

## Math 24 Syllabus, Summer 2020

**Course Information:** This course will be a Zoom based synchronous class, using WebAssign (you need to purchase an access code) for homework and a digital version of our textbook, Gradescope (free) for written assignments and exams, and Piazza (free) for Q&As for homework problems. In Math 24, we study basic (systems of) linear differential equations. In Math 106 in Summer Session II, we will study systems of nonlinear differential equations, which have much wider applicability.

**UC Santa Cruz Orientation Module for Summer 2020:** Useful official orientation information from UCSC for summer session students can be found in **Modules** tab on the left.

**Instructor:** Professor Hirotaka Tamanoi, Email: [tamanoi@ucsc.edu](mailto:tamanoi@ucsc.edu)

**Zoom Office Hours:** Mondays and Wednesdays from 12 PM to 1:30 PM on Zoom. See the Zoom schedule. For my Zoom office hours, you only need UCSC email addresses to join, and Zoom office hours will not be recorded.

**TA and Zoom Office Hours:** Alejandro Bravo Doddoli and Nicolas Newman. Tuesdays, Wednesdays, Thursdays from 4 PM to 5:30 PM, and Fridays from 12 PM to 1:30 PM. So on every weekday, TAs or I will be available from 12 PM or from 4 PM, either during office hours or discussion sections. These times were chosen to avoid conflicts with other summer session classes.

**Learning Outcomes:** (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.

**Synchronous Zoom Lectures (6/22-7/24), Yuja, and Lecture Notes:** My course is hosted on [Canvas](#). You do not need to sign up for an account, login with your CruzID and Gold Password at [canvas.ucsc.edu](https://canvas.ucsc.edu). See [Canvas Getting Started Student Guide](#). See the Zoom item in the navigation menu on the left pane of Math 24 page in Canvas for schedule and information. You will need to *register* for these lectures, and *passwords* and *UCSC emails* will be required to participate in zoom lectures (see the **Announcements**). Lecture dates are June 22 to July 24, Mondays, Wednesdays, and Fridays from 9 AM, except July 3rd due to the Independence day holiday.

Zoom lectures will be recorded and will be available in **Yuja** located on the left navigation pane. In Yuja, look for "All Courses" in the "Shared" section. Math 24 channel should contain Zoom lecture recordings.

Lecture notes will be posted in the Lecture Notes folder in the **Files** item on the left navigation pane.

**WebAssign (Online Homework):** Homework assignments will be graded online using [WebAssign](#). You have to go to WebAssign website directly to access, not from Canvas. So you should bookmark WebAssign. Problems will be assigned after each lecture and you will have about 3 days to complete the homework assignment for that particular lecture. For example, the WebAssign homework for the first lecture on Monday 6/22 will be due on midnight Thursday 6/25. You are allowed 5 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 of the textbook listed below.

Instructor	Hiroataka Tamanoi
Section	Math 24, section 01
Class Key	<b>ucsc 8733 4191</b>

**Textbook:** *Elementary Differential Equations and Boundary Value Problems*, Tenth (10th) edition, by William E. Boyce and Richard C. DiPrima, Publisher: John Wiley & Sons. The ebook version of this textbook comes with WebAssign.

**Lecture Schedule:** We will cover chapters 1, 2, 3, 5, 7, and probably 9 from the text. The tentative schedule is the following.

Week	Monday	Wednesday	Friday
Week 1	1.2, 1.2	2.1, 2.2	2.3, 2.4, 2.5
Week 2	2.6, 2.8, 3.1	3.2, 3.3	Holiday
Week 3	3.4, 3.5	3.7, 3.8	7.3, 7.4, 7.5
Week 4	7.6, 7.7, 7.8	7.9, 5.1, 5.2	5.3, 5.4, 5.5
Week 5	5.6, 9.1	9.3, 9.4	Final Exam

**TA directed Zoom Discussion Sections (starting Friday 6/26) and Quizzes:** There will be Zoom discussion sections for **all of you** twice a week with your TA, on Mondays and Fridays 4P M-5:45 PM, starting Friday 6/26. Even if you registered for one of the discussion sections, you are expected to attend both sections. This is because summer sessions progress twice as fast as regular quarter classes. These discussion sections are meant to help you with WebAssign problems and prepare you for written assignments on Mondays.

