



California State University, Sacramento  
College of Engineering and Computer Science

Computer Science 35: Introduction to Computer Architecture

Spring 2024 Syllabus

---

## Instructor

---

Devin Cook, M.S.

## Contact Information

---

I use the same e-mail address to answer questions and to receive your coursework. So, please use a descriptive subject in your e-mail. I get quite a bit of e-mail, and the subject helps a lot.

|               |                     |
|---------------|---------------------|
| <b>E-Mail</b> | dcook@csus.edu      |
| <b>Office</b> | Riverside Hall 5009 |
| <b>Zoom #</b> | 331 390 3761        |

## Website

---

All the information in this syllabus – as well as other helpful information presented during the course – can be found online.

|                |  |
|----------------|--|
| <b>Website</b> | <a href="http://athena.ecs.csus.edu/~dcook/35">athena.ecs.csus.edu/~dcook/35</a> |
|----------------|--|

## Course Description

---

### Catalog Description

Internal representation of numeric and non-numeric data, assembly level machine architecture, addressing modes, subroutine linkage, polled input/output, interrupts, high-level language interfacing, macros and pseudo operations. Lecture two hours, technical activity and laboratory two hours.

### Prerequisites

CSc 15

### Textbook

None

## Major Topics

---

- Numeric and non-numeric data representation. Representation of Elementary Language Data Types: integer, real, Boolean, character
- Processors, registers, and instruction encoding
- Von Neumann architecture and processor design philosophies
- Memory location alignments and data movement instructions
- Conditional logic
- Modules: defining subroutines, calling subroutines
- Addressing modes: registers and memory locations
- Interrupts, vector tables, and interaction with the operating system
- High-level language interfacing, inline assembly, introduction to code generation

## Crashing the Course

---

- **All** student adds are done, in-person, during the first week of the Semester.
- Waitlisted students will be added first. But, only students physically present will be added.

## Academic Integrity

---

- Do **not** plagiarize. Plagiarism is the act of incorporating another person's work into yours and claiming it as your own.
- Do **not** aid any student to commit academic fraud. This means you **cannot** show your solution to another student or show how to do it.
- Do **not** use Discord for any channel related to the course. This will be considered cheating.
- In **any** case of cheating, both the student that copied the solution, **and** the student who allowed it, will receive a zero. For severe incidents, it will result in an automatic **F** in the course.
- Any assignments done in prior semesters, *even if you took this class*, are **not** allowed. Any prior work will receive an automatic zero.

## Lectures

---

- Attendance is vital to your success in the course. If you miss a class, you are responsible for checking with a classmate about the material we covered.
- Please ask questions or give comments. I enjoy back-and-forth interactions with students.
- During lectures **no** electronic devices, of any type, are allowed. This includes laptops, phones, and other texting devices. **No** exceptions.
- I will provide all the lecture slides in PDF format on the website. So, you don't have to take notes.

## Assignments

---

- You only get to submit each assignment **once** – so make sure you did it correctly!
- Late assignments are penalized. I will take off **20%**, per day, starting immediately after the assignment is due. Weekend days are counted.
- **Do not ask other students for help.** All assignments are individual work only.
- My job is not to give you the correct solution, but to help you figure it out by yourself. There are no "dumb" questions, so don't be afraid to ask.

## Grading

---

| Title                    | Points |
|--------------------------|--------|
| Lab Activities / Quizzes | 200    |
| Project                  | 100    |
| Midterm Exams            | 300    |
| Final Exam               | 300    |
|                          | 900    |

- The Final is comprehensive.
- Any material covered in the lectures, or the notes can be included in the exams.
- **Note:** Depending on how much material is covered during the semester, the percentages may vary.

## Student Resources

---

- **Student Health & Counseling Services**  
[www.csus.edu/student-life/health-counseling](http://www.csus.edu/student-life/health-counseling)
- **Crisis Assistance & Resource Education Support**  
[www.csus.edu/student-affairs/crisis-assistance-resource-education-support/](http://www.csus.edu/student-affairs/crisis-assistance-resource-education-support/)
- **Reading and Writing Center**  
[www.csus.edu/undergraduate-studies/writing-program](http://www.csus.edu/undergraduate-studies/writing-program)
- **Services for Students with Disabilities**  
[www.csus.edu/student-affairs/centers-programs/disability-access-center](http://www.csus.edu/student-affairs/centers-programs/disability-access-center)