

Programming Fundamentals: Java

**CS 111B** 

Section: 001 CRN: 71518

### Is CS 111B the right class for you?

- CS 111B is meant for students who already know a little bit of programming, and want to learn the fundamentals of Java programming. If you have never programmed before, you should take CS 110A first.
- In CS 111B, we will cover a brief review of data types, if-statements, loops, and methods (functions), to learn how they work in Java. Then we will spend more time on object-oriented programming (OOP) and inheritance, exception handling, file i/o, and arrays.
- For prerequisite knowledge, before you take CS 111B, you should be able to do something like this in the programming language of your choice:
   Write a complete function/method that takes in a single numeric parameter. If the number is positive, use a loop to print a "Hello world!" message that number of times. Otherwise, print a message such as: "Error: number must be positive!"
   If you already can write a program like that, then CS 111B is the right place for you to learn Java. If you don't know how to do something like that, then you should take CS 110A first, to get an introduction to programming.
- If you want to transfer and get a Bachelors Degree, <u>assist.org has official</u> <u>information about which courses transfer (articulate) between schools</u>. For example, you can see there that SFSU wants CS majors to take CS 110A, then know Java (as covered in our CS 111B and 111C courses).
- CS 111C Data Structures and Algorithms in Java is an important class for CS majors. Before you can take it, you must complete CS 111B (or show the

department chair that you have learned Java already.)

### Course Requirements

- This class will meet face-to-face on campus: Tuesdays and Thursdays 2:10 PM -4:00 PM in Batmale Hall room 453 (Ocean Campus). This classroom has Apple MacOS computers for each student. It is CRN 71518, Section 001.
- You will need to use a computer so you can do homework for this class. Only a web browser is needed, so a simple computer or Chromebook is fine, but a phone is not enough - you need a full-size screen and keyboard. (A tablet with an external keyboard can work, but a Chromebook or simple computer is better.) You may be able to borrow a chromebook and/or get wifi from CCSF. You will also be able to use a computer lab on campus.
- Learning to write computer programs is a time consuming and sometimes frustrating endeavor of open-ended problem-solving. I expect an average student to spend about 12 hours per week on this class: reading, watching videos, attending class, studying, working on programming assignments and other class work. If you don't have the time or dedication for such work, this class may not be for you. Make sure to keep up with the course materials and do all the assignments before they are due. Everything in this class builds cumulatively, so if you get behind, it is very difficult to pass the class. I am available to help via office hours and email, plus there are discussions and lots of opportunities to practice in this class.
- In the first 2 weeks of class, we will cover <a href="Chapters 1-5">Chapters 1-5</a> of the textbook as a quick review of topics from CS 110A (using Java). So if you are new to programming, I recommend you study those chapters before our class begins.
- You must come to class in person within the first 2 weeks of class, or else I will drop you from the class. The midterm test (October 9) and final exam (December 18) must be taken in person, on campus (on paper, without the use of a computer).

### **Instructor Information**

Name: Craig Persiko

Email: cpersiko@ccsf.edu
Office Number: L468

Office Phone: 415-239-3332

Website

http://fog.ccsf.edu/~cpersiko

**Office Hours** 

• Tuesdays and Thursdays from 11:00 am – 12:00 noon in Batmale 468 (my office)

(plus other times by appointment - email me to make an appointment)

## **Course Information**

### Course Description/Overview

This course covers programming fundamentals using the Java language, emphasizing 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.

#### **Transferability**

UC/CSU

#### Requisites/Advisories

RECOMMENDED PREP: CS 10 or CS 110A or MATH 108

**Grading Options** 

Letter

## **Student Learning Outcomes**

1. Create and test Java programs that use appropriate method design and control structures with a variety of I/O channels.

- 2. Design, implement, and use classes and objects that adhere to best practices for object-oriented design in Java.
- 3. Implement basic algorithms to manipulate arrays, including multidimensional arrays.

# **Class Meeting Information**

#### **Start and End Dates**

August 19, 2025 - December 19, 2025

### **Important Dates:**

Last day to add: September 5, 2025

Last day for refund: August 29, 2025

Last day to drop without W: September 5, 2025

Last day to drop with W: November 13, 2025

Last day to elect pass/no pass: NA

#### Class Meeting Information

Dates	Days	Times	Location
	08/15-12/19	02:10 pm - 04:00	Batmale Hall 453
		pm	

The following tests must be taken in person, on campus (on paper, without the use of a computer):

• Midterm Test: October 9, 2:10-4:00pm

• Final Exam: December 18, 3:30-5:30pm

### **Attendance Policies**

You must come to class in person within the first 2 weeks of class, or else I will drop you from the class. You are expected to participate in class every week and submit all assignments on time. I may drop you from the class if you don't post or submit anything, nor come to class for over two weeks, without explanation.

