1. Summary

- Course instructor: Dan Romik
- Teaching assistant: Matthew Litman
- Course lectures: MWF 11:50-12:00, Hoagland 108
- Discussion section: T 6:10-7, Olson 147
- Instructor office hours: F 9:30-10:30, MSB 2218
- TA office hours: T 10:45-11:45, MSB 2137
- Midterm exam date, time and place: 11:10-12 on Wednesday February 12, Cruess 107
- Final exam date, time and place: 8-10 am on Tuesday March 17, Cruess 107

2. Course prerequisites

- C- or higher in MAT21C

3. Course textbook

- The course will be based on the book *Linear Algebra as an Introduction to Abstract Mathematics* by Isaiah Lankham, Bruno Nachtergaele and Anne Schilling (World Scientific, 2016). A free PDF of the book can be downloaded [here](#).

4. Course description and learning objectives

Linear algebra is part of the basic language of mathematics, and nowadays plays an increasingly important role as part of the basic language and toolset of practical areas of application such as data science, machine learning, computer graphics and more. One main goal of the course is to teach you the fundamentals of the subject. Topics will include: complex numbers, abstract vector spaces, linear transformations, methods for solving systems of linear equations, matrices and diagonalization, and more. A complete list of subjects can be found in the mathematics department’s [general syllabus for the class](#).
A second main goal of the class is to introduce you to mathematical proofs and
abstract mathematical thinking. We will prove well-known mathematical theorems
such as the fundamental theorem of algebra, and develop skills in reading and
writing proofs, understanding mathematical notation and writing style, the patterns
of generalization and abstraction, and more. These general skills carry over to all
areas of pure mathematics, and many areas of engineering, computer science, and
other sciences.

5. Grading policy

The final course grade will be assigned based on a weighted average of the following
components:

- **Homework**, to be assigned weekly — 30% of the grade. The two lowest
  weekly assignment grades will be ignored.
- **Midterm exam.** The midterm exam will be held on Wednesday, February
  12 at the normal lecture time and place — 30% of the grade.
- **Final exam.** The final exam will be held at 8-10 am on Tuesday March
  17 — 40% of the grade.

Exams will be closed-book exams, with no written material or electronic devices
allowed.

The translation of the final course numerical score to a letter grade will be decided
at the end of the quarter, but the following lower bounds on the letter grade cutoff
will apply:

A final numerical score of 90% or higher guarantees you a final grade of at least A-;
a final numerical score of 80% or higher guarantees you a final grade of at least B-;
a final numerical score of 70% or higher guarantees you a final grade of at least C-;
a final numerical score of 60% or higher guarantees you a final grade of at least D-.

6. Other course policies

- **Late homework.** Late homework will not be accepted except in case of
  a documented illness or other documented and uncontrollable situation of
  similar type.
- **Make-up exams.** Missing an exam will lead to a grade of 0 except in the
  case of a documented illness or other documented circumstances beyond
  your control. Make-up exams will not be given. If you are unable to attend
  an exam, let me know immediately.
- **Ethics policy.** The homework that you submit in the class must be your
  own work. You may work on the homework collaboratively with your
  friends, but the work that you hand in must be written in your own hand-
  writing (or typed by you), in your own words, and you represent that you
  understand what you wrote.
Failure to adhere to these guidelines would be considered by me as a violation of the [UC Davis Code of Academic Conduct](https://catalog.ucdavis.edu/policies/) and warrant, at minimum, a failing grade in the assignment in question and a referral to Student Judicial Affairs.

To put the above in more human terms: don’t cheat; treat the course instructor and TA and your fellow students as you would like to be treated.

### 7. Students with disabilities

If you are entitled for some form of accommodation, e.g., based on a disability, please let me know so that we can discuss any relevant logistical details.

Note that, excepting minor things that are at my discretion, for most forms of accommodation such as extra time on the final exam I am only allowed to provide accommodations that are explicitly approved by the campus’s [Student Disability Center](https://www.sduocenter.ucdavis.edu/). So make sure to discuss your situation with them in a timely manner.