

# San Jose State University

## Computer Science

### CS 49J - Programming in Java Spring 2017

#### Course and Contact Information

<b>Instructor:</b>	Kathleen O'Brien
<b>Office Location:</b>	MacQuarrie Hall 217
<b>Telephone:</b>	Please use email
<b>Email:</b>	kathleen@laughton.com Or contact me through Piazza
<b>Office Hours:</b>	TuTh 2:45 - 3:15 or on Piazza anytime
<b>Class Days/Time:</b>	TuTh 12:00PM - 1:15PM
<b>Classroom:</b>	SCI311
<b>Prerequisites:</b>	Previous programming experience in a language other than Java.
<b>Final:</b>	Wednesday, May 24 0945-1200 (regular classroom)
<b>Tentative Exam date:</b>	Mar 21

#### 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

<b>Title</b>	Big Java Early Objects 6/e.
<b>Author</b>	Cay Horstmann
<b>Publisher</b>	Wiley
<b>ISBN</b>	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 (75%)

One in-class mid-term (30% ) and a final exam (40%). 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 (25%)

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.

## 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	26-Jan		Intro		housekeeping first program
2	2	31-Jan		Ch 1: 1.3-1.5 & Ch 2: 2.1-2.6	hw0	Objects
	3	2-Feb		Ch 2: 2.7 - 2.10	hw01	objects, graphics
3	4	7-Feb		Ch 3: 3.1-3.5	hw02	Classes
	5	9-Feb		Ch 3: 3.6 -3.8	hw03	classes & graphics
4	6	14-Feb		Ch 4: 4.1-4.3	hw04	Data types, I/O
	7	16-Feb		Ch 4: 4.5		Data type, Strings
5	8	21-Feb		Ch 5: 5.1-5.4, 5.7	hw05	if
	9	23-Feb		Ch 6: 6.1, 6.3-6.5, 6.7-6.9	hw06	loops - random
6	10	28-Feb		Ch 7: 7.1-7.3	hw07	arrays
	11	2-Mar		Ch7: 7.6		2D arrays

7	12	7-Mar	Ch 7: 7.7	hw08	array lists
	13	9-Mar	Ch 8: 8.1-8.3 & Ch 12: 12.1-12.3	hw09	Static methods
8	14	14-Mar	Ch 8: 8.4-8.5		object oriented design
		16-Mar	finish up and review	hw10	
9		21-Mar	Miderm		
	15	23-Mar	Ch 9: 9.1-9.3		inheritence
Spring Break Mar 27 - Mar 31					
10	16	4-Apr	Ch 9: 9.4	hw11	
	17	6-Apr	Ch 9: 9.5		
11	18	11-Apr	Ch 10: 10.1-10.3	hw12	Interface
	19	13-Apr	Ch 10: 10.4-10.6		Comparator
12	20	18-Apr	Ch 11: 11.1	hw13	I/O
	21	20-Apr	Ch 11: 11.2-11.3		
13	22	25-Apr	Ch 11: 11.4		
	23	27-Apr	Ch 15: 15.1-15.2		Collections Framework
14	24	2-May	Ch 15: 15.3		
	25	4-May	Ch 15: 15.4		
15	26	9-May	Ch 15: 15.5		
	27	11-May	Ch 15: 15.6		
16	28	16-May	finish up and Review		

**Final:** Wednesday, May 24 0945-1200