CS 49J-01 Programming in Java Syllabus

San José State University, Summer 2021

Instructor Information

Instructor	Email	Zoom Office Hours
Yan Chen	yan.chen01@sjsu.edu	TR 15:00 – 16:00 or By Appointment

General Information

TR 13:00 – 15:00 @ https://sjsu.zoom.us/j/89416677936

Catalog Description

Introduction to the Java programming language and libraries. Topics include fundamental data types and control structures, object-oriented programming, string processing, input/output, and error handling. Use of Java libraries for mathematics, graphics, collections, and for user interfaces.

Prerequisite(s)

Previous programming experience in a language other than Java.

Course Format

Online Synchronous Mode: live lectures will be conducted at the set times/days via Zoom. Also, those lecture sessions will be recorded and posted on Canvas (https://sjsu.instructure.com/courses/1424421). Office hours will also be held via Zoom (same link as lecture).

Course Materials

There is no required textbook for this course. The most comprehensive and up-to-date information (documentation, guide, examples, etc.) can be found on https://docs.oracle.com/en/java/javase/16/. All other materials (lecture notes, homework, etc.) will be posted on Canvas. You are responsible for regularly checking the Canvas course page for any updates, including its messaging system.

Software/Equipment

- Laptop/Desktop with internet connection that is capable of checking Canvas course page, submitting homework, and installing/running the required software, etc.
- Java SE Development Kit 16 (JDK 16 https://www.oracle.com/java/technologies/javase-jdk16-downloads.html). The JDK is a development environment for building applications, and components using the Java programming language. Or any JDK that above 8.
- An IDE for writing/running Java programs. Suggested: IntelliJ IDEA (https://www.jetbrains.com/idea/) or Eclipse (https://www.eclipse.org/downloads/).
- (Optional) Git (https://git-scm.com/downloads) and a GitHub account (https://github.com/) for version control.

Further Readings

- Big Java Early Objects 7/e, Cay Horstmann. https://horstmann.com/bigjava/

Course Learning Outcomes (CLO)

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

- Write Java applications which are appropriately documented using Javadoc
- Use Java to read and write text files
- Implement from specifications Java classes that embody data structures
- Use and work with pre-existing implementations in the Java collections framework
- Use iterators and enhanced for loops to traverse collections
- Write a graphics program that draws simple shapes
- Use Java exceptions for error handling

Course Requirements and Assignments

(Individual) Programming Assignments

There will be 5 individual programming assignments throughout the course. Schedule your time well to protect yourself against unexpected problems. Start early so you have time to ask questions if you need helps. Late work will be accepted with a penalty of 20% per day (will NOT be accepted after 5 days passed its deadline).

(Group) Programming Assignment

There will be 1 group programming assignment (up to 4 students/group). Details will be given in class. NO late submission will be accepted for group programming assignment.

(Individual) Final Exam

There will be a cumulative final exam that covers all material throughout the semester. The date and time are fixed (Last day of instruction, Thursday, August 5, 13:00 - 15:00 Pacific Time). Exceptions may ONLY be given in cases of a verifiable emergency or for those who live in a different time zone where the exam time would be in the midnight or early morning.

Final exam is mandatory as University policy S17-1 (http://www.sjsu.edu/senate/docs/S17-1.pdf) states:

> *"Faculty members are required to have a culminating activity for their courses, which can include a final examination, a final research paper or project, a final creative work or performance, a final portfolio of work, or other appropriate assignment."*

(Optional) Extra Credits

You can earn extra credits from various activities such as exercises (5 total), in-class quizzes and discussions. Exercise/quizzes will be locked by passwords that are ONLY given in the lectures. NO late submission will be accepted for extra credits.

Although exercises and quizzes are optional, they are highly recommended to practice what you learned in class and to enhance your score. University Policy S16-9 (http://www.sjsu.edu/senate/docs/S16-9.pdf) states that:

> *"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 practice. Other course structures will have equivalent workload expectations as described in the syllabus."*

Grading Information

There will be at least 120 points available, including extra credits from optional exercises/activities, as shown in the following table. More details will be given in class.

