

San Jose State University

Computer Science

CS 49J - Programming in Java Fall 2017

Course and Contact Information

Instructor:	Kathleen O'Brien
Office Location:	MacQuarrie Hall 217
Telephone:	Please use email
Email:	kathleen.a.obrien@sjsu.edu Or contact me through Piazza
Office Hours:	TuTh 2:45 - 3:15 or on Piazza anytime
Class Days/Time:	TuTh 12:00PM - 1:15PM
Classroom:	DH450
Prerequisites:	Previous programming experience in a language other than Java.
Final:	Wednesday, Dec 13 0945-1200 (regular classroom)
Tentative Exam date:	Oct 17

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>

Textbook/Material

Title	Big Java Early Objects 6/e.
Author	Cay Horstmann
Publisher	Wiley
ISBN	978-1-119-18718-9

Student 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

Course Mechanics

Laptops

You will be required to bring a wireless-enabled 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

Homework and exam submission

You will use Codecheck (URL provided in assignments) to help test assignments

You will submit your homework and exams in Canvas

Solutions will be posted in the Canvas.

Course Requirements

Exams (60%)

One in-class mid-term (30%) and a final exam (30%). Exams cannot be made up, except for reasons of illness, as certified by a doctor, or documentable extreme emergency. Makeup exams may be oral.

Programming Assignments (30%)

Two assignments per week (25%). Schedule your time well to protect yourself against unexpected problems. I suggest starting early so you have time to ask questions if you need helps. Late work is not accepted, and there is no extra credit or makeup work. **All homework is due at 1:00 AM** the morning of each class meeting, but I will give you a grace period and accept assignments until **6:00 AM**. Do not ask for an additional extension because your Internet went down at 5:58. The assignment was due hours earlier. Assignments submitted after 1am are marked late, but if you are able to submit, you will receive full credit. Also I will drop the lowest grade.

Participation (5%)

Participation is 5% of your grade. You can earn participation points during class via online polls in Piazza. You also earn a point for every Piazza post you make outside of class. You will need to post regularly either asking or answering questions in order to acquire enough points for full credit. Your participation points are calculated out of a maximum of 150.

Quizzes (5%)

Two quizzes per week due before the start of class covering the required required for that class **Each quiz is due at 1:00 AM** the morning of each class meeting, but I give you a grace period

and accept the quiz until **6:00 AM**.

Time Spent

University policy expects that students will spend a **minimum** of forty-five hours for each unit of credit during the semester for instruction, preparation/studying, doing assignments, or course related activities.

This is a 3 unit/15-week class, so you should expect to spend at least 135 hours per semester or 9 hours per week on this class. Many students need to spend much more time.

Additional Information

Coding Guidelines

For full credit on your assignments, you need to follow established Java coding conventions that we will cover in class.

Also your code must be formatted. You can click *Source* -> *Correct Indentation* in Eclipse.

Piazza

- Have a question? Ask it on Piazza
- Have an answer? Submit it.
- You get a point for each question or answer.
- If you email me a question about the course material, I will repost it on Piazza and answer it there. You won't get a point for that.
- Only email me with personal and confidential questions.

Clicker Questions

- Several times per class, there will be a “clicker” question to record your active participation
- Real clickers are hardware devices that cost money. We use Piazza instead.
- You will log in to Piazza. You may be asked to answer a question or record that you participated
- You get a point for each answer (even if it's wrong or you were unable to do the activity correctly).

Grading Policy

Your grade for the course is based on the mid-term , the finals, the homework, and participation. Grades are calculated by weighting the scores as defined above. I do not curve grades.

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

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

- Please arrive on time for class meetings. If you do come in late, please take a seat quietly.
- Do not talk on a cell phone during class. If your phone rings, turn it off or leave the room.
- This is a huge room with a lot of people. I would appreciate it if you would refrain from talking to your neighbors while I am talking or while a classmate is trying to talk to me. A lot of people making tiny noises makes it very hard for me to hear.

