

Syllabus

MAT 21A: Differential Calculus

Sections A01-A02: **Fall 2022**

Hello everyone!

Welcome to Math 21A.

Here is a list of things/reminders you might find handy:

- **A face mask.** You are strongly recommended and encouraged to wear a mask. You can find more information about all the University rules [here](#).
- **Daily Symptom Survey.** It is also recommended to fill out Daily Symptom Survey every day you come to campus. You can find the link to the survey by clicking [here](#).
- Access to textbook “**Thomas' Calculus Early Transcendentals,**” **15th edition, by Stewart/Day (Cengage).** (The same will be used in in the rest of Math 21 series.)
- You can familiarize yourself with the way the class is going to be run by reading over [this](#) module.
- [Campuswire](#):
- **Lecture prep:** due 1pm the day before lecture (hard deadline is the start of the lecture).
- **Weekly survey:** due Sundays at 1pm.
- **Group Work:** due Monday at 7pm
- **Homework:** due Tuesday at 7pm

How to contact Dr. Heggerud:

- Email: cmheggerud@ucdavis.edu
 - Include [Course code] in the subject line
 - Be concise and proofread your email before you send it, treat these emails as professional emails.
 - If you are asking for extension on Homework or Group Work, follow instructions provided with those assignments. Extensions are easy to get, but I will only grant ones that use the provided email template.
 - If its a question about homework or the material, you might get a quicker reply on campus wire.
- **Office Hours:**

TA information:

Learning Environment, Inclusivity and Acknowledgements

I strive to create a learning environment that supports a diversity of thoughts, perspectives, experiences, and honors your identities. To help accomplish this:

- As a participant in in this class you should strive to honor the diversity of your classmates and differing viewpoints the diversity contributes.
- If you have a name and/or set of pronouns that differ from those that appear in your official records, please let me know. Additionally, feel free to change your Zoom name to your preferred name and pronouns. You can also set your preferred name by going to the following website: <https://registrar.ucdavis.edu/records/preferred-name>
- Please come talk with me if you feel your performance in the course is being impacted by your experiences outside of class, including, but not limited to, religious holidays, family emergencies, jury duty, and long-term health problems.
- If something was said in class (by anyone) that made you feel uncomfortable, please talk to me or the college administrator about it.
- Those showing discriminatory behaviors will be asked to change their behavior or leave class.
- Everyone has their own unique struggles so let patience and kindness guide your interactions with everyone.

I recognize that many of you have additional responsibilities, stresses, and unique situations at this time. I also recognize that things that are out of your control can come up during this class. When possible, I encourage you to adhere to the timelines outlined in the syllabus. Appropriate extensions will be given on a case by case basis. If some aspect of this class format is not feasible given your current situation, please talk to me about it! In order to best help you, I need you to communicate with me as early as possible so that we can make appropriate accommodations.

UC Davis embraces diversity of any kind including age, background, beliefs, ethnicity, gender, gender identity, gender expression, national origin, religious affiliation, sexual orientation, and other visible and nonvisible categories.

I welcome all students in this course and I expect that all students contribute to a respectful, welcoming and inclusive environment.

All humans have implicit biases, I acknowledge I have my own. Implicit bias is also known as implicit social cognition and it refers to the attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner. These biases can include both favorable and unfavorable assessments. It is our responsibility to recognize and take steps to mediate them proactively.

If you experience anything that makes you feel uncomfortable in this class, please talk to me or college administrator.

I would also like to acknowledge that the land in which UC Davis is located has been home to the Patwin people for thousands of years. We are honored and grateful to be unceded guests on their traditional lands. I invite you to learn more about Indigenous lands, have a look at this useful [resource](#).

Course Objectives

Math 21 series is a calculus series designed for STEM majors. A goal of this course is to help you develop effective strategies for solving both mathematical and real world problems. You will learn how to create mathematical models and develop effective strategies for solving problems in applied settings ranging from chemistry to physics and engineering.

Math 21A focuses on the fundamentals of differential calculus. This is the study of how functions change which enables you to study how systems evolve based on simple laws. You will learn how to analyze functions, build mathematical models of common real world systems, and use calculus to draw conclusions about these systems. This course is also an entry point to advanced mathematics.

Main Learning Objectives:

In this course you are going to develop quantitative skills that are fundamental in pursuing a career in a STEM field. You are also going to learn how to communicate effectively and how to function well on multi-disciplinary teams.

By the end of this course you should be able to:

- understand the meaning of limits and derivatives of functions,
- calculate limits and derivatives of functions using appropriate techniques,
- interpret limits and derivatives in a real world context,
- approximate functions and error propagation using derivatives,
- apply problem-solving skills and knowledge of calculus to solve related rates and optimization problems, and
- use derivatives to predict the behavior of and graph functions.

Course Logistics

This class is planned to be delivered entirely in person. You are expected to be on campus the entire Fall quarter.