Points	Details

Programming Assignments	45.00	The first one worth 5 pts; the rest 4 worth 10 pts each
Group Assignment	15.00	More details will be given in class
Final Exam	40.00	T/F, MC, and short answers
(Optional) Exercises	10.00	5 exercises total, 2 pts each
(Optional) Others	10.00+	Other class activities, more details will be given in class
Total	**120.00**	Mandatory (100) + Optional (20+)

Grading scale

Grade	Points	Grade	Points	Grade	Points
A	Above 93.00	**B minus**	80.00 to 82.99	**D plus**	66.00 to 69.99
A minus	90.00 to 92.99	**C plus**	76.00 to 79.99	**D**	63.00 to 65.99
B plus	86.00 to 89.99	**C**	73.00 to 75.99	**D minus**	60.00 to 62.99
B	83.00 to 85,99	**C minus**	70.00 to 72.09	**F**	Below 59.99

- A+ will be given for those who receive over 100.00 AND have participated in at least 2 discussions. If more than 1% of students meet these criteria, the top 1% of students will be given an A+.
- Grade near the borderlines will be rounded up depending upon your level and quality of class participation.
- The grade might be curved ONLY if the final grades of the class at the end of the semester are not normal.

Class Protocol

- Do NOT share any course material publicly (on Canvas, GitHub, etc.) without permission, including but not limited to lecture notes, lecture videos, passwords, homework/exam solutions, and class meeting links.
- No late homework questions (within 24 hours before due, excluding follow-ups) via email.
- You must be dressed for zoom sessions. You may wear pajamas and sweats if you want but wear a shirt.
- Instances of academic dishonesty will not be tolerated. Your own commitment to learning, as evidenced by your enrollment at San José State University and the University's Academic Integrity Policy (https://www.sjsu.edu/studentconduct/docs/Academic Integrity Policy F15-7.pdf) require you to be honest in all your academic course work. Cheating or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a reduction in final course grade (first incident of cheating will result in one letter grade off; second incident will result in a F for the class) and administrative sanctions by the University.

Important Dates

Date	Description
June 1, Tuesday	First Day of instruction (for this class)
June 2, Wednesday	Last day to drop class for 100% refund
June 3, Thursday	Last day to Drop without "W" grade, 75% refund
June 7, Monday	Last day to add ONLINE using MySJSU
June 7, Monday	Last day to submit Summer 2021 Credit/No Credit or Audit Option
Aug. 3, Tuesday	All class activities except for the final due (for this class)
Aug. 5, Thursday	Final exam (for this class)
Aug. 6, Friday	Last day to submit Petition for Course Drop or Withdrawal
Aug. 14, Saturday	Grades viewable on MySJSU

Visit https://www.sjsu.edu/summer/calendar/? for the Academic Calendar.

University Policies

Per University Policy S16-9 available at 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 available at http://www.sjsu.edu/gup/syllabusinfo. Viewing these policies and resources is highly recommended.

Course Schedule

This is a tentative schedule and is subject to change but with fair notice.

Lesson	Date	Topics
0	Tue., June 1	Introduction to the Course
1	Thur., June 3	Setting up Environment
2	Tue., June 8	Variables & Methods
3	Thur., June 10	Objects & Classes
4	Tue., June 15	Decisions
5	Thur., June 17	Loops
6	Tue., June 22	Recursion
7	Thur., June 24	Input/Output & Exception Handling
8	Tue., June 29	Inheritance & Interfaces
9	Thur., July 1	Javadoc & Junit Test
10	Tue., July 6	Collections
11	Thur., July 8	Comparator
12	Tue., July 13	Data Structures 1
13	Thur., July 15	Data Structures 2
14	Tue., July 20	GUI 1
15	Thur., July 22	GUI 2
16	Tue., July 27	Varargs & Genetic
17	Thur., July 29	Multithreading
18	Tue., Aug. 3	Final Review
19	**Thur., Aug. 5**	**Final Exam**