

San José State University
Department of Computer Science
CS 47, Section 02
Introduction to Computer Systems
Spring 2025

Course and Contact Information

<i>Instructor:</i>	Kaushik Patra
<i>Office Location:</i>	Online
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<i>Office Hours:</i>	W 6:00 pm – 8:30 pm (online - zoom)
<i>Class Days/Time:</i>	TTh 6:00 pm – 7:15 pm
<i>Classroom:</i>	MQH 222
<i>Prerequisites:</i>	CS/MATH 42/42X and CS 46B/CS49J or equivalent (with a grade of "C-" or better)

Course Format

This course uses in-person flipped (students learn the topics from recorded video before coming to class to participate in concept discussion and problem solving) or live lecture learning method (check first day of class) with designated meeting time and place as above mentioned. In general students are expected to have computer systems with internet connection and webcam. A tool 'MARS' will be used to study assembly programming concept. The materials and lecture videos are uploaded in Canvas prior to class. Students are required to review the lecture video and note before coming to class. During class hour it is expected that students have access to their laptop with internet connection to download some program material to work on during class hour if needed. All the homework and assignments are to be uploaded in Canvas.

i) An ability to use current techniques, skills, and tools necessary for computing practice.

j) An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.

Required Texts/Readings

Textbook

COMPUTER ORGANIZATION and DESIGN | Edition: 5

Author: DAVID A. PATTERSON

ISBN:9780124077263

Publication Date:10/10/2013

Publisher:ELSEVIER

Other Readings

LOGIC & COMPUTER DESIGN FUNDAMENTALS

Author: MANO & KIME

ISBN: 9780131989269

Publication Date: 06/15/2007

Publisher: PEARSON

Other technology requirements / equipment / material

You will be **required** to bring a [wireless laptop](#) to all classes.

Course Requirements and Assignments

- Each student is expected to be present, punctual, and prepared at every scheduled class and lab session. It is assumed that the students already have basic knowledge of digital Boolean logic and fundamentals of assembly language machine programming.
- Attendance is not optional. Individual participation is also required. There will be no make-ups for missed midterm or assignments, unless any special arrangements are made with the instructor beforehand.
- All students **must complete** the *Syllabus agreement* through by Jan 25, 2025, 11:59 pm. Any one **failed** to do so will be **dropped** from the class. This agreement will be sent to individual email as *'[CS47,02] PreReq-Survey'* from <https://sjsu.qualtrics.com>.
- There will be **8 programming assignments, 6 quizzes, 1 individual project, one midterm and final exam**. All programming assignments and projects should be submitted through Canvas. **No scanned copy** of handwritten solution is allowed. Allowed document type is **PDF** only for written reports.

Project report should contain the following.

- Introduction containing objective.
- Requirement.
- Design and Implementation.
- Testing
- Conclusion
- Make sure to
 1. Include clear diagrams for requirement and design.
 2. Include code snippet to explain implementation.
 3. Include screen shots of testing results.

4. Upload source code and test program as zip archive.

Project reports are encouraged to be submitted in [IEEE format](#).

[http://www.ieee.org/conferences_events/conferences/publishing/templates.html]

10% of the obtained marks in project will be awarded as extra points in project evaluation if report submitted in proper IEEE format.

LockDown Browser + Webcam Requirement

This course requires the use of LockDown Browser and a webcam for online quizzes. The webcam can be the type that's built into your computer or one that plugs in with a USB cable.

Watch this brief video to get a basic understanding of LockDown Browser and the webcam feature.

<https://www.respondus.com/products/lockdown-browser/student-movie.shtml>

Download Instructions

Download and install LockDown Browser from this link:

<https://download.respondus.com/lockdown/download.php?id=967937270>

Once Installed

- Start LockDown Browser
- Log into to Canvas
- Navigate to the quiz

Note: You won't be able to access a quiz that requires LockDown Browser with a standard web browser. If this is tried, an error message will indicate that the test requires the use of LockDown Browser. Simply start LockDown Browser and navigate back to the exam to continue.

Guidelines

When taking an online quiz, follow these guidelines:

- Ensure you're in a location where you won't be interrupted
- Turn off all other devices (e.g. tablets, phones, second computers) and place them outside of your reach
- Before starting the test, know how much time is available for it, and also that you've allotted sufficient time to complete it
- Clear your desk or workspace of all external materials not permitted - books, papers, other devices
- Remain at your computer for the duration of the test
- If the computer, Wi-Fi, or location is different than what was used previously with the "Webcam Check" and "System & Network Check" in LockDown Browser, run the checks again prior to the exam
- To produce a good webcam video, do the following:
 - Avoid wearing baseball caps or hats with brims
 - Ensure your computer or device is on a firm surface (a desk or table). Do NOT have the computer on your lap, a bed, or other surface where the device (or you) are likely to move
 - If using a built-in webcam, avoid readjusting the tilt of the screen after the webcam setup is complete
 - Take the exam in a well-lit room, but avoid backlighting (such as sitting with your back to a window)

- Remember that LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted

Getting Help

Several resources are available if you encounter problems with LockDown Browser:

- The Windows and Mac versions of LockDown Browser have a "Help Center" button located on the toolbar. Use the "System & Network Check" to troubleshoot issues. If an exam requires you to use a webcam, also run the "Webcam Check" from this area
- Respondus has a Knowledge Base available from support.respondus.com. Select the "Knowledge Base" link and then select "Respondus LockDown Browser" as the product. If your problem is with a webcam, select "Respondus Monitor" as your product
- If you're still unable to resolve a technical issue with LockDown Browser, go to support.respondus.com and select "Submit a Ticket". Provide detailed information about your problem and what steps you took to resolve it

Final Examination or Evaluation

There shall be an appropriate final examination and evaluation at the scheduled time as indicated in University calendar, unless specifically exempted by the college dean who has curricular responsibility of the course. The examination is expected to have descriptive, problem analysis and problem-solving style questions to answer.

Grading Information

- Programming assignment carries **20%** towards final score. Average of 8 scores from programming assignments will be contributed.
- Quizzes carried **30%** towards final score. Average of 6 scores from quizzes will be contributed.
- Project carries **20%** towards final score.
- Midterm carries **10%** towards final score.
- Final carries **20%** towards final score.

Submission is allowed till 11:59 pm on due date. Zero delay tolerance for the submission, i.e. NO late submission is permitted, unless you make special arrangements with your instructor beforehand.

You will receive a numeric score for the midterm, the final, each of the total homework, and each project submission. Letter grade, which is your class grade, will be obtained by adding the numeric scores and weighing with the percentages given below. Fraction in percentage will be converted into nearest integer value (' ≥ 0.5 ' will be moved to next integer number, ' < 0.5 ' will be moved to previous integer number).

A+ = 100-97%	A = 96-93%	A- = 92-90%
B+ = 89-87%	B = 86-83%	B- = 82-80%
C+ = 79-77%	C = 76-73%	C- = 72-70%
D+ = 69-67%	D = 66-63%	D- = 62-60%
F = 59-0% Failure		

Course Schedule – *subject to change by instructor with due notice.*

Date	Lecture	Assignment Due Dates
01/23/25	Green Sheet Review	Prerequisite Survey (Jan 25)
01/28/25	Introduction to Computer	
01/30/25	Computer Organization	
02/04/25	Number Representation	Repondus Monitor / Quiz Environment Setup Test (Feb 08)
02/06/25	Programming a computer	Getting to know you discussion (Feb 08)
02/11/25	Assembler / Linker / Loader	
02/13/25	SPIM simulator	Quiz-01 (Feb 14-15)