

Math 15a: Applied Linear Algebra Spring 2020

MWTh 1:00pm-1:50pm

Gerstenzang 121

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Office Hours: Th 2-3 (In classroom), Fri 3-4 (In office Goldsmith 118b)

Course Description Students in Math 15a will learn the fundamentals of vectors and matrices including linear independence/dependence, change of basis, linear maps, and eigenvectors and eigenvalues.

Prerequisite Any calculus course (MATH 10a or 10b) or higher, or precalculus (MATH 5a) and permission of the instructor.

Textbook (Required) Otto Bretscher, Linear Algebra with Applications, Fourth Edition. We will use the textbook as a primary reference. I will post relevant excerpts from other material if needed. Lectures and homework assignments will be based directly on the textbook.

Grading Your grade will be based on your homework, two midterm exams, and the final exam, according to the following scheme:

- Midterm 1: Thursday, Feb. 27th, 20%
- Midterm 2: Thursday, Mar. 26th, 20%
- Final exam: During Math Common Exams block, as scheduled by the registrar, 40%
- Written assignments/homework assignments: 20%

Your percentage is not the only factor used to determine your letter grade. The final letter grade at the end of the semester will be determined by your percentage and the overall difficulty of the material. If a student earns a 90% in the course then they will not receive a letter grade lower than an A-, 80% guarantees a B-, and so on. However, it is possible that the requirement for an A- or some other letter grade is lowered due to the difficulty of the material. In short, the best way to guarantee the highest possible letter grade you are capable of earning is to learn the material. (Adapted from Jonathan Rachowicz's syllabus)

Homework Homework will be collected every week unless stated otherwise. You may collaborate on homework, but make sure that the answers that you submit are your own. Please list the names of the people with whom you collaborated; they deserve to be acknowledged! Your lowest homework grade will be dropped. Always write your answers neatly and show all your work; points will be deducted if the grader cannot follow your reasoning. You will not receive credit for problems that were not assigned, so be sure to read the assignment carefully. Also, please staple your homework if it contains multiple

pages. (Adapted from Adam Levine's Math 15a Syllabus).

Late assignments will be penalized 20% per (calendar) day beginning with the start of class. If you submit your assignment after the end of class it will be graded out of 80%. 24 hours later you will be graded out of 60% and so on. Exceptions and extensions will be determined on a case-by-case basis, but they will require a medical or serious personal issue. I always accept pictures of assignments if you are unable to attend class. Please make sure the pictures are clear enough to read.

I will drop two of the lowest scoring homework assignments.

Exams During an exam you are not permitted to bring/use a calculator, notes, scratch paper, smartwatch, cell phone, laptop, etc. This list is not exhaustive. If you are unsure whether or not you may use something on the exam, please ask before the exam. Scratch paper will be provided. One student at a time will be permitted to use the restroom so plan accordingly. (Adapted from Jonathan Rachowicz's syllabus)

Disability If you have a disability for which you are or may be requesting an accommodation, you should contact Beth Rodgers-Kay in the Office of Academic Services at 63470 or at brodgers@brandeis.edu. Letters of accommodations should be presented at the start of the semester to ensure provision of accommodations. Accommodations cannot be granted retroactively.

Academic Integrity Cheating/plagiarism will not be tolerated. You are expected to follow the University's policy on academic integrity, which is distributed annually as Section 4 of the Rights and Responsibilities Handbook (see <http://www.brandeis.edu/studentaffairs/srcs/rr/index.html>). Instances of alleged dishonesty will be forwarded to the Department of Student Development and Conduct for possible referral to the Student Judicial System. Potential sanctions include failure in the course and suspension from the University.