

**Discrete Mathematics (Math 42), Fall 2014, San José State University
MacQuarrie Hall 320, 10:30–11:45am (Sec. 01, code 40439)**

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

Office and phone: MacQuarrie Hall 419, (408)924-5071.

Office hours: MW 9:30–10:30; MW 1:30–2:30. Current schedule available at:
<http://www.math.sjsu.edu/~hsu/courses/generic/sched.pdf>

E-mail: hsu@math.sjsu.edu. I can be reached by e-mail at many times of the day, and will try to respond within 24 hours.

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

Required texts: *Discrete Mathematics with Ducks*, belcastro. Available via SJSU library at: http://discover.sjlibrary.org/iii/encore_sjsu/record/C_Rb4653000

Grading: Your semester grade consists of: Homework 15%; Quizzes 5%; Exam 1 16%; Exams 2 and 3 17% 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. Most of all, students will learn that:

Math is serious play.

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

Math 42W Workshops. Math 42W is a 1 unit class (two sessions/week, MW9, MW1:30, or TTh3) 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.

Quizzes. Roughly once a week, except for exam weeks, we will have an in-class quiz. Quizzes are closed-book, no notes or calculators allowed. Our first quiz will be on **Wed Sep 03**.

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 **Mon Dec 15**, from **9:45am–noon**. Please make sure that you are still on campus at that time (e.g., don't buy a plane ticket that leaves town on Dec 14).

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 **Fri Sep 05** (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 (**Fri Sep 12**). Note, however, that graduating seniors have the highest priority, and that Open University students have the lowest priority.

How to drop this course. Until **Fri Sep 05**, you can drop at my.sjsu.edu. Nothing will appear on your transcript, but please let me know if you drop.

To drop after Fri Sep 05, 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

All reading is from *Ducks*.

Date	Reading	Date	Reading
Mon Aug 25	1.1–1.2	Mon Oct 27	Exam 2
Wed Aug 27	1.3–1.5	Wed Oct 29	7.4
Mon Sep 01	Labor Day	Mon Nov 03	7.5
Wed Sep 03	2.1–2.2	Wed Nov 05	8.1–8.3
Mon Sep 08	2.3	Mon Nov 10	8.5–8.6
Wed Sep 10	2.5, extras	Wed Nov 12	8.8
Mon Sep 15	3.1–3.3	Mon Nov 17	10.1–10.3
Wed Sep 17	3.4–3.5	Wed Nov 19	10.4–10.6
Mon Sep 22	3.6–3.7	Mon Nov 24	14.1–14.3
Wed Sep 24	Exam 1	Wed Nov 26	Exam 3
Mon Sep 29	4.1–4.2	Mon Dec 01	14.5
Wed Oct 01	4.4	Wed Dec 03	14.7
Mon Oct 06	Review, algorithms	Mon Dec 08	11.1–11.3
Wed Oct 08	5.3–5.4	Wed Dec 10	11.4–11.6
Mon Oct 13	6.1–6.3	Mon Dec 15	FINAL EXAM
Wed Oct 15	6.4–6.6		9:45am–noon
Mon Oct 20	6.7–6.9		
Wed Oct 22	7.1–7.2		