CS 24: Introduction to Computing Systems — Fall 2026

Course Syllabus

Information At-A-Glance

Instructor

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Course Email

For all course-related questions, please email cs024@caltech.edu. If there is something particularly sensitive, you may email Prof. Ordentlich directly.

Course Website

https://com.puter.systems
Visit early. Visit often.

Lecture

Beckman Institute Auditorium
MWF 11:00 – 11:55 PM

Course Overview

Prequisites: CS 2 and (CS 3 or CS 3x).

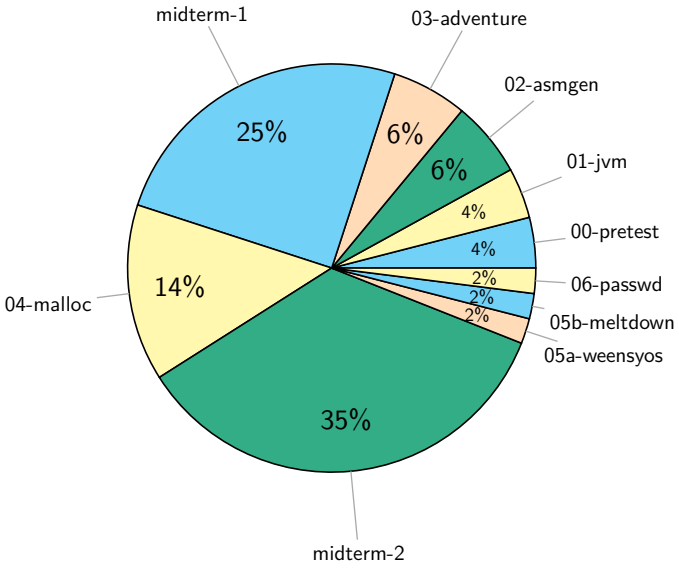
Basic introduction to computer systems, including hardware-software interface, computer architecture, and operating systems. Course emphasizes computer system abstractions and the hardware and software techniques necessary to support them, including virtualization (e.g., memory, processing, communication), dynamic resource management, and common-case optimization, isolation, and naming.

Course Learning Outcomes

By the end of the course, you will be able to:

- Differentiate between how Java and C code run on modern machines
- Translate between high-level and low-level programming languages
- Defend trade-offs between efficiency, security, readability, and performance in your programs
- Explain the mechanisms modern systems use to protect, manage, and virtualize memory
- Describe how modern computers give the illusion of running multiple things at once
- Design a concurrent program which does not have any race conditions

Assessments



Programming Projects

The projects are the heart and soul of this course. We prefer the term *project* to *set* because all the individual parts of the assignment will come together in a single finished product that we hope you will be proud of.

Projects will be submitted to GitLab, and we will grade the version of your project we find in the most recent pushed commit on the `master` branch prior to the deadline. If you have trouble with git or otherwise submitting prior to the deadline, please see the extension policy below. To receive a score on a project with a DUE, you must pass the DUE. See the "Policies" document for more information.

Late Policy

We've designed a late policy that is very intentional in providing flexibility while also making sure students do not fall so far behind that they might not be able to pass. Please see below for details.

Please do not e-mail us asking for an extension. You must use the website form. There are limits and restrictions on extensions which the form outlines. Please read these before you need an extension! This flowchart outlines common scenarios in which a student may need an extension:

