

Math 221 — Linear Algebra — Fall 2021

Instructor Contact Info: Brooke Ullery (bullery@emory.edu, MSC E416). I'll respond to your emails within 24 hours, but probably much sooner. Office hours are Mondays 1-2 PM and Tuesdays 10-11 AM.

Lab Instructor Contact Info: Santiago Arango (santiago.arango@emory.edu, MSC W431). Office hours are Wednesdays and Thursdays 5-6 PM.

Class meeting times: Mon/Wed 10-11:15 PM August 25–December 6 in WH 103. Lab sessions take place on Friday; the time depends on your section.

Website: <http://www.math.emory.edu/~bullery/math221>. I'll post all of your assignments and lecture notes on the website. Canvas will only be used to input grades.

Prerequisites: MATH 111 or 112 or 112Z.

Course Overview: This course is an introduction to linear algebra. Our aim will be not only to become proficient in computations involving matrices and vectors, but to gain a deeper conceptual understanding of the topics covered so that you're able to apply them in math, statistics, science, economics, or any other area of study. As Lay puts it in his textbook: "In linear algebra, the concepts are as important as the computations. The simple numerical exercises that begin each exercise set only help you check your understanding of basic procedures. Later in your career, computers will do the calculations, but you will have to choose the calculations, know how to interpret the results, and then explain the results to other people."

Text: "Linear Algebra with Applications" by Keith Nicholson, available online at <https://lyryx.com/linear-algebra-applications/>.

Homework: There will be homework assigned after each class. It will not be collected or graded. Instead, there will be a weekly quiz covering the homework material. The homework assignments are available on the website and will be updated after each lecture. I encourage you to work on the problems together and to come to office hours if you need help or have any questions.

Quizzes: There will be a short (10 minute) quiz at the end of each Friday lab session, except the first Friday and dates of the midterm exams. The quiz questions will be very similar to the homework problems from that week. For example, I might give the same problem with the numbers changed. Notes, books, or electronic devices may not be used when taking the quizzes. Your lowest two quiz grades will be dropped. No makeup quizzes will be given. If you miss a quiz, that will be one that you drop. For extreme circumstances that impact your attendance for more than two consecutive

weeks (e.g. hospitalization), contact the Office of Undergraduate Education (OUE) and Brooke as soon as possible.

Exams: The two 50 minute midterm exams will take place during your lab sessions on **October 1** and **November 5**. The final exam will be cumulative and take place on **December 13, 8:00 AM–10:30 AM**. Notes, books, or electronic devices may not be used when taking any of the exams. Makeup exams will be given only in extreme situations, with justification verified by the OUE.

Grading: The final course grade will be calculated as follows: 25% each midterm, 10% quizzes, and 40% final exam.

Honor code: Remember that copying another student's work is a violation of the Honor Code and will be treated as such.

Masks: Please keep your mask on for the entire length of class. Please refrain from eating/drinking in class so that you can keep your mask on the whole time.

ADA and students with disabilities: In compliance with the Americans with Disabilities Act of 1990 (ADA), no otherwise qualified person with a disability be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the university. Please contact the Office for Disability Services, located in the SAAC building on the Emory's Clairmont campus to coordinate reasonable accommodations for students with documented disabilities.