

# San Jose State University

## CS 46A - Introduction to Programming Section 1

**Kathleen O'Brien**

**Fall 2015**

**Class times and location:** TR 1::30 - 2:45 in WSQ 109

**Office Hours:** TR 2:45 to 3:15 in MacQuarrie Hall 217 and on Piazza

(Let me know you are coming so I can be sure to be there)

**Email:** kathleen@laughton.com Or contact me through Piazza

**Final:** Thursday, December 10, 1215-1430

**Exam dates:** Check in Canvas

## Description

Basic skills and concepts of computer programming in an object-oriented approach using Java. Classes, methods and argument passing, control structures, iteration. Basic graphical user interface programming. Problem solving, class discovery and stepwise refinement. Programming and documentation style. Weekly hands-on activity.

For the official catalog description, please visit [the online catalog](http://info.sjsu.edu/web-dbgen/catalog/courses/CS046A.html) at <http://info.sjsu.edu/web-dbgen/catalog/courses/CS046A.html>

## Prerequisites

Eligibility for college level mathematics; Computer Science, Software Engineering, or Undeclared major; or instructor's consent.

## Textbook/Material

Cay S. Horstmann, [Big Java](http://horstmann.com/bigjava.html) (http://horstmann.com/bigjava.html) 5th Edition. ISBN: 9781118607718  
This is a custom version designed to save you money. It is only available in the bookstore although you may get the full version elsewhere if you wish. You can also rent textbooks for a lot less than you can buy them.

Videos from Intro to Programming in Java on [Udacity.com](https://www.udacity.com) at <https://www.udacity.com>

## Student Learning Outcomes

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

- Analyze and explain the behavior of programs involving the fundamental program constructs
- Write short programs that use the fundamental program constructs including standard conditional and iterative control structures
- Identify and correct syntax and logic errors in short programs
- Choose arrays or array lists for a given problem and write short programs that use arrays or array lists
- Design and implement a class based on attributes and behaviors of objects
- Construct objects using a class and activate methods on them
- Write javadoc comments for classes and methods
- Write graphics program that draws simple shapes
- Use interfaces and inheritance to describe common behavior of classes and write programs that use that common behavior
- Use an integrated development environment and a debugger

## Course Mechanics

### Laptops

You will be required to bring a wireless laptop to all classes and exams.

### 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 Modules area (in menu on the left)

## Course Requirements

### Exams

Two in-class exams (15% per exam) 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

Two assignments per week (25%). Schedule your time well to protect yourself against unexpected problems. I suggest you ignore the official deadlines and complete the assignments 24 hours earlier. Late work is not accepted, and there is no extra credit or makeup work. **All homework is due at 1:00 AM**, but I will give you a grace period and accept assignments until 8:00 AM. Do not ask for an additional extension because your Internet went down at 7:58. The assignment was due hours earlier.

### Participation

I expect each student to be present, punctual, and prepared at every scheduled class and lab session. You will be graded on class participation via online discussion in Piazza. You are expected to **post regularly** either asking or answering questions. You also are expected to answer the in-class questions that will be asked in Piazza. Your grade for participation is calculated on a curve(5%)

## Quizzes

There is a quiz due the morning of each class meeting on the assigned reading for the that class. There may also be pop quizzes. No curve(5%)

## Labs

You must enroll for a lab section and attend all labs. **You will fail the course if you don't pass the lab section. You will fail the lab and the class if you miss more than 3 labs.** Provided you get a passing grade in the labs, it counts as 5% of your total grade. Please do not use up your 3 allowed misses in the first few weeks of class on non-emergencies. Last semester I had to fail several students in CS46A who missed a fourth lab due to illness, but who had already frivolously used up the allowed misses. If you miss more than three labs you are not adequately prepared for CS46B.

## Time Spent

As per University policy (<http://www.sjsu.edu/senate/S12-3.htm>) success in this course is based on the expectation that students will spend, for each unit of credit, a **minimum** of forty-five hours over the length of the course for instruction or preparation/studying or course related activities.

This is a 4-unit/15-week class, so you should expect to spend at least 180 hours per semester or 12 hours per week on this class. Many students need to spend much more time.

