

Java 1 Programming

Mrs. Jillian Maher

Room CC2

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Website: mahersclass.yolasite.com

Availability: 6th Period 1:45pm – 2:20pm
2:30pm – 3:00pm

Course Expectations

You are expected to work, study, and collaborate in this classroom in a professional manner. We will use JAG SWAG to help be the best professionals through this course. These are by no means the limit of expectations, only the benchmark. Please remember all district and school rules apply to this classroom as well.

1. **Be Safe.** Absolutely NO food and drink in the lab. Remain in your seat throughout class. Do not block exits before, during or after class. Clean up the area around you before dismissal.
2. **Have Work Ethic.** Use your time in class from bell to bell. Work efficiently through slides, through notes, through classwork, ALWAYS!
3. **Be Accountable.** Enter the classroom prepared and be in your seat before the start. Turn in all assignments on time. Gather makeup work and complete in appropriate time. Ask questions and get help immediately.
4. **Give Respect.** You are only in charge of one person. Be the best person you can be. Treat others as you expect to be treated.

Course Text

Kölling, M. (2010). *Introduction to programming with Greenfoot: Object-oriented programming in Java with games and simulations*. Upper Saddle River, NJ: Prentice Hall.

This textbook is accessible within the classroom only. However, the software can be accessed at <http://www.greenfoot.org/book>. While not required, you may like being able to work with your programs from home.

The course will also use the MIT AppInventor. The software is web based and may be viewed and accessed from any desktop web browser.

Course Materials

The classroom this year will be designed as paperless as possible. All files will be retrievable online at the class Canvas website or on the network folder. Homework will be submitted primarily through Canvas, our school's Learning Management System. It may be nice to reserve a folder for occasional flyers and have your own reliable flash drive.

Grading

An average of the four quarter grades accounts for 90% of your final grade. A final exam will account for the remaining 10% of your grade. For each quarter's grade, there are three categories.

Labs are 30% of your quarter grade. To show programming mastery, it is essential that you create, reconstruct, or manipulate programs. Each unit will contain one large programming project lab. Labs will be graded using a rubric for each assignment, posted each time.

Assessments are 40% of your quarter grade. You will be assessed on your ability to read and write code through unit tests, quizzes, and constructed response problems.

Coursework is 30% of your quarter grade. Assignments in this category vary. We will have Practice Quizzes, Article Summaries, Mini Labs, research, and various worksheets necessary to gain skills prior to completing a lab.

Academic Integrity Policy

Due to the high accessibility to online content in this course, you will be monitored daily for appropriate computer use. Coding a computer is just like hand-writing, it is unique to each individual. Turing in another author's code is strictly prