University of Connecticut Department of Mathematics

MATH 2210Q – 002 Applied Linear Algebra
This Version: August 28, 2026

Session:	Fall 2026 Session 002 (8/31/2026 – 12/11/2026)
Lecture Time:	Monday and Wednesday, 2:00–3:15 pm
Lecture Room:	MONT 319
Course Website:	HuskyCT `https://lms.uconn.edu/`

Instructor:	Bin Zou
Office	MONT 428
E-mail:	bin.zou@uconn.edu
Office Hours:	Monday 1–2 pm (in person)
	Wednesday 10–11 am (virtual, Teams)
Teams link:	`https://teams.microsoft.com/meet/259626552582962?p=BnPCv6RUVSXAFHdEbg`
	Meeting ID: 259 626 552 582 962 Passcode: Cz2CR6MX

1 General Course Information

Course Description and Objective

This course is an introduction to the techniques of linear algebra with elementary applications. The objective is to learn, understand, and be able to work with the vocabulary, algorithmic manipulations, main ideas and concepts of linear algebra, including systems of linear equations, matrices, vector spaces (concrete and abstract) and their bases, linear transformations and change of bases matrices, eigenvectors and eigenvalues, orthogonalization, various matrix factorizations, and the applications of these ideas. Since this course is a bridge to more advanced courses where taking an abstract view of things becomes more important, students are expected to learn how to distinguish true statements from false ones, and to give simple explanations and counterexamples.

Course Prerequisites

The Prerequisite for this course is Calculus II, either Math 1132Q or Math 1152Q.
Note: This course is a prerequisite for Math 3210, 3510 and 3710 and is a (highly) recommended preparation course for Math 3230.

Required Textbook

Linear Algebra and Its Applications, 6th ed., by D. Lay, S. Lay and J. McDonald, Pearson. It is recommended that you also purchase **MyLab Access** because practice questions will be assigned via MyLab.

Course Website

Lecture materials will be posted at HuskyCT `https://lms.uconn.edu/`. Please check for update on a regular basis.

Practice questions (homework) will be administrated using Pearson's **MyLab Math**: `https://mlm.pearson.com/enrollment/zou77312`.
Note that practice questions are *not* graded, but MyLab provides detailed feedback. Exam questions may come from those practice questions. If you only have the trial account, please print out each practice homework after completion.

Course Topics

Below is a **minimal** list of topics to be covered in this course:

Chapter	Title	Sections
1	Linear Equations in Linear Algebra	1.1-1.5, 1.7-1.9
2	Matrix Algebra	2.1-2.3
3	Determinants	3.1-3.3
4	Vector Spaces	4.1-4.7
5	Eigenvalues and Eigenvectors	5.1-5.4
6	Orthogonality and Least Squares	6.1-6.4

If time allows, we will also venture into some more advanced topics from the textbook, such as diagonalizing real symmetric matrices, quadratic forms, and singular value decomposition.

2 Grade Evaluation

The grading components of this course are given as follows:

Component	Midterm Exam 1	Midterm Exam 2	Final Exam
Weight	25%	25%	50%

The schedule for letter grades will be decided once I have scores on all components. In general, 60% is guaranteed a Pass (D-) and over 90% is at least an A-.

- All exams are closed-book and closed-notes. No electronic devices are allowed, except for a calculator (see below for policy).
- Midterm Exam 1 covers Chapters 1 and 2, while Midterm Exam 2 covers Chapters 3 and 4. Both Midterm exams will be scheduled **in class** (for a total of 75 minutes), and the detailed information will be announced about one week prior to the exams.
- Final Exam covers *all* chapters, and the exact date/time (during the Finals Week) is determined by the UConn Registry Office.

Calculator Policy

Only numeric and/or graphing calculators that do not have a C.A.S., i.e, cannot do symbolic manipulations, are allowed for exams. If you want to use a calculator, I recommend any version of the TI-83 or TI-84.

Make-Up Policy

If you cannot write the Final exam, you need to apply for a re-exam directly with the Dean's Office. Upon approval, you contact me to schedule the re-exam.

For two midterm exams, if you cannot write the exam on the scheduled day with a valid reason, the *default* choice is to move the weight to the Final exam. Please communicate with me ASAP if you have conflicts with an exam once the date is released.

3 Other

Q-Center

The Q-center provides peer tutoring and review sessions for this course. Please check their schedule at `https://qcenter.uconn.edu/`.

Course Feedback

Your feedback on the course is always welcome and appreciated. If you have any comments or suggestions that may help improve the lecture quality and learning outcome, please do not hesitate to contact me.

Academic Integrity

I expect all of you to be familiar with and abide by UConn's academic integrity policy at all times; see HERE for details.

Accessibility

In compliance with University of Connecticut policy and equal access laws, I am available to discuss appropriate accommodations that you may require as a student with a disability. Please consult the Center for Students with Disabilities, see `http://csd.uconn.edu/`.