

CS 010C: Intro to Data Structures and Algorithms

Summer 2025

SYLLABUS

IMPORTANT NOTICE: If your official enrollment in this course is delayed, you are expected to attend all lectures and labs and complete all assignments from the first day of instruction quarter. Make-ups for missed labs, tests, assignments etc. are generally not granted.

Course Catalog Description: Lecture, 3 hours; laboratory, 3 hours. Prerequisite(s): CS 010B with a grade of C or better; proficiency in C++. Topics include basic data structures such as arrays, lists, stacks, and queues. Covers dictionaries (including binary search trees and hashing) and priority queues (heaps). Offers an introductory analysis of algorithms, sorting algorithms, and object-oriented programming, including abstract data types, inheritance, and polymorphism. Explores solving complex problems through structured software development.

Lecturer: Ryan Rusich Contact via Canvas Inbox or Slack Office hours: TBD TA: Yue Zhu Contact via Canvas Inbox or Slack Office hours: TBA	Lecture: Meets: M, W Time: 10:00 AM-12:50 PM Location: WCH 139 Lab: Meets: T, TH Time: 10:00 AM-12:50 PM Location: SKYE 171
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Course Resources

- [Canvas Course Web Page](#) - main course management web page is on Canvas. Students can log in to this web page by opening <https://elearn.ucr.edu> in a browser and authenticating with their UCR credentials.
- [Textbook](#) - The course has a required online [zyBook](#).
- [Slack](#) - All course announcements use the [Slack General Channel](#). Students can DM students and staff here.

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Course Grades

The grading will be based on the following graded items. There is one midterm and final exam.

ITEM	NUMBER	POINTS/PER	% GRADE
Programming Assignments	5	varies	20
Labs	1-2 per week	varies	25
Lab Attendance	2 per week	0.5	5
Midterm	1	15	15
Final	1	20	20
zyBooks HW	varies	varies	7
ICAs (lecture Attendance + Participation)	varies	varies	8
TOTAL			100

Course grades will follow the standard grade distribution with possible upwards adjustments on individual course items or overall course grade.

[97, 100] : A+

[93, 97) : A

[90, 93) : A-

[87, 90) : B+

[83, 87) : B

[80, 83) : B-

[77, 80) : C+

[73, 77) : C

[70, 73) : C-

[67, 70) : D+

[63, 67) : D

[60, 63) : D-

Participation

ICA (In Class Activities), appropriate behavior in lecture/labs, attendance, and interaction with teaching staff and classmates. **Be professional in all interactions with teaching staff and classmates. We are here in support for you to reach your full potential.**

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Midterm and Final Exam

- Exams are in-person, closed notes.
- Midterm - Wednesday August 13th in WCH 139. (week 3)
- Final Exam - Friday August 29th in WCH 138 at 3:30-5:30 PM. (week 5)

Programming Assignments & Labs

- Students are required to implement lab programming assignments on Amazon Web Service (AWS) accounts (accounts provided).
- Students will use Cloud9 IDE (a service in AWS) to develop programs.
- Completed labs and programming assignments are submitted ONLINE via Canvas as well as on zyBooks if there is a submission component (automated test cases) for zyBooks..
- Completed labs are due by 11:59 PM on the due date.
- Late Policy: students can submit lab assignments up until the next lab session. The penalty is 10% per 100 pts. **The cutoff is that day at 11:59 pm.**
- Programming assignments are to be completed *strictly* individually. No teamwork or collaboration.
- Lab assignments will be completed with students working in pairs. Though each student should implement their own complete solution.
- Lab partners will rotate during the course. Each pairing will last a minimum of 2 lab sessions, i.e. one week of the course.
- ALL submitted files for labs and programming assignments must have a class_header (i.e. content in class_header.txt) appended to top of the file, which verifies that the work submitted represents the individual student's independent academic work. Credit will not be awarded sans class_header.

Lab Format and Rules

- Labs are in-person in SURGE 171.
- Students will be required to implement labs and programming assignments, either in zyBooks or Amazon Web Service (AWS) accounts (accounts provided).
- Credit will not be earned for outside programming environments.
- Demos will be used to determine student proficiency and knowledge of programming work completed for the course.

