

Math 55- Discrete Mathematics

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Office Hours: M/Th 11am-12pm, W 2-3 pm

Class Hours: MTWTF 8-10am

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Class Room: 9 Evans

Course Description

One of the main goals of this course is to learn how to understand mathematical statements and to construct proofs of these statements. As you will discover, this can be a complicated process, and require some time and creativity.

On the way towards this goal, we will explore the following topics: Logic, mathematical induction sets, relations, and functions, introduction to graphs, elementary number theory, combinatorics, algebraic structures, discrete probability theory.

Required Materials

The textbook is Rosen, Discrete Mathematics and its Applications, 8th ed. Since many homework problems come from this book, make sure you have the right edition, or else double check with a classmate. Let me know if you have any troubles accessing the textbook.

I highly encourage you to read the sections of the book before the lecture in which they are covered. First of all, this may make it easier to participate fully in lecture. Secondly, reading math is hard, and practicing a little bit every day will pay off in the long run.

Prerequisites

There are no official prerequisites. The suggested prerequisites from the course catalogue are "Mathematical maturity appropriate to a sophomore math class. 1A-1B recommended"

If you have any concerns about being in the right class, shoot me an email and we can talk it through together!

Instructor and contact info

I am a second year graduate student in the UC Berkeley math department. Please feel free to call me by my first name, Max. :)

If you have any questions, concerns, or want to set up an appointment with me, please don't be shy about sending me an email at the address in the header of this document. I prefer emails over bcourse messages.

Assignments and exams

This course has two midterms and one final. Only the final will be cumulative. The dates and times of these are as follows:

- Midterm 1: Friday, July 12, 8-10 am
- Midterm 2: Friday, August 2, 8-10 am
- Final: Thursday, August 15, 8-10 am

If you have (or think you may have) a conflict with any of these dates, let me know during the **first two weeks of class**.

In addition, there will be weekly quizzes on Wednesdays (on the previous week's material) and homework assignments due each Tuesday and Thursday. These assignments will be posted on my class website. Please turn in a hard copy of the homework during the class meeting. If you are out of town or otherwise unable to turn in an assignment in person, shoot me an email and we can figure it out.

Grading policies

The breakdown of your final grade is:

- 15% HW
- 15% Quiz
- 20% Midterm 1
- 20% Midterm 2
- 30% Final Exam

There are no late homeworks or makeup quizzes accepted, but the lowest two scores of each will be dropped. (Let me know if there is an emergency, and we can arrange something). Also, if it benefits your grade then your final grade will replace the lowest midterm grade.

Homework will be graded half for completion and half for correctness of a few randomly selected problems.

Enrollment

If you have any questions, send an email to *enrollment.math.berkeley.edu*.

Accessibility

If you have DSP accommodations, please shoot me an email so we can figure out together how to make the class accessible for you. Even if you do not have DSP accommodations, please feel free to shoot me an email if you have accessibility concerns about the course.

Academic Integrity

I highly encourage you to work with your classmates on the homework problems, since collaboration is an important skill and opportunity to learn from others. However, the final write-up should be your own.

Please do not copy homework solutions from any source (such as a solution manual, a friend, or a website). Such responses will be given a 0. If you do not know how to start a problem, understand that this is nothing to be ashamed of! Shoot me an email or see me in office hours, and I can give you a hint.

Classroom Environment

I am so excited to learn together with all of you through classroom discussion! Please be respectful of everyone's contributions, and understand that we all come from different mathematical backgrounds. If you are comfortable doing so, let me know if there is anything I should change to make you feel more welcome and included in class.