- **Lectures** - Mondays, Wednesdays, and Fridays
- **Discussions** - Thursdays

- **Collaborative work** - If your group does not finish the group worksheet during class, you will be expected to meet with your group outside the class and finish the worksheet. It is up to you and your group mates to organize when you are going to meet.

Learning in this class will be split into two parts: independent and face-to-face.

- You are expected to complete Canvas Modules which include readings and reflective assignments on your own time.
- Face-to-face learning will occur during lectures and discussion sections. You are expected to be actively engaged during every face-to-face session you attend.
- If you are unable to attend lectures in person, you are expected to watch the recordings of these sessions on your own time.
- You are going to be assigned to groups during your first discussion section and are expected to contribute to group work as much as your group members.

Required Textbook and Materials:

Textbook -- Thomas' Calculus Early Transcendentals - Fourteenth edition

If you already have access to physical or digital copy of the textbook, you do not need to opt in to Equitable Access. In this class you only need some kind of access to the textbook. You do not need access to any additional products offered by the publisher.

Technology -- You need stable internet access, a computer or a tablet with web cam (for joining office hours), and a device capable of taking pictures. You will use computer or a tablet to access class materials, participate in office hours, and to submit your assignments. If you do not have access to a computer or reliable internet access, here is a [linkLinks to an external site.](#) for university program that can help you obtain one.

Calculators -- You do not need a calculator for this class. If you have a calculator, you are free to use it while you study, but you will not be allowed to use a calculator of any kind during tests.

Additional resources:

- **Office Hours** - Wednesday, Thursday 2-3pm on Zoom. (for now) Please watch out for office hour announcement during first week of classes. If you have additional questions you can always post them on Campuswire. If you want to talk to me over Zoom, we can also arrange additional time to meet. You will be able to find all the Zoom links for this class by clicking Zoom tab in Canvas.
- **Campuswire:** We will use Campuswire as a course discussion board. You are encouraged to post questions about anything and everything related to the class material and class logistics so that other students have the opportunity to view and answer them. You have the

opportunity to gain course engagement points by participating on campus wire. To join class Campuswire page, either follow the instructions in the email you received or click on [this link](#)Links to an external site. and enter class code 3328

- **Calculus room** - You can find instructions for how to access Calculus room by clicking [here](#)Links to an external site..
- **Math tutoring** - all the information about campus math tutoring can be found [here](#)Links to an external site.
- **Your classmates** - Your classmates are an excellent resource. You can form study groups and help each other stay on top of the material. They are also an excellent resource when you are working on homework. Just make sure you don't break Academic Conduct Code.

Accommodations for Students with Disabilities

Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Student Disability Center (SDC). Faculty are authorized to provide only the accommodations requested by the SDC. If you have any questions, please contact the SDC at (530) 752-3184 or sdc@ucdavis.edu. *If you are given any accommodations, please let me know as soon as possible so that I have time to make appropriate arrangements.*

Additional Course Policies and Expectations

- Please create a respectful learning space for your peers by arriving on time and prepared.
- All announcements will be posted on Canvas. It is your responsibility to check the webpage periodically for assignments and notes.
- We will strive to answer your emails and Campuswire questions promptly. However, keep in mind that we also have other obligations and need a break sometime. During the week we will try to answer your questions within 24 hours and within 48 hours on weekends.
- All students are expected to comply with and uphold the principles described in the [UC Davis Code of Academic Conduct](#)
- I am here to facilitate your learning; let me know if you have questions!

COVID/Feeling sick

- If you are sick, **stay home**. Let Dr. Heggerud know if this means you have to miss an exam, or another deadline immediately. Reasonable accommodations will be made, if necessary.
- Remember, lectures will be recorded and posted to campus.
- Masks are **strongly recommended**.
- You are encouraged to complete the Daily Symptom Survey [here](#)Links to an external site.
- If you test positive for COVID, stay home.
- In general, this class will follow the University guidelines found [here](#).Links to an external site.

Course Outline

| Week | Sections | Topics |
|------|----------|---|
| 1 | Ch 1 | Introduction and course policies. Brief review of functions. |
| 2 | 2.1-2.3 | Tangent lines to curves. Limits and limit laws. |
| 3 | 2.4-2.5 | One sided limits. Continuity |
| 4 | 2.6-3.1 | Limits involving infinity. Derivative at a point. |
| 5 | 3.2-3.3 | Derivative of a function. Differentiation rules. |
| 6 | 3.4-3.6 | Derivative as a rate of change. Derivatives of trigonometric functions. The Chain Rule. |
| 7 | 3.7-3.8 | Implicit differentiation. Derivatives of inverse functions. |
| 8 | 3.9-3.11 | Related rates. Linearization. |
| 9 | 4.1-4.2 | Extreme values of functions. The Mean Value Theorem. First derivative test. |
| 10 | 4.4-4.5 | Concavity. L'Hopital's rule. |
| 11 | 4.6-4.7 | Optimization. Newton's method. |

Subject to slight modification. Check modules for updates.

