Matrix Methods in Science and Engineering
Mathematics 3203, Sections 001 & 002, Fall 2026

Instructor: Dr. Katie Anders
Office: RBN 4046
Email: kanders@uttyler.edu

Course Schedule: Section 001 meets MW 10:10–11:05 AM in RBN 4034. Section 002 meets MW 1:25-2:20 in RBS 2024.

Course Website: You MUST activate your Canvas account. To do so, go to `https://uttyler.edu/canvas`. This is also the address to login. If you are registered in the course, you already have access to the course. All important documents will be posted on Canvas.

Office hours: Tuesday and Thursday 9:00-10:30 AM and by appointment arranged by email

Required Text: *Linear Algebra and Its Applications*, 5th edition, by Lay, Lay, & McDonald, ISBN # 9780321982384

Course Description: Matrices and matrix algebra, determinants, systems of linear equations, Gaussian elimination, eigenvalues and eigenvectors, linear transformation, applications in science and engineering.

Course Prerequisites: MATH 2413 Calclulus I

Student Learning Outcomes: Upon completion of this course, students should be able to do the following:

- Perform basic computations with matrices, including Gaussian elimination, matrix multiplication, and computing transposes, inverses, and determinants
- Solve systems of linear equations using Gaussian elimination and inverse matrices
- Compute eigenvalues and eigenvectors of matrices and understand their importance to matrix theory and its applications
- Apply matrix techniques to real world applications from science and engineering

Grading: Scores will be posted on Canvas. After the end of the semester, final course grades will be available on `myuttyler.edu`. A final course grade of 90% is guaranteed to be at least an A, a final course grade of 80% is guaranteed to be at least a B, a final course grade of 70% is guaranteed to be at least a C, and a final course grade of 60% is guaranteed to be at least a D. All grades below D will be F.

Quizzes: 20%
Exam 1: 25%
Exam 2: 25%
Final Exam: 30%

If you have any questions about the grading of a particular quiz or exam, you must contact me no more than one week after the day I return the graded assessment in class, whether you are present during that class or not.

Attendance: It is your responsibility to attend class. Attendance is mandatory. This means, among other things, coming to class on time and prepared. Before class begins, you should silence and put away cell phones and any other electronic devices. Students are responsible for all announcements made during lecture.

Homework: Homework will be assigned each class period. Homework is mandatory, and you are responsible for completing all of the assigned problems. Solving the homework problems is essential to success in this course and on quizzes and exams.

Quizzes: Dates for quizzes will be announced at least one week in advance. Quizzes will usually be given at the beginning of the class period. If you are tardy on the day of a quiz, you do not get extra time on the quiz. The lowest quiz score will be dropped at the end of the semester.

Exams: There will be 2 midterm exams. A list of the test dates is given below. This list is preliminary and subject to change; at least one week advance notice of any change in test dates will be given.

Exam 1: Wednesday, September 30
Exam 2: Wednesday, November 4

Final Exam:. For Section 001, the final exam will be Wednesday, December 9 from 10:15-12:15 in the usual classroom. For Section 002, the final exam will be Monday, December 7 from 12:30-2:30 PM in the usual classroom.

Cell Phones: Cell phones are not permitted in class. You must silence them and put them away before class begins.

Calculators: The use of calculators and other electronic devices, including cell phones, during exams is strictly prohibited, so study accordingly.

Make-ups: Make-ups for **documented** absences that are **required** as part of a UT Tyler obligation (e.g. athletes participating in an event, students participating in a debate contest, etc.) or for religious observation will be granted. For all make-ups of this type, prior notification of at least one week and documentation are required. Other make-ups are granted only in extreme cases and at the sole discretion of the instructor. Prior notification is still required. Under no circumstances will make-ups be granted without prior notification. Leaving early for a break is NOT grounds for a make-up, so please make your travel plans accordingly. In almost all cases, missed work will be assigned a 0.

Academic Integrity: Your work must be your own. Violations will be processed according to the established guidelines of the department, college, and university. Violations of academic integrity include, but are not limited to, cheating, fabrication, or plagiarizing. A range of academic sanctions may be taken against a student who engages in academic dishonesty. Below are ideas related to academic integrity.

Resources you are encouraged to utilize in this course include the textbook and unassigned problems, notes from class, assigned homework problems, your fellow Math 3203 students, the Math Learning Center, and your instructor. E-mail is the best way to contact me. I reply to email from 9:00 A.M. until 4:00 P.M. Monday-Friday.

A note about a resource NOT allowed in this course: while the internet may be a valuable resource, using it to unethically acquire answers for your work will be considered a violation of academic integrity and processed accordingly. Similarly, copying answers from other students' assignments, past or present, violates the idea that your work must be your own.

The use of Artificial Intelligence is not permitted in this course at all. All work submitted by a student in this course should be their own. The assignments and assessments are designed to support your learning. Doing your own work, without assistance from artificial intelligence, is an essential part of mastering course learning objectives. In this course, you are expressly forbidden from using ChatGPT or any other artificial intelligence (AI) tools for any stages of the work process, including brainstorming. Deviations from these guidelines will be considered a violation of UT Tyler's Honor Code and academic integrity policies.

University Policies: Tuesday, September 8 is this semester's Census Date, the deadline for all registrations, schedule changes, and section changes. Friday, October 30 is the last day to withdraw from one or more courses. For university policies concerning Students' Rights and Responsibilities, Grade Replacement/Forgiveness, State-Mandated Course Drop Policy, Disability Services, Student Absence due to Religious Observance, Student Absence for University-Sponsored Events and Activities, Social Security and FERPA Statement, and more, see the University Policies and Information file on this course's Canvas page.

Tentative Schedule:. This schedule may change as the semester unfolds.

Week	**Dates**	**Sections**
1	August 24 - August 28	1.1, 1.2
2	August 31 - September 4	1.2, 1.3
3	September 7 - September 11	1.3
4	September 14 - September 18	1.4, 1.5
5	September 21 - September 25	1.5, 1.7, 1.8
6	September 28 - October 2	1.8, 1.9
7	October 5 - October 9	1.8, 1.9, 2.1
8	October 12 - October 16	2.2, 2.3
9	October 19 - October 23	2.8, 2.9
10	October 26 - October 30	2.9, 3.1, 3.2
11	November 2 - November 6	3.2, 3.3
12	November 9 - November 13	3.3, 5.1, 5.2
13	November 16 - November 20	5.2, 5.3
14	November 23 - November 27	NO CLASS
15	November 30 - December 4	5.3, 5.5
16	December 7	Final Exam Section 002
	December 9	Final Exam Section 001