Math 24 Syllabus, Summer 2024

Course Information

Learning Outcomes: By taking this course, you will learn the following.

1. You will understand how differential equations are used to understand and model scientific phenomena, to design engineering devices, and to explain other phenomena in nature.
2. You will be able to solve basic differential equations in one variable.
3. You will be able to solve systems of first-order differential equations,
4. You will be able to model various biological and other systems by differential equations and analyze their behavior.

Gradescope: We will use Gradescope (Links to an external site.) https://www.gradescope.com/get_started (Links to an external site.) to grade your exams. Get familiar with this tool. Especially, check the video titled For students: Submit PDF homework (Links to an external site.)to review how to upload your scanned image files and PDF files to Gradescope. To submit your exams to Gradescope, you either (1) scan your work into multiple image files and upload them, or (2) make a **single** PDF file out of your scan and upload it. Gradescope cannot accept multiple PDF files for uploading at this time. If you do not have scanning technology, contact slug support: https://deanofstudents.ucsc.edu/slug-support/program/contact.htmlLinks to an external site.

WebAssign (Online Homework): Homework assignments will be graded online using WebAssign (Links to an external site.). You have to go to the WebAssign website directly to access it, not from Canvas. So you should bookmark WebAssign. Problems will be assigned after each lecture, and you will have three days to complete the homework assignment for that particular lecture. For example, the WebAssign homework for the first lecture on Monday, 7/29, will be due at midnight on Thursday, 8/1. You are allowed five submissions for each question.

Please self-enroll yourself using the following information. If you do not have it, you will need to purchase an access code to access WebAssign. *Use only your UCSC email address when you register to receive credit.* **WebAssign comes with an eBook version of the textbook listed below.**

Instructor	Hirotaka Tamanoi
Section	Math 24, section (no name)
Class Key	**ucsc 0084 8447Links to an external site.**

Time Zone: If you live in a different time zone, here is an instruction to set your time zone. How do I set a time zone in my user account as a student? (Links to an external site.)Especially, please be careful about the time and date for the final exam.

Instructor Office Hours (No TA)

Professor HirotakaTamanoi (tamanoi@ucsc.edu)	Monday, Wednesday, and Friday 2 PM to 3 PM
Location: McHenry 4180 (Use Westside stairs)	

Lectures

Lecture dates: From 7/29 to 8/30, Mondays, Wednesdays, and Fridays from 9 AM AM to 11:30 AM.

Lecture Videos: Lectures will be recorded and will be available in **Yuja** located on the left navigation pane

Lecture notes will be posted in the Lecture Notes folder in the **Modules** item on the left navigation pane right after the class.

Textbooks: We have one required textbook, which comes with WebAssign (Links to an external site.). The newest version is the 11th edition. However, the eBook available within the WebAssign is still 10th edition. There are only a few differences between these two editions, and both 10th-edition and 11th-edition textbooks are fine.

(1) Elementary Differential Equations, Tenth (10th) edition, by William E. Boyce and Richard C. DiPrima.

(2) *Elementary Differential Equations*, Eleventh (11th) edition, by William E. Boyce and Richard C. DiPrima, Publisher: John Wiley & Sons.

Lecture Schedule: We will cover chapters 1, 2, 3, 7, and 6 from the text. The tentative class schedule is the following. Lecture notes will be available in the Lecture Notes folder in the **Modules** tab in the left navigation pane.

Week	Monday	Tuesday	Wednesday	Friday
Week 1 (7/29, 31, 8/2)	Chapter 1		2.1, 2.2	2.3, 2.5
Week 2 (8/5, 8/7, 8/9)	2.6, 3.1, 3.2	**Midterm 1**	3.3, 3.4	3.5, 3.6
Week 3 (8/12, 8/14, 8/16)	3.7, 3.8	**Midterm 2**	7.1, 7.2, 7.3	7.4, 7.5, 7.6
Week 4 (8/19, 8/21, 8/23)	7.7, 7.8, 7.9	**Midterm 3**	6.1, 6.2	6.3, 6.4
Week 5 (8/26, 8/28, 8/30)	6.5, 6.6	**Midterm 4**	Review	**Final Exam**

Mathematics Resources: In the **Module** section, you can find a folder containing the following apps.

- Slope Fields
- Wolfram Alpha
- Desmos Graphing Calculator
- Phase Portrait

WebAssign Homework Assignments: Go to the WebAssign website. See the WebAssign info at the end of the Basic Course Information section above.

Canvas Ed Discussions (Q&A): You can ask various questions at Canvas **Discussions**, and the teaching staff (TA and I) and your fellow students can answer your questions. (Piazza is no longer used.)

Midterms (Open-Book) and the Final Exam (Closed-Book)

Dates of Online Midterms (Tuesdays)	8/6, 8/13, 8/20, 8/27 (You upload to Gradescope)
Date of the In-Person Final Exam	8/30 (9 AM -- 12 PM), in regular classroom

Course Grades

Here is a tentative scheme for the course grade.

Homework Assignments 30%	Midterms 30%	Final Exam 40%

At the end of the course, class averages for the above categories will be calculated, and raw scores will be rescaled so that the above percentage distribution is reflected. Then the total scores of individual students will be calculated, and the course grades will be determined.