

Math 217—Differential Equations—Fall 2019

$$\frac{dy}{dx} + P(x)y = Q(x) \quad \frac{d}{dt}x = Ax \quad \mathcal{L}\{f(t)\} = \int_0^\infty e^{-st}f(t)dt$$

Lecture Sections

Section 01

Class Time: MWF 9-9:50am in Crow 204

Instructor: Greg Knese

Office: Cupples I 214

Office hours: TBA

Email: geknese@wustl.edu

Section 02

Class Time: MWF 11-11:50am in Hillman 60

Instructor: Humberto Diaz

Office: Cupples I 203

Office hours: Monday, 1-2PM; Wednesday, 12-1PM; Friday, 10-11AM; by appointment

Email: humberto@wustl.edu

Discussion sections

You will meet with your Assistant to Instructor every Tuesday (starting with the first Tuesday of classes). In these meetings, you will learn new material and topics as well as work on problem solving. Come to these meetings prepared by doing your homework. You will have group work to do that will be graded and part of your grade. We will drop two discussion section grades in computing your group work score.

Assistants to the Instructor

Naga Manasa Vempati mvempati@wustl.edu

Eric Pasewark eric.pasewark@wustl.edu

Math help room and AI office hours: <https://www.math.wustl.edu/~blake/calculus/>

General course info

Text: Differential Equations and Boundary Value Problems: Computing and Modeling (5th edition) by Edwards, Penney, and Calvis

Course Description: This course gives an introduction to ordinary differential equations, with an emphasis on using differential equations to model real-world systems. Topics to be covered include first-order solution techniques, higher-order linear equations and systems, Laplace transforms, series solutions, and other topics as time permits. Prerequisite: successful completion of, or concurrent enrollment in, Math 233.

Exams

- There are three midterm exams, as well as a final.
 - The midterms are scheduled from 6:30-8:30PM on September 19, October 24, and November 21. The final will be on Dec 13, 2019, 10:30AM - 12:30PM.
 - You must take the final exam to pass the course. The final exam covers all material from the course.
 - Attendance at each of these exams is required and no make-up exams will be given. If something happens that prevents you from taking an exam, you must contact your instructor as early as possible to make alternative arrangements. Certain excused absences are handled by Dr. Blake Thornton bthornton@wustl.edu.
 - Practice exams will be provided before each exam;
 - Adherence to the university's academic integrity policy is required.
 - No calculators allowed. You will not be allowed anything other than writing tools at the exams.
 - Please check your seat assignment beforehand. <https://www.math.wustl.edu/seatlookup/>
 - If your lowest midterm score is lower than that of your final, the final will replace that midterm.
 - Exams will be a mix of multiple choice questions (probably around 15-20 of these) and hand graded questions (probably 2 of these). The final exam will be entirely multiple choice.
 - Find your multiple choice score the day after the exam here: <https://www.math.wustl.edu/seatlookup/>
 - Find all your grades here: mycanvas.wustl.edu. Webwork grades will be uploaded to Canvas at the end of the semester.
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Homework

There will be two types of homework: online homework via WeBWorK and written homework submitted via Crowdmark.

Webwork will usually be due on **Mondays** throughout the semester; access is through Canvas. Your two lowest WeBWorK scores will be dropped to account for any missed assignments.

Crowdmark homework will be due on **Wednesdays**. Your lowest hand-graded homework will be dropped. You are encouraged to work together on homeworks, but submitted solutions must be your own individual work; i.e., copying is not allowed.

Grading

The breakdown for the final grade will be:

- Discussion, 7.5 %
- Exam 2, 12.5%;
- Crowdmart, 12.5 %;
- Exam 3, 12.5 %;
- Webwork, 12.5 %;
- Final Exam, 30%.
- Exam 1, 12.5%;

We will replace an exam score with the final exam score if it is to your benefit. The grades will then be given according to the following scale:

A+	95-100 %	B+	80-84 %	C+	65-69 %	D	50-54 %
A	90-94 %	B	75-79 %	C	60-64 %	F	0-49 %
A-	85-89 %	B-	70-74 %	C-	55-59 %		

Pass/Fail policy: you must receive at least a C- to receive a “Pass” for the course.

Disability Resources (DR)

Special accommodations for exams are offered to students who have registered in a timely manner at Disability Resources (DR). Information about DR may be found at <https://students.wustl.edu/disability-resources/>. Students who desire to take advantage of this service should go to the DR early in the semester, well before the first exam. Once approved for accommodations, students should work with DR for these exams.

Tentative schedule of topics

Week	Date	Textbook sections	Notes
1	Aug 26	Syllabus and Sec 1.1	
1	Aug 28	Sec 1.2	
1	Aug 30	Sec 1.3	
2	Sept 2	Labor Day	
2	Sept 4	Sec 1.4	
2	Sept 6	Sec 1.5	
3	Sept 9	Sec 1.6	
3	Sept 11	Catch-up	
3	Sept 13	Sec 2.1	
4	Sept 16	Sec 2.2	
4	Sept 18	Review	
4	Sept 19	Exam 1	Exam covers chapter 1
4	Sept 20	Sec 2.4	
5	Sept 23	Sec 3.1	
5	Sept 25	Sec 3.2	
5	Sept 27	Sec 3.3	
6	Sept 30	Sec 3.4	
6	Oct 2	Sec 3.5	
6	Oct 4	Sec 3.6	
7	Oct 7	Catch-up	
7	Oct 9	Sec 4.1	
7	Oct 11	Sec 5.1	
8	Oct 14	Fall Break	
8	Oct 16	Sec 5.2	
8	Oct 18	Sec 5.3	
9	Oct 21	Sec 5.5	
9	Oct 23	Review	
9	Oct 24	Exam 2	Exam covers ch 2.1, 2.2, 2.4 ,3.1-3.6,4.1, 5.1-5.2
9	Oct 25	Sec 5.6	
10	Oct 28	Catch-up	
10	Oct 30	Sec 7.1	
10	Nov 1	Sec 7.2	
11	Nov 4	Sec 7.3	
11	Nov 6	Sec 7.4	
11	Nov 8	Sec 7.5	
12	Nov 11	Sec 7.6	
12	Nov 13	Catch-up	
12	Nov 15	Sec 8.1	
13	Nov 18	Sec 8.2	
13	Nov 20	Review	
13	Nov 21	Exam 3	Exam covers ch 5.3, 5.5, 5.6, 7
13	Nov 22	Sec 8.3	
14	Nov 25	Sec 6.1	
14	Nov 27	Thanksgiving Break	
14	Nov 29	Thanksgiving Break	
15	Dec 2	Catch-up	
15	Dec 4	Review	
15	Dec 6	Review	
	Dec 13	Final exam 10:30am-12:30 pm	Exam covers all sections above