

Discrete Mathematics (Math 42/42X, CS 42/42X), Spring 2023
San José State University
MacQuarrie Hall 323, 9:00–10:15am (Sec. 01)

Instructor: Dr. Tim Hsu (pronounced “shoe”).

Office and phone: MacQuarrie Hall 316, (408)924-5071.

Office hours: By Zoom, MW noon–1:00pm.

E-mail: tim.hsu@sjsu.edu. I can be reached by e-mail at many times of the day, and will try to respond within 48 hours.

Course web page: <http://www.math.sjsu.edu/~hsu/courses/42/>

Required texts: *Discrete Mathematics and Its Applications*, Rosen, 8th ed. (Make sure you get the 8th edition.)

Grading: Your semester grade consists of: Homework 16%, Exam 1–3 18% each; Final exam 30%.

Goals of the course. Math 42 introduces students to mathematical proofs, techniques, and terminology, and to begin developing mathematical maturity. Students will learn ideas and techniques of logic, proofs, sets, functions, relations, and introductory combinatorics and probability.

Prerequisites. You are required to have taken Math 19, with a grade of C or better, or to be eligible for Math 30/30X. However, most students are better off waiting at least until they have passed Calculus I (Math 30/30X).

Math 42W Workshops. Math 42W is a 1 unit class in which you work on problems in teams, aided by workshop facilitators. You are not required to take Math 42W, but our experience has been that students in workshops are more successful than students who are not.

Class. Bring your textbook to class every day. Class will consist of a mixture of lecture, group activities, and question-and-answer sessions. Please turn off all cellphones before you get to class.

Reading. In general, you should do the assigned reading before anything else, i.e., before the topics come up in class or in the homework. Read *all* of the text — this text in particular needs to be read like a story, and doesn’t easily reduce to bullet points. Throughout the semester, I’ll always assume that you’ve done all of the reading. In particular, not every topic you have to know will be covered in class.

The course web page will always have a complete list of all reading assigned to date.

Homework. Homework will be due every class day, except for exam days; for more details, see the handout on homework. Specific assignments will be determined as the term progresses. For a complete list of all homework assigned to date, see the course web page.

Problem sessions. In addition to my regular office hours, starting on **Fri Feb 03**, I will also hold problem sessions for this class every **Fri**, from **12:30–2:30pm** online. These sessions are completely optional, and you should be fine without them, but the time is available for those who can make it.

Checkins. Because we only meet two days each week, it is *crucial* that you do substantial work in the long gap between Wed and Mon. To that end, I will require you to “check in” with me each week in that time period. See the handout on check-ins for more details.

Exams. All exams will be closed-book, no calculators, no notes. Exams are primarily based on the reading and the homework, so the best way to prepare for exams is to do all of the reading and the homework.

Exam dates. The dates of our three in-class exams and final exam are found on the syllabus below. In particular, the final exam will be held on **Sat May 20**, from **10:30am–12:45pm**. Please make sure that you are still on campus at that time (e.g., don’t buy a plane ticket that leaves town on May 19).

How to add this course. If you are not registered for this course, and you would like to add it, you must first put a full effort into completing all of the work in the course. Second, if you are a graduating senior, you need to produce documentation to verify that.

I'll make a waiting list, which you get on by filling out and turning in the information form for the course. I'll give out add codes starting **Mon Feb 13** (or possibly earlier), mainly based on completeness of homework, and as long as there is room, I will continue to give out add codes until add date (**Mon Feb 20**). Note, however, that graduating seniors have the highest priority, and that Open University students have the lowest priority.

How to drop this course. Until **Mon Feb 20**, you can drop at my www.sjsu.edu. Nothing will appear on your transcript, but please let me know if you drop.

To drop after Mon Feb 20, you must go to the student services center and submit a Course Drop form to the Director of Academic Services. Dropping under these circumstances is only allowed for "serious and compelling reasons" (course catalog). A low grade is not a serious and compelling reason.

Academic integrity. Your commitment to learning (as shown by your enrollment at SJSU) and SJSU's Academic Integrity Policy require you to be honest in all of your academic course work. Faculty are required to report all infractions to the Office of Student Conduct and Ethical Development. See: www.sjsu.edu/studentconduct

Disabilities. If you need course adaptations or accommodations due to a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities register with the Accessible Education Center (formerly the Disability Resources Center) to establish a record of their disability.

Tentative syllabus

Date	Activity	Date	Activity
Wed Jan 25	1.1	Mon Mar 27	SPRING BREAK
Mon Jan 30	1.1–1.2	Wed Mar 29	NO CLASSES
Wed Feb 01	1.2	Mon Apr 03	4.1–4.2
Mon Feb 06	1.3	Wed Apr 05	4.2–4.3
Wed Feb 08	1.4	Mon Apr 10	5.1
Mon Feb 13	1.5	Wed Apr 12	5.2
Wed Feb 15	1.6	Mon Apr 17	6.1–6.2
Mon Feb 20	Review	Wed Apr 19	6.2–6.3
Wed Feb 22	Exam 1	Mon Apr 24	7.1
Mon Feb 27	1.7	Wed Apr 26	7.2
Wed Mar 01	1.8	Mon May 01	Review
Mon Mar 06	2.1	Wed May 03	Exam 3
Wed Mar 08	2.2	Mon May 08	9.1
Mon Mar 13	2.3	Wed May 10	9.5
Wed Mar 15	2.4	Mon May 15	Review
Mon Mar 20	Review	Sat May 20	Final exam,
Wed Mar 22	Exam 2		10:30am–12:45pm