San José State University
Computer Science Department
CS 49C: Programming in C, Section 01, Fall 2020

Course and Contact Information

Instructor:	Rekha Rani
Office Location:	Zoom meeting by appointments
Telephone:	N/A
Email:	rekha.rani@sjsu.edu
Office Hours:	Tu Th 12:15 pm – 1:15pm
Class Days/Time:	Tuesday and Thursdays (1:30 pm – 2:45 pm)
Classroom:	Online Synchronous Zoom meetings on Canvas
Prerequisites:	Previous programming experience and completion of math GE

Course Description

Beginning course in the C language. Prerequisite: Previous programming experience and completion of math GE.

Course Format

CS 49C is an online hands-on programming course. Most of the lectures will follow programming exercises and programming assignments. There is a significant hands-on component in this class and student participation during class is key to the successful completion of the course.

Course materials such as syllabus, handouts, notes, assignment instructions, reading assignments, etc. are posted on Canvas Learning Management System course login website at http://sjsu.instructure.com. Students are responsible for regularly checking for updates on canvas.

Course Learning Outcomes (CLO)

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

1. Have a basic knowledge of C programming language.
2. Understand the concepts of functions and pointers.
3. Handle possible errors during program execution.
4. Read and access sequential and random-access files.
5. Write recursive programs in C.
6. Understand concepts of memory management and storage classes in C.
7. Code, document, test, and implement a well-structured computer program in C.

Required Texts/Readings

Textbook

- Title: *C Primer Plus, 6th edition*
  Author: Stephen Prata
  Publisher: Addison-Wesley Professional, 2013
  ISBN-13: 978-0-321-92842-9, ISBN-10: 0-321-92842-3

- Title: *C How to Program, 8th edition*
  Author: Deitel and Deitel
  Publisher: Pearson
  ISBN-13: 978-0133976892, ISBN-10: 9780133976892

Other Readings

Additional course readings, code examples, exercises, etc. will be assigned and will be provided by the instructor during the course.

Other technology requirements / equipment / material

Wireless Laptop (Should be brought for all classes). Students are responsible for ensuring that they have access to reliable Wi-Fi during tests. If students are unable to have reliable Wi-Fi, they must inform the instructor, as soon as possible or at the latest one week before the test date to determine an alternative.

Course Requirements and Assignments

Course requirements, reading materials, hands-on coding activities, and assignments contribute to and are aligned with course learning outcomes. Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course-related activities, including but not limited to reading and assignments.

The final grade is calculated based on the percentage of the total points for all the Course Requirement and Assignments listed below:

- **Homework Assignments:** individual, regularly assigned, will include written problem assignments, and perhaps some online exercises. Solutions will be not posted. Assignments are submitted via Canvas for grading. Students must submit only their own work by the posted due date.
- **Reading assignments:** Reading assignments will regularly be for the next class.
- **Midterm:** There will be one written Midterm exam during the semester. Makeup exams will only be given in cases of illness (with signed documentation from a medical facility – original copy). Exams are closed book, closed notes and closed neighbor.
- **Project:** There will be a programming project. Information on the project, including topics and deadlines, will be given later in the course.
- **Final exam:** The final has a fixed date. Makeup exams will only be given in cases of illness (with signed documentation from a medical facility – original copy). Exams are closed book, closed notes and closed neighbor. The final exam is cumulative.

The university's syllabus policies:

- *University Syllabus Policy S16-9 at http://www.sjsu.edu/senate/docs/S16-9.pdf.*
- *Office of Undergraduate Education's Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/*

Final Examination or Evaluation

The exam will test understanding (not memorization) of the material taught during the semester. The final exam is cumulative and closed book. The examination is expected to have problem analysis and problem-solving style questions to answer.

Grading Information

Final grade is calculated based on the percentage of the total points for all the Course Requirement and Assignments listed below:

Homework Assignments	40%
Midterm	20%
Project	20%
Final Exam	20%

Grade	*Percentage*
A plus	*96 to 100%*
A	*93 to 95%*
A minus	*90 to 92%*
B plus	*86 to 89 %*
B	*83 to 85%*
B minus	*80 to 82%*
C plus	*76 to 79%*
C	*73 to 75%*
C minus	*70 to 72%*
D plus	*66 to 69%*
D	*63 to 65%*
D minus	*60 to 62%*
F	*Below 60%*

Recording of Zoom Classes

- This course or portions of this course (i.e., lectures, discussions, student presentations) will be recorded for instructional or educational purposes. The recordings will only be shared with students enrolled in the class through Canvas. The recordings will be deleted at the end of the semester.

- If, however, you would prefer to remain anonymous during these recordings, then please speak with the instructor about possible accommodations (e.g., temporarily turning off identifying information from the Zoom session, including student name and picture, prior to recording).

- Students are not allowed to record without instructor permission Students are prohibited from recording class activities (including class lectures, office hours, advising sessions, etc.), distributing class recordings, or posting class recordings. Materials created by the instructor for the course (syllabi, lectures and lecture notes, presentations, etc.) are copyrighted by the instructor. This university policy (S12-7) is in place to protect the privacy of students in the course, as well as to maintain academic integrity through reducing the instances of cheating. Students who record, distribute, or post these materials will be referred to the Student Conduct and Ethical Development office. Unauthorized recording may violate university and state law. It is the responsibility of students that require special accommodations or assistive technology due to a disability to notify the instructor.

- Any student that needs accommodations or assistive technology due to a disability should work with the Accessible Education Center (AEC), and the instructor.

University Policies

Per University Policy S16-9 *(http://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 (http://www.sjsu.edu/gup/syllabusinfo), which is hosted by the Office of Undergraduate Education. Make sure to visit this page to review and be aware of these university policies and resources.

CS 49C Programming in C, Spring 2020, Tentative Course Schedule

This schedule is subject to change with fair notice. Updates will be given in class and the schedule available on the course website will be updated.

Course Tentative Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1	January 28	Course introduction & Introduction to C Programming
2	February 2	Introduction: Writing and compiling C programs
2	February 4	C Fundamentals
3	February 9	Variables in C
3	February 11	Types and Representations in C
4	February 16	Operations in C
4	February 18	Strings and formatted IO
5	February 23	Decisions
5	February 25	C Functions
6	March 2	C Functions
6	March 4	Scope and Storage Classes
7	March 9	Pointers in C
7	March 11	Repetition: Loops
8	March 16	Review Session
8	March 18	Review Session 2
9	March 23	**Midterm**
9	March 25	Repetition: Arrays
10	March 30	*SPRING RECESS*
10	April 1	*SPRING RECESS*
11	April 6	Repetition: Recursion
11	April 8	Arrays
12	April 13	Character Strings and String functions
12	April 15	File I/O
13	April 20	Storage: Linkage and Memory Management
13	April 22	Memory Management
14	April 27	Structures
14	April 29	Structures II

Week	Date	Topics, Readings, Assignments, Deadlines
15	May 4	Bit Fiddling
15	May 6	Project demo session
16	May 11	Project demo session
16	May 13	Final Review
Final Exam	**May 20 (Thursday)**	**12:15-14:30 PST**