San Jose State University

CS 46A - Introduction to Programming Section 2

Kathleen O'Brien

Spring 2016

Class times and location: TR 4:30 - 5:45 in SCI 311
Office Hours: TR 12:45 to 1:15 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, Friday, May 20, 1445-1700
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 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) 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. E-books are another oprion

Videos from Intro to Programming in Java on 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 at 1:00AM on the assigned reading for the that class, but I will give you a grace period and accept assignments until 8:00 AM. 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 compenstae 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 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 at http://www.sjsu.edu/senate/docs/F13-1.pdf for more details."

Grading scale for participation

Contributions	Score
>=132	100
>=120	97
>=100	95
>=90	92
>=80	87

>=70	85
>=60	82
>=50	77
>=45	75
>=40	72
>=35	67
>=30	65
>=15	62
below 15	0

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.

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 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 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, 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 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 at http://www.sjsu.edu/provost/services

/academic_calendars/. The Late Drop 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 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, 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 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 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 at 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.

Adapted from the greensheet of Dr. Cay Horstmann

Tentative Schedule for CS46A Spring 2016

Day	Class Date	this week's lab	Quiz#	Quiz		Homework Due
1	28-Jan	Lab 0				housekeeping
2	2-Feb	Lab 1	Quiz 1	1.3 – 1.6	Lesson 1 video Through Kylie's Advice	
3	4-Feb		Quiz 2	1.7, 2.1 – 2.2	rest of Lesson 1 and Lesson 2 Video through "How many days"	Hw1 draft
4	9-Feb	Lab 2	Quiz 3	2.3 – 2.4	Lesson 2 through ToUpperCase	Hw1 final
5	11-Feb		Quiz 4	2.5 – 2.8	rest of Lesson 2	Hw2 draft
6	16-Feb	Lab 3	Quiz 5	3.1 – 3.3	Lesson 3 through Improving the documentation	Hw2 final
7	18-Feb		Quiz 6	3.3 – 3.7	rest of Lesson 3	Hw3 draft
8	23-Feb	Lab 4	Quiz 8	4.1 – 4.2	Lesson 4 through Magic Number	Hw3 final
9	25-Feb		Quiz 9	4.3 - 4.5	rest of Lesson 4	Hw4 draft
10	1-Mar	Lab 5	Quiz 10	5.1 - 5.3	All of Lesson 5.1	Hw4 final
11	3-Mar		Quiz 11	5.4 - 5.8	All of Lesson 5.2 /review	Hw5 draft
12	8-Mar	Lab 6			review	Hw5 final
13	10-Mar			Exam 1		
14	15-Mar	Lab 7	Quiz 12	6.1 - 6.3	All of Lesson 6.1	hw6 draft

15	17-Mar		Quiz 13	6.3 - 6.4	Lesson 6.2 through Most Populous Country	hw6 final
16	22-Mar	Lab 8	Quiz 14	6.7 -	Lesson 6.2 through Finding the Position of the First Match	hw7 draft
17	24-Mar		Quiz 15	6.4 - 6.10	Rest of Lesson 6.2	Hw 7 final
Spring Break						
18	5-Apr	Lab 9	Quiz 16	7.7 & 7.2	Lesson 7.1 video through Lost In a Good Book 2	hw8 draft
19	7-Apr		Quiz 17	7.3 - 7.5	Rest of Lesson 7.1	hw8 final
20	12-Apr	Lab 10	Quiz 18	7.1 -7.3	Lesson 7.2	hw9 draft
21	14-Apr		Quiz 19	7.6 & 7.8	Video Lesson 7.3	hw9 final
22	19-Apr	Lab 11			cover any outstanding issues	hw10 draft
23	21-Apr		Quiz 20	10.1 – 10.3	Video Lesson 9 through Implementing Comparable	hw10 final
24	26-Apr	Lab 12	Exam2			
26	28-Apr		Quiz 21	9.1 – 9.3	rest of Video Lesson 9 (inheritance)	hw11 draft
27	3-May	lab 13	Quiz 22	8.1 - 8.4	Video Lesson 8 (static methods, etc)	hw11 final
28	5-May				more on interface and inheritance	hw12 draft
29	10-May	Lab 14				hw12 final
30	12-May				Review	

Final: Friday, May 20, 2016, 1445 - 1700 in SCI311 (regular classroom)