

CS 245 Syllabus

Fall 2026

Course Description

A study of programming language paradigms using a high-level language to implement advanced data structures such as linked lists, trees and graphs, binary search trees. The course will also cover implementation and complexity analysis of common algorithms associated with these data structures and the selection of appropriate data structures and algorithms for problem solving with an emphasis on development and refinement. Prerequisites: CS 126 with a grade of 2.0 or better.

Textbook

Data Structures the Fun Way by Jeremy Jubica

Course Objectives

Students successfully completing this course should:

1. Be able to implement basic data structures in a high level language.
2. Be able to apply data structures to problems of searching and sorting.
3. Understand basic algorithm analysis.
4. Understand how to select appropriate data structures for problem solving.

Grading

Point Distribution

Item	Percentage
Homework and labs	30%
Exam 1	15%
Exam 2	15%
Exam 3	15%
Final Exam	25%

Averages are not rounded.

Grading Scale

Range	Grade
$[90, \infty)$	4.0
$[85, 90)$	3.5
$[80, 85)$	3.0
$[75, 80)$	2.5
$[70, 75)$	2.0
$[65, 70)$	1.5
$[60, 65)$	1.0
$[0, 60)$	0.0

However, you must finish with an exam average of at least 60% to get a grade of 2.0 regardless of your overall average.

Exams

Your low exam grade will be replaced by your final exam grade if your final exam grade is higher. No makeups will be given. If an exam is missed for any reason, that grade will be replaced by the final exam grade.

No electronic devices of any kind are allowed during exams. If it has an electrical current and it's not a pacemaker or insulin pump, it's not allowed. Any violation of this policy will result in immediate failure in the course.

Do not make travel arrangements for the end of the semester until the final exam schedule is available. We will strictly adhere to the final exam schedule from the registrar.

Academic Honesty

Working together on programs is not allowed. Copying of programs from any source, including classmates and the Internet, is not allowed whether they are written by humans or artificial intelligence. You are allowed to talk to classmates and others about programs, but you are not allowed to look at anyone else's code, either to give or receive help, other than textbooks or code provided by the instructor.

Help on Programs

If you need help, come to office hours. Make sure that you start programs early enough that you will have time to get help. Coming in for help an hour before a program is due is unlikely to be profitable. You can email for help, but an in person conversation is much more likely to be helpful.

The programming exercises in this course will be more substantial than those in previous courses. *Do not expect to be able to start them the day before they are due and finish them.*

Attendance

You are expected to attend lectures. If you have more than 4 unexcused absences from lectures you will receive a grade of 0 for the course.