If you are feeling sick, please stay home, and email me. I'll be happy to help you keep up while you're away from class.

## **Communication Plan**

Sharing ideas with each other is one of the best ways for you to learn, so when you have a question or problem, ask your classmates for help. You can email me anytime: please send me your entire program by email, and specify exactly what error messages or output your program is producing, along with your question. I'm also available during my office hours listed above.

There is free tutoring available by advanced CCSF Computer Science students, via the <u>CS Tutor Squad</u>.

## Texts/Reading

Textbooks (Free, Online only):

- Primary textbook: <u>HTML version of Think Java, Second Edition, by Allen Downey and Chris Mayfield</u> also available in <u>PDF Format of the same book</u>.
- For some topics, we will use: <u>Introduction to Programming Using Java, by David J.</u>
   <u>Eck</u>

# **Course Technology**

Software and Computer Access

- For an easy web-based Java development environment, I recommend
   OnlineGDB.com. You need to create an account to save your work there, but the
   free account is all you need for this class. I also encourage you to try one of the
   more professional, full-featured development environments below.
- If you want to install a Java Development environment on your computer, use Oracle's Standard Edition (SE) Java Development Kit: JDK 21. It can be downloaded from Oracle here, free of charge. (Click on your operating system, then the Installer link.) It is already installed on the City College Linux server called "hills". By registering in this class you will automatically be given an account on hills, or if you already had an account, it will be reactivated if necessary. You can access hills from any computer that is connected to the internet.
- Some students prefer to install an Integrated Development Environment (IDE), such as <u>jGrasp</u> or <u>Eclipse</u>. I encourage you to try these out. Eclipse is a professional-level full-featured IDE.
- I have put together a page of links to free or low-cost software you might find useful (including these IDEs) at <a href="http://fog.ccsf.edu/~cpersiko/links.html">http://fog.ccsf.edu/~cpersiko/links.html</a>

Use of CCSF computers, including remote access, is regulated by the CCSF Computer Usage Policy. Do not give passwords and other sensitive information to unauthorized persons. This means you shouldn't tell anyone your personal passwords and you shouldn't give class account passwords to people who aren't in this class.

## **Grading Policies and Evaluation Methods**

Your final score will be made up of the following components:

- 30% Programming Exercises and Canvas Discussions
- 50% Programming Assignments (homework)
- 8% Midterm Test (on paper, no computer allowed)
- 12% Final Examination (on paper, no computer allowed)

Midterm and final grades will be assigned on the following percentage scale:

- 90% 100% A
- 80% 89% B

- 70% 79% C
- 60% 69% D
- 0 59% F

Students who do not take the final exam will be assigned a grade of "FW". An "FW" is an "F" grade that also indicates that the student did not complete the course. It is the same as an F for the purposes of Free City and financial aid.

### Programming Assignments (Homework):

The best way to learn how to program is to do it! Assignments will be given once a week, but you should try to complete each assignment early, so you can ask questions and get help. You will each encounter problems that require more time than you anticipate to fix -- that's the nature of programming. So think of the assignments as due in the morning instead of at night. Then you can ask questions in office hours or via email on the due date if necessary.

All assignment submissions must include 2 major parts: the Java code you wrote (the source file) and some sample input and output showing how your program works.

I will employ student workers to grade assignments for this class. If you have any questions or concerns about this arrangement or a particular grading decision a grader makes, please don't hesitate to tell me. I will be happy to review grading decisions on request.

### Late Assignments:

Late submissions are accepted without penalties, but if you get behind in this course, it becomes very difficult to understand what's going on. So it's important to submit assignments on-time. You will get no credit for turning in my solution as your own. All programs you turn in must be your own, even after we have gone through a solution in class.

### Academic Honesty:

Cheating of any kind will not be tolerated. It will result in a grade of 0 on the assignment or test in question and can be cause for disciplinary action, including suspension or expulsion. Cheating on assignments means copying code or answers from another

source - that includes copying code from a web site, or submitting work written by someone else (including AI). Getting help from other sources is not cheating as long as you're not copying their work or allowing them to copy yours. All code and work that you submit must be written by you. On the exams, it is cheating to use a phone or computer, or to copy from other students.

## **Free CS Tutoring**

The CS Tutor Squad provides free tutoring to CS students on campus and on Zoom. Tutors are current and former CS students and industry professionals who have expertise in a variety of classes.

You can find more info, including their Zoom link and on-campus location, on their <u>CS</u> <u>Tutor Squad website</u>.

