COURSE DESCRIPTION
INTRO TO LINEAR ALGEBRA
MA 260-2E, 35852
SPRING 2026

DEPARTMENT OF MATHEMATICS
UNIVERSITY OF ALABAMA AT BIRMINGHAM

Course Instructor: Dr. Y. Zeng
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Office Hours: Tue Thu, 3:30-4:30 PM (or by appointment)

Meeting times: Tue Thu, 2 – 3:15 PM
Meeting location: UH 4002
Prerequisite: Grade of C or better in MA 125 or MA 225 or MA 168
Credits: 3 semester hours
Textbook: Howard Anton, Chris Rorres and Anton Kaul, *Elementary Linear Algebra, Applications Version*, 12th edition, Wiley, ISBN-9781119406723. The electronic version of the book is already uploaded to your Canvas page under First Day Access. More information is available at

https://www.uab.edu/elearning/academic-technologies/first-day-access

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Important dates:

First day of classes: Jan 12
Martin Luther King Holiday: Jan 19
Last day to drop without paying full tuition: Jan 20
Extended drop period: Jan 21 – Feb 25
Spring Break: Mar 9 –15
Last day to withdraw with a "W": Mar 27
Last day of class: Apr 24
Major exams (tests): Test I: near Tuesday, February 24;
Test II: near Thursday, April 16.

(These dates are approximate and may be slightly shifted due to unforeseen circumstances.)

Final exam: Tuesday, April 28, 2026, 1:30 PM – 4:00 PM

Date: January 8, 2026.

Course policies:

- Please make sure that you are able to receive e-mail through your Blazer-ID account. Official course announcements may be sent to that address.
- If you wish to request a disability accommodation please contact DSS at 934-4205 or at *dss@uab.edu*.
- If a test is missed due to a serious verifiable circumstance or official university business, the test grade will be replaced with the final exam score. Otherwise, if you miss an exam you will receive a zero score for this exam. In the unlikely event when two midterm tests are missed due to a serious verifiable circumstance or official university business, the matter will be resolved on the case by case basis. In any case you **must** inform your instructor of such circumstances **before** the exam takes place.
- All tests (including the final exam) are open book. Calculators (without internet access) will be allowed during any of the tests.

Methods of teaching and learning:

- Class meetings of 75 minutes consist of lectures and discussions of examples and homework problems. Time also includes two in-class tests and occasional quizzes .
- Students are expected to undertake at least 6 hours of private study and homework per week.

Assessment procedures:

- Student achievement will be assessed by the following measures:
  - **Homework**
    - Weekly homework sets will be chosen from the book and posted as assignments on CANVAS. They will usually be due within one week. Answers to the homework problems, **including full solutions**, need to be turned in on the due date by 11:59pm via Canvas.
    - Each HW set receives 0, 0.5, 1, 1.5 or 2 points credit. These points will accumulate until the next test and then be **added as extra credit to the test score** (each test will be graded on a range of 0 to 100).
    - No late homework is accepted.
  - **Quizzes.** Occasionally, an end-of-class quiz will be given, with a score up to 2. This will be applied as bonus credit to the next test, just as described for homework.
  - **Two in-class tests.** Two 75-minute tests will be given. At least one week notice will be given for the sections of the book to be covered.
  - **A 150-minute comprehensive final examination.** The final exam will be cumulative, i.e. it will test on all the material.
- Your course grade will be determined from the tests and final exam with the weights

Test 1 (30 %), Test 2 (30 %), Final Exam (40 %).

Your final grade is determined according to the following table:

Course performance:	88-100	75-87	62-74	50-61	below 50
Final Grade:	A	B	C	D	F

Learning Outcomes:

(1) Students will learn about **Systems of Linear Equations** and how to use **matrices** as a tool in solving them, Sections 1.1 to 1.9.
(2) **Determinants** will be studied, in particular their relation to inverting matrices, Sections 2.1 to 2.3.
(3) **Euclidean Vector Spaces** R^n for general n will be introduced, Sections 3.1 to 3.3.
(4) The concept of **General Vector Spaces** will be introduced, Sections 4.1 to 4.9.
(5) Students will learn how to calculate **Eigenvalues and Eigenvectors** of square matrices, Sections 5.1 and 5.2.
(6) **Inner Product Spaces** and their relation to orthogonality will be introduced, Sections 6.1 to 6.3.
(7) Students will learn how to **diagonalize** symmetric matrices, Sections 7.1 and 7.2.

