

MAP 2302: Elementary Differential Equations

Spring 2014

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Office hours: Mondays and Wednesdays 10:40–12:00, or by appointment.

Class meets MWF 8:30–9:20 in Little 201.

Textbook

Fundamentals of Differential Equations and Boundary Value Problems (6th Edition), by Nagle, Saff, and Snider.

Syllabus

This is a first course in ordinary differential equations. Some of the topics we will cover are first order linear ODEs; first order non-linear ODEs, including the techniques of separation of variables, exactness, and integrating factors; and second order linear ODEs, including the techniques of finding fundamental solutions of homogeneous equations, the Wronskian, undetermined coefficients, variation of parameters, the Laplace transform, and power series solutions.

Exams

Friday, January 31, in class.

Friday, February 28, in class.

Friday, April 4, in class.

Wednesday, April 30, 5:30–7:30 PM (final).

Homework

I will assign homework problems each week to be collected and graded. Solutions to these problems will be distributed after the homework has been collected. Late homework will not be accepted. I will also assign some homework problems which will not be collected or graded. You should certainly do these problems as well, since exam questions may be based on them.

Grading

Each in-class exam is worth 20% of your final grade, the final is worth 40%, and the homework assignments are worth a total of 20%. I will drop your lowest in-class exam score (or half of your final exam) to make the total add up to 100%. Your grade will be determined by the following scale:

$$95 \leq x \leq 100 : A$$

$$80 \leq x < 85 : B$$

$$65 \leq x < 70 : C$$

$$50 \leq x < 55 : D$$

$$90 \leq x < 95 : A-$$

$$75 \leq x < 80 : B-$$

$$60 \leq x < 65 : C-$$

$$45 \leq x < 50 : D-$$

$$85 \leq x < 90 : B+$$

$$70 \leq x < 75 : C+$$

$$55 \leq x < 60 : D+$$

$$0 \leq x < 45 : E$$