

**Instructor** : Aaron Montgomery

**Class** : Online

**Office Hours** : W @ 1 pm, Th @ 11 am, and by appointment

**Email** : montgoaa@cwu.edu **Phone** : 963-1906

**Text** : **Linear Algebra** by Jim Hefferon

## Course Outcomes

Students at the end of this course will be able to...

- solve systems of linear equations using efficient solving techniques
- perform basic matrix operations
- determine and use vector space properties
- solve problems requiring the use of eigenvalues and eigenvectors

## Resources

*My Online Video Lectures:* I will post online videos sorted by homework assignment in the **Media Gallery** section of Canvas. There will be a playlist for each homework and a “Miscellany” playlist. As always, I’m finding things I could have done better. I will try to add some subtitling, some spliced in video, and possibly some “viewing guides” to help with this. Any viewing guides will be posted with the problems on Canvas.

*The Text:* The textbook is free and available online at the URL below. There is also an “answers to exercises” at that site, so if you want extra practice, you can work problems from the text. Note that he also has a series of videos (linked from the URL below) if you get sick of listening to me. He and I cover material in a slightly different order and have different presentation styles.  
<https://hefferon.net/linearalgebra/>

*Assignments:* Assignments are found in the **Assignments** section of Canvas. If I answer a question from an assignment in Office Hours, I will post the video name and timestamp for that problem here, so you should check if you get stuck. However, if you still don’t understand the problem, feel free to ask again and we can try to work out what you are missing.

*Office Hours:* I will hold office hours in the **Ultra Blackboard** on Canvas (in the “Office Hours” Session). You can show up and ask me questions (typically students type questions into the chat and I talk through the answer while I write it out on the screen). These sessions are recorded and you can find them in the “Sessions” section of **Ultra Blackboard**. If I answer a question in Office Hours, I will post the video name and timestamp for that problem in the **Assignments** section.

*Email:* You can email me questions and I will try to respond as quickly as I can. Email responses tend to be more terse than Office Hour responses, so if you are really lost, it would be best to try office hours instead of email. This also helps your classmates as they can see the explanation as well in the video recording.

## Grades

**Homework (120 points):** Nine (9) weekly homework assignments will be assigned and are due to me by 11:59 pm on the due date. Each homework assignment will be worth 15 points, the top 8 scores will count toward your grade. Assignments should be submitted on Canvas and should be a single pdf file. They must be legible, that means in focus and with sufficient contrast that I can read your work. There are many scanner apps for Android and iOS that will combine multiple images into a single pdf file (e.g., *Adobe Scan*) and you can combine multiple images into a single file using computer software such as Microsoft Word (which you should export as a new PDF file, not as a Word document). I will post homework solutions after the homework is due. *Homework 0* is worth 0 points but you should practice uploading a single pdf file there.

**Three Exams (120 points):** There will be three exams over the quarter, each exam will be worth 40 points. You have a 90 minutes to complete the exam. If for some reason you are unable to upload an exam (for example, you go over time), you should email it to me. Your total time on the exam will be the difference between the email time and the start time. I will post review sheets (with solutions) for each exam.

**Final (60 points):** There will be a comprehensive final exam covering all

content in the course. It will be worth 60 points. The procedure will be the same as for the first three exams except that you will have 120 minutes to complete this exam.

**Time Overages:** Over the three exams and one final, you will have a total of 20 minutes of grace time. Once you go over this 20 minutes, you will lose 1 point for every extra minute spent on the exam. For example, if you take 95 minutes on the first exam, 60 minutes on the second exam, 100 minutes on the third exam, and 130 minutes on the final, you will have used up  $5 + 0 + 10 + 10 = 25$  total minutes of grace time and will lose 5 points on the final exam (where you first when over). This is tracked in the “Grace Time” column of grades.

$\geq 87\%$	B+		$\geq 93\%$	A		$\geq 90\%$	A-
$\geq 77\%$	C+		$\geq 83\%$	B		$\geq 80\%$	B-
$\geq 77\%$	C+		$\geq 73\%$	C		–	–
$\geq 67\%$	D+		$\geq 63\%$	D		$\geq 60\%$	D-

No, there is no C- grade. This is because of how the Emergency Pass procedure interacts with the Math Department’s prerequisite rules.

### Accommodations

Central Washington University is committed to creating a learning environment that meets the needs of its diverse student body. Students with disabilities should contact Disability Services to discuss a range of options to removing barriers, including accommodations. Disability Services is located in Hogue 126. Call (509) 963-2214 or email [ds@cwu.edu](mailto:ds@cwu.edu) for more information.

In compliance with RCW 28B.137.010, Central Washington University makes every effort to deal reasonably and fairly with students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Students must present written notice to their instructor within the first two weeks of class listing the specific dates on which accommodations are required. Contact the Dean of Student Success at (509) 963-1515 for further information or questions.