Some important UAB policies:

Non-discrimination Statement. The University of Alabama at Birmingham (UAB) is an Equal Employment/Equal Educational Opportunity Institution. UAB is dedicated to providing equal opportunities and equal access to all individuals regardless of race, color, religion, ethnic or national origin, sex (including pregnancy), genetic information, age, disability, religion, sexual orientation, gender identity, gender expression, and veterans status. Title IX of the Educational Amendments of 1972 protects individuals from discrimination based on sex in any educational program or activity operated by recipients of federal financial assistance. As required by Title IX, UAB does not discriminate based on sex in its educational programs or activities, including in admission and employment. Inquiries concerning the application of Title IX may be referred to UABs Assistant Vice President and Senior Title IX Coordinator, the U.S. Department of Educations Office for Civil Rights, or both. UABs Assistant Vice President and Senior Title IX Coordinator is Andrea McDew, 701 20th Street South, Suite 1030, Birmingham, AL 35233, 205-5493, amcdew@uab.edu. UAB does not discriminate in admissions, educational programs, or employment on the basis of any factor stated above or prohibited under applicable law. Students, faculty, and staff are assured of participation in University programs and in the use of facilities without such discrimination.

Divisive Concepts. All University faculty, instructors and teaching staff have the academic freedom to explore, discuss, and provide instruction on a wide range of topics in an academic setting. This class may present difficult, objectionable, or controversial topics for consideration, but will do so through an objective, scholarly lens designed to encourage critical thinking. Though students may be asked to share their personal views in the academic

setting, no student will ever be required to assent or agree with any concept considered divisive under Alabama law, nor penalized for refusing to support or endorse such a concept. All students are strongly encouraged to think independently and analytically about all material presented in class and may express their views in a time, place, and manner, consistent with class organization and structure, and in accordance with the University's commitment to free and open thought, inquiry, and expressions.

Shared Values Statement. Collaboration, integrity, respect, and excellence are core values of our institution and affirm what it means to be a UAB community member. A key foundation of UAB is diversity. At UAB, everybody counts every day. UAB is committed to fostering a respectful, accessible and open campus environment. We value every member of our campus and the richly different perspectives, characteristics and life experiences that contribute to UABs unique environment. UAB values and cultivates access, engagement and opportunity in our research, learning, clinical, and work environments. Our College aims to create an open and welcoming environment and to support the success of all UAB community members.

Academic Misconduct. UAB Faculty expects all members of its academic community to function according to the highest ethical and professional standards. Academic dishonesty and misconduct includes, but is not limited to, acts of abetting, cheating, plagiarism, fabrication, and misrepresentation. Students are expected to honor the UAB Academic Code of Conduct as detailed in the most current UAB Policies Guide. Please consult these resources for additional information regarding the specific procedures to be undertaken when a student violates the UAB Academic Code of Conduct.

- https://www.uab.edu/students/one-stop/policies/academic-honor-code
- https://www.uab.edu/engineering/home/students/code-of-conduct#academic

DSS Accessibility Statement. UAB is committed to providing an accessible learning experience for all students. If you are a student with a disability that qualifies under Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act, and you require accommodations, please contact Disability Support Services for information on accommodations, registration and procedures. Requests for reasonable accommodations involve an interactive process and consist of a collaborative effort among the student, DSS, faculty and staff. If you are registered with Disability Support Services, please contact DSS to discuss accommodations that may be necessary in this course. If you have a disability but have not contacted Disability Support Services, please call 934-4205 or visit http://www.uab.edu/dss or Hill Student Center Suite 409.