

CSE 16

Applied Discrete Mathematics

Summer 2020 (June 22 – August 14)

Description: Introduction to applications of discrete mathematical systems. Topics include sets, functions, relations, graphs, predicate calculus, mathematical proof methods (induction, contraposition, contradiction), counting methods (permutations, combinations), and recurrences. Examples are drawn from computer science and computer engineering. Knowledge of computer programming is useful before taking this course. Students who do not have prior programming experience are strongly recommended to take Computer Science 5C, CSE 5J, or CSE 20 before taking this course. (Formerly Computer Engineering 16.) Prerequisite(s): MATH 19A or MATH 11B or AM 11B or AM 15B or ECON 11B.

Zoom Lecture: T-W-Th 10:00am-11:35am

Join Link: <https://ucsc.zoom.us/j/96394259536>

Class Webpage: <https://classes.soe.ucsc.edu/cse016/Summer20/>

Instructor: Patrick Tantalo <http://users.soe.ucsc.edu/~ptantalo/>

Zoom Office Hours: T-W-Th 1:00pm-2:00pm

Join Link: <https://ucsc.zoom.us/j/94096325117>

Email: ptantalo@soe.ucsc.edu

Teaching Assistant: Samira Zare (szare@ucsc.edu)

Homework Grader: Ishani Chakraborty (ischakra@ucsc.edu)

LSS Learning Assistant: Edwin Wang (ekwang@ucsc.edu)

Required Text:

[BOP] *Book of Proof*

by Richard Hammack (<http://www.people.vcu.edu/~rhammack/BookOfProof/>)

Supplementary Texts:

[ADS] *Applied Discrete Structures*

by Alan Doerr and Kenneth Levasseur (<https://faculty.uml.edu/klevasseur/ads2/>)

[DMOI] *Discrete Mathematics: an Open Introduction*

by Oscar Levin (<http://discretetext.oscarlevin.com/home.php>)

[DMA] *Discrete Mathematics and its Applications*

by Kenneth H. Rosen, 8th edition, McGraw-Hill 2018 (ISBN 978-1259676512)

Coursework:

50% Homework Assignments (7): Due Tuesdays 6/30, 7/7, 7/14, 7/21, 7/28, 8/4, 8/11

50% Quizzes (6): Thursdays 7/2, 7/9, 7/16, 7/30, 8/6 and 8/13

1% Extra Credit: SETs (Student Experience of Teaching survey)

Grading scale:

A+ 97.0% - 101%

A 93.0% - 96.9%

A- 90.0% - 92.9%

B+ 87.0% - 89.9%

B 83.0% - 86.9%

B- 80.0% - 82.9%

C+	76.0% - 79.9%
C	70.0% - 75.9%
C-	67.0% - 69.9%
D+	64.0% - 66.9%
D	61.0% - 63.9%
D-	58.0% - 60.9%
F	0% - 57.9%

All scores will be rounded to the nearest 10th of a percent. They will not be rounded further. No scores in this class will be curved.

Accommodations for Students with Disabilities

UC Santa Cruz is committed to creating an academic environment that supports its diverse student body. If you are a student with a disability who requires accommodations to achieve equal access in this course, please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me by email, preferably within the first two weeks of the quarter. I would also like us to discuss ways we can ensure your full participation in the course. I encourage all students who may benefit from learning more about DRC services to contact DRC by phone at 831-459-2089 or by email at drc@ucsc.edu. See also <https://drc.ucsc.edu/>.

Academic Honesty:

The Baskin School of Engineering has a zero tolerance policy for any incident of academic dishonesty. If cheating occurs, consequences may range from getting zero on a particular assignment to failing the course. In addition every case of academic dishonesty is referred to the students' college Provost, who sets in motion an official disciplinary process. Cheating in any part of the course may lead to failing the course, suspension or dismissal from the Baskin School of Engineering, or from UCSC.

What is cheating? In short, it is presenting someone else's work as your own. This would include collaborating with any person while writing your solutions to homework assignments or quizzes. You may discuss homework problems with fellow students, TAs and tutors, but your collaboration must be at the level of *ideas* only. Legitimate collaboration ends when you "lend", "borrow", or "trade" *written solutions* to problems, or *in any way share in the act of writing your solutions*. If you do collaborate (legitimately) or receive help from anyone, you must credit them by placing their name(s) at the top of your paper. Go to https://www.ue.ucsc.edu/academic_misconduct to see the University's policy on Academic Misconduct.

Some Important Summer Session Deadlines:

- Add - Thursday, June 25
- Drop - Monday, July 6 (tuition reversed)
- Financial Aid Disbursement - Monday, June 15 (if enrolled by June 1 priority deadline)
- Request "W" Grade - Friday, July 24 (no tuition reversal)
- Change Grade Option - Friday, July 31

For all dates and deadlines, see the summer academic calendar at:

<https://summer.ucsc.edu/studentlife/index.html>

For questions about dropping, requesting a W grade, or withdrawing from Summer Session, email:

summer@ucsc.edu