

Math 22A: Linear Algebra (Section 1)
Spring Quarter 2023 at UC Davis
MWF 11:00-11:50am
Wellman Hall, Room 26

Instructor: Cooper Jacob

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General Information.

Course webpage:

- All course information, class announcements, homework assignments, lecture notes and slides, exam solutions, etc. will be posted on Canvas (<https://login.canvas.ucdavis.edu>).
- Please set your notification preferences for Canvas to “notify me right away” for all announcements etc. for this class, so that you receive important information in a timely manner.
- **Please read this syllabus and any announcements before emailing me or the TAs**, since most logistical questions will have already been answered on this syllabus and/or via a recent Canvas announcement.

Textbook:

- We will be using the **12th edition of *Elementary Linear Algebra* by Howard Anton and Chris Rorres**. My lectures will be following the organization of this textbook. You can access the textbook via the Bookshelf tab on Canvas.
- I highly recommend you read the applicable section of the textbook before coming to lecture. This will help you to better understand the material covered in lecture, and will give you the opportunity to ask questions during lecture about what you have read.

Office Hours:

- I will hold office hours weekly (days and times to be determined, and will be announced via Canvas).
- My office hours will be held remotely via Zoom.
- The TAs for this class will also hold office hours, which will be announced via Canvas.
- You are also welcome to email me or the TAs if you have questions.

Lecture Notes and Slides:

- Lecture notes and slides will be posted on Canvas before lectures.
- Many students find it helpful to bring a copy of these lecture notes to class, either on a tablet or printed, and annotate them during lecture.
- If you have any questions about the material covered in the lecture notes, please post them on the class Piazza page.
- Please note that **lectures will not be recorded**.

Piazza:

- We will be using the online discussion forum Piazza. You can access our class forum via the Piazza tab on Canvas, or by going directly to the Piazza webpage, <https://piazza.com>.
- The TAs and I will be answering questions on Piazza, and I recommend that you post any questions you may have about the class to Piazza, such as questions regarding clarifying or better understanding the material covered in the course, homework problems, logistics, etc.
- Posting on Piazza is probably the fastest way to get a response to your question. This is a good way to practice written discussion of mathematics.
- However, please be aware that we will very likely NOT reply to questions such as “are we required to know this for the exam,” because you are required to know ALL of the material covered so far in this course for the exams.
- I also highly encourage you to answer your fellow students’ posts whenever you can. Explaining mathematics to a fellow student is an excellent way to help you learn the material.
- You can post anonymously to your fellow students if you choose, but you cannot post anonymously to the instructor.
- If you have a question about something, chances are at least one of your classmates does as well; so, posting your question on Piazza helps everyone (and improves efficiency, since responding to multiple emails regarding the same question will delay overall response time from your instructor and TAs).

Homework, Exams and Grading.

Assignment Percentages:

- 15% Homework (9 assignments, lowest 2 will be dropped, see the Calendar file for the due dates)
- 25% Midterm 1 (Friday, **April 28th**, in class)
- 25% Midterm 2 (Friday, **May 26th**, in class)
- 35% Final Exam (Thursday, **June 15th**, 8:00-10:00am)

Please see the Calendar file for a visual outline of when assignments are due.

Homework:

- Please see the Homework Assignments file for a complete list of all homework assignments. Homework problems will be from the **12th edition of *Elementary Linear Algebra* by Howard Anton and Chris Rorres.**
- Homework assignments are due as listed on the class Calendar (typically **Mondays at 10:00pm**, unless Monday is a holiday in which case that week's homework will instead be due that **Wednesday at 10pm**). You will be uploading your completed assignments to Gradescope via Canvas.
- You are highly encouraged to upload your homework to Gradescope with sufficient time before the submission deadline in case of internet issues, since we will not be accepting homework assignments which are late for any reason.
- You can submit as many times as you like before the homework submission deadline, and we will grade only your most recent submission.
- Please make sure your homework submission uploaded successfully to Gradescope, and also make sure that you uploaded it to the correct assignment location. We will not be accepting homeworks which were uploaded to the incorrect location.
- There will be 9 homework assignments.
- Your lowest 2 homework scores will be dropped.
- **No late homework assignments will be accepted.**
- Each weekly homework assignment contains multiple problems, typically from a few different sections of the textbook. You are required to complete all assigned problems; however, you will only be submitting two problems per week to Gradescope. The two problems which you are required to submit for each assignment are specified in the Homework Assignments file. Your homework grade each week will be based only on your submitted work for these two problems.
- The remaining assigned homework problems are on the "honor system." This means you are expected to complete all of the assigned homework problems, but you will only be submitting the two problems specified to be graded.
- **If you do not do all of the assigned homework, you should not expect to be able to pass the examinations.**
- You are expected to write all assigned homework problems out in detail in your notebook (not just the two to be submitted) to practice properly writing mathematics. This will help you to prepare for the exam problems, which will be graded on the clarity and completeness of your work.
- Detailed solutions will only be posted for the problems which are to be submitted. These solutions will be written up by your TAs and will be available after grades are released for the submitted problems.
- Your homework will be graded on the completeness and clarity of your work, not just the correctness of your final answer. If in doubt, include more steps in your work, and more detail in your explanations. One suggestion I like to give when students ask about how much detail to include in their work is to think about how you would show a friend, who has taken all classes up to but not including this one, how to solve this problem.
- You are of course welcome to ask me and the TAs questions about any of the homework problems, both regarding how to solve the problems mathematically as well as how to properly write your solutions to these problems. You can also ask us about any other (unassigned) homework problems you may choose to do as extra practice.
- I am aware that there is a student solutions manual available for our class textbook. If you choose to purchase the solutions manual, please be aware of the following:
 - Submitted homework solutions which are simply copied from the solutions manual will receive no credit (score of zero).
 - If you rely on the solutions manual to tell you what the next step is when solving a problem, then you will not learn the material, because you will not learn the process and you will not learn how to problem-solve when you get stuck. It is a bad idea to look at the solutions manual while trying to solve a problem.
 - However, for problems other than the problems each week which will be graded, you are welcome to use the solutions manual to check your work after (and only after!) completing the entire problem to see if you solved it correctly. I've found that when students check their own work after completely finishing a problem, they actually learn more from the process of determining whether or not they made a mistake (sometimes there are errors in the solutions manual!) and finding what kind of mistakes they commonly make so that they can try to avoid making them again in the future.