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- TA will periodically check student file revisions in Cloud9 to ensure coding occurs in the environment. Credit will be revoked or not awarded for non-verifiable/insufficient file history.
- Physical attendance is mandatory from 10:00-12:00 PM.
- TA will be available for questions and demos from 12:00-12:50 PM
- Students should arrive promptly at the beginning of the lab.
- Short bathroom, snack/drink breaks, or to make a phone call are fine. Attendance points will be deducted for excessive or prolonged breaks, or tardiness.
- Start of lab - Introductory instruction, grading explanation, set-up, and/or discussion of common bugs/snags.
- Students and TA will use Slack for Q & A during lab sessions.
- Students will work in pairs (for labs only). Pair work can include direct help solving a programming problem or debugging. However, each student in a pair must complete their own individual implementation and submit it for credit.
- Communication between students in other pairings is restricted to high level discussion only. No code sharing or hands-on programming help.
- TA may make periodic announcements during the lab session (used sparingly to avoid interruption, e.g. common errors, instruction clarification, bugs/snags).
- Assessment: students will be graded in one of the following ways (depending on individual lab specs):
 - Pass/fail auto-graded test cases.
 - Demo code and answer verbal questions for TA.
- Students can demo the last 45-60 minutes of each lab session.
- Students are expected to have code pre-compiled, with source code already open in the text editor at the start of demos.
- Students can demo up until the following next lab (end of lab) for full credit.

Academic Integrity

All forms of academic dishonesty will be pursued aggressively, to protect all students. The following are explicitly forbidden. This list is not exhaustive. The consequence for violations will be a formal report <https://conduct.ucr.edu/policies/academic-integrity-policies-and-procedures>

Penalties range from an F (0%) on a particular assignment up to an F in the course.

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Collaboration

We strongly encourage students to help each other in the lab. However, each programming assignment must be completed completely on your own, with limited help from teaching staff. We will be checking the programming assignments using zyBooks' built-in coding analysis tools.

Collaboration (including online resources, AI, tutors, friends/family members, or former students) on zyBook program assignments or labs is forbidden and is considered cheating. We pursue academic dishonesty cases vigorously and report cases to UCR's Office of Student Conduct.

Generative AI

Submission of programs or labs that are produced from generative AI chatbots, in full or partial (e.g. ChatGPT, Copilot, etc.), or any other automated coding tools is strictly prohibited and will result in a failing score for the assignment and up to a failing grade in the course. Cases will be referred to the Office of Student Conduct.

Misuse of Chegg (or similar service)

- Copying Solutions: The use of Chegg (or similar service) to find and copy solutions for programming assignments or labs constitutes cheating and academic dishonesty.
- Posting exam questions or code: Sharing exam questions or code from assignments on Chegg (or similar website) constitutes cheating and academic dishonesty.
- Code for hire: Obtaining a solution to any programming assignments or labs from an outside source, or contracts with services like Chegg constitutes cheating and academic dishonesty.

Classroom Etiquette

We value our students and want everyone to feel welcome and free from judgment in this class. Our classroom is a place of respect for both students and instructors. We do not judge anyone based on race, religion, gender, or economic position. We strive to recognize and appreciate each student's uniqueness and talent. If you ever feel we are not achieving this or have suggestions for improvement, please let us know so we can learn and do better.

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In return, please practice the same respect in the classroom, lab room, and any associated social media sites or boards. Come to class prepared and show respect to your peers and instructors. Some ways to do this include:

- Greeting group members by name.
- Putting phones and computers (unless instructed to use) away during lectures.
- Participating in group discussions.
- Minimizing personal conversations.
- Respecting all opinions, even if they differ from your own.

Make Up Policy

Only documented medical conditions such as emergency room/urgent care visits or illness (cold, flu, COVID) are considered for missed work. Every other circumstance falls under the drop policy for participation. Credible documentation is required for consideration of a make-up e.g. doctor's note, hospital discharge notice, positive COVID test, UCR stay at home order etc. Vague explanations of personal circumstances will not be accepted. All private correspondence with the instructor (of a personal nature) is kept in confidence.

IMPORTANT NOTICE ON RECORDINGS: Videos if provided are for personal use by students for academic purposes. All rights and copyright reserved by the owner RYAN RUSICH.