

MAP 2302: Elementary Differential Equations

Fall 2020

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Class Format

Each week I will post recorded lectures (by Konstantina Christodouloupoulou) and homework problems based on these lectures. On Mondays, Wednesdays, and Fridays during 7th period (1:55–2:45) we will meet on Zoom for discussion, questions, and examples.

Office hours (via Zoom)

Mondays and Fridays 8th period (3:00–3:50), Wednesdays 4th period (10:40–11:30), or by appointment.

Textbook

Fundamentals of Differential Equations and Boundary Value Problems (7th 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, September 25, 1:55–2:55

Friday, October 23, 1:55–2:55

Friday, November 20, 1:55–2:55

Wednesday, December 16, 3:00–5:00

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 turned in. 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:

$95 \leq x \leq 100 : A$	$90 \leq x < 95 : A-$	$85 \leq x < 90 : B+$
$80 \leq x < 85 : B$	$75 \leq x < 80 : B-$	$70 \leq x < 75 : C+$
$65 \leq x < 70 : C$	$60 \leq x < 65 : C-$	$55 \leq x < 60 : D+$
$50 \leq x < 55 : D$	$45 \leq x < 50 : D-$	$0 \leq x < 45 : E$