

Introduction to Programming Section 02

CS 46A

Spring 2024 4 Unit(s) 01/24/2024 to 05/13/2024 Modified 02/13/2024

Contact Information

Instructor: Mike Wood

For help with coding exercises, please visit me during office hours:

- Wednesdays 11-12 Virtually via Zoom (see links in Canvas)
- Thursdays 12-1 Virtually via Zoom (see links in Canvas)
- Additional office hours are available by request

For questions about course logistics, please email me at mike.wood@sjsu.edu

Course Description and Requisites

Introduction to programming for anyone new to the field or who needs a refresher with basic Java programming syntax, object-oriented paradigm, control structures, iteration, etc. Hands-on activities in writing, compiling, executing, and debugging programs for solving real-world problems.

Lecture 3 hours/lab 3 hours.

Prerequisite(s): 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, Applied and Computational Math, Software Engineering, Forensic Science: Digital Evidence, or Undeclared; or instructor consent.

Letter Graded

Classroom Protocols

Code of conduct:

Short version: No form of harassment will be tolerated, including verbal comments and images that exclude people based on gender, socio-economic status, or appearance.

The full code of conduct is provided on the Canvas course space for this course.

Plagiarism and cheating

Just like a written essay, using somebody's computer code without proper acknowledgement is considered plagiarism. Homework problems should be based entirely on students' own work. Students can discuss general coding techniques and problem solving strategies for homework problems but this should never include copying (whether by typing, file transfer or cutting and pasting), looking at somebody else's code on their computer to get help, or allowing copying to occur.

Students found violating this policy once will receive zero credit for those problems. Continued violations will result in disciplinary action. If you have any questions about this policy, please don't hesitate to ask for clarification.

Program Information

Diversity Statement - At SJSU, it is important to create a safe learning environment where we can explore, learn, and grow together. We strive to build a diverse, equitable, inclusive culture that values, encourages, and supports students from all backgrounds and experiences.

Course Learning Outcomes (CLOs)

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

1. Analyze and explain the behavior of programs involving fundamental program constructs
2. Write short programs that use 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 them
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 programs that draw 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

Course Materials

In this course, we will use the following textbook:

Java Early Objects available through ZyBooks

In particular, we will use the ZyBook version of this text. To access this text, use the following instructions:

1. Sign in or create an account at learn.zybooks.com
2. Enter zyBook code: SJSUCS46AWoodSpring2024
3. Subscribe

✓ Grading Information

Criteria

Category	Weight	Notes
Participation Exercises	5%	Two exercises per lecture Exercises due on Canvas before midnight of the following day if more time is needed to complete exercises outside of class
Poll Anywhere	5%	Full credit for each lecture if at least half the questions are answered Lowest two scores dropped
Reading Quizzes	5%	A reading quiz is due at the start of each lecture Lowest two scores dropped
Labs	15%	Every Friday
Homework	15%	Due most Sundays before midnight (see schedule)
Big Quiz #1	15%	Covers lectures 1-1 through 5-2
Big Quiz #2	15%	Covers lectures 6-1 through 10-2
Final Exam	25%	Covers material from all lectures

Breakdown

Grade	Score must be at least... (%)	But less than
A+	97	--

A	94	97
A-	90	94
B+	87	90
B	83	87
B-	80	83
C+	77	80
C	73	77
C-	70	73
D+	67	70
D	63	67
D-	60	63
F	--	60

University Policies

Per [University Policy S16-9 \(PDF\)](http://www.sjsu.edu/senate/docs/S16-9.pdf) (<http://www.sjsu.edu/senate/docs/S16-9.pdf>), relevant university policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g. learning assistance, counseling, and other resources) are listed on the [Syllabus Information](https://www.sjsu.edu/curriculum/courses/syllabus-info.php) (<https://www.sjsu.edu/curriculum/courses/syllabus-info.php>) web page. Make sure to visit this page to review and be aware of these university policies and resources.

Course Schedule

Lecture Schedule

Lesson	Date	Time	Topic	Reading
0	Jan 24	1:30-2:45	Introduction	
1-1	Jan 29	1:30-2:45	Our First Java Programs	
1-2	Jan 31	1:30-2:45	Style and Methods	

2-1	Feb 5	1:30-2:45	Variables, Methods, and Objects	
2-2	Feb 7	1:30-2:45	Documentation	
3-1	Feb 12	1:30-2:45	Implementing Classes	
3-2	Feb 14	1:30-2:45	Classes and Methods	
4-1	Feb 19	1:30-2:45	Numbers, Arithmetic, and I/O	
4-2	Feb 21	1:30-2:45	I/O with Scanner Objects	
5-1	Feb 26	1:30-2:45	If Statements and Logical Operators	
5-2	Feb 28	1:30-2:45	Nested If Statements	
	Mar 4	1:30-2:45	Big Quiz 1	
6-1	Mar 6	1:30-2:45	While Loops	
7-1	Mar 11	1:30-2:45	For Loops	
7-2	Mar 13	1:30-2:45	Do Loops	
8-1	Mar 18	1:30-2:45	More Loops	
8-2	Mar 20	1:30-2:45	Nested Loops	
9-1	Mar 25	1:30-2:45	ArrayLists	
9-2	Mar 27	1:30-2:45	ArrayLists & Arrays	
			Spring Break	
10-1	Apr 8	1:30-2:45	Arrays	
10-2	Apr 10	1:30-2:45	2D Arrays	
	Apr 15	1:30-2:45	Big Quiz 2	
11-1	Apr 17	1:30-2:45	Designing Classes	
12-1	Apr 22	1:30-2:45	Static Variables & Methods	

12-2	Apr 24	1:30-2:45	Packages & Unit Tests	
13-1	Apr 29	1:30-2:45	Inheritance	
13-2	May 1	1:30-2:45	Polymorphism	
14-1	May 6	1:30-2:45	Interfaces	
14-2	May 8	1:30-2:45	Review & Practice	
	May 16	12:15-2:45	Final Exam	

Note: Course schedule subject to change to support student learning. Students are expected to follow weekly updates on the Canvas course space.