# Programming in C Section 01

## CS 49C

Spring 2024   3 Unit(s)   01/24/2024 to 05/13/2024   Modified 01/21/2024

# 👤 Contact Information

| | |
|---|---|
| Instructor | Rohit Mapakshi |
| Office Location | Classroom/Online Zoom meeting location (please see Zoom office hours information below) |
| Telephone | N/A |
| Email | rohit.mapakshi@sjsu.edu |
| Office Hours | Zoom Office Hours<br><br>Tuesday and Thursday 3:00PM to 4:00PM PST<br><br>https://sjsu.zoom.us/j/87620865369?pwd=cFJETmpOV3ZpQ2RBZUJPZUVSNzhSZz09 (https://sjsu.zoom.us/j/87620865369?pwd=cFJETmpOV3ZpQ2RBZUJPZUVSNzhSZz09)<br>Password: 580160 |
| Class Days/Time | Tuesday/Thursday 7:30am – 8:45am PST (Pacific Standard Time)<br><br>·   Instruction mode: In-Person<br><br>·   Duncan Hall, Room 450<br><br>·   First day of this class starts on: January 25, 2023 |
| Prerequisites/ Grading | Previous programming experience and completion of math GE |

# 🖥️ Course Description and Requisites

Beginning course in the C language.

Prerequisite: Previous programming experience and completion of math GE; Allowed Majors: Computer Science, Math, Math ITEP or Forensic Science: Digital Evidence.

Letter Graded

# ✳️ Classroom Protocols

- This course or portions of this course (i.e., lectures, discussions, student presentations) will be provided in-person.
- 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 specific accommodations or assistive technology due to a disability should work with the Accessible Education Center (AEC), and with the instructor.
- Please note that for the Zoom online course summary meeting scheduled, it is based on the Pacific Standard Time zone (PST).
- Due to the COVID/Omicron cases, if you test positive for covid, stay at home. Arrangements for class participation will be provided.

COVID-19 and Monkeypox Safety Training

Students registered for a College of Science (CoS) class with an in-person component should view the CoS COVID-19 and Monkeypox Training slides for updated CoS, SJSU, county, state and federal information and guidelines, and more information can be found on the SJSU Health Advisories website. By working together to follow these safety practices, we can keep our college safer. Failure to follow safety practice(s) outlined in the training, the SJSU Health Advisories website, or instructions from instructors, TAs or CoS Safety Staff may result in dismissal from CoS buildings, facilities or field sites. Updates will be implemented as changes occur (and posted to the same links).

# 📋 Program Information

Diversity Statement - At SJSU, it is important to create a safe learning environment where we can explore, learn, and grow together. We strive to build a diverse, equitable, inclusive culture that values, encourages, and supports students from all backgrounds and experiences.

# ◎ Course Goals

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.

# ▤ Course Materials

## Required/Mandatory Textbooks

The following online textbook (Zybooks: Programming in C with zyLabs) with online lab is mandatory for each student who is enrolled in this class. All classwork/labs and reading assignments will be done using this platform.

To register and subscribe to the Zybooks C Programming online resource, follow the instructions that are provided in an upcoming assignment. Please do not subscribe to this if you are not yet enrolled in the class.

A subscription is $89. Subscriptions will last until the end of semester.

Please have the following the information ready when you begin your Zybooks account registration:

- Your SJSU student ID
- The above account registration information (noted above)
- Payment information for the online book subscription
- Details of accessing the online zyBooks will be provided in the Canvas course module

## Optional Texts/Readings

N/A

## 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

*Software requirements i.e. instructions for the installation of applications/services/tools will be described during class instruction.*

# ⁝≣ Course Requirements and Assignments

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 internships, labs, and clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.

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

## Final Examination or Evaluation

*This class's final examination will be held on:*

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| Wednesday, May 15 | 7:15-9:30 AM PST |

# ✔ Grading Information

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

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|---|---|
| In-Class Work | 10% |
| Project | 5% |
| Assignments | 20% |

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|---|---|
| Quizzes | 15% |
| Midterms (x2) | 30% |
| Final Exam | 20% |

Projects

TBA

Quizzes

**At least one quiz per week** will be issued via Canvas. Quizzes will be 10 to 15 minutes in total duration with one to three questions for each quiz. Each student must complete each quiz on time and (be done independently on Canvas during class).