Copyright

My lectures and course materials, including all the recordings, worksheets, tests, outlines, and similar materials, are protected by U.S. copyright law and by the University policy. I am the exclusive owner of the copyright of the materials I create. You may take notes and make copies of course materials for your own use. You may also share those materials with another student who is enrolled in or auditing this course. You may not reproduce, distribute or display (post/upload) lecture notes or recordings or course materials in any other way - whether or not a fee is charged - without my express prior written consent. You also may not allow others to do so. If you do so, you may be subject to student conduct proceedings under the UC Davis Code of Academic Conduct.

These rules also apply to everything TAs create and post on Canvas.

Assessment

The goal of this class is to help you learn the fundamentals of differential calculus and to use differential calculus to model, understand, and make predictions about real world systems. You are also going to work on developing and improving your analytical skills and communication skills. Finally, this class prepares you to be successful in Math 21B. All the assignments and assessments in this class are geared towards helping you develop mastery of the course learning outcomes and to prepare you for the courses which have math 21A as a prerequisite.

Grading:

In surveys of Week 4 and Week 9 you will have an opportunity to make a choice for your grading scheme in this class. If you do not make a choice for yourself, you will default to Option 1 at the end of the quarter.

Option 1:

- Three short tests 40%
- Homework 10%
- Group work 20%
- Class engagement points 10%
- Final Exam 20%

Option 2:

- Three short tests 40%
- Homework 10%
- Group work 20%
- Final Exam 30%

Option 3:

- Three short tests 40%
- Group work 20%
- Final Exam 40%

Scores will be posted on Canvas. Make sure that all the scores are entered correctly on Canvas. You have to notify Dr. Heggerud about the score discrepancy no later than a week after the assignment is graded. These scores will be used to calculate your final

grade in the class at the end of the quarter so it is important that you check your scores frequently.

The class will not be curved down and there will be no extra credit. That means if your average score in the class is 90% and above you are guaranteed to get a grade in A range. Similarly, if your score is between 80% and 90% you are guaranteed to get a grade in at least a B range.

The next few pages offer more detail about each type of assignment. Please read them carefully.

Homework

What is the purpose of this assignment?

You learn math best by doing as many problems as possible; these assignments will help prepare you for the tests

When is the homework due?

Homework is due every Tuesday by 7pm and assigned every Sunday or Monday. If you are not able to finish the homework by the deadline, email Dr. Heggerud and request an extension using the following template:

email subject line: Math 21A homework extension request

In the email body list for which homework you are requesting an extension and the new deadline you are requesting

Where do I find homework assignments?

You can reach homework assignments by doing any of the following:

- click on the link in weekly modules
- click on Assignment tab in Canvas and navigate to the appropriate homework assignment
- click on the appropriate assignment in Canvas Calendar

How is homework scored?

Homework is automatically graded on Webwork.

How many problems do you need to complete to get full credit on homework?

Every homework assignment consists of 20 problems. You have to complete 10 to get the full credit on homework

Here are some additional tips and instructions about the homework:

- You do not need to do all the problems at once, just make sure you complete them all before the deadline for that homework.
- Tips for using the WeBWork:
 - **Before you submit** your answer, click the "**Preview**" button. This will allow you to make sure you entered the answers correctly. You will have limited number of tries to enter your answer so use preview every time before you submit your answer. You are allowed to preview your answer as many times as you want. WeBWork does not count number of times you used preview button towards your grade.
 - For more complicated expressions, you can also use the "Preview" button before you are done entering the answer. For example, if an answer consists of two terms, you can enter the first term, hit preview, and then enter the second term.
 - **Do not use calculator along with WeBWork.** WeBWork has its own built in calculator. Using a calculator will most often going to result in your answer being marked incorrectly. For example, if the answer to the problem is $\frac{3}{13}$, then entering $\frac{3}{13}$ will be marked as correct, but 0.23 or 0.231 will be marked as incorrect.

Group Work

What is the purpose of this assignment?

- You need to learn how to write math, how to work with other people, as well as how to apply mathematical concepts we are learning in this class. Group assignments will help you develop all of these skills.
- You will be assigned into groups during your first discussion section. You will work on worksheets and the questionnaire attached to the worksheet. If your group is unable to complete the whole worksheet during discussion section, make sure you set the time to meet with your group before the assignment deadline. It is up to your group to find the most convenient way of communicating and collaborating outside the class.
- You are expected to contribute to the group work as much as the rest of the members of your group. The whole group will get the same grade.
- You can expect to find questions similar to the group assignment question on the exams so make sure everyone in the group understands all the problems on the worksheet.

When is this assignment due?

- Group assignments are due Monday by 7pm. This is so your TA can have enough time to give you feedback on your assignment before you have to submit the next assignment.
- Assignments are submitted to Gradescope.
- If your group is unable to meet this deadline extensions will be given on individual basis.
- If you need an extension email Dr. Heggerud using the following template:

email subject line: Math 21A group assignment extension request

How is the assignment scored?

