Instructor: Aaron Berkowitz, Goldsmith 111, aberkow@brandeis.edu.

Time. M, T, W, Th 9:00-11:00 am.

Text. There are no required texts for this course. Supplementary readings and materials will be suggested through the course, but are not required.

Prerequisites. Placement by examination; any mathematics course numbered 10 or above; or MATH 5a AND permission of the instructor. Students may take MATH 15a or 22a for credit, but not both.

For the placement exam, see http://www.brandeis.edu/registrar/newstudent/testing.html.

Learning Goals for Math 15A. Linear algebra lies at the interface between pure and applied mathematics. It would not be much of an exaggeration to say that every problem in applied mathematics which is solvable is a linear algebra problem. Indeed, the goal of much of both pure and applied mathematics is to find ways to turn hard problems into linear algebra problems so that they can be solved. With that in mind, the goal of this course is to provide you with the tools you need to solve linear algebra problems. The course will be organized in the following way:

1. Matrix Algebra and Linear Systems
2. Vector Spaces and Dimension
3. Linear Maps and Geometry
4. Eigenvalues and Eigenvectors

Various applications will be introduced throughout as time permits.

Exam. There will be four short exams and a final exam. The short exams will be offered the first hour of every Thursday, and the lowest grade will be dropped.

Homework. Homework problems will be assigned daily and posted to LATTE. The homework is optional but the problems will reflect the type and difficulty of problems to expect on the exams. Further, homework will be collected weekly and checked for completion. Completed homework will be considered as a factor in student’s favor when assigning final grades. No student will be penalized for not doing the homework.

Grades. Your grade will be calculated as the better of the following:

- 30% Short Exams, 70% Final Exam
- 75% Short Exams, 25% Final Exam

OVER
Calculators. Calculators are not allowed during exams.

Office hours. You are encouraged to come to office hours whenever you have questions about the course material or just to say hello. If you can’t attend office hours, please don’t hesitate to ask for an appointment at another time.

LATTE. All course materials for Math 15A will be available online on LATTE. Log in at https://moodle2.brandeis.edu using your Unet username and password.

Students with disabilities. If you are a student who needs academic accommodations because of a documented disability you should contact me and present your letter of accommodation as soon as possible. If you have questions about documenting a disability or requesting academic accommodations you should contact Beth Rodgers-Kay in the Office of Academic Services at x63470 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. 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/srscs/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. If you have any questions about how these policies apply to your conduct in this course, please ask.