Assignments

- **Homework Assignments** are individual work assignments, regularly assigned, and may include written problem responses. Solutions will not be posted. Assignments will constitute 20% of the final course grade. All assignments are to be submitted via Canvas for grading. Students must submit only their own work by the posted due date. **(No late assignment submissions)**. There will be 14+ assignments during the course semester. These assignments will be based on the topics of the previous and current week.

- **Reading assignments**: Reading assignments will regularly be assigned for the next week's class. You are responsible for the reading assignments.

In-Class Work

There will be in-class work activities which will make up 10% of the final course grade; these will be held daily in class. Class work is to be completed during class, with a due date/time on the same day. These activities will be based on the week's topics that have been lectured about.

Midterms/Final Exam

**There will be two written midterm exams** 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 communications (unless stated otherwise during the semester). Each exam will be 15% of the final course grade. Midterms will consist of every topic taught from the first day of class and up to the week of the midterm; the second midterm is accumulative from the first day of the class.

The final has a fixed date. A makeup exam 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 communications (unless stated otherwise). The final exam is cumulative. The final exam will be comprehensive and will be 20% of the final grade. Grade percentages are typically computed and will be shown in Canvas. The grading table, below, shows the letter grade and percentage mapping.

NOTE: There will be no rounding of percentages for the final grade calculation, or for any grade category. Do not request for things such as bumping your grade from B+ to A-; you are to earn the grade.

| Grade | Percentage |
|-------|------------|
| A+ | 97.50 to 100% |
| A | 92.50 to 97.49% |
| A - | 90.00 to 92.49% |
| B + | 87.50 to 89.99 % |
| B | 82.50 to 87.49% |
| B - | 80.00 to 82.49% |
| C + | 77.50 to 79.99% |
| C | 72.50 to 77.49% |
| C - | 70.00 to 72.49% |
| D + | 67.50 to 69.99% |
| D | 62.50 to 67.49% |
| D - | 60.00 to 62.49% |
| F | Below 60.00% |

# 🏛 University Policies

Per [University Policy S16-9 (PDF) (http://www.sjsu.edu/senate/docs/S16-9.pdf)](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 the [Syllabus Information (https://www.sjsu.edu/curriculum/courses/syllabus-info.php)](https://www.sjsu.edu/curriculum/courses/syllabus-info.php) web page. Make sure to visit this page to review and be aware of these university policies and resources.

# 📅 Course Schedule

| Week | Date | Topics, Readings, Assignments, Deadlines |
|---|---|---|
| 1 | 25-Jan-24 | Course introduction & Introduction to C Programming |
| 2 | 30-Jan-24 | Introduction: Writing and compiling C programs |
| 2 | 1-Feb-24 | C Fundamentals |
| 3 | 6-Feb-24 | Variables in C |
| 3 | 8-Feb-24 | Types and Representations in C |
| 4 | 13-Feb-24 | Operations in C |
| 4 | 15-Feb-24 | Strings and formatted IO |
| 5 | 20-Feb-24 | Decisions |
| 5 | 22-Feb-24 | C Functions |
| 6 | 27-Feb-24 | C Functions, Source and Header Files |
| 6 | 29-Feb-24 | Scope and Storage Classes |
| 7 | 5-Mar-24 | Pointers in C |
| 7 | 7-Mar-24 | Repetition: Loops |
| 8 | 12-Mar-24 | Review Session 1 |

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| 8 | 14-Mar-24 | Midterm 1 |
| 9 | 19-Mar-24 | Repetition: Arrays |
| 9 | 21-Mar-24 | Repetition: Recursion |
| 10 | 26-Mar-24 | Arrays |
| 10 | 28-Mar-24 | Character Strings and String functions |
| | April 1-5, 2024 | Spring Break!! |
| 11 | 9-Apr-24 | File I/O |
| 11 | 11-Apr-24 | Storage: Linkage and Memory Management |
| 12 | 16-Apr-24 | Memory Management |
| 12 | 18-Apr-24 | Midterm 2 |
| 13 | 23-Apr-24 | Structures |
| 14 | 25-Apr-24 | Structures II |
| 14 | 30-Apr-24 | Value notations, Bit Manipulation |
| 15 | 2-May-24 | Bit Manipulation, Libraries |
| 16 | 7-May-24 | Libraries continued, Review |
| 16 | 9-May-24 | Final Review |
| Final Exam | 15-May-24 | 7:15-9:30 AM PST (Pacific Standard Time) |
| | Wednesday | |