MAT 22B: Differential Equations (2022 Summer Session I)

Instructor: Benjamin Godkin
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Office Hours: M 9:30-10:30AM, T 3-4PM, W 11:30AM-12:30PM, R 2-3PM, F 9:30-10:30AM
Website: https://www.math.ucdavis.edu/~godkin

Class meetings: MWF 2:10 PM - 3:50 PM, Young 184 (June 21, 2022 - July 29, 2022)

Textbook: *Elementary Differential Equations and Boundary Value Problems* by Boyce and DiPrima

Course Outline: We will follow the course schedule available on the department website (https://www.math.ucdavis.edu/courses/syllabus_detail?cm_id=59). Note that summer session will move significantly faster than the schedule on the department website. More detailed calendar below.

Prerequisites: At least one of the prerequisite requirements below:

- MAT 022A C- or better

- MAT 067 C- or better

OR by consent of instructor.

Grading: You will be evaluated by the higher of the following two assignment weightings:

- Homework 20%, Quizzes 15%, Applications 15%, Midterm 20%, Final 30%

- Homework 10%, Quizzes 10%, Midterm 30%, Final 50%

Homework: There will be a total of 7 homework assignments. Homework will be handed in by the end of the class meeting time. The 2 lowest assignments will be dropped. Late homework will generally not be accepted.

Quizzes: There will be a total of 7 quizzes. The 2 lowest scores will be dropped. Quizzes cannot be made up and will take place during the final 15 minutes of the class meeting.

Applications: Each week, there will be an application-based assignment to be completed. It is strongly encouraged that you work on this in groups. You are free to form your own groups, but I am also happy to facilitate the formation of groups. If you elect to work as a group, you may submit a single submission, but you may only work as a group of up to four classmates. I will hold "discussion sections" (OH in a larger room) on Tuesdays and Thursdays which you may use as a meeting place, but attending those sessions will not be mandatory.

Exams: There will be one midterm and one final exam. These exams cannot be made up and are scheduled to take place during the class time. Please make sure you are available during the scheduled time as makeup exams will not be possible.

- Midterm: Wednesday July 13, 2021

- Final: Friday July 29, 2021

Class Policies:

- Please make use of OH for questions, but you may also email me any questions you have. Please email me at the above email address and not through Canvas. I will try to reply within 24 hours or by Monday if you email over the weekend. If you do not get a reply, please follow-up, because I may have missed your email.

- You may work on homework with other students, but your write-up should be completed yourself and be in your own words.

- Calculators will not be allowed on exams.

- All exams are closed book, notes, and other resources.

- Students are expected to adhere to the UCD Code of Academic Conduct (http://sja.ucdavis.edu/cac.html). Any suspicions of cheating will be reported to OSSJA, and they will handle any issues that may arise.

- If anything of concern comes up please contact me sooner rather than later.

Other resources:

- The Academic Assistance & Tutoring Center provides tutoring services during the summer through Zoom. https://tutoring.ucdavis.edu/math

- The 3Blue1Brown YouTube channel has a great video series on differential equations with lots of visualizations. https://youtube.com/playlist?list=PLZHQObOWTQDNPOjrT6KVlfJuKtYTftqH6

<u>Course Schedule:</u>

Lecture	Date	Sections (Boyce and DiPrima 10th)	Due Dates
1	6/22/2021	1.1, 1.2, 1.3	Quiz 0
2	6/24/2021	2.1, 2.2	
3	6/27/2021	2.3, 2.4	PS1, Quiz 1
4	6/29/2021	2.5, 2.7	Application 1
5	7/1/2021	2.8	PS2 , Quiz 2
6	7/6/2021	2.9, 3.1	Application 2
7	7/8/2021	3.2, 3.3	PS3, Quiz 3
8	7/11/2021	3.4	Quiz 4
9	7/13/2021	Midterm	PS4
10	7/15/2021	3.5, 3.6, 3.7, 3.8	Application 3
11	7/18/2021	6.1, 6.2	PS5, Quiz 5
12	7/20/2021	7.1, 7.2, 7.3	
13	7/22/2021	7.4,7.5	PS6, Quiz 6, Application 4
14	7/25/2021	7.6, 7.7	
15	7/27/2021	7.8, 7.9	PS7, Quiz 7
16	7/29/2021	Final	Application 5