University of Tennessee
Syllabus

Math 251 - Matrix Algebra I
Section 9, CRN 31181
Spring 2023

[Course Description](#)

Instructor information

Instructor Name: Humphries, Peter
Office: Ayres 230
Email: phumphr1@utk.edu

Course Communication: During the week, you can expect me to reply to emails within 24 hours. It may take longer for me to reply during the weekend.

Class times: MWF 1:50-2:40
Classroom: Strong 106

Office hours: M 3:00-4:00, W 10:15-12:00, R 1:00-2:45

Textbook/Materials/Resources

The textbook for this course is *Elementary Linear Algebra* (12th edition) by Anton, Rorres, and Kaul. Readings and homework problems will be assigned from this textbook throughout the semester.

Student Learning Outcomes/Objectives

Upon completion of Math 251, students should be able to:
- understand the relationship between matrices and systems of linear equations,
- compute the row echelon and reduced row echelon forms of a matrix,
- find inverses and apply these to solve systems of linear equations,
- understand the relationship between matrices and linear transformations,
- compute and interpret the determinant of a matrix,
- understand properties of Euclidean vector spaces,
- compute and interpret norms, dot products, and distances,
- recognize subspaces and abstract vector spaces,
- compute the eigenvalues, eigenvectors, and diagonalization of a matrix.

Learning Environment

Class time will be split between lectures, individual work, and group activities designed to support your learning.

In class: During a typical week, class time will predominantly be used for lecturing and large group discussion. There will also be opportunities to work on problems in smaller groups.

Preparation: It is strongly suggested that you read each section of the textbook before the material is discussed in class.

Homework problems: Problems from the textbook will be assigned weekly. You are expected to upload your solutions to these problems to Canvas each Monday.

Classroom Expectations/Etiquette

- Please arrive on time for class.
- Please be respectful in the actions and language you use in the classroom.
- Cellphones should be turned off and put away for the duration of each lesson.
- Please restrict use of computers to relevant topics so as to minimize distractions to yourself and others.

Calculator and Technology Policy

A calculator or computer may be useful for some in-class activities and for homework assignments. **Calculators will not be permitted for tests or the final examination.**

Course Assessment and Evaluation

Your grade in this course will be weighted as follows. All grades will be recorded in Canvas.

Homework	10%
Quizzes	15%
Tests	45%
Exam	30%

Homework: Problems from the textbook will be assigned weekly. You are expected to submit your solutions on Canvas each Monday for a completion grade. You are also expected to attempt unassigned problems from the textbook.

Quizzes: There will be a graded quiz in class every Wednesday (except for the first week of class and days when a test is scheduled). Each quiz will consist of one problem taken directly from the most recent homework assignment.

Tests: There will be three in-class tests during the semester.
 Test 1 Wednesday 22 February
 Test 2 Wednesday 29 March
 Test 3 Wednesday 26 April

Final Exam: The final exam will cover all of the material studied during the semester.
 Date Monday 15 May, 1:00pm - 2:15pm

Letter grades for the course will be determined according to the table below. (The number shown is the minimum score required for each letter grade.)

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
90	87	83	80	77	73	70	67	63	60	57	0

Make up Policy

No make-ups will be allowed for quizzes or worksheets. Make-ups for tests may be approved at the discretion of the instructor - this is considered to be a privilege, not a right. A student requesting a make-up test should make a reasonable attempt to contact the instructor within 24 hours of missing the test. If the make-up is approved, the student will be notified by email. Documentation showing the need for a make-up (i.e. explaining an illness or emergency), or verification from the Office of the Dean of Students may be requested.

How to be Successful in this Course

You should spend at least some time every day doing mathematics. Here are some ideas for how to study:
- complete any homework assigned on WebAssign promptly
- work through problems from the exercise sections of the textbook
- read, re-read, and summarize your notes
- read the textbook, and study the examples
- form a study group with friends and/or classmates
- visit office hours regularly to ask questions

Campus Syllabus

If the instructor finds it necessary to make informational changes (e.g. office hours, schedule adjustments) due to students' needs or unforeseen circumstances, students will be notified in writing/email of any such changes.