

**COURSE DESCRIPTION**  
**LINEAR ALGEBRA**  
**MA 631**  
**FALL 2022**

DEPARTMENT OF MATHEMATICS  
UNIVERSITY OF ALABAMA AT BIRMINGHAM

**Course Instructor:** Professor Nikita Selinger  
**Office:** UH 4016  
**Phone#:** (205) 934-2154  
**E-mail:** selinger@uab.edu  
**Office Hours:** Before/after class, drop-in, or email for appointment.

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**Meeting place:** UH 4002  
**Meeting times:** TuTh, 2:00 – 3:15  
**Textbook:** (1) *UAB Class Notes: MA 631, Linear Algebra* by multiple UAB math faculty members. Download from Canvas (Required)  
(2) S. H. Friedberg, A. J. Insel and L. E. Spence, *Linear Algebra*, Pearson, 5th Ed. (Recommended)  
(3) P. Lax, *Linear Algebra and Its Applications*, Wiley, 2nd Ed. (Recommended)  
(4) S. Axler, *Linear Algebra Done Right*, Springer. (Recommended)

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**Important dates:**

**First day of class:** August 22, 2022  
**Last day to drop/add (without paying full tuition):** August 29, 2022  
**Labor Day Holiday:** September 05, 2022  
**Last day to withdraw with a “W”:** October 14, 2022  
**Fall/Thanksgiving Break:** November 21 – 27, 2022  
**Last day of class:** December 02, 2022  
**Final exam:** Tuesday, December 06, 1:30 PM – 4:00 PM

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**Syllabus**

Vector spaces; linear transformations and matrices; determinants; systems of linear equations and Gaussian elimination; eigenvalues, eigenvectors and diagonalization; generalized eigenvectors and Jordan decomposition; minimal polynomials, Cayley-Hamilton theorem

**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 are contacted by the Early Alert Program, you should consider taking advantage of the services it offers. Various services to assist you are also listed in the *Student Resources* section of the *Blazernet* web site.
- If you wish to request a disability accommodation please contact DSS at 934-4205 or at *dss@uab.edu*.

**Methods of teaching and learning:**

- Class meetings of 75 minutes consisting of lectures and discussions of examples and homework problems.
- Students are expected to undertake **at least** 10 hours of private study and homework per week.

**Assessment procedures:**

Student achievement will be assessed by the following measures:

- **Regular homework.** Homework will be assigned on a weekly basis. Homework contributes 20% to the course average.
- **Class participation.** Class participation contributes 20% to the course average.
- **Midterm exam.** The midterm exam contributes 25% to the course average.
- **Final exam.** The final exam contributes 35% to the course average.
- Your course performance is your course average (including the final exam score). This is a number between 0 and 100.
- 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

- In addition your grade may be raised by a strong performance on the final exam (normally at most one letter grade).

**UAB DSS Accessibility Statement.** The University of Alabama at Birmingham 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 (205) 934-4205, visit their website, or their office located in Hill Student Center Suite 409.

**UAB Title IX Statement.** The University of Alabama at Birmingham is committed to providing an environment that is free from sexual misconduct, which includes gender-based assault, harassment, exploitation, dating and domestic violence, stalking, as well as discrimination based on sex, sexual orientation, gender identity, and gender expression. If you have experienced any of the aforementioned conduct we encourage you to report the incident. UAB provides several avenues for reporting. For more information about Title IX, policy, reporting, protections, resources and supports, please visit UAB Title IX web page for UAB's Title IX, UAB's Equal Opportunity, Anti-Harassment, Duty to Report, and Non-Retaliation policies.