San Jose State University
Computer Science
CS 46A - Introduction to Programming Section2
Fall 2016

Course and Contact Information

Instructor:	Kathleen O'Brien
Office Location:	MacQuarrie Hall 217
Telephone:	Please use email
Email:	kathleen@laughton.com Or contact me through Piazza
Office Hours:	TR 2:45 - 3:15 or on Piazza anytime
Class Days/Time:	TR 12:00 - 1:15
Classroom:	SCI 311
Prerequisites:	Eligibility for college level mathematics; Computer Science, Software Engineering, or Undeclared major; or instructor's consent.

Final: Monday, December 19, 0945-1200 (regular classroom)
Tentative Exam dates: Oct 6 and Nov 15

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, ISBN: 9781119290223. You will take twice weekly quizzes in the Engage platform based on the e-book

   Available from
   - the bookstore for $79.35 (new only)
   - direct from Wiley for $80.35

- 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.

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-enabled laptop running Windows, Mac OSX, or a version of Linux 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.

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. Exams will be proctored by Proctorio. More on this just before exam 1

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** 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.

Participation

I expect each student to be present, punctual, and prepared at every scheduled 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 are expected to **post regularly** either asking or answering questions. 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 200, but you can not get more than 100%

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 6:00 AM. There may also be pop quizzes. (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 and you may repeat a quiz three times 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 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, 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).

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. I do 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

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

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. 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 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

"**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/

Tentative Schedule for CS46A Fall 2016

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Lesson	Class Date	this week's lab		Quiz#	Quiz		Homework Due
0	25-Aug	Lab 1					housekeeping
1	30-Aug	Lab 2		Quiz 1	1.3 – 1.6	Lesson 1 video Through Kylie's Advice	
2	1-Sep			Quiz 2	1.7, 2.1 – 2.2	rest of Lesson 1 and Lesson 2 Video through "How many days"	Hw1 draft
3	6-Sep	Lab 3		Quiz 3	2.3 – 2.4	Lesson 2 through ToUpperCase	Hw1 final
4	8-Sep			Quiz 4	2.5 – 2.8	rest of Lesson 2	Hw2 draft
5	13-Sep	Lab 4		Quiz 5	3.1 – 3.3	Lesson 3 through Improving the documentation	Hw2 final
6	15-Sep			Quiz 6	3.4 – 3.7	rest of Lesson 3	Hw3 draft
7	20-Sep	Lab 5		Quiz 7	4.1 – 4.2	Lesson 4 through Magic Number	Hw3 final

8	22-Sep			Quiz 8	4.3 - 4.5	rest of Lesson 4	Hw4 draft
9	27-Sep	Lab 6		Quiz 9	5.1 - 5.3	All of Lesson 5.1	Hw4 final
10	29-Sep			Quiz 10	5.4 - 5.8	All of Lesson 5.2	Hw5 draft
	4-Oct	Lab 7				review	Hw5 final
	6-Oct				Exam 1		
11	11-Oct	Lab 8		Quiz 11	6.1 - 6.3	All of Lesson 6.1	
12	13-Oct			Quiz 12	6.4 - 6.5	Lesson 6.2 through Most Populous Country	hw6 draft
13	18-Oct	Lab 9		Quiz 13	6.6 - 6.7	Lesson 6.2 through Finding First Match	hw6 final
14	20-Oct			Quiz 14	6.8 - 6.10	Rest of Lesson 6.2	hw7 draft
15	25-Oct	Lab 10		Quiz 15	7.7-	Lesson 7.1 video through Lost In a Good Book 2	Hw 7 final
16	27-Oct			Quiz 16	7.7-	Rest of Lesson 7.1	hw8 draft
17	1-Nov	Lab 11		Quiz 17	7.1 -7.5	Lesson 7.2	hw8 final
18	3-Nov			Quiz 18	7.6 & 7.8	Video Lesson 7.3	hw9 draft
19	8-Nov	Lab 12		Quiz 19	8.4 - 8.6	Video Lesson 8 (static methods, etc)	hw9 final
20	10-Nov			Quiz 20	8.1 - 8.3	intro to interface review	hw10 draft
	15-Nov	Lab 13		Exam2			hw10 final
21	17-Nov			Quiz 21	10.1 – 10.2	Video Lesson 9 up to Implementing Comparable	hw11 draft
22	22-Nov	No Lab		Quiz 22	10.3 -	Video Lesson 9 Implementing Comparable	hw11 final
	24-Nov		Thanksgiiving				
23	29-Nov	Lab 14		Quiz 23	9.1 – 9.3	rest of Video Lesson 9 (inheritance)	

24	1-Dec			Quiz 24	9.4-	inheritance	hw12 draft
25	6-Dec			Review Quiz 1			hw12 final
	8-Dec			Review Quiz 2		review	
Final	**19-Dec**		**0945 - 1200**				