

Math 2210: Applied Linear Algebra
Summer 2025 (June 2 - July 3, 2025)

Instructor: Professor Guozhen Lu

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Textbook: Linear Algebra and Its Applications, 6th edition, by *David Lay, Stephen Lay and Judi McDonald*.

Format of Course Lectures: You are recommended with two options. It will be very helpful if you can watch both of them.

1. YouTube Lecture Videos by Professor Paul Cartie at
https://youtube.com/playlist?list=PLU2QPsBQN_q3et7QBrDD958bB_NRFzv4E&si=3VUCePSrzJChn-1M

or

2. Asynchronous Lecture Videos by UConn Professor Tom Roby available at
<https://kaltura.uconn.edu/channel/Math%2B2210Q/168885461>

You need your UConn NET ID to login to watch this set of videos.

<https://www2.math.uconn.edu/~troby/math2210sum24/index.php>

Class Webpage: Go to <https://huskyct.uconn.edu>. Click on “Login” and sign in using your UConn NetID and password. Click on ”MATH-2210Q-Applied Linear Algebra-SEC011-1245”.

Lecture Slides: Some Slides are prepared for you and are posted at Husky CT. You are strongly encouraged to read these slides in addition to the textbook.

Virtual Office hours/Problem Solving Sessions: Monday and Thursday at 9am-10:00am EDT through meeting at my WebEx personal room link below. We will go through solutions to some of the examples and problems. You may also make an appointment with me to ask questions if none of these times are good for you.

My WebEX Personal Room: <https://uconn-cmr.webex.com/meet/gu116109>

MyLab Math: All the homework assignments, quizzes and exams will be given through Pearson’s MyLab Math. It is absolutely necessary for you to get MyLab Math access. You also need to contact the UConn bookstore to gain access of MyLab Math and the textbook of this course.

● **COURSE DESCRIPTION:**

The course is an introduction to the techniques of linear algebra with elementary applications. Topics to be covered: Linear systems of equations and row operations; linear independence, subspace, and spanning sets; inner products, orthogonality, determinants and inverses; Gram-Schmidt procedure, spectral theorem; least squares approximation; characteristic values and vectors, diagonalization; linear transforms, etc.

● **Prerequisites:** The official prerequisites are MATH 1132, 1152, or 2142.

- **Recommended Preparation:** a grade of C or better in MATH 1132. Not open for credit to students who have passed MATH 3210. In particular, you should be comfortable with trigonometric identities, derivatives and integrals of functions, the chain rule, the product rule, the quotient rule, and solving related rate problems, etc.
- **QUIZZES:** There will be 2 quizzes given each week through myMath Lab. Each quiz will cover the material from the asynchronous lectures up to the date. **No make-up quiz** will be given under any circumstance. Your lowest quiz score will be dropped.
You will be notified when the quiz will be given and you will be given **24 hours** to complete each quiz.
- **EXAMS:** There will be **2 Midterm Exams and No Final Exam**. Midterm exams are scheduled on **June 17 and July 3, 2024, both at 10am-12 noon through MyLab Math. Password will be given right before the exam starts.**
Exams are proctored synchronously through Lockdown Browser (to be determined). You are required to turn your camera on while taking the exam.
- **HOMEWORK:** Homework will be assigned but not collected. These homeworks are to provide the absolutely necessary practices for you to understand the subject matter covered in the classes. Doing homework problems also prepare you for the quizzes and exams. You are strongly encouraged to work on the assignments thoroughly. You may also work on them collectively in groups if you choose to.
- **MAKE UP POLICY:** There will be no make-ups for any quiz. Make-up exams will be given only in case of an extreme circumstance of illness. In such a case, **doctor's authorization proof is absolutely needed.**
If you are a student athlete, please let me know during the first week of the course in case your team travel schedule conflicts with a scheduled exam.
- **Special accommodations:** If you are a student-athlete or a student with disabilities, please provide me with a letter from the appropriate office (the Counseling Program for Intercollegiate Athletes (CPIA), or the Center for Students with Disabilities (CSD)) concerning your special needs (e.g. when taking exams), so that I can make appropriate accommodations.
- **GRADING:**
Quizzes—30%; Midterm—35% each (total 70% for 2 Exams).
- **Letter grade conversion:** The final letter grade will be assigned according to the following conversion rule.

A	93–100	A–	90–93	B+	87–89.99	B	83–86.99	B–	80–82.99	C+	76–79.99
C	73–75.99	C–	70–72.99	D+	67–69.99	D	63–66.99	D–	60–62.99	F	below 60

- **Calculators:** You can use calculators and mathematical software when doing homework, but you should be able to do most problems without a calculator. Unless otherwise indicated in class, calculators will not be permitted on quizzes and exams.
- **Academic Integrity:** Integrity is a crucial part of the academic experience. You must observe the University's Academic Integrity Policy as found in the Student Handbook. You may also refer to the following: Important university policies: <http://provost.uconn.edu/syllabi-references/>
- **OTHER RESOURCES** Help might be available at Q-Center. Further information on Q-Center is available at <http://qcenter.uconn.edu/Tutoring/tutoring.php>
- **DISCLAIMER**
The instructor reserves the right to make any changes on items stated in this syllabus as long as he thinks academically advisable. Changes will be announced in class. It is student's responsibility to keep up with the changes.
- **Tentative Course Schedule**

Schedule for Math 2210Q-Summer 2024		
Week	Date	Sections to be covered
1	June 2-7	1.1, 1.2, 1.3, 1.4, 1.5, 1.7, 1.8, 1.9
2	June 9-14	2.1, 2.2, 2.3, 3.1, 3.2, 3.3
3	June 16-21	4.1, 4.2, 4.3, 4.4, 4.5, 4.6
4	June 23-28	5.1, 5.2, 5.3, 5.4, 6.1, 6.2
5	June 29-July 3	6.3, 6.4, 7.1, 7.2, 7.3, 7.4
Enjoy the rest of the summer!		