San Jose State University
Computer Science
CS 46A - Introduction to Programming Section1
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 Or with Canvas messaging
Office Hours:	TR 2:45 - 3:15 or on Piazza anytime
Class Days/Time:	TR 1:30 - 2:45
Classroom:	YUH 124
Prerequisites:	Eligibility for college level mathematics; Computer Science, Software Engineering, or Undeclared major; or instructor's consent.

Final: Tuesday Dec 19, 2017 1215 - 1430 (regular classroom)
Tentative Exam dates: Oct 5 and Nov 14

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

Textbook/Material

1. Big Java 6e ENGAGE Custom Interactive Text By Cay S. Horstmann, You will take twice weekly quizzes in the Engage platform based on the e-book

   Available from
   - the bookstore (new only)
   - direct from Wiley

- Here is a document that tells you how to get the accessw code and how to register.
- first two chapters
  - Lesson 1: search for *Gosling*
  - Lesson 2: search for *Algorithm Design*
  - Lesson 3: search for *Calling Methods*
  - Lesson 4: search for *Accessor and Mutator*

2. Videos from Intro to Programming in Java on Udacity.com at https://www.udacity.com. This is free. Instructions for signing up are in the syllabus area

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 need to bring a wireless laptop (running OSX, Windows, or some version of UNIX) to all classes, labs, and exams.

Homework and exam submission

You will use Codecheck (URL provided in assignments) to help test assignments (2 per week: a draft and a final)

You will submit your homework and exams in Canvas

Solutions will be posted in the Canvas.

Course Requirements

Midterm Exams (15% per exam)

Two in-class exams. Exams cannot be made up, except for reasons of illness, as certified by a doctor, or documentable extreme emergency.

Final Exam (30%)

The final must be taken on the scheduled day. But talk to me if you have a true emergency

Programming Assignments (25%)

Two assignments per week: a draft and a final. Schedule your time well to protect yourself against unexpected problems. 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** to compensate for Internet problems. Please 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. I drop the lowest homework grade for both the draft and the final. This allows everyone to mess up on one of each type of assignment.

Participation (5%)

You will get the most out of class if you are present, on time, and prepared at every class and lab session. 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. You also get participation points for attending Supplemental Instruction session. (See the section on Supplemental Instruction of more information.) Your participation points are calculated out of a maximum of 175. You can not get more than 100%. You can check your total at any time in by clicking on the statistics tab in Piazza.

NOTE: Posts need to add to the discussion. **Do not wait until the last few weeks of class and then make half a dozen meaningless posts at a time** trying to get points. I will deduct points for this inappropriate behavior.

Quizzes (5%)

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 6:00 AM. No quiz scores will be dropped.

Labs (5%)

The lab counts as 5% of your total grade. You are already enrolled in a lab section. Please be sure to attend. The labs are designed to reinforce what you learn in class. **You have to pass the lab to pass the class. To pass the lab, you need to attend 11 of the 14 sessions. In other words, you can only miss 3 labs and still pass this class.** Please do not use up your 3 allowed misses in the first few weeks of class on non-emergencies. I have occasionally had to fail a 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

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 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

- A quiz before each class meeting except for exams, that is: twice a week
- Quizzes are in Canvas
- Quizzes are untimed and you may repeat a quiz as many times as you wish, but only the last

attempt is counted
- 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 **6:00AM** 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, 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).

Supplemental Instructions

We are fortunate this semester to have Supplemental Instruction made available to us through Peer Connections. Supplemental Instruction is an academic assistance program which provides peer-led group study sessions to assist students in traditionally difficult courses. And it is free! Students who attended last semester found it very helpful.

The sessions are led by a SI leader who has already mastered the course material and has been trained to facilitate group sessions where students can meet to improve their understanding of course material, review and discuss important concepts, develop study strategies and prepare for exams. SI is for everyone, and open to all students enrolled in this class. Attendance at SI sessions is free and voluntary. Students, who attend SI sessions weekly, typically earn higher final course and exam grades than students who do not participate in SI. Please bring your lecture notes, computers, and questions with you.

SI study sessions meeting times will be determined by taking a poll of interested students and finding the most convenient time. The location will be determined once the time has been set.

Your SI Leader	Email
Yen Huynh	yen.huynh@sjsu.edu

Yen will be attending all classes with you and will facilitate the class activities.

SI sessions meet two times a week, throughout the semester.