# Additional Information

## Quizzes

- One quiz before each class meeting except for exams, that is: twice a week
- Quizzes are in Canvas
- Quizzes are untimed
- Once you start a quiz, you must finish it, or Canvas won't give you any points. **Quizzes are due at 1:00**, but I will allow you to submit up until **8:00AM** to compensate for Internet problems

## 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, I'll ask a "clicker" question.
- Real clickers are hardware devices that cost money. We use Piazza instead.
- Occasionally, you'll see survey questions with titles such as Clicker Question 1 in Piazza. Leave them alone until I announce in class what the question is.

- Once I put up a slide with the question and options, log in to Piazza and answer it.
- You get a point for each answer (even if it's wrong).

## CS46A/B Lab Rules

[Lab rules](http://cs46labs.bitbucket.org/lab-rules.html) are posted at <http://cs46labs.bitbucket.org/lab-rules.html>

## Grading Policy

You will receive a grade for each of the exams, the finals, the total homework performance, labs, participation in online discussion, and quizzes. Grades are calculated by weighting the scores as defined above. If a curve is used, the cutoffs are guided by the university definitions for letter grades. I do not plan to curve the homework, exams or final grades.

This class is graded ABC/NC

At least	Letter Grade
93	A
90	A-
87	B+
83	B
80	B-
77	C+
73	C
below 73	NC

A grade of NC does not effect your grade point

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

I expect you to arrive promptly for every class meeting. 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 collaboratively produce results in pairs or teams.

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

## General Expectations, Rights and Responsibilities of the Student

As members of the academic community, students accept both the rights and responsibilities incumbent upon all members of the institution. Students are encouraged to familiarize themselves with SJSU's policies and practices pertaining to the procedures to follow if and when questions or concerns about a class arises. See [University Policy S90-5](http://www.sjsu.edu/senate/docs/S90-5.pdf) at <http://www.sjsu.edu/senate/docs/S90-5.pdf>. More detailed information on a variety of related topics is available in the [SJSU catalog](http://info.sjsu.edu/home/catalog.html), at <http://info.sjsu.edu/home/catalog.html>. In general, it is recommended that students begin by seeking clarification or discussing concerns with their instructor. If such conversation is not possible, or if it does not serve to address the issue, it is recommended that the student contact the Department Chair as a next step.

## Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester's [Catalog Policies](http://info.sjsu.edu/static/catalog/policies.html) section at <http://info.sjsu.edu/static/catalog/policies.html>. Add/drop deadlines can be found on the current academic year calendars document on the [Academic Calendars webpage](http://www.sjsu.edu/provost/services/academic_calendars/) at [http://www.sjsu.edu/provost/services/academic\\_calendars/](http://www.sjsu.edu/provost/services/academic_calendars/). The [Late Drop Policy](http://www.sjsu.edu/aars/policies/latedrops/policy/) is available at <http://www.sjsu.edu/aars/policies/latedrops/policy/>. Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the [Advising Hub](http://www.sjsu.edu/advising/) at <http://www.sjsu.edu/advising/>.

## Consent for Recording of Class and Public Sharing of Instructor Material

[University Policy S12-7](http://www.sjsu.edu/senate/docs/S12-7.pdf), <http://www.sjsu.edu/senate/docs/S12-7.pdf>, requires students to obtain instructor's permission to record the course and the following items to be included in the syllabus:

Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor's permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.

You need to request this permission in writing.

Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent.

## Academic Integrity

Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. The [University Academic Integrity Policy S07-2](http://www.sjsu.edu/senate/docs/S07-2.pdf) at <http://www.sjsu.edu/senate/docs/S07-2.pdf> requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The [Student Conduct and Ethical Development website](http://www.sjsu.edu/studentconduct/) is available at <http://www.sjsu.edu/studentconduct/>.

The University emphasizes responsible citizenship and an awareness of ethical choices inherent in human development. Academic honesty and fairness foster ethical standards for all those who depend upon the integrity of the university, its courses, and its degrees. University degrees are compromised and the public is defrauded if faculty members or students knowingly or unwittingly allow dishonest acts to be rewarded academically. This policy sets the standards for such integrity and shall be used to inform students, faculty and staff of the university's Academic Integrity Policy.

