

MATH 219A - DIFFERENTIAL EQUATIONS WINTER 2007

MW: 1:10 - 2:30 P.M. (HATHORN 207)

Instructor: Peter Wong

Office: 212 Hathorn

Office phone: x6143

e-mail: pwong

Office hours: 9:30 - 10:30 MW, 8:00 - 9:00 T, or by appointment

Text: *Differential Equations* by P. Blanchard, R. Devaney and G. Hall, (3rd. ed.) Brooks/Cole Publishing Co. 2006.

Grading: 2 Mid-Term Exams - 25% each; Final Exam - 30%; Homework - 10%; Project - 5%; Attendance - 5%

Exam Dates: Exam I: Feb. 5; Exam II: Mar. 12 ; **Final Exam:** 10:30 - 12:30 (Thursday) April 12, 2007

Prerequisites: Math 205 and Math 206

In this first course, we study elementary methods of solving *differential equations* which often arise in modeling physical phenomena in the real world. We study the solutions analytically, numerically as well as graphically.

We will use *DETools*(CD comes with the book) to help analyze solutions of differential equations.

Weekly homework will be assigned but only selected ones will be collected and graded. Near the end of the semester, group projects will be assigned.

Syllabus

Week 1 : 1.1, 1.2;

Week 2 : 1.3, HW 1;

Week 3 : 1.4 - 1.6, HW 2;

Week 4 : 1.7, 1.8, HW 3;

Week 5 : Exam I, 2.1;

Week 6 : 2.2, 2.3, HW 4;

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Week 7 : 3.1, 3.2, HW 5;
Week 8 : 3.3, 3.4, HW 6;
Week 9 : Exam II, 3.5;
Week 10 : 3.6, 3.7, HW 7;
Week 11 : 4.1, 4.2, HW 8;
Week 12 : 5.1, 5.2, HW 9.