MATH 113
LINEAR ALGEBRA
SPRING 2021

STAFF

Lecturer. Umut Varolgunes (OH: Monday 1-2pm, Thursday 4-6pm)

CA. Daniel Dore (OH: Wednesday 3-5pm)

COURSE OUTLINE

Math 113 is a course on linear algebra, the study of vector spaces and linear maps. The emphasis will be theoretical: we will study abstract properties of vector spaces and linear maps as well as their geometric interpretation.

Besides studying linear algebra, an important goal of the course is to learn how to write mathematics. In class we will give rigorous proofs, emphasizing proper mathematical language and notation. Through the homework assignments, you will learn to apply mathematical reasoning and write clear, compelling and correct proofs yourself. Your homework and exams will be judged accordingly. No background in linear algebra or proofs is assumed, and there are no formal prerequisites for the course; Math 113 is appropriate for students who have already seen some linear algebra in Math 51.

The course textbook is Linear Algebra done right by Sheldon Axler. We will mostly follow the order of topics there, with the addition of an introduction to general fields in week 1 and an interlude about determinants around week 4. The latter will be to mostly put your previous knowledge in context. My expectation is that each chapter in the book will take about a week.

LECTURES

They will be recorded. There will also be lecture notes posted on the course website:
https://umutvg.people.stanford.edu/math-113

HOMEWORK

There will be weekly homework assignments posted on Wednesdays on the course website except on exam weeks (7 in total). They will be due next Thursday at midnight. You will submit your solution sets to Gradescope. Your lowest grade from all assignments will be dropped.

It is strictly required that you write your own solutions. No copying or paraphrasing is allowed. Read, discuss, collaborate, understand first, then go to your corner and write a solution. This is very strict and its breach will have consequences.

GRADING

There will be one midterm on April 30 and one final during the last week. Your grade will be based on 20 percent midterm, 30 percent final, and 50 percent homework.

FURTHER INFORMATION

- Contact the CA at dore@stanford.edu first about your questions regarding homework and grading.
- Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Office of Accessible Education (OAE). Professional staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is being made. Students should contact the OAE as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk (phone: 723-1066, URL: http://studentaffairs.stanford.edu/oaes).