such as a personal computer with proper operating system to run the software, broadband internet access to view the video recordings and participate in online discussion sessions, etc.) to be able to complete and communicate all assignments, tests and projects to the instructor as required. The access information to Library resources, and Help Desk for technical support are available through the eCollege website.

   Policies pertaining to scholastic dishonesty are identical to TAMU-Commerce regulations given in the Student Handbook, available online at the website [http://web.tamuc.edu/studentLife/documents/studentGuidebook.pdf](http://web.tamuc.edu/studentLife/documents/studentGuidebook.pdf). All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment (See Student’s Guide Handbook, Policies and Procedures, Conduct). Disruptive behavior and scholastic dishonesty in any form will not be tolerated.

   Students requesting accommodations for a disability should contact the Office of Student Disability Resources and Services, Texas A&M University-Commerce, Gee Library, Room 132, Phone: (903) 886-5150 or (903) 886-5835, Fax: (903) 468-8148, or Email: StudentDisabilityServices@tamuc.edu.

   Any possible changes to be made in this syllabus by the instructor during the semester will be announced by email.