

Math 2700: Differential Equations (MWF 10:10-11:00)
Fall 2007

Professor Daniel K. Nakano
Office: Boyd Graduate Center, Room 445
Phone: 542-2643
Office Hours: MWF 1:20-2:20
Text: Boyce and DiPrima, Elementary Differential Equations and Boundary Value Problems, Eighth Edition

COURSE SCHEDULE

Week	Topics	Homework
8/17	Direction Fields	(1.1) 1,4,11,15,21,22,23,26
8/20-8/24	Solutions and Classification of Differential Equations	(1.2) 2,4,5,8,12,14,15 (1.3) 1,4,8,11,16,20,27,30
8/27-8/31	Linear Equations, Separable Equations	(2.1) 5,13,16,28,30,31 (2.2) 1,4,15,22,24,25
9/5-9/7	Modeling with First Order Differential Equations	(2.3) 1,3,6,9,12,17,24
9/10-9/14	Linear and Nonlinear Equations, Population Dynamics	(2.4) 3,7,8,13,23,25 (2.5) 1,4,8,13,16,23
9/17-9/21	Exact Equations, Integrating Factors, Euler's Method	(2.6) 2,6,12,14,19,25 (2.7) 1,7,11,16,21
9/24-9/28	REVIEW MIDTERM (material through Section 2.7)	
10/1-10/5	Homogeneous Equations with Constant Coefficients, Linear Homogeneous Equations	(3.1) 2,7,11,14,21,27 (3.2) 2,7,14,21,29,34
10/8-10/12	Wronskian, Characteristic Equations and Complex Roots	(3.3) 2,7,10,15,21,25 (3.4) 1,9,14,18,23,27
10/15-10/19	Reduction of Order, Method of Undetermined Coefficients	(3.5) 2,7,13,18,19,25 (3.6) 1,3,8,15,16,28,31
10/22-10/24	Variation of Parameters	(3.7) 3,7,10,15,17,21

10/29-11/1	Mechanical and Electrical Vibrations, Forced Vibrations	(3.8) 1,7,8,12,14,18 (3.9) 3,5,9,10,12,15
11/5-11/9	Series Solutions, REVIEW MIDTERM (material through Section 3.9)	(5.2) 3,6,15,17,22,24
11/12-11/19	Laplace Transform, Initial Value Problems	(6.1) 2,5,7,12,26 (6.2) 3,8,12,17,25
11/26-11/30	Step Functions, ODEs with Discontinuous Forcing Functions	(6.3) 1,7,14,19,20,24 (6.4) 1,10,14,16
12/3-12/5	Impulse Functions, REVIEW (for Final Exam)	(6.5)

Final: Friday, December 14, 2007, 8:00-11:00am.

Grading Policy

Final: 40%

Midterms (2): 20% each

Homework: 20%

Remarks:

1) I highly recommend that you read your book before coming to class. You will probably not understand everything the author says, but it will help you to keep up during the lectures. Success in this class will depend on your ability to read outside of class.

2) In the Thursday recitation section you will have a chance to ask questions about the homework problems from the previous week. The homework is due on at the beginning of class on Friday (the next day). No late HW will be accepted.

3) Academic Honesty: The University of Georgia expects every student to live up to the highest standards of academic honesty and ethics. There are severe punishments for cheating enforced by the university.

4) This syllabus is a general course plan, but deviation may become necessary over the course of the semester.

5) Withdrawals: You may withdraw without penalty before the third HW assignment is due. After that point the assignment of a W or a WF will depend on whether you are making passing marks in the course.