UWG Fall 2009
MATH 3303: Ordinary Differential Equations
MWF 01:00 pm - 01:50 pm Boyd Building Room 301

Instructor: Dr. Minh Nguyen  
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Office Hours: TBA  
Textbook:  
Material: We shall cover all of Chaps 1--8 from the book.

Course Description:  
This course is an introduction to the subject of differential equations and has three components:  
1. Existence theory and classical methods for first order equations (chapters 1&2)  
2. Real life applications and the theory of linear equations (chapters 3&4)  
3. Techniques and methods for solving general linear equations: operator method, power series, systems of linear equations and an introduction to the Laplace transform (chapters 6, 7&8).  
We shall use the computer algebra system Maple for symbolic computations and for its linear algebra and integral transforms packages.

Learning Outcomes: the student will be able:  
1. To identify and classify a differential equation  
2. To decide whether a solution is unique, and to find its domain of existence  
3. To solve first order equations by classical methods  
4. To model a simple process and determine its evolution for large time  
5. To solve an inhomogeneous equation using undetermined coefficients or variation of parameters  
6. To find power series solutions of linear equations with analytic coefficients  
7. To solve systems of linear equations by methods of linear algebra  
8. To use computer resources to solve ordinary differential equations symbolically

Grading Procedure:  

Tests (300 points): There will be three 50-minute tests, each worth 100 points.  

Quizzes (100 points): There will be approximately 14 short quizzes. The best 10 quizzes will count. Each quiz is worth 10 points.  

Final Exam (200 points): There will be a comprehensive final exam, worth 200 points.  

Extra Credits: are given to those students who actively participate in discussion and in solving problems.  

For your grade in the course, the following grading scale will be used:  
- 540-600 points earns a grade of A  
- 480-539 points earns a grade of B  
- 420-479 points earns a grade of C  
- 360-419 points earns a grade of D  
- below 360 points earns a grade of F
Test and Quiz Policy: No make-up tests or quizzes will be given. Missed quizzes and tests get a grade of 0.

Homework: Homework will be assigned during each class meeting or on the web page of this course. It is to be completed by the next class meeting. It is ESSENTIAL to your success in the course that you do the homework regularly, and on time. Part of each homework assignment is to read the corresponding material in the text.

Online technology support: We will use CourseDen online service to support the course. You can find this web site at http://webct.westga.edu. Quizzes, lecture notes, your grades and other assignments may be posted at this site. Visit this site as often as possible to know what is going on in this class.

Attendance Policy: Students are expected to attend every class. If a class is missed, the student is responsible for all material, assignments and announcements.

Attendance: 8 absences lead to WF.

Important Dates:
  Test #1: Sept. 18
  Test #2: Oct. 16
  Test #3: Nov. 20