You will be graded on correctness, clarity, and answering the questionnaire that goes with every worksheet. The whole group will get a single grade, so it is to your benefit to develop good working relationship with your group. Each group assignment will be worth 10 points. The points are distributed as follows:

- Did you attempt all the problems? - 2 points
- Did you show good effort on all the problems? - 3 points
- Did you follow all the directions in the group work assignment correctly? - 2 points
- Did you answer all the questions on the questionnaire that comes with each group assignment? - 2 points
- Each week one problem will be chosen randomly and graded for correctness. - 1 point

How many group assignments do you need to complete?

You need to complete all of the group assignments, but two lowest scores will be dropped at the end of the quarter. If you don't do well on one group assignment, make sure you use feedback provided on the graded assignment to increase your score on the next assignment.

Who is going to be in my group?

Most of the groups will consist of four people, but the size of discussion section might require some groups to consist of only three people. Each person in the group will have assigned role. The roles rotate on weekly basis.

Each group will have the following roles:

- **Scribe:** Your role is to turn in the assignment, add all the group members to the assignment, and select which page of your work correspond to which problem (or make sure that someone else does if you can't).
- **Reporter:** Your role is to report on how group work went that week. Make sure you answer all the questions on the questionnaire designated to the Reporter.

- **Clarifier:** Your role is to make sure everyone in the group understands all the problems and the material covered in the worksheet. If you also don't understand material from the worksheet, it is your job to get help from other members of the group, TA, or Dr Burke.
- **Manager:** If your group has four people in it, then the fourth person will have a Manager role. The role of a manager is to make sure to keep everyone in the group on task and to organize any meetings necessary to complete group work outside class.

What do you need to turn in?

- Remember it is the job of the Scribe to turn in the assignment.
 - [HereLinks to an external site.](#) are directions on how to scan your work and prepare it for submission.
 - [HereLinks to an external site.](#) are directions for adding group members to your assignment. Please make sure all your group members are added to the assignment before you submit the assignment. It is your responsibility to make sure your group included all the group members on the submission.
 - You need to turn in the questionnaire and all the work on the worksheet problems.
 - **Submitted group work has to follow these guidelines in order to be graded:**
 - - You need to include filled out questionnaire. Group work that does not include submitted questionnaire will be given a score of zero.
 - Each problem has to be written on a separate page. It is ok for a problem to take more than one page. In that case you will have opportunity to assign multiple pages to one problem in Gradescope.
 - Each page has to be assigned to the correct problem in Gradescope. It is your responsibility to double check this before you submit your assignment. If you do not assign the page to the problem, the TA will not see any submission and you will not be able to get credit.
 - You are expected to present your solutions in neat handwriting.
 - You have to show your work. You will not get any credit for the problems that only show the final answer.
 - Box your final answers.
 - Use full sentences for problems that require you to explain or describe the answers.
 - If the problem asks you to sketch or graph something, you have to include the graph in your solutions.
 - Don't wait until the last minute to submit your work. I suggest you finish the assignment shortly after the discussion section is over.
-

Here's some additional information for successful group work.

How to work through the problems:

- First, restate each problem in your own words. Work together on this to be sure everybody has a shared understanding of what is to be done. Include your problem re-statement in your solutions.
- Work together to solve the problem, sharing ideas and asking each other questions.
- Write out your solutions in complete sentences. There should be equations/formulas in your solutions, and these should be contained in sentences. Look at how the textbook writes out solutions to examples to get a sense for what your solutions should look like.
- The goal of your solutions is to communicate to your reader, in English, the process you used to arrive at your answers, and not just to show your work.

Instructions for effective group work:

- Work in a group of four (or three) people. This is an ideal size for working efficiently on the worksheet problems.
- Follow all the instructions in the group work assignment. Don't miss out on learning (and points) by not following the instructions.
- Remember that Clarifier's job is to make sure that everyone in the group understands the group's solutions. Clarifier can achieve this during group discussions by paraphrasing other group members' ideas. For example, when another group member has an idea, say something like, "Let me check that I understand you correctly, you're saying that...."
- Remember that the goal is to prepare for tests. If you and your groupmates split up the work so that each person does a different problem, you will not learn! Be sure that each person in your group has the opportunity to think about each problem and contribute to the group's solutions.

Three Short Tests

You will have four short tests during the quarter. Each test will be **30 minutes long**. Test days are:

- Monday October 10th
- Friday October 28th
- Friday November 18th

Tests are going to be administered in class during normal lecture times in the normal lecture room. Each test will start at 9:00am so make sure you are on time. Please make sure that you don't have anything else scheduled during this time.

If anything arises during the quarter that will prevent you from taking the test on the indicated days, let the instructor know immediately. Each case will be considered on an individual basis.

What if I am sick, or an urgent matter has come up. -- Email Dr. Heggerud immediately and do NOT come to the test if you are sick.

