Welcome to CSE 20
Discrete Mathematics

Instructor: Cynthia Lee
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Office Hours: 2-3pm Wednesdays

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Office Hours: 4-5pm Mondays

* Questions: All non-confidential questions should be posted to the webboard instead of by email to the instructor or TAs. This is to facilitate faster responses and allow all students the benefit of the answer.

Class Meeting: MWF 12-1:50 in EBU3b (CSE building) 2154
Discussion: TuTh 12-12:50 in EBU3b (CSE building) 2154
Final Exam: Saturday, August 2, 8:00 a.m. - 10:59 a.m. (location TBA)location TBA

Prerequisites: CSE 8A or 8B or CSE 11. CSE 8B or CSE 11 may be taken concurrently with CSE 20/Math 15A. CSE 20 is equivalent to Math 15A.

Textbook: Discrete Mathematics with Applications by Susanna Epp is required. A Short Course in Discrete Mathematics by Bender and Williamson is recommended. A previous version is available online for free.

Why CSE 20?

It may help to think of this class as a foreign language class. You will learn how to speak “proof.” Proofs are a special language spoken by computer scientists to other computer scientists for the purpose of communicating very unambiguously, and very convincingly, the truth of their claims.

Learning proof language is like learning other languages in that it has ‘grammar’ rules, vocabulary, and customs/traditions. One big difference is that proof language is extreme in the precision of its vocabulary and ‘grammar.’ In this class, we will work on three separate but related proof skills: writing, speaking, and critical reading.

As we are practicing proof skills, we will also be laying other essential foundations for your career in computer science: an understanding of logic as it applies to computer hardware, and an understanding of number theory as it relates to cryptography.

It is important to me as an educator that you have an idea as to why you should be learning the material that we are covering. If you ever find yourself with any questions about this, be it during lecture or some other time, please don't hesitate to ask.
Grading Details

Grades will be computed as follows:

- Quizzes: 30%
- Midterm: 30%
- Final: 40%

A = 90%+
B = 80-89.9%
C = 65-79.9%
D = 50-64.9%
F = <50%

Plus and minus will be assigned at the instructor's discretion. This includes but is not limited to: consideration to improvement over the course of the term, class participation, and natural "breaks" in the distribution of scores.

Class Participation

There will be frequent opportunities for structured active participation during lecture (solving problems), in which everyone is expected to participate. There may also be a few homework/mini-project assignments or other opportunities for extra credit.

Homework and Quizzes

Homework will be assigned about twice a week, but will not be collected. This does not mean you are not required to do it. Your understanding of the homework problems will be assessed using quizzes (also about two per week--9 total). Quizzes will be patterned on the homework problems. Please understand that simply looking over the homework problems and/or their solutions, and deciding that you could solve them on a quiz, is almost certain to lead to not doing well on the quizzes. You will be expected to work very quickly on the quizzes, more quickly than is possible if you haven't already done similar problems completely and on your own. You are strongly encouraged to form study groups for working on homework assignments. Explaining a concept to others is extremely valuable for the learning process. After meeting with a study group (especially if you did more listening than talking) I suggest you take a moment alone to quiz yourself with a few problems you haven't seen before.

Your lowest quiz score will be dropped. There will be no make-up quizzes. Quizzes will be given promptly at the beginning of class. Please ensure that you are not late to class.

Midterm and Final

Midterm will cover all material covered up to the day of the exam. The final will likewise cover all material from the whole quarter, though additional emphasis will be given to material covered after the midterm. Both will be closed book.

Academic Integrity Policy

Do not cheat. If you cheat, or are even suspected of cheating, I will enforce the UCSD Policy on Integrity of Scholarship. This means that your case will be referred to the Dean of your college, who will determine your guilt or innocence, and who will determine your punishment if guilty. Punishment may include an F in the course, academic probation or suspension from UCSD. If you have any questions about this, please ask.