Individual Work

All homework and exams must be *your own individual work*. It is OK to have general discussions about homework 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 homeworks 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 give your completed code to another student before the due date.

A first incident of cheating will result in a 0 on that assignment or exam. A second incident will result in a failure 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

Miscellaneous Policies

Add Policy: I will not give out any add codes this semester.

Publicly Viewable Work: Your class work (including homework, exam, and project work) may be viewable by other students of this course. Your grades will not be viewable by others.

Copyright of Materials: All materials created by the instructor for this course, including lectures, handouts, homeworks, exams, solutions, projects, and so on, are copyrighted property of the instructor. You may transcribe lectures or copy course materials for the use of yourself and other students registered in this course. You may not sell or give transcriptions of lectures or copies of course materials to others without the prior written consent of the instructor.

University Policies

"**University Policies:** Office of Graduate and Undergraduate Programs **maintains university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc.**" You may find all syllabus related University Policies and resources information listed on GUP's [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>

Last day to drop: Feb 7

Last day to add: Feb 14

Tentative Schedule

Week	Lesson	Class Date	Quiz	Reading	Homework due	
1	1	August 24, 2017		Intro		housekeeping first program
2	2	August 29, 2017	1	Ch 1: 1.3-1.5 & Ch 2: 2.1-2.6	hw0	Objects
	3	August 31, 2017	2	Ch 2: 2.7 - 2.10	hw01	objects, graphics
3	4	September 5, 2017	3	Ch 3: 3.1-3.7	hw02	Classes

	5	September 7, 2017	4	Ch 3: 3.8	hw03	classes & graphics
4	6	September 12, 2017	5	Ch 4: 4.1-4.3	hw04	Data types, I/O
	7	September 14, 2017	6	Ch 4: 4.5		Data type, Strings
5	8	September 19, 2017	7	Ch 5: 5.1-5.4, 5.7	hw05	if
	9	September 21, 2017	8	Ch 6: 6.1, 6.3-6.5, 6.7	hw06	loops - random
6	9B	September 26, 2017	9	Ch 6: 6.8-6.10		
	10	September 28, 2017	10	Ch 7: 7.1-7.3	hw07	arrays
7	11	October 3, 2017	11	Ch7: 7.6		2D arrays
	12	October 5, 2017	12	Ch 7: 7.7	hw08	array lists
8	13	October 10, 2017	13	Ch 8: 8.1-8.3 & Ch 12: 12.1-12.3	hw09	Static methods
	14	October 12, 2017	14	Ch 8: 8.4-8.6		object oriented design
9		October 17, 2017		Miderm		
	15	October 19, 2017	15	Ch 9: 9.1-9.3	hw10	inheritence
10	16	October 24, 2017	16	Ch 9: 9.4	hw11	
	17	October 26, 2017	17	Ch 9: 9.5		
11	18	October 31, 2017	18	Ch 10: 10.1-10.3	hw12	Interface
	19	November 2, 2017	19	Ch 10: 10.4-10.6		Comparator
12	20	November 7, 2017	20	Ch 11: 11.1 - 11.2	hw13	I/O
	21	November 9, 2017	21	Ch 11: 11.3 - 11.4		
13	22	November 14, 2017	22	Ch 14: Ch 15: 15.1	hw14	Collections Framework
	23	November 16, 2017	23	Ch 15: 15.2		LinkedList

14	24	November 21, 2017	24	Ch 15: 15.3	hw 15	Set
		November 23, 2017		Thanksgiving		
	25	November 28, 2017	25	Ch 15: 15.4	hw16	Maps
15	26	November 30, 2017	26	Ch 15: 15.5 - 15.6	hw17	stacks and queues
	27	December 5, 2017	27		hw18	finish up and review
16		December 7, 2017	28			
Final: Wednesday, Dec 13 0945-1200						