The San José State University Academic Integrity Policy requires that each student: 1. Know the rules that preserve academic integrity and abide by them at all times. This includes learning and abiding by rules associated with specific classes, exams and course assignments. 2. Know the consequences of violating the Academic Integrity Policy. 3. Know the appeal rights, and the procedures to be followed in the event of an appeal. 4. Foster academic integrity among peers.

### **Attendance:**

[University policy F69-24](#) states that “Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading.”

### **Campus Policy in Compliance with the American Disabilities Act:**

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. [Presidential Directive 97-03](http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf) at [http://www.sjsu.edu/president/docs/directives/PD\\_1997-03.pdf](http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf) requires that students with disabilities requesting accommodations must register with the [Accessible Education Center](#) (AEC) at <http://www.sjsu.edu/aec> to establish a record of their disability.

### **Tentative Schedule for CS46A Fall 2015**

Day	Class Date	this week's lab	Quiz#	Quiz	Homework Due
1	20-Aug	Lab 0			
2	25-Aug	Lab 1	Quiz 1	1.3 – 1.6	Lesson 1 video Through Kylie's Advice

3	27-Aug			Quiz 2	1.7, 2.1 – 2.2	rest of Lesson 1 and Lesson 2 Video through "How many days"	Hw1 draft
4	1-Sep	Lab 2		Quiz 3	2.3 – 2.4	Lesson 2 through ToUpperCase	Hw1 final
5	3-Sep			Quiz 4	2.5 – 2.8	rest of Lesson 2	Hw2 draft
6	8-Sep	Lab 3		Quiz 5	3.1 – 3.3	Lesson 3 through Improving the documentation	Hw2 final
7	10-Sep			Quiz 6	3.3 – 3.7	rest of Lesson 3	Hw3 draft
8	15-Sep	Lab 4		Quiz 7	No reading	No video	Hw3 final
9	17-Sep			Quiz 8	4.1 – 4.2	Lesson 4 through Magic Number	Hw4 draft
10	22-Sep	Lab 5		Quiz 9	4.3 - 4.5	rest of Lesson 4	Hw4 final
11	24-Sep			Quiz 10	5.1 - 5.3	All of Lesson 5.1	Hw5 draft
12	29-Sep	Lab 6		Quiz 11	5.4 - 5.8	All of Lesson 5.2 /review	Hw5 final
13	1-Oct				Exam 1		
14	6-Oct	Lab 7		Quiz 12	6.1 - 6.3	All of Lesson 6.1	hw6 draft
15	8-Oct			Quiz 13	6.3 - 6.4	Lesson 6.2 through Most Populous Country	
16	13-Oct	Lab 8		Quiz 14	6.7 -	Lesson 6.2 through Finding the Position of the First Match	hw6 final
17	15-Oct			Quiz 15	6.4 - 6.10	Rest of Lesson 6.2	hw7 draft
18	20-Oct	Lab 9		Quiz 16	7.7 -7.2	Lesson 7.1 video through Lost In a Good Book 2	Hw 7 final
19	22-Oct			Quiz 17	7.3 - 7.5	Rest of Lesson 7.1	hw8 draft
20	27-Oct	Lab 10		Quiz 18	7.1	Lesson 7.2	hw8 final
21	29-Oct			Quiz 19	7.6, 7.8	Video Lesson 7.3	hw9 draft
22	3-Nov	Lab 11				Video Lesson 7.3	hw9 final
23	5-Nov			Quiz 20	8.1 - 8.4	Video Lesson 8 (static methods, etc)	hw10 draft
24	10-Nov	Lab 12			10.1 – 10.3	Video Lesson 9 through Implementing Comparable	hw10 final
25	12-Nov			Exam2			
26	17-Nov	lab 13			9.1 – 9.3	rest ofLesson 9 (inheritance)	hw11 draft
27	19-Nov			Quiz 21		more on interface and inheritance	hw11 final
28	24-Nov			Quiz 22			hw12 draft
Thanksgiving							
29	1-Dec	Lab 14					hw12 final
30	3-Dec						
31	8-Dec					Review	
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Final					Thurs Dec 10 1215-1430		

Adapted from the greensheet of Dr. Cay Horstmann