### **Accommodations for Students with Disabilities**

Students seeking disability-related accommodations are encouraged to register with Disabled Students Programs and Services located in Room 323 of the Rosenberg Library. DSPS can be contacted in person (Rosenberg 323), via phone (415) 452-5481, or via email at <a href="mailto:dspsacom@ccsf.edu">dspsacom@ccsf.edu</a>. Please see the <a href="mailto:DSPS website">DSPS website</a> for more information about office hours, and alternate locations.

If you already have approved accommodations for classroom or testing because of a disability, be sure to submit your DSPS accommodation document to the instructor as soon as possible. If you have emergency medical information to share or need special arrangements if the building needs to be evacuated, please make an appointment with the instructor as soon as possible.

## Non-Discrimination and Anti-Harassment Policy

The San Francisco Community College District adheres to all applicable federal, state, and local laws and regulations that uphold the principle of equal opportunity and prohibit discrimination and harassment on the basis of race, color, ancestry, national origin, ethnic group identification, religion, age, gender, gender identity, marital status, domestic

partner status, sexual orientation, disability, AIDS/HIV status, medical conditions, status as Vietnam-era veteran, or past, current, or potential pregnancy or pregnancy-related conditions such as lactation, or on the basis of these perceived characteristics, or based on association with a person or group with one or more of these actual or perceived characteristics.

These laws and regulations include but are not limited to the California Education Code, the California Code of Regulation Title 5, the Equal Employment Opportunity Act, the Americans with Disabilities Act, the Rehabilitation Act (1973) §504, and Title IX, which defines sexual harassment of students, including acts of sexual violence, as a form of sex-based discrimination. For more information about students' rights to access to the College's programs and activities, or if you believe you have been subject to discrimination or harassment, please contact <a href="CCSF's Title IX Coordinator">CCSF's Title IX Coordinator</a>: Tony Brown, J.D. Compliance Officer/Title IX Coordinator/Section 504 Coordinator Phone: 415-452-5123 Email: gabrown@ccsf.edu.

## **Equity Statement**

The CCSF CS Department is committed to promoting equity, diversity, and inclusion in the field of computer science. We strive to make computer science accessible and exciting to all, particularly those who are often excluded from or face frequent identity discrimination in the field. If you have a suggestion for how we can better support you and/or your classmates, please reach out to any CS instructor or to the Department Chair. We will make sure your voice is heard.

For more information and resources outside of our department, please visit <u>CCSF's</u> <u>Office of Student Equity</u>.

### **Standards of Conduct**

Students who register in CCSF classes must abide by the <u>CCSF Student Code of Conduct</u>. Violation of the code is basis for referral to the Student Conduct Coordinator or dismissal from class or the College. See the <u>Office of Student Affairs</u>.

Collaborating on or copying of tests or homework in whole or in part will be considered an act of academic dishonesty. See these links on Plagiarism:

Encourage Academic Integrity and Prevent Plagiarism

**Citing Information Sources** 

## Library

<u>City College of San Francisco's Library</u> offers many services to help you with your classes.

Take online library workshops, learn how to get started on a research project, borrow textbooks and other instructional materials, and much more.

<u>Borrow Technology from the Library</u> - Chromebooks, laptops, and hotspots can be borrowed from all CCSF Libraries.

Visit City College libraries in person at Rosenberg (at Ocean Campus), the Chinatown/North Beach Center, the Downtown Center, the Evans Center, the John Adams Center, and the Mission Center.

A librarian is on-site and available to help during open hours.

## **Academic Tutoring**

As a City College student, you can access many free services to help you succeed in your classes and navigate college. Please come to the STAR (student tutoring and resource) Center for free Peer and Professional tutoring and mentoring, individual or group study spaces, workshops that center your learning needs, an open-access computer lab with printing, and a welcoming community. Our centers and labs are free and available online and in person. Please join us: we care about your success!

Visit the <u>STAR Center</u> within the Learning Assistance Department.

### **Student Services**

Financial Aid

Unlock Your Financial Aid Potential: FAFSA/CADAA Adventure Awaits! Learn more about <u>FAFSA</u> and <u>CADAA</u>. We encourage you to apply to maximize all Financial Aid resources! Come visit us in the Financial Aid Office located in MUB 270 or email: finaid@ccsf.edu

### Counseling

Counselors are here to help you find your way through City College and support you in completing your educational goals. Please make an appointment to see a counselor by visiting <u>Counseling</u>. To view your education plan, please visit <u>Degree Works</u>.

#### Admissions and Records

The Office of Admissions and Records/Registration is the beginning and the end, along with everything in between in your journey at CCSF. From getting started to registering each term to completing your degree and accessing your academic records, we provide the services to help ensure a smooth transition in achieving your educational goals. We want to be your partners on this journey. Visit us in MUB 130 (Registration) or MUB 188 (Admissions & Records).