During the Zoom discussion sections, your TA will make effective use of Breakout Rooms feature of Zoom for small-group collaborative work. TAs will give problems for small groups to work on, and TA will visit groups to discuss/advise each group to further discussion. TA will ask a few groups to present the results of their collaborative work on

some problems to the entire class. After questions and answers sessions and small group work sessions, TA will give you several simple multiple choice quiz questions on Canvas which will be graded instantly by Canvas, to check your understanding. These quiz problems will become available during discussion sections in **Quizzes** tab in the navigation pane.

**Written Assignment with Gradescope:** There will be a weekly written assignment on Tuesdays starting 6/30. This is basically a short open-book exam of 30 to 60 minutes (duration depending on each assignment), and we will use [Gradescope](#). Get familiar with this tool at [https://www.gradescope.com/get\\_started](https://www.gradescope.com/get_started). Check the video titled [For students: Submit PDF homework](#).

Problems in these written assignments are from the previous week's lecture materials. So for example, problems of written assignment on 6/30 come from lectures on Monday, Wednesday, and Friday of the first week. You resolve any issues from Monday and Wednesday lectures by the end of Friday discussion sections, and you resolve any questions from Friday lectures during Monday sections to prepare for written assignments on Tuesdays.

You will work on these written assignments on your own. Cooperation with other students and asking at homework websites such as Chegg are prohibited. Students who use Chegg and/or other homework sites to work on written assignments may fail the course. (These websites cooperate with us.) Written assignments will be available in the **Assignments** section of the Canvas, which is linked to Gradescope.

After finishing, you scan your work into PDF files (by using your phones, etc) and upload them into your account in Gradescope. I suggest that you write your final version of your solution on new sheets, using new sheets for different problems. The exam will be available between 12 PM and 11:59 PM on Tuesdays. Once you start, you will have a specified time block (at most an hour) to work on the problems and then upload scanned files. So you will have to start before 11 PM at the latest. You cannot divide this specified time block into several parts.

The aim of these written assignments is to gauge the depth of your understanding of the materials and to practice writing solutions clearly with sufficient explanations. If we cannot read your answer, you may not receive any credits, even if your answer turns out to be correct. Grading criteria are

1. sufficient explanation of your solution method,
2. organization and clarity of your writing of your solution, and
3. correctness.

Note that correctness is only the third criterion. If you just write your answer, *you may not get credits at all even if the answer is correct.*

**Piazza:** We will be using Piazza for class discussion. The system is highly catered to getting you some help fast and efficiently from classmates, the TA, and myself. Rather than emailing questions to the teaching staff, I encourage you to post your questions on Piazza. All of you can contribute to the discussion on the same problem, even

anonymously. You can use LaTeX to type math formulas, too. TAs will frequently check Piazza to leave comments. You can have access to Piazza from the Piazza item in the left navigation pane on this Canvas page, or directly at the URL <https://piazza.com/ucsc/summer2020/math2401/home>

If you have any problems or feedback for the developers, email [team@piazza.com](mailto:team@piazza.com).

**Final Exam (Gradescope):** Final Exam will take place on 7/24, during the class time 9 AM-11:30 AM. This will be Zoom proctored. Before the exam when you arrive, you will be placed in the Zoom waiting room, and you will be admitted to Zoom exam "room" one by one after checking your photo ID. So please arrive at least 15 minutes earlier than the exam time with your photo ID. During the exam time, we will proctor you through Zoom. So your digital camera should show you and your solution sheets during the exam time. We may incorporate some other procedures to preserve the integrity of the final exam. The final exam problem sheet will be available on Canvas once everybody has been checked in. Please have sufficiently many white papers ready to write your solutions. The same criteria used to grade written assignments also apply to grade your final exams. So write clearly in an organized way with explanations. At the end of the exam period, you scan your work into PDF files (using your phones, etc) and you upload them into your account in Gradescope.

