

## Math 115A, Lecture 2: Analysis

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**Course Webpage:** [www.math.ucla.edu/~hendricks/Math115A.html](http://www.math.ucla.edu/~hendricks/Math115A.html) Most course content can be found both here and on ccle. We will also use the my.ucla.edu gradebook for this class.

**Location and Time:** MWF 10-10:50 in MS 5147. TA discussion section TR 10-10:50 in MS 5147. Please note that section attendance is extremely important to success in this course.

**Content:** This course is a rigorous introduction to linear algebra. We will cover abstract vector spaces, linear transformations, matrices and determinants, inner product spaces, and eigenvector theory. Since this course is intended as a potential first course in abstract mathematics, we will focus on building skills for reading and writing proofs.

**Textbook:** S. Friedberg, A. Insel, and L. Spence. *Linear Algebra. Custom edition for UCLA.*

**Prerequisites:** Math 33A.

**Homework:** Homework will be assigned weekly and due at the beginning of Friday's lecture (the first homework is very short). **No late homework will be accepted.** However, your lowest homework score will be dropped when computing your grade.

You are encouraged to work in groups on your homework – this is generally beneficial to your understanding and helps you learn how to communicate clearly about mathematics. However, you must write up all solutions yourself. Moreover, since crediting your collaborators is an important element of academic ethics, you should write down with whom you worked at the top of each assignment. You must also cite any sources you use other than the lecture or the textbook. This includes other textbooks, websites about linear algebra, and the solutions guide to our textbook. (Note that nontrivial consultation of the solutions guide is almost guaranteed to result in disaster on the exams.)

**Exams:** There will be two in-class midterms on **Wednesday, January 27** and **Monday, February 22**. There will also be a final exam **Friday, March 18, 3-6 p.m.** There will be not be any make-up exams except in extreme and documented circumstances. In particular, note that university policy requires that a student who has an undocumented absence from the final exam be given a failing grade in the course.

**Grading:** Grades will be computed as follows:

- Homework: 20%
- Midterms 1 & 2: 20% each
- Final: 40%

A curve compatible with the department guidelines for this course will be applied to the composite numerical grades. The average will be a B- (unless something surprising happens).

**Schedule:** We will approximately follow the schedule of topics at <http://www.math.ucla.edu/ugrad/courses/math/115A> . Exact reading will appear on each week's homework.

**Final Scheduling Note:** Unfortunately, it is currently the case that the research side of my job requires that I travel frequently and on relatively short notice. Several lectures in this course will be given by other professors. Naturally, I will make every effort will be made to ensure that you have adequate access to me, and to advertise my timing as clearly as possible. (The advantages to having active researchers teach your classes are presumably obvious – this sort of thing, I fear, is one of the disadvantages.)