You will be excused from the test and the weight of the missing test will be distributed over remaining tests and the final exam. This accommodation can only be made if I am informed prior to the exam.

Will there be any make up tests?

There will be no make up tests, but you will get an opportunity to increase your score on every short test.

Tell me more about increasing my score on the previous short test.

- Starting with second short test, after the test is collected, you can choose to stay for the remaining class time (about 15 minutes) and work on the problems similar to the previous test.
- The problems will not be the same as the problems on the previous test but will be testing the same learning goals.
- Your score on the previous test for the problems you choose to redo will be replaced by the score you get during redo.
- It is up to you to remember which problems you would like to redo.
- You can only redo the problems you attempted on the previous test. If you skipped the problem on the previous test, then you cannot redo it.
- You can redo up to **two problems per test**.
- You will get an opportunity to redo problems from the third short test during the Final exam.

Final Exam

Final exam for this class is on Friday December 9th 8-10 a.m.

More details about the final exam will be posted towards the end of the quarter.

Class Engagement Points

If you choose grading Option 1, you are required to collect up to 150 class engagement points by the end of the quarter. If you want to collect more, you are welcome to do so, but for the purposes of calculating grades at the end of the quarter I will be using the following guidelines:

150+ points = 100% Class Engagement

75-150 points = 50-100% Class Engagement

0-75 points = 0-50% Class Engagement

These points can be collected by doing the following things:

- **Filling out weekly surveys (5pts)** - there are 11 surveys and each survey is worth 5 points. They will be posted at the end of Fridays lecture and due Sunday at 1pm.
- **Module 0 quiz(10pts)** - quiz on the material contained in this module is worth 10 points if completed before October(?).
- **Practice Gradescope assignment (5pts)** - A practice assignment to get familiar with gradescope.
- **Submitting Lecture Prep assignments (4pts)** -- there are 25 Lecture Prep assignments and each is worth 4 points
 - Why should you do these assignments: you might not understand everything in the reading (and you are not expected to) but this assignment will help you identify whether there are any holes in your previous math knowledge you need to fill, it will give you pointers how to fill those holes, and it will help you understand the lecture better
 - When are these assignments due: Lecture Prep assignments are due at 1:00pm the day before each lecture
 - You can turn in Lecture Prep assignment after the deadline and all the way up to the lecture time for full credit, but I will not be able to incorporate your responses when I am putting together the lecture
 - How are these assignments scored: in order to get full credit, you have to answer all the mandatory questions clearly using full sentences
 - Answers that are vague or not clear will be given no credit. For example answering "Everything in this assignment was a review" or " All of it was new to me" will not get you any points.
- **Feedback surveys (10pts)**. There will be 3 feedback surveys to help you and the instructor reflect on the course.
- **Interesting facts about living famous mathematicians(5 pts)**: write about 100 words and if you do a good job you get 5 points. You might want to find a mathematician whose research interests you! If you do it well, I will post it for the rest of the class (If you want).
 - the first one of these assignments has to be submitted by October 10th
 - the remaining ones are due approximately bi-weekly
 - the last assignment from this group has to be submitted by December 2nd
 - you can submit at most 5 of these assignments
- **Connect math to a real-world application (10 pts)**: Find something in the real-world (biology, physics, climate, sports, music, etc..) that can be explained with the math we covered in the class, describe it, and explain how it relates to the class (~1 page). If you do it well, you get 10 points, and I will post it for the rest of the class (If you want). (The essay must be in your own words.)
 - the first one of these assignments has to be submitted by October 10th
 - the remaining ones are due approximately bi-weekly

- the last assignment from this group has to be submitted by December 2nd
- you can submit at most 5 of these assignments
- **news (10pts)** -- pick an article from one of the sites listed below and explain how the math you learned in Math 21A is used in the article
 - in order to get full 10 points you have to summarize the main points in the article, list the math topics from 21 series, and say where those topics were used in the article
 - you can find articles on one of these sites:
 - [ScienceLinks to an external site.](#)
 - [Scientific AmericanLinks to an external site.](#)
 - [Society of Industrial and Applied Math NewsLinks to an external site.](#)
 - the first one of these assignments has to be submitted by October 10th
 - the remaining ones are due approximately bi-weekly
 - the last assignment from this group has to be submitted by December 2nd
 - you can submit at most 5 of these assignments
- **Success Coaching and Learning Strategies workshop (10 pts):** attend a workshop and submit a short report on how the workshop helped you - 10 points
 - you can find the link to workshops [hereLinks to an external site.](#)
 - after you attend a workshop, you have seven days to submit the assignment and provide some kind of proof you attended.
- **Thoroughly and correctly answer questions on the discussion boards (2pts):** We will use [Campuswire:Links to an external site.](#) code 3328, as our discussion board.
 - You can get up to 20 points for correctly and thoroughly answering student questions on campus wire.
 - Questions can be posted anonymously, but answers should not be (if you want the CE points).