Note that these sessions are **not** tutorial sessions for doing homework. They are sessions to help you understand the material. Please do not ask Quoc or Yen specifically how to do a homework problem. But if the homework requires a loop, it would be an excellent idea to ask them how to write a loop.

You earn 2 participation points for each session you attend. (That is about 60 points)

CS46A/B Lab Rules

You can read the Lab rules here (http://cs46labs.bitbucket.io/lab-rules.html)

Grading Policy

Your grade for the course is based on each of the exams, the finals, the total homework, the labs, the quizzes, and participation. Grades are calculated by weighting the scores as defined above. I do not curve grades.

This class use to be graded ABC/NC. But the University has changed its policy and the class is now graded with a traditional letter grade. See the scale 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

You must earn at least a C (73) to be eligible to table CS/SE 46B

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."

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. It the other person submits your work, I have to give you both a 0. Please do not risk this by giving your code to your friends.

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 at http://www.sjsu.edu/gup/syllabusinfo/

Last day to drop: Feb 7
Last day to add: Feb 14

Tentative Schedule for CS46A

Lesson	Class Date	this week's lab		Quiz#	To read in the text	To watch on Udacity	Homework Due
0	24-Aug	Lab 1					housekeeping
1	29-Aug	Lab 2		Quiz 1	1.3 – 1.6	Lesson 1 video Through Kylie's Advice	
2	31-Aug			Quiz 2	1.7, 2.1 – 2.2	rest of Lesson 1 and Lesson 2 Video through "How many days"	Hw1 draft
3	5-Sep	Lab 2_5		Quiz 3	2.3 – 2.4	Lesson 2 throughToUpperCase	Hw1 final
4	7-Sep			Quiz 4	2.5 – 2.8	rest of Lesson 2	Hw2 draft
5	12-Sep	Lab 3		Quiz 5	3.1 – 3.3	Lesson 3 through Improving the documentation	Hw2 final
6	14-Sep			Quiz 6	3.4 – 3.7	rest of Lesson 3	Hw3 draft
7	19-Sep	Lab 4		Quiz 7	4.1 – 4.2	Lesson 4 through Magic Number	Hw3 final
8	21-Sep			Quiz 8	4.3 - 4.5	rest of Lesson 4	Hw4 draft
9	26-Sep	Lab 5		Quiz 9	5.1 - 5.3	All of Lesson 5.1	Hw4 final
10	28-Sep			Quiz 10	5.4 - 5.8	All of Lesson 5.2	Hw5 draft
	3-Oct	Lab 6				review	Hw5 final
	5-Oct				Exam 1		

11	10-Oct	Lab 7		Quiz 11	6.1 - 6.3	All of Lesson 6.1	
12	12-Oct			Quiz 12	6.4 - 6.5	Lesson 6.2 through Most Populous Country	hw6 draft
13	17-Oct	Lab 8		Quiz 13	6.6 - 6.7	Lesson 6.2 through Finding First Match	hw6 final
14	19-Oct			Quiz 14	6.8 - 6.10	Rest of Lesson 6.2	hw7 draft
15	24-Oct	Lab 9		Quiz 15	7.7-	Lesson 7.1 video through Lost In a Good Book 2	Hw 7 final
16	26-Oct			Quiz 16	7.7-	Rest of Lesson 7.1	hw8 draft
17	31-Oct	Lab 10		Quiz 17	7.1 -7.5	Lesson 7.2	hw8 final
18	2-Nov			Quiz 18	7.6 & 7.8	Video Lesson 7.3	hw9 draft
19	7-Nov	Lab 11		Quiz 19	8.4 - 8.6	Video Lesson 8 (static methods, etc)	hw9 final
20	9-Nov			Quiz 20	8.1 - 8.3	design patterns review	hw10 draft
	14-Nov	Lab 11		Exam2			hw10 final
21	16-Nov			Quiz 21	10.1 – 10.2	Video Lesson 9 up to Implementing Comparable	
22	21-Nov	No Lab		Quiz 22	10.3 -	Video Lesson 9 Implementing Comparable	hw11 draft
	23-Nov		Thanksgiving				
23	28-Nov	Lab 12					
24	30-Nov			Quiz 23	9.1 – 9.3	rest of Video Lesson 9 (inheritance)	hw11 final
	5-Dec	Lab 13		Quiz 24	9.4-	inheritance	hw12 draft
	7-Dec			Review Quiz 1		review	hw12 final
Final	19-Dec		1215-1430				

Final: Friday Dec 19, 2017 1215 - 1430