

San José State University
Computer Science Department
CS149, Operating Systems, Section 2, Spring 2025

Course and Contact Information

Instructor:	Fain (Frank) Butt
Office Location:	CL111 / Online
Telephone:	(408) 924-5060
Email:	Frank.Butt@sjsu.edu
Office Hours:	M 7:15 PM – 8:45 PM (by appointment)
Class Days/Time:	Section 2: MW 4:30 – 5:45 PM
Classroom:	MacQuarrie Hall 222
Prerequisites:	CS146 or SE146

Course Format

All your programming projects must be able to compile and run before submission. Otherwise you will not earn many points if we can't verify your results. You are expected to spend 15-20 hours a week on homework or programming assignment.

Faculty Web Page and MYSJSU Messaging

Course syllabus and the rest of the course information will be published via Canvas. You are responsible for regularly checking with the messaging system through MySJSU and Canvas to learn of any updates.

Course Description

Fundamentals: Contiguous and non-contiguous memory management; processor scheduling and interrupts; concurrent, mutually exclusive, synchronized and deadlocked processes; files. Substantial programming project required.

Learning Outcomes

Upon successful completion of this course, students will be able to explain:

1. SLO 1 - Basic history of computers and their operating systems
2. SLO 2 - Different user interfaces
3. SLO 3 - How I/O is performed
4. SLO 4 - Process and execution models
5. SLO 5 - Memory management
6. SLO 6 - Native and network file systems
7. SLO 7 - Parallel processing
8. SLO 8 - OS Security

Course Learning Outcomes (CLO)

Upon successful completion of this course, students will be able to:

1. CLO 1 – Provide the knowledge and understanding on how a modern-day operating system works
2. CLO 2 – Explain the differences between traditional desktop OS, embedded systems, and mobile.
3. CLO 3 – Knowledge on how to implement components of an operating system.

Textbook

Operating System Concepts, 10th Edition; Silberschatz, Galvin, Gagne, ISBN: 978-1-119-32091-3

Other Readings [Optional]

None

Other equipment / material requirements (include if applicable)

None

Course Requirements and Assignments

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in [University Policy S12-3](http://www.sjsu.edu/senate/docs/S12-3.pdf) at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

There will be one exam, programming assignments, several homework and quizzes. All the exams and quizzes will be conducted in person, and they are close book but open notes. There will be no laptops, calculators, or any personal digital devices allowed unless you are instructed to do so. I strongly suggest that you attend each class and take good notes during the semester. There will be **NO** make-up exams and quizzes.

All the programming assignments, and related documentations must be handed in electronically. Programs that are handed in after the due date will not be accepted. Additional information about each project will be given in separate handouts. For your programming assignments, we will compile and grade your programs using the GCC C/C++ compiler running in a GCC docker container. Your program needs to be able to compile and execute successfully before you turned it in.

NOTE that [University policy F69-24](http://www.sjsu.edu/senate/docs/F69-24.pdf) at <http://www.sjsu.edu/senate/docs/F69-24.pdf> states that “Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading.”

Grading Policy

Final Exam	400 points	40%
Quizzes & HW	300 points	30%
<u>Programming Assignments</u>	<u>300 points</u>	<u>30%</u>
Total	1000 points	100%

The final "letter" grade will be determined from a curve at the end of the semester. Any assignment that are submitted past the due date will incur a minimum of 20% deduction.

Note that “All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades.” See [University Policy F13-1](http://www.sjsu.edu/senate/docs/F13-1.pdf) at <http://www.sjsu.edu/senate/docs/F13-1.pdf> for more details.

Classroom Protocol

All the classes are in person including all the quizzes and exams. Even though we don’t use attendance as part of your final grade, it is to your best interests to attend class and take good notes as there are no specific lecture notes will be given out.

University Policies

Per [University Policy S16-9](https://www.sjsu.edu/senate/docs/S16-9.pdf), relevant university policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g. learning assistance, counseling, and other resources) are listed on [Syllabus Information web page](https://www.sjsu.edu/curriculum/courses/syllabus-info.php) (<https://www.sjsu.edu/curriculum/courses/syllabus-info.php>). Make sure to visit this page to review and be aware of these university policies and resources.

CS149, Operating Systems, Section 2, Spring 2025, Course Schedule (subject to change)

Event	Date	Class Time	Topics, Readings, Assignments, Deadlines
Week 1	01/27/2025	Sec 2: 4:30 – 5:45PM	Introduction and Overview, Chapter 1
Week 2	02/03/2025	“	Chapter 2, 3
Week 3	02/10/2025	“	Chapter 3, 4
Week 4	02/17/2025	“	Chapter 4, 5

Event	Date	Class Time	Topics, Readings, Assignments, Deadlines
Week 5	02/24/2025	“	Chapter 5, 6
Week 6	03/03/2025	“	Chapter 6, 8
Week 7	03/10/2025	“	Chapter 8, Quiz#1 – covers Chapter 1-6;
Week 8	03/17/2025	“	Chapter 9
Week 9	03/24/2025	“	Review; Chapter 10
Week 10	03/31/2025	“	Spring Break Week – no classes;
Week 11	04/07/2025	“	Chapter 10, 11
Week 12	04/14/2025	“	Chapter 11, 12
Week 13	04/21/2025	“	Chapter 12, 13
Week 14	04/28/2025	“	Chapter 13, 14
Week 15	05/05/2025	“	Quiz#2 – covers Chapter 7-14; Chapter 18
Last Day	05/12/2025	“	Last day of class - Reviews
Final Exam	05/20/2024	Mon, 3:15 PM - 5:15 PM	Final Exam covering Chapter 1-18, any additional handouts, project related questions