It is up to you to pick and choose which assignments you want to do from this list. However, I suggest that you complete as many Surveys and Lecture Prep assignments as you can. Surveys will allow you to give feedback about the class and Lecture Prep assignments will allow you to submit questions about the material. I will be answering these questions during lecture meetings.

Since there are many assignments to pick and choose from, there will be no extensions on any of the assignments from this group. If you miss one assignment, you can just pick a different assignment to help you collect Class Engagement points.

How to succeed in this course

There is a lot of material covered in this course so it is important you stay engaged and keep up with lectures and the assignments.

If you took calculus in high school, some material might seem familiar but it will be presented in a new way and you are expected to be able to apply it to real world situations.

Math 21A requires that you have a good foundation in algebra. I highly recommend you set aside some time and get comfortable with diagnostic tests from Week 1 discussion session without any use of calculators.

If you are having trouble solving any of the problems on the algebra diagnostic test, please contact me or your TA as soon as possible and ask for help. You can ask me, your TA, go to calculus room, or you can seek help at [Academic Assistance and Tutoring Centers](#)[Links to an external site.](#). If you weren't able to do any, or very few, problems correctly, I suggest you consider taking Math 12 this quarter and after you complete Math 12, you proceed with Math 21A. **Make sure you talk to your academic advisor before you make any changes to your schedule.**

Since this is a four unit course, you are expected to spend at least eight hours per week of independent study. However, since this a calculus course, I recommend you consider spending more.

Here are some tips for doing well in this class:

- While you are not required to attend lectures, **plan on attending** as many as you can.
- Since this is a four unit course, you are expected to spend **at least eight hours per week** of independent study. However, since this a calculus course, I recommend you spend more than eight hours per week of independent study.
- Make sure you **spend some time every day** doing work for this class. This will make you more familiar with the material and it will make the material appear easier with every passing week. Remember how hard it was to learn to read when you were a kid and how reading is second nature right now. Calculus is similar. With enough daily practice, it is possible to become as good at calculus as you are at reading.
- **Create a schedule** and stick to it. I have included a **sample schedule** at the bottom of the page. Feel free to use it or modify it to fit the rest of your classes. No matter which schedule you use, make sure you stick to it.
- **Take good notes.** Just because I will record a lot of videos that you will be able to watch whenever you like, get in practice of taking actual notes. Taking notes is a form of learning so take advantage of it.
- **Be prepared** for lecture meetings. Complete the material outlined in Modules before attending lecture meetings and submit the Lecture Prep assignment.
- **Be engaged** during lecture meetings and ask questions. **There are no stupid questions.** I will do my best to answer all the class material-related questions during lectures.
- If you do not understand something that was covered in modules or lecture meetings, re-read the book and **ask questions.** Office hours and Campuswire are great places to get your questions answered.
- As soon as you come across a topic you do not understand, get help.
- **Help** is available in many forms: talk to your peers, attend office hours, go to Calculus Room whenever it is open. You do not have to wait for your TA to be in the

Calculus Room, you can get help from any graduate student in Calculus Room whenever Calculus Room is open. You can find the hours by going to [thisLinks to an external site.](#) web site.

- Start working on your homework as soon as it is assigned. That way you will have multiple occasions to get help in case you are stuck on any of the homework problems.
- **Take quizzes.** Remember that quizzes help you get ready for the test. I suggest you take the quiz shortly after you finish the homework.
- Homework and group worksheet problems are assigned to help you assess your comprehension of the material, help you study, and get ready for the tests.
- That said **do additional problems.** Practice makes perfect so try to do as many problems as you can in addition to homework and worksheet problems each week. This will help you will feel much more comfortable with the concepts covered on the tests.
- Make sure you understand the problems from the worksheet and that you work with your group members on solving the problems.
- Make sure you understand not only how to do math steps, but also **how to explain** the problems. **Tests cover concepts** as well as mathematical manipulations. The best way to make sure that you understand the concepts is to try to explain them to your friends. All the answers to the conceptual problems that will show up on the tests can be found in the textbook, so make sure you carefully read the textbook.
- Don't lose points in the class by not paying attention.
- **Don't cram** for the tests. If you are being consistent at doing work throughout the quarter, studying for the tests should be a review, not a cramming session. When studying for the tests, do additional problems. There are great problems in the book at the end of each chapter.
- Practice. Practice. Practice.

Make sure you stick to either this (or one closely resembling this) study schedule. If you do, you are going to do well in this class.

