

**San José State University**  
**Department of Computer Science**  
**Fall 2021**  
**CS 49J – Java Programming**

**Course and Contact**

**Information Instructor:** Ramin Moazeni, PhD  
**Class Hours:** TTh: 6:00PM - 7:15PM  
**Office Hours:** TTh: 5:30PM – 6:00PM, Over zoom  
**Email:** [Ramin.Moazeni@sjsu.edu](mailto:Ramin.Moazeni@sjsu.edu)  
**Classroom:** ONLINE over Zoom

**Prerequisites:** Previous programming experience in a language other than Java.

**Course 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.

For the official catalog description, please visit [the online catalog](http://info.sjsu.edu/web-dbgen/catalog/courses/CS049J.html) at <http://info.sjsu.edu/web-dbgen/catalog/courses/CS049J.html>

**Learning Outcomes**

Upon successful completion of this course, students should 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

**Required Texts**

<b>Title</b>	Big Java Early Objects 7/e.
<b>Author</b>	Cay Horstmann
<b>Publisher</b>	Wiley
<b>ISBN</b>	ISBN 978-1-119-49909-1
	Available in the bookstore or directly from Wiley

You will need a wireless laptop (running OSX, Windows, or some version of UNIX)

## Course Mechanics

Desktop/Laptop

You will be required to have a desktop/laptop running Windows, Mac OSX, or a version of Linux to all classes and exams. It must be capable of installing and running the course software

## Course Requirements

### Exams (50%)

One online in-class mid-term (25%) and an online final exam (25%). Exams cannot be made up, except for reasons of illness, as certified by a doctor, or documentable extreme emergency.

### Programming Assignments (45%)

Schedule your time well to protect yourself against unexpected problems. I suggest starting early so you have time to ask questions if you need help. Late work is accepted with a penalty of 10% per day. Late homework is not accepted one week past its due date **All homework is due at 11:59PM** on the due date specified.

### Quizzes (5%)

Quizzes will be given throughout the course covering the required material discussed.

## Grading Policy

Your grade for the course is based on the exams, the homework, and quizzes. Grades are calculated by weighting the scores as defined below.

At least	Letter Grade
93	A
90	A-
87	B+
83	B
80	B-
77	C+
73	C
70	C-
67	D+
63	D
60	D-
below 60	F

## Exams

- The exams are based on lectures, homework/lab assignments, and reading materials covered before the exam's date.
- Absolutely NO items may be shared during the exams, including books, notes, and calculators.
- Absolutely NO usage of cell phones during exams. Cell Phones must be in off or silent mode and not within your reach.

## Individual Work

All homework and exams must be *your own individual work*. It is OK to have general discussions about the assignments or read other material for inspiration. You may *never* copy anything from anyone **without attribution**. This means if you find code on Stackoverflow or another web site, you need to give the URL where you found the code in a comment at the top of your class so that I can look at it if necessary.

You may copy from the textbook, the labs, or anything we do in class without attribution. For assignments and exams, you may not copy anything from any other student at all, and you may not collaborative produce results in pairs or teams. Your work must be entirely your own.

**It is never okay to share your code with other students.** If the other person submits your work, both students will receive a 0.

First incident of cheating will result in a 0 on that assignment or exam. Second incident will result in a F for the class.

## BSCS Program Outcomes supported by this course:

- (a) An ability to apply knowledge of computing and mathematics to solve problems
- (b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
- (c) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- (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 trade-offs involved in design choices
- (k) An ability to apply design and development principles in the construction of software systems of varying complexity

## University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>

## CS 49J, Java Programming, Tentative Schedule

Week	Lesson	Class Date	Reading	
1	1	19-Aug	Administrative, Intro to Java	
2	2	24-Aug	Intro to Java (Contd)	
2	3	26-Aug	Basic Java Concepts	
3	4	31-Aug	Basic Java Concepts (Contd)	
3	5	02-Sept	Lab Setup – IntelliJ, Git, Bitbucket	
4	6	07-Sept	Java Methods	
4	7	09-Sept	Java Reference Parameters	
5	8	14-Sept	Scope, Comments, Decision Statements, Switch Statements, Loops	
5	9	16-Sept	for-loop, Accumulator Variables, Sentinel Values, and Random Class	
6	10	21-Sept	Intro to Classes and Objects	
6	11	23-Sept	Classes and Objects, Inheritance, Interfaces, Abstract, InnerClass	
7	12	28-Sept	File IO	
7	13	30-Sept	File IO (Contd)	
8	14	05-Oct	Exception Handling	
8	15	07-Oct	Exception Handling (Contd)	
9	16	12-Oct	<b>Midterm (6pm-7:15pm)</b>	
9	17	14-Oct	Streams and Binary Input/Output	
10	18	19-Oct	Java Collection Framework -- Linked List, List Iterator, Sets, Maps	
10	19	21-Oct	Java Collection Framework -- Linked List, List Iterator, Sets, Maps (Contd)	
11	20	26-Oct	Java Collection Framework -- Stacks, Queues, Priority Queues	
11	21	28-Oct	Java Collection Framework -- Stacks, Queues, Priority Queues (Contd)	
12	22	02-Nov	Graphical Applications	
12	23	04-Nov	Graphical Applications (Contd)	
13	24	09-Nov	Graphical Applications (Contd)	
13	25	11-Nov	Veteran's Day – No Class	
14	26	16-Nov	Event Handling	
14	27	18-Nov	Generic Classes	
15	28	23-Nov	Generic Classes	
15	29	25-Nov	Thanksgiving Recess – No Class	
16	30	30-Nov	Multithreading	
16	31	Dec-02	Multithreading	
17	32	Dec-09	<b>Final Exam (5:15pm-6:45pm)</b>	

