CSE 101
Introduction to Data Structures and Algorithms
Winter 2022

Description: Introduction to abstract data types and basics of algorithms. Linked lists, stacks, queues, hash tables, trees, heaps, and graphs will be covered. Students will also be taught how to derive big-Oh analysis of simple algorithms. All assignments will be in C/C++.

Prerequisites: CSE 12 or BME 160; CSE 13E or ECE 13 or CSE 13S; and CSE 16; and CSE 30; and MATH 11B or MATH 19B or MATH 20B or AM 11B.

Days & Times: TTh 1:30-3:05pm
Place: Media Theater M110 (**we will be remote for weeks 1 and 2**)
Class Webpage: https://classes.soe.ucsc.edu/cse101/Winter22/

Instructor: Patrick Tantalo https://users.soe.ucsc.edu/~ptantalo/
Zoom Office Hours: Wednesdays 10:00am - 12:00pm & 2:00pm - 4:00pm
Dates: Wednesday January 5 to Wednesday March 9
Link: https://ucsc.zoom.us/j/93713480489?pwd=c1NVdE93dWR6STM4SUozTmllOXordz09
Email: ptantalo@soe.ucsc.edu

Teaching Assistants:

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Course Tutors: TBD

MSI Learning Assistant:

Joshua Poole	(jkpoole@ucsc.edu)

LSS Small Group Tutor:

Sanya Srivastava	(ssrivas7@ucsc.edu)

Required Text:

Introduction to Algorithms (3rd edition) by Cormen, Leiserson, Rivest and Stein. MIT Press 2009 (ISBN 978-0-26-203384-8)

Recommended Texts:

Open Data Structures (pseudo-code edition) by Pat Morin. https://opendatastructures.org/
Data Abstraction & Problem Solving with C++ (6th edition) by Carrano & Henry. Pearson 2013 (ISBN 978-0-13-292372-9)

Coursework:

70% Programming Assignments (7-8): Due at roughly 7 day intervals
20% Quizzes (5): Tuesdays 1/11, 1/25, 2/8, 2/22, 3/8 (remote, times to be announced)
10% Final Exam: Thursday, March 17, 12:00-2:00pm (in-person)

All scores are rounded to the nearest 10^{th} 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 misconduct. If cheating occurs, consequences may range from getting zero on a particular assignment to failing the course. In addition, every case of academic misconduct 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 include copying another students', programming assignment, or exam solution; allowing your own work to be copied; or in any way facilitating misconduct by others. You may discuss programming projects with fellow students, but your collaboration must be at the level of *ideas* only. You may freely give and receive help on the UCSC computer facilities, code editors and IDEs, the UNIX operating system, and on the proper use and syntax of the C and C++ programming languages. You may also freely use any *example code* posted by me on the class webpage. However, you may not *copy*, *paste*, *email*, *transfer* or *share* in any way the *source code* for projects in this class. Go to https://www.ue.ucsc.edu/academic_misconduct to see the University's official policy on Academic Misconduct.

Important Dates and Information:

Waitlists expire: Wednesday, January 12
Add/Drop/Swap deadline: Monday, January 24
Withdraw from class deadline: Monday, February 14
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