- **Saturday:**
 - Look back over the material covered previous week. Write a short summary and identify the topics you are still struggling with.
 - Check Campuswire in case anyone else has already asked the same questions you are having.
 - If you still have questions post them on Campuswire.
 - Re-read the topics in the textbook you are still struggling with.
 - Try to finish the homework if you haven't done so already.
 - Get together with your group and finish the group assignment if you haven't done so already.
- **Sunday:**

- Read the chapters covered during Monday lecture meeting, take notes, and submit Lecture Prep assignment. You can find the reading in the Modules.
- **Monday:**
 - If you have questions about topics, homework, worksheet, and/or quiz problems make sure you seek help
 - Attend the lecture, ask questions, and take notes.
 - Finish the homework and take the quiz.
 - Make sure your group has submitted the group work assignment.
 - Before finishing the day, look over your notes and write down any remaining questions.
 - Check Campuswire in case anyone else has already asked the same questions you are having.
 - If you still have questions post them on Campuswire.
- **Tuesday:**
 - Read the chapters covered during Wednesday lecture meeting, take notes, and submit Lecture Prep assignment. You can find the reading in the Modules.
 - Start working on the homework.
- **Wednesday:**
 - Attend the lecture, ask questions, and take notes..
 - Before finishing the day, look over your notes and write down any remaining questions.
 - Check Campuswire in case anyone else has already asked the same questions you are having.
 - If you still have questions post them on Campuswire.
- **Thursday:**
 - Read the chapters covered during Friday lecture meeting, take notes, and submit Lecture Prep assignment. You can find the reading in the Modules.
 - Spend some more time working on the homework.
 - Prepare for the discussions section by looking over the worksheet.
 - Attend the discussion section. If your group isn't done with the assignment, make plans to meet outside the class.
- **Friday:**
 - Attend the lecture, ask questions, and take notes.
 - Before finishing the day, look over your notes and write down any remaining questions.
 - Check Campuswire in case anyone else has already asked the same questions you are having.
 - If you still have questions post them on Campuswire.
 - Fill out the Survey.

Academic Honesty

All students have to adhere to UC Davis Academic Conduct Code. You can find the full text of the academic conduct code [hereLinks to an external site..](#)

Academic honesty and integrity are extremely important and valued in this class. Your main goal in this class is to gain the knowledge you are going to need to be successful both in subsequent math and science classes and in your future careers.

All the assignments and tests in this class are designed with the purpose of helping you reflect on your progress in this class. You are encouraged to work on homework and group work with other people. Science is a social endeavor. Scientific progress happens when we interact with other people and share ideas and knowledge. You will find throughout this quarter that you will learn a lot by having to explain a solution or a concept to your peers. The way you will develop a clear picture of your individual learning in this class is by taking quizzes and tests. **The knowledge you will present on tests is your own.**

When you conduct yourself with academic integrity, you are **committing to honesty**. Honesty is valued above all in this class. When you fail to conduct yourself with academic integrity (commonly referred to as “cheating” or “academic dishonesty”), you abandon your sense of “right” and “wrong” and choose to intentionally deceive yourself, your peers, TAs, and me of your true learning and abilities. **If you are caught cheating you will be reported to [OSSJALinks to an external site.](#)** All academic dishonesty cases in this class are going to be handled only by OSSJA and will result in penalties and/or sanctions determined by OSSJA. These penalties can include censure, probation, deferred separation, suspension or dismissal from the University of California.

If you are having hard time learning and understanding the material, please use one of the many resources in this class. You can find the list of resources [here](#). There is no shame in asking for help when you don't understand the material. **Your TA and I are committed to help you understand the material and prepare you for the future success.**

Please watch a great short video on academic integrity. While you are watching the video pay attention to how you are going to make sure to comply with academic honesty during Fall quarter.

I understand that we are all tempted to do things we know we shouldn't do, and we are more likely to give into those temptations when we are particularly stressed or feeling desperate. At UC Davis we want our students to get help before they become desperate. Here are some tips on avoiding feeling desperate:

- Start working on homework early. This allows you time to get help.
- Maintain good study habits.
- Study consistently instead of cramming. This will help you feel more prepared for quizzes and tests.
- You can find more tips on how to do well in this class [here](#).
- If there are other challenges in your lives, Davis has resources (counseling, financial assistance, etc.). You can find a lot of those resources [hereLinks to an external site.](#)

All too often students who wouldn't normally cheat do so because they are feeling overwhelmed or scared. Cheating to get a few extra points is never worth the risk of failing the course and facing University sanctions. It is easy in the moment, when we are stressed and desperate, to not make the best decisions. That's normal. Try to avoid getting to the point where you are feeling desperate, and if you are referred to OSSJA, be honest. Honesty is valued above all.

What is considered cheating in this class?