**Grades:** Extensions of deadlines for WebAssign and Written Assignments are not granted unless you encounter (documented) extenuating circumstances. Practicing discipline and punctuality is part of this course. You will have plenty of time to complete these assignments. However, if you do encounter a situation beyond your control, we will do our best to accommodate you.

WebAssign >30%	Quizzes <10%	Written Assignments 25%	Final Exam 35%
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At the end of the course, class averages for the above categories will be calculated, and they will be rescaled so that the above percentages are reflected. Then the total scores of individual students will be calculated, and the course grades will be determined.

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**Important Summer Session Remote 2020 Deadlines:**

Session 1:

Drop: Monday, June 29

Request for "W": Friday, July 10

Summer is unique. You will not be dropped for non-attendance or non-payment. You must drop yourself. Dropping before the deadline results in a full-tuition reversal/refund. Withdraw posts a W for the grade and full tuition is charged (no refund). For all dates and deadlines, including 'change of grade option' (P/NP) and grades due, here is the summer academic calendar: <https://summer.ucsc.edu/studentlife/index.html> For questions about dropping, requesting a W grade for a course, or withdrawing from the summer quarter, email [summer@ucsc.edu](mailto:summer@ucsc.edu).

**DRC Remote Accommodations:** The Disability Resources Center reduces barriers to inclusion and full participation for students with disabilities by providing support to individually determine reasonable academic accommodations. Operations continue via remote appointments. If you have questions or concerns about exam accommodations or any other disability-related matter, email the DRC Schedulers at [drc@ucsc.edu](mailto:drc@ucsc.edu) for an appointment. You can also contact DRC by phone at 831-459-2089.

**Academic Integrity:** All members of the UCSC community benefit from an environment of trust, honesty, fairness, respect, and responsibility. You are expected to present your own work and acknowledge the work of others in order to preserve the integrity of scholarship. Academic integrity includes:

- Following exam rules
- Using only permitted materials during an exam
- Viewing exam materials only when permitted by your instructor
- Keeping what you know about an exam to yourself
- Incorporating proper citation of all sources of information
- Submitting your own original work

Academic misconduct includes, but is not limited to, the following:

- Disclosing exam content during or after you have taken an exam
- Accessing exam materials without permission
- Copying/purchasing any material from another student, or from another source, that is submitted for grading as your own
- Plagiarism, including use of Internet material without proper citation
- Using cell phones or other electronics to obtain outside information during an exam without explicit permission from the instructor
- Submitting your own work in one class that was completed for another class (self-plagiarism) without prior permission from the instructor.
- Violations of the Academic Integrity policy can result in dismissal from the university and a permanent notation on a student's transcript. For the full policy and disciplinary procedures on academic dishonesty, students and instructors should refer to the [Academic Misconduct page](#) at the [Division of Undergraduate Education](#).

**Religious Accommodation:** UC Santa Cruz welcomes diversity of religious beliefs and practices, recognizing the contributions differing experiences and viewpoints can bring to the community. There may be times when an academic requirement conflicts with religious observances and practices. If that happens, students may request reasonable accommodation for religious practices. The instructor will review the situation in an effort to provide a reasonable accommodation without penalty. You should first discuss the conflict and your requested accommodation with your instructor early in the term. You or your instructor may also seek assistance from the [Dean of Students' office](#).

