# MATH 355.002 : Linear Algebra
## Summer 2017

---

**Instructor:** Miriam Kuzbary

**Class Hours:** MTWRF 10:30 - 12:05pm in HBH 423

**Email:** miriam.kuzbary AT rice DOT edu

**Office Hours:** MTWRF 3:00 - 4:00pm and by appointment in HBH 48 (in the basement).

**Course Description:** In this course we will explore linear algebra, which is in some sense the study of vectors and certain functions on them. This is a generalization of the algebra you know from the one-dimensional world to the many-dimensional world and is a fundamental tool in every STEM field. More than that, the subject is full of deep, theoretical results which are interesting in their own right. The goal of this class is to become fluent in computational techniques as well as to gain an understanding and appreciation for the theory holding it all together.

We will study the geometry of Euclidean space, matrices and determinants, abstract vector spaces and linear transformations, eigenvalues and eigenvectors, as well as applications of these topics.

**Course Expectations:** This is a difficult class normally, but taken during the summer it will likely be even more of a challenge. Please expect to spend a minimum of three hours per hour of class working outside of the classroom. Though I will have office hours every week day, feel free to send me an email at any time with questions you have and I will respond promptly and arrange to meet with you if necessary.

**Course Materials:** The textbook for this class will be Linear Algebra and its Applications, 5th ed. by David C. Lay, Steven R. Lay, and Judi J. McDonald.

**Website:** On OWLSpace

**Homework**: There will be homework due every other day at the beginning of class. Homework will be posted on owlspace at least two days before it is due. Working together is encouraged, however, each student must write up their homework on their own. Homework must be legible and your responses should be both well justified and clearly indicated. As a guideline, an average student from a linear algebra class should be able to read your homework and understand (and agree with) your solution to each problem.

**Exams:** This class will have two midterms (on 7/7 and 7/19) and one final exam (7/28). On midterm days there will be a short review and then an hour long exam. The final exam will be three hours and on the last day of class (July 28th). More details will be announced closer to each

exam date. If you have a conflict with any of these dates, please discuss it with me well in advance and we will find a solution.

**Grading:** Homework will account for 20% of the final grade, the two midterms will account for 25% each, and the final exam will account for 30% of the final grade.

| Tentative Course Schedule: | |
| --- | --- |
| Week 1: | 1.1-5, 1.7-9, 2.1-3 |
| Week 2: | 4.1-4, and Midterm 1 (7/7) |
| Week 3: | 4.5-7, 3.1-3, 5.1-5 |
| Week 4: | 6.1-6.7 and Midterm 2 (7/19) |
| Week 5: | 7.1,2,4, and Final Exam (7/28) |

**Disability Support:** Any student with a documented disability seeking academic adjustments or accommodations is requested to speak with me during the first two weeks of class. All such discussions will remain as confidential as possible. Students with disabilities will need to also contact Disability Support Services in the Allen Center.