- **Copying the work of another student or allowing others to copy your own work.**
 - In this class you are encouraged to work with other people. The only assignment in this class where you will be turning in collaborative work is Worksheets. All the other assignments have to be your own work.
 - You are allowed to ask for help on Homework, but you are not allowed to wait until your friend gets a correct answer on WeBWork and then submit their answer. In most cases this will not even be possible because WeBWork generates different numbers for different students.
 - While you are encouraged to talk to your friends if you do not understand something, the goal of these conversations should be for you to gain the understanding of the material.
- **Chatting with another student during tests.**
 - All the work on tests has to be your own.
 - Exchanging any kind of information with your peers or any other person while taking the test is not permitted.
 - You are not allowed to chat with others while taking a test even if you are chatting about non class or math related material.
 - Tests are short and chats can wait until both you and your friends have completed the test.
- **Using an unauthorized cheat sheet during tests.**
 - You are only allowed to use the materials specifically listed as allowed during the test. These materials will be listed at the beginning of each test.
 - In order to resist the temptation, only have authorized materials in your vicinity while taking the test.
- **Using unauthorized resources.**
 - You are not allowed to use any web pages that allow you to post a question and get an answer. This includes chat rooms, social media, and specialized web sites.
 - You are not allowed to use any automatic on line calculators of any kind. This includes various online derivative calculators, graphing software, or problem solvers.
 - You are not allowed to pay anyone to do any part of the coursework for you. This is a serious offense that could result in the expulsion from the university.
 - If a test says that no calculators are allowed, this means you are not allowed to use any kind of calculator. This includes graphing calculators, scientific calculators, online calculators, four function calculators. If you are in doubt

whether what you are planning on using is allowed, ask. I would be happy to clarify it for you.

- **Using unauthorized electronic devices during tests.**
 - You are not allowed to use any electronic devices during the test.
 - All tests have to be written on paper provided during the test. You are not allowed to do any work or calculations on the tablet of any kind. You are also not allowed to use your own paper during the test.
- **Copying information directly from any online source without a reference.**
 - Some of the class engagement activities require you to use on line sources. You are required to cite all the sources. In this class we do not care which citation style you use as long as you cite your sources.
 - That said, you are not allowed to copy/paste from any source. This is considered plagiarism.
 - When in doubt, cite it. It is better to over do it than to not cite it. By citing the work, you are giving credit to people who created the material.

NOTE: This list does not necessarily cover ALL instances of cheating. Do not assume an action is not dishonest. You will still be reported to OSSJA if you do something that's not allowed, even if you didn't know it wasn't allowed. If you are ever in doubt about whether an action is academically dishonest, email me before you act. I will be happy to clarify the situation for you. We can work together on making sure you fully understand academic integrity.

Resources

Class:

- Dr. Heggerud's office hours TBA, or by making a private appointment via email. Private appointments are done in 10 minute increments and are intended only for discussing issues in private such as your grades or personal circumstances.
- TA office hours - TBA

Academic:

- [Calculus roomLinks to an external site.](#)
- [Academic Assistance and Tutoring CenterLinks to an external site.](#)

Campus Resources:

- [UC Davis Student Disability CenterLinks to an external site.](#)
- [UC Davis Harassment & Discrimination Assistance and Prevention ProgramLinks to an external site.](#)
- Students and TA can use the SHCS for stress support. SHCS info: There are confidential counselors at Student Health and Counseling Services. Students can call 530-752-0871 for an appointment or go to Acute Care at the Student Health & Wellness Center to see the psychologist on duty.

- Mental Health Consultation Support: Free Counseling on-line through Live Health Online Visit: <https://shcs.ucdavis.edu/on-line-visits> Enter coupon code: COUNSELINGUCD to attain the free counseling. Mental health staff available 24 hours/7 days week by phone at 530-752-0871
- For food, financial, and housing resources, go to the [Aggie CompassLinks to an external site.](#). The student staff and Basic Needs Coordinator, Howard Chanel can assist you. Also they can help you sign up for Cal Fresh if needed.
- Additional campus resources can be found on Professor Ebeler's [pageLinks to an external site.](#)

National Resources:

- National Alliance on Mental Illness (NAMI): 800-950-6264, info@nami.org -- Operates an emergency mental health hotline M-F from 10 a.m. to 6 p.m. EST. Operators can provide info about mental illness and refer callers to treatment, support groups, family support, and legal support, if needed <https://www.nami.org/Links to an external site.>
- Substance Abuse and Mental Health Services Administration (SAMHSA): 800-662-4357 -- SAMHSA runs a 24-hour mental health hotline that provides education, support, and connections to treatment. It also offers an online Behavioral Health Treatment Locator to help you find suitable behavioral health treatment programs. <https://www.samhsa.gov/find-help/national-helpline> and <https://findtreatment.samhsa.gov/Links to an external site.>
- National Suicide Prevention Lifeline: 800-273-8255 -- Crisis intervention and free emotional support are available, which is helpful when you need confidential assistance during a time of emotional distress for you or a loved one. The helpline is open 24/7, and a live online chat is available as well. <https://suicidepreventionlifeline.org/Links to an external site.>
- Crisis Text Line: Text CONNECT to 741741 -- Specialized crisis counselors are just a text message away on this free confidential 24-hour support line. To further protect your privacy, these messages do not appear on a phone bill. The text line also provides services and support if you are upset, scare, hurt frustrated, or distressed. <https://www.crisistextline.org/textline/Links to an external site.>
- Veterans Crisis Line: 800-273-8255, Text a message to 838255 -- Operated by the Department of Veterans Affairs, these services aid veterans and their families who may be crisis by connecting them with VA responders. <https://www.veteranscrisisline.net/>