City College of San Francisco
CS 111B: Programming Fundamentals: Java
Fall 2020
Tuesdays and Thursdays, 11:10 am - 1:00 pm, Batmale 453
Anita Rathi
arathi@ccsf.edu

Course Goals

This course covers programming fundamentals using the Java language, using an object-oriented approach to problem solving. Topics include classes, objects, references, dynamic memory allocation, inheritance, polymorphism, arrays, files, design and implementation of abstract data types, in numerical and non-numerical applications.

Student learning outcomes: Upon completion of this course a student will be able to:

A. Design, implement, test, and debug programs that use each of the following fundamental programming constructs: basic computation, I/O from console and files, simple graphical user interfaces that include events and listeners, exception handling, standard conditional and iterative structures, and the definition of methods

B. Design, implement, and use classes and objects with Java features including encapsulation, appropriately scoped variables, static and instance variables, inheritance (including overriding methods), and polymorphism

C. Implement basic algorithms to manipulate arrays, including multidimensional arrays

Course Prerequisite

CS 110A or equivalent experience.

Textbook

The official textbook for this course is:

- Required: Absolute Java, by Walter Savitch (6th Edition) ISBN 978-0-13-404167-4

There are many ways to obtain the book, including getting a used copy, a rental copy, or a digital copy. My advice is to get one as cheaply as you can!

Course Requirements

This course requires attending class and participating in class discussions and exercises. Outside of class, you are expected to read the textbook and lecture notes, participate in online discussion boards, and complete homework and projects.

Course content is hosted in Canvas. All notes, slides, and code from class will be posted to Canvas. Practice forums are hosted on Canvas. Homework and projects will be submitted through Canvas.

Grading Policy

The course work and participation will be weighted to determine final course grades as follows:

Homework: 25%
Projects: 25%
Exams: 25%

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Participation (Quizzes, Attendance, In-Class-Exercise) : 25%
I do not drop any grades. There are extra credit opportunities for each project.

Homework/Assignments

You can work with other students on homework problems, but each student must submit his/her own homework. Homework will typically be due by 11:59 pm of due date.
- Homework will be accepted up to 1 day after the due date with a 10% late penalty applied.
- If you have concerns about completing an assignment in time, contact me in advance of the due date to see if we can arrange an extension.

Projects

There will be three-four projects over the course of the semester.
Projects are listed as "Projects" on Canvas.
Projects will be accepted up to 2 days after the due date with a 10% late penalty applied.
Many projects contain extra credit.
- This portion of the project is optional.
- It's possible to have an overall project score of greater than 100%, which will then help your overall course grade.

You can (and are encouraged to) work with 1-2 other students and submit as a group.
You must work in a group for at least one project.

Exams

There is a midterm and a final.
Exams are administered via Canvas and are open-note, open-book, open-Internet.
The midterm will be in-class on Thursday, October 17.
The final exam is in the Final Week, (Check Final Schedule).

Attendance

Attendance at class meetings is mandatory. If you miss a class, it is your responsibility to obtain any information missed, including changes to the course schedule. In accordance with City College rules, if you miss four class sessions, you may be dropped from the course.Come to class on time and with cell phones turned to silent.In general, it is your responsibility to drop or withdraw a class by the final deadlines given in the course schedule. Use the automated Web4 system to drop the class. You do not need a code or signature from me to drop the course.

Office Hours

My in-person office hours are on Tuesdays and Thursdays from 10:30 am -11:00 am over Zoom in my Office hours room. You can come by during this time without an appointment. Other times can be scheduled by appointment.

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Accommodations

Students who need academic accommodations should request them from the Disabled Students Programs and Services (DSPS) located in the Rosenberg Library, Room 323 on the Ocean Campus. Telephone: 415-452-5481(V), 415-452-5451 (TDD). DSPS is the campus office responsible for verifying disability-related need for academic accommodations, assessing that need, and for planning accommodations in cooperation with students and instructors as needed and consistent with course requirements.Please read this important message from DSPS: http://www.ccsf.edu/NEW/en/student-services/studentcounseling/ dsps/about/online.html

Student Conduct

Student conduct must confirm to City College rules and regulations as outlined in the CCSF Catalogue.

Cheating of any kind will not be tolerated and may result in a failed grade or CCSF disciplinary procedures.

Copying code is considered cheating. Do not submit code that you did not write. If you get help or ideas from the website, you should rewrite the code yourself. You should always be able to explain and rewrite code that you submit.

Submitting assignment that contain copied code or answers will result in a score of zero for the assignment and could result in a failing grade for the course and disciplinary procedures.

Collaboration or copying on a test is considered cheating.

Course Schedule (Subject to Change at Instructor's Discretion)

Week	Topic	Suggested Reading
1	● Java Basics ● String Class	● Lesson 1
2	● Console Input Output ● Conditional Constructs	● Lesson 2 ● Lesson 3
3	● Conditional Constructs ● Classes ● Quiz 1	● Lesson 4
4	● Classes	● Lesson 4

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5	● Static Methods ● Quiz 2	● Lesson 5
6	● Copy Constructors ● Packages ● Javadoc	● Lesson 5
7	● Arrays ● Two Dimensional Arrays	● Lesson 6
8	● Array List ● Inheritance	● Lesson 14.1 ● Lesson 7
9	● Inheritance ● Quiz 3 ● **Mid- Term on 10/13**	● Lesson 7
10	● Inheritance ● Polymorphism and Abstract Classes	● Lesson 7
11	● Interfaces	● Lesson 8
12	● Exception Handling	● Lesson 9
13	● GUI	● Lesson 17
14	● GUI	● Lesson 17
15	● GUI	● Lesson 18
16	● GUI ● Review Quiz	● Lesson 18
17	● Project Demonstrations	
18	**FINAL**	