San Jose State University
Computer Science
CS 46A - Introduction to Programming
Fall 2020

Course and Contact Information

Instructor:	Qi Yang
SJSU Home Page:	https://www.sjsu.edu/people/qi.yang/
Email:	qi.yang@sjsu.edu
Office Location:	Zoom Meeting
Office Hours:	TR 3:00 - 4:00, 8:00 – 9:00
Classroom:	Zoom Meeting
Class Days/Time:	TR 1:30 - 2:45
Prerequisites:	Math Enrollment Category M-I, M-II, or M-III, or MATH 1 with a grade of C- or better; and a major of Computer Science, Software Engineering, or Undeclared; or instructor consent.

Course 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.

Student Learning Outcomes

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

1. Analyze and explain the behavior of programs involving the fundamental program constructs
2. Write short programs that use the fundamental program constructs including standard conditional and iterative control structures
3. Identify and correct syntax and logic errors in short programs
4. Choose arrays or array lists for a given problem and write short programs that use arrays or array lists
5. Design and implement a class based on attributes and behaviors of objects
6. Construct objects using a class and activate methods on them

7. Write Javadoc comments for classes and methods
8. Write graphics program that draws simple shapes
9. Use interfaces and inheritance to describe common behavior of classes and write programs that use that common behavior
10. Use an integrated development environment and a debugger

Textbook/Material

- Big Java Early Objects By Cay S. Horstmann, 7/e, 2019, Wiley
  - Required: E-Book with Self-Check Quizzes
  - [VitalSource](#) (Lifetime version)
  - [Wiley](#) (Rentals will not work)
  - University Bookstore (need to buy new)
    - [9781119499459](#): E-Book only
    - [9781119499534](#): E-Book plus Print
  - Rental does not provide Self-Check Quizzes
  - VitalSource Registration
    - You will receive a code after purchasing the e-book
    - Use the same code if you had one from last semester
    - Use the code to register into VitalSource to use the e-book and do the self-check quizzes
    - Download Bookshelf
    - You should use your SJSU email and Id plus the same name as in Canvas to do the registration to avoid unnecessary issues.
    - **You must use the link inside Canvas to do the registration. Otherwise, you may not receive the credit for doing the quizzes.**
  - [Udacity Videos for *Intro to Programming in Java*](#)

Course Work

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 exam must be taken on the scheduled day. But talk to me if you have a true emergency.
Homework Assignments (25%)
  Two programming assignments per week: a draft (6.25%) and a final (18.75%).
  Due time: 6:00 pm; Grace time: 10:00 pm.
  Submissions to Canvas after 6:00 pm are marked late, but you will receive full credit if
    You are able to submit it by 10:00 pm.
  Submissions to Canvas after 10:00 pm are not accepted.
  No email submissions.
  The lowest score for both the draft and the final will be dropped.
  Schedule your time well to protect yourself against unexpected problems.

Participation (5%)

You will get the most out of class if you are present, on time, and prepared at every class. You will do some work during each class and submit them to Codecheck to earn the points. The lowest two scores will be dropped.

Self-Check Quizzes (5%)

These are based on the assigned reading for the class and due by 6:00 pm on the day after each class. Quizzes are untimed and you may repeat a quiz as many times as you wish. The lowest two quiz scores will be dropped.

Labs (5%)

The labs are designed to reinforce what you learn in class and you are already enrolled in a lab section.

You must pass the lab to pass the class.

You will fail the Lab and CS46A if you miss more than 3 labs.

No extra credit or makeup work

Time Spent

Success in this course is based on the expectation that students will spend a minimum of 12 hours per week (3 hours per unit).

Many students need to spend much more time.

Grading Policy

Your grade for the course is based on all course work listed above. Grades are calculated by weighting the scores as defined above.

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

All scores are listed in Canvas after grading completed and you should check your scores after they are posted.

You must earn at least a C- (70%) to be eligible to take CS 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](#) for more details.

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.

Codecheck and Canvas submission
> You will use Codecheck to test your programs and generate reports.
> You will submit the reports from Codecheck in Canvas to receive the credit.
> Notice that passing Codecheck tests does not guarantee your programs are correct. You must follow the instructions.

Additional Information

Free Tutoring

There will be free tutoring available in the Computer Science Study Lab in MH 226 starting in the third week of school.

Supplemental Instructions

Supplemental Instruction is an academic assistance program which provides peer-led group study sessions to assist students in traditionally difficult courses. The sessions are led by SI leaders who have already mastered the course material and have 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. You do not earn any points for attending SI sessions.

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.

SI Leader	Email
Malik Hasan	malik.hasan@sjsu.edu
Ahsan Ali Syed	ahsanali.syed@sjsu.edu

Note that these sessions are **not** tutorial sessions for doing homework. They are sessions to help you understand the material. Please do not ask the S.I. leaders 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.

In-Class Assistants

There will be two In-Class Assistants to help you do programming assignments during each class. All In-Class Assistants have already mastered the course material. The SI leaders will also attend each class. They come to our class to help you with the programming assignments.

Piazza

There will be some "clicker" questions during class to help you understand the materials. Real clickers are hardware devices that cost money. Piazza is free, but you need to register to use it. You should use your SJSU email and your first name and last name to register. You do not earn or lose any points when using Piazza.

You can also ask questions in Piazza and may get help from other students. But Piazza is not a tutoring tool and you must not show your entire program then ask for help. If you use Piazza to discuss programming assignments, you can show at most five (5) lines of code. Otherwise, you will lose points on the assignment.

Individual Work

All homework must be *your own individual work*. It is OK to have general discussions about homework assignments or read other material for inspiration. You may copy from the textbook, the labs, or anything we do in class. But, you may not copy anything from 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 time. If 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.

For exams, you must complete the work by yourself without help from others, within the specified periods of time.

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

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, homework, 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 **hosts 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/

Tentative Schedule for CS46A

Tentative Exam dates: October 1 and November 10

Final: Wednesday, December 9, 2020 12:15 - 14:30