CSE 102
Introduction to Analysis of Algorithms
Spring 2024

Description: Methods for the systematic construction and mathematical analysis of algorithms. Order notation, the RAM model of computation, lower bounds, and recurrence relations are covered. The algorithm design techniques include divide-and-conquer, branch and bound, and dynamic programming. Applications to combinatorial, graph, string, and geometric algorithms.

Prerequisite: CSE 101

Lecture: TTh 11:40-1:15pm Earth&Marine B206
Class Webpage: https://people.ucsc.edu/~ptantalo/cse102/Spring24/

Instructor: Patrick Tantalo https://users.soe.ucsc.edu/~ptantalo/
Email: ptantalo@soe.ucsc.edu

Office Hours: Wednesday: 10:00am - 12:00pm & 2:00pm - 4:00pm Zoom Link (**Uses CruzID Gold**)
Meeting ID: 970 6467 3490
Dates: Wednesday April 3 - Wednesday June 5

Teaching Assistants:
    Saeed Kargar   (skargar@ucsc.edu)
    Amin Karbas   (mkarbasf@ucsc.edu)
    Jay Mehta   (jmehta1@ucsc.edu)

Course Tutors: TBA

LSS Small Group Tutor:
    Sophie Han   (sxhan@ucsc.edu)

Required Text:
    Introduction to Algorithms (3rd edition) by Cormen, Leiserson, Rivest and Stein (CLRS).
    MIT Press 2009 (ISBN 978-0-262-03384-8).

Supplementary Texts:
    Fundamentals of Algorithmics, Brassard and Bratley, Prentice Hall (1996).
    Computer Algorithms, Baase and van Gelder, 3rd ed, Addison-Wesley (2000).
    Algorithm Design Manual, Steven S. Skiena, Telos/Springer-Verlag (1997).

Coursework:
- 25% Homework: Written exercises from CLRS (7-8)
- 20% Programming Project: Due in week 8
- 25% Midterm Exam 1: Thursday April 25, 11:40-12:45pm (lecture to follow)
- 0% Midterm Exam 2: Thursday May 23, 11:40-12:45pm (lecture to follow)
- 30% Final Exam: Thursday June 13, 9:30-11:00am

All scores will be rounded to the nearest 10th of a percent. They will not be rounded further. No scores are curved. The following letter grade boundaries will be used to determine your grade in the class.

Grading scale:

A+	98.0% - 100%
A	93.0% - 97.9%
A-	90.0% - 92.9%
B+	88.0% - 89.9%
B	83.0% - 87.9%
B-	80.0% - 82.9%
C+	78.0% - 79.9%
C	70.0% - 77.9%
C-	68.0% - 69.9%
D+	65.0% - 67.9%
D	61.0% - 64.9%
D-	59.0% - 60.9%
F	0% - 58.9%

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 be happy to meet with you in office hours to discuss how 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. Examples would include copying written homework solutions from another student, or allowing your own work to be copied. Sharing any kind of information on an exam would also be considered cheating. You may discuss your homework solutions with fellow students, but your collaboration must be at the level of *ideas* only. You may freely give and receive help with any example discussed in class, in the text, or in one of the handouts. However, you may not share in the act of *writing* your solutions to homework problems. Please see the following links for the official UCSC policies on Academic Misconduct for

Graduate Students: https://www.ucsc.edu/academics/academic-integrity/
Undergraduate Students: https://ue.ucsc.edu/academic-misconduct.html/

Important Dates:
Waitlists expire: Wednesday, April 10 (permission codes required as of this date)
Add/Drop/Swap deadline: Friday, April 19 (add by petition only after this date)
Withdraw from class deadline: Friday, May 10

Registrar Information:
Enrollment FAQ: https://registrar.ucsc.edu/faqs/students/enrollment/index.html
Waitlist FAQ: https://registrar.ucsc.edu/faqs/students/wait-list/index.html
Enrollment Videos: https://orientation.ucsc.edu/next-steps/slug-videos.html#enrollment
More How-To Videos: https://orientation.ucsc.edu/summer/how-to-index.html