**Principle of Community:** The University of California, Santa Cruz expressly prohibits students from engaging in conduct constituting unlawful discrimination, harassment, or bias... [More here](#). I am committed to providing an atmosphere for learning that respects diversity and supports inclusivity. We need to work together to build this community of learning. I ask all members of this class to:

- be open to and interested in the views of others
- consider the possibility that your views may change over the course of the term
- be aware that this course asks you to reconsider some “common sense” notions you may hold
- honor the unique life experiences of your colleagues
- appreciate the opportunity that we have to learn from each other
- listen to each other’s opinions and communicate in a respectful manner
- keep confidential discussions that the community has of a personal (or professional) nature
- ground your comments in the texts we are studying. Refer frequently to the texts and make them the focus of your questions, comments, and arguments. This is the single most effective way to ensure respectful discussion and to create a space where we are all learning together.

**Title IX/Care Advisory:** The [Title IX Office](#) is committed to fostering a campus climate in which members of our community are protected from all forms of sex discrimination, including sexual harassment, sexual violence, and gender-based harassment and discrimination. Title IX is a neutral office committed to safety, fairness, trauma-informed practices, and due process. Title IX prohibits gender discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking. If you have experienced sexual harassment or sexual violence, you can receive confidential support and advocacy at the Campus Advocacy Resources & Education (CARE) Office by calling (831) 502-2273. In addition, Counseling & Psychological Services (CAPS) can provide confidential, counseling support, (831) 459-2628. You can also report gender discrimination directly to the University’s Title IX Office, (831) 459-2462. Reports to law enforcement can be made to UCPD, (831) 459-2231 ext. 1. For emergencies call 911.

**Difficult Conversations:** In our in-class and online discussions and dialogues, we will have the opportunity to explore challenging, high-stakes issues and increase our understanding of different perspectives. Our conversations may not always be easy. We sometimes will make mistakes in our speaking and our listening. Sometimes we will need patience or courage or imagination or any number of qualities in combination to engage our texts, our classmates, and our own ideas and experiences. We will always need respect for others. Thus, an important aim of our classroom interactions will be for us to increase our facility with difficult conversations that arise inside issues of social justice, politics, economics, morality, religion, and other issues where reasonable people often hold diverse perspectives. This effort will ultimately deepen our understanding and allow us to make the most of being in a community with people of many backgrounds, experiences, and positions.

**Student Services:** [Counseling and Psychological Services](#) Many students at UCSC face personal challenges or have psychological needs that may interfere with their academic progress, social development, or emotional wellbeing. The university offers a variety of confidential services to help you through difficult times, including individual and group counseling, crisis intervention, consultations, online chats, and mental health screenings. These services are provided by staff who welcome all students and embrace a philosophy respectful of clients' cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity, and sexual orientation.

**Student Success and Engagement Hub** The Division of Student Success provides campus-wide coordination and leadership for student success programs and activities across departments, divisions, colleges, and administrative units.

**Tutoring and Learning Support:** At Learning Support Services (LSS), undergraduate students build a strong foundation for success and cultivate a sense of belonging in our Community of Learners. LSS partners with faculty and staff to advance educational equity by designing inclusive learning environments in Modified Supplemental Instruction, Small Group Tutoring, and Writing Support. When students fully engage in our programs, they gain transformative experiences that empower them at the university and beyond.

**Slug Support Program** College can be a challenging time for students and during times of stress, it is not always easy to find the help you need. Slug Support can give help with everything from basic needs (housing, food, or financial insecurity) to getting the technology you need during remote instruction. To get started with SLUG Support, please contact the [Dean of Students](#) Office at 831-459-4446 or you may send us an email at [deanofstudents@ucsc.edu](mailto:deanofstudents@ucsc.edu).

**Slug Help/Technology** The ITS Support Center is your single point of contact for all issues, problems, or questions related to technology services and computing at UC Santa Cruz. To get technological help, simply email [help@ucsc.edu](mailto:help@ucsc.edu).

**On-Campus Emergency Contacts:** Slug Help/[Emergency Services](#). For all other help and support, including the health center and emergency services, start [here](#). Always dial 9-1-1 in the case of an emergency.