San Jose State University
Computer Science
CS 46A - Introduction to Programming
Fall 2022

Course and Contact Information

Instructor:	Qi Yang
SJSU Home Page:	https://www.sjsu.edu/people/qi.yang/
Email:	qi.yang@sjsu.edu
Classroom:	Zoom Meeting
Class Days/Time:	TR 1:30 - 2:45 pm
Office Location:	Zoom Meeting
Office Hours:	TR 8:00 - 8:50 pm
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, Forensic Science: Digital Evidence, 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

Online Class Regulations

1. CS 46A is online and synchronous for fall 2022.
2. The lab is in person, and you must attend your lab section.
3. Be respective and friendly to others.
4. Do not discuss other things in Zoom meetings.
5. The lectures will be recorded and posted in Canvas.
6. Cameras are required for exams.

Textbook

- Big Java: Early Objects By Cay S. Horstmann, 7/e, 2019, Wiley.
- FirstDay program: The eBook is available in Canvas from the first day, and your Bursar account will be charged automatically if you don't opt out by 09-02-2022.

Course Mechanics

- Laptops
  You will need a laptop/desktop with internet access (running OSX, Windows, or some version of UNIX) for all classes, labs, and exams.
- Codecheck submission
  You will use Codecheck to test your programs and generate reports for exams, homework, participation exercises, and some lab work.
  Your programs must generate some results in Codecheck to receive any credit.
- Canvas submission
  For most assignments, you need to submit all reports from Codecheck together to Canvas to receive the credit.
  Notice that passing Codecheck tests does not guarantee your programs are correct. You must follow the instructions.

Course Work

- **In-Class iClicker Quizzes (5%)**
  There will be some iClicker questions during lectures to help you understand the materials. You will earn your points as long as you submit your answers, no matter they are correct or not.
  The scores for Lesson01and Lesson02 will be ignored, and the lowest score among the rest will be dropped.

- **Participation Exercises (5%)**
  These are programming exercises given in class.
  The scores for Par01 and Par02 will be ignored, and the lowest score among the rest will be dropped.
- **Lab (10%)**
  The lab is designed to reinforce what you learn in class and also help you do the course work, including the pre-class work, the participation exercises, and the homework.
  You must pass the lab to pass the class and will fail the lab and CS 46A if you miss more than 3 labs.
  The lowest three lab scores will be dropped.
- **Homework Assignments (20%)**
  One programming assignment with three problems each week.
  The lowest score will be dropped.
- **Midterm Exams (30%)**
  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.
- **No other extra credit or makeup work**
- **Scores in Canvas**
  All scores are listed in Canvas, including those for the ignored and dropped assignments. After exam1, Canvas will apply the rules for the ignored and dropped assignments and re-calculate the grades.

Assignments Submission

- Each assignment has a due time and a grace time.
- Late assignments: Canvas will mark your assignments as Late if submitted after the due time (and before the grace time), and you will lose 2 points for late Participation Exercises and Labs, and 5 points for late homework assignments.
- Rejected assignments: Canvas will reject any submissions after the grace time. You will receive no credit, and no makeup will be given to such assignments.
- Emergency: You must provide verifiable documents for emergencies to get any extensions.
- The following are not emergency:
  - No internet connection
  - Any issues with your device
  - Too much work
  - Not feeling well

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.

The course grades will be automatically transferred from Canvas to SJSU official site and will not be rounded. As an example, 89.9% is a B+, not an A-.

At least	Letter Grade	Grade Points
93%	A	4.0
90%	A-	3.7
87%	B+	3.3
83%	B	3.0
80%	B-	2.7
77%	C+	2.3
73%	C	2.0
70%	C-	1.7
67%	D+	1.3
63%	D	1.0
60%	D-	0.7
below 60%	F	0.0

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.

Additional Information

Free Tutoring

There will be free tutoring available starting in the third week of school.

Supplemental Instructions

Supplemental Instruction (SI) 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.

Note that SI sessions are not tutorial sessions for doing homework. They are sessions to help you understand the material. Please do not ask the SI 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.

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 grace time.**

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 for all involved students. A second incident will result in an F for the class for all students involved.

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

COVID-19 and Monkeypox Safety Training: Students registered for a College of Science (CoS) class with an in-person component should view the CoS COVID-19 and Monkeypox Training slides for updated CoS, SJSU, county, state and federal information and guidelines, and more information can be found on the SJSU Health Advisories website. By working together to follow these safety practices, we can keep our college safer. Failure to follow safety practice(s) outlined in the training, the SJSU Health Advisories website, or instructions from instructors, TAs or CoS Safety Staff may result in dismissal from CoS buildings, facilities or field sites. Updates will be implemented as changes occur (and posted to the same links).

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.

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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/

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Tentative Schedule for CS 46A

Exam 1: Thursday, October 06

Exam 2: Tuesday, November 15

Final Exam: Wednesday, December 14, 2022, 12:15 - 2:30 pm