MATH 3203.003, Spring 2026
Matrix Methods — Syllabus

Instructor Information	
Professor:	Dr. Stephen Graves
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The preferred method of contact is via Canvas.
https://uttyler.instructure.com

Class Meeting Times

Section	Days	Times	Location
003	MoWe	10:10 – 11:05	RBN 3041

Office Hours

MoWeFr	09:15 — 09:45	RBN 4011
Tu	12:00 — 13:00	RBN 4011

Also by appointment arranged by email

1. Course Information

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

1.2. **Course Prerequisites.** A grade of C or better in Mathematics 2413, *Calculus I*.

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

- Understand the basic properties of Euclidean space including linear independence, dimension, rank, orthogonality, norm and projection.
- Perform basic matrix operations including row reduction, transpose, finding the inverse and finding the determinant.
- Solve systems of linear equations using substitution, Gauss-Jordan elimination, Cramer's rule and inverse matrices.
- Find eigenvalues and eigenvectors as well as understanding their properties and importance to matrix theory and applications.

2. Important Dates

12 Jan. First Day of Classes; **19 Jan.** Dr. MLK, Jr. Day (*No classes*); **26 Jan.** Census Date; **9 Mar. – 13 Mar.** Spring Break (*No classes*); **30 Mar.** Withdrawal Deadline; **27 Apr. – 1 May** Final Exams

I will not hold classes on Good Friday, 3 April.

3. Course Content

3.1. **Required Texts.**

a. **Primary** *3blue1brown: Linear Algebra*
by Grant Sanderson. This will be supplemented with notes and lectures.[1]

b. **Recommended**
The 5 Elements of Effective Thinking
by Edward Burger and Michael Starbird.[2]
ISBN 978-0691156668

3.2. **Canvas & Email.** You are expected to check Canvas at least daily, and also expected to check your university email. **All non-exam work will be submitted via Canvas**.

3.3. **Grading.** Scores will be posted on Canvas. After the end of the semester, final course grades will be available at https://my.uttyler.edu. A final course grade of 70% is guaranteed to be a C; a final course grade of 80% is guaranteed to be a B; a final course grade of 90% is guaranteed to be an A. All grades below C will be F.

3.4. **Course Structure.** The course content will be organized by Canvas modules. Your grade will be computed on the 100% scale by a weighted average: participation (P) and homework assessment (HW) will count for 10%. in-class exams ($E_\#$) will be averaged and have a total weight of 60%, and the final exam (FE) will have a weight of 30%.

$$\text{Grade} = .05(P) + .05(HW) + .60\left(\frac{1}{N}(E_1 + \cdots + E_N)\right) + .30(FE) \leqslant 100.$$

3.5. **Participation, 5%.**

- Your participation will be assessed by your submission of daily lecture notes via Canvas.
- Correct and generally complete lecture notes will earn 2 points; incomplete notes will earn 1 point; incorrect notes (for the wrong day or content) or minimal notes will earn 0 points.
- If you miss class, **it is your responsibility to obtain lecture notes from a classmate** and copy them into your own notes and submit them. Class notes will not be provided by the instructor. Notes taken from sources other than class will not count.

3.6. **Homework Assessment, 5%.**
- Homework will be assigned weekly and checked for completeness.
- A complete asssignment will earn 2 points; a mostly-complete assignment will receive 1 point; anything less will receive 0 points.

3.7. **In-class Exams, total 60%.** There will be 3 comprehensive in-class exams. **Tentative dates**: 4 February, 2 March, and 1 April.

3.8. **Final Exam, 30%.** The comprehensive final exam will be scheduled during the university's final exam week and announced as soon as the time and date are determined. Students who do not take the final exam earn an F for the course.

4. Course Policies

4.1. **Academic Honesty.** *All work submitted 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 (also called falsification), or plagiarizing. A range of academic sanctions may be taken against a student who engages in academic dishonesty.
- Submitting the *homework* or *lecture notes* of another student is **plagiarism**.
- Submitting work generated by "AI" (large language models, diffusion models, etc.) as if you had created it without the software tool is **plagiarism**.
- Find the answers to assigned work online and submitting it as your own work is **plagiarism**.
- **Plagiarizing work will result in a grade of 0 for the category**, not just the assignment.
- Cheating on an exam will result in an F for the **course**.
- Posting copyrighted material to the internet without the prior written permission of the copyright holder is **illegal**.

4.2. **Civil Environment.** The free exchange of ideas is a central part of a university education. Class will be conducted in a polite and professional manner and I expect students to behave politely and professionally. *Disruptive behavior will not be allowed and is judged at my sole discretion.* Persistently bad behavior will result in your removal from the classroom.

4.3. **Personal Electronics.** Students are required to have access to a device capable of accessing Canvas and a device capable of scanning hand-written work for upload to Canvas.

4.4. **Late & Missed Work.**
- Late work will not be accepted
- Missed participation grades and homework assessments will count as 0s.
- Alternative testing will be arranged for excused absences.
- A student missing one exam due to documented illness or emergency is eligible to replace the missed exam grade with the grade from their final exam. *This makes you ineligible to receive extra credit.*
- Students missing more than one in-class exam have failed the course and will receive an F.
- Students missing the final exam have failed the course and will receive an F.

4.5. **Final Exam Policy.** A student who earns an F on the final exam will receive an F for the course.

5. University Policies

The University has many policies required to be disclosed to students; as they frequently change, and in fact the location of the list of these policies frequently changes, it is better to read the **University Policies and Information** page linked from the Canvas course.

Notes

1. `https://www.3blue1brown.com/topics/linear-algebra`
2. This inexpensive book can totally change how you view learning and I recommend it to anyone who thinks they might struggle with course material, whether or not they're in my classes.