Midterms and Final Exam:

- There will be two midterms and a final exam for this class. (Exam dates are given above and are also available in the Calendar file.)
- Exams are closed-book and closed-notes. No note-cards are allowed. No calculators or other electronic devices are allowed.
- A formula sheet with some but not all of the formulas from the material covered prior to the exam will be provided with the exam (and will be posted on Canvas prior to the exam so that you know which formulas you will be provided with).
- **Exams will be cumulative** (as is the nature of mathematics).
- **There will be no make-up exams.** If you must miss a midterm due to illness, you will need to contact me ASAP with proof; in this case, your final exam will be worth 60% of your grade.
- You are required to show all of your work on exams. Exam problems are graded on the completeness and clarity of your work as well as the correctness of your final answer. All work must be done on the exam. Scratch paper will not be allowed.
- If in doubt, include more steps in your work, and more detail in your explanations. One suggestion I like to give when students ask about how much detail to include in their work is to think about how you would show a friend, who has taken all classes up to but not including this one, how to solve this problem.
- You will be required to sign an academic integrity statement on your exam, which will be on the cover page of the exam. This cover page also contains instructions regarding the exam, and it will be posted on Canvas prior to the exam.

(OPTIONAL) Technology Assignment:

There will be a (completely optional) technology assignment, due by Monday, April 10 at 10:00pm, on Gradescope. This assignment will not count towards your final grade. It is designed to help you familiarize yourself with the process of scanning and uploading a PDF submission to Gradescope via Canvas, if you are unfamiliar with this process. Instructions for this assignment will be posted under the “Files” section on the Canvas page for this course.

Classroom Policies.

COVID-19 Policy and Masks (IMPORTANT, please read):

- If you feel sick or otherwise unwell, please do not come to class. Lecture notes will be posted on Canvas, and you are welcome to ask questions about material from the textbook and lecture notes on Piazza, via email, etc.
- We will of course be following county and school mask mandates, so when wearing masks is required by Yolo County and/or UC Davis you will be required to wear masks in the classroom and during office hours.
- **I strongly suggest wearing a mask indoors at all times**, to respect everyone's health and safety, especially our disabled and/or immunocompromised community members. I will be wearing a mask at all times, and I hope that all of you will wear a mask during lecture and when coming to office hours / Calculus room.

Classroom Conduct:

- Please be respectful of your classmates and your instructors.
- Please do not talk amongst yourselves during lecture.
- Please turn off or silence your cell phones etc. during class.
- Please do not use any electronic video or sound recording devices in class.
- You are welcome to use your tablet/laptop/etc. to take written notes.

Academic Integrity:

- You will be required to sign an academic integrity statement on each midterm exam and on the final exam.
- Any evidence of cheating on an exam will result in a score of zero and will be reported to Student Judicial Affairs, which may administer additional punishment.
- Cheating includes, but is not limited to, bringing notes or written or electronic materials into an exam, copying off of another person's exam, allowing someone to copy off of your exam, and having someone take an exam for you.

Students with SDC accommodations:

- Please let me know right away if you will need accommodations for any physical, psychological, or learning disability.
- Please also make sure that the SDC office has sent me your accommodation letter ASAP.

Copyright Statement:

My lectures and course materials, including lecture slides, note-sheets, exams, class handouts, and similar materials, are protected by U.S. copyright law and by University policy. I am the exclusive owner of the copyright for those 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 this course. You may not reproduce, distribute or display (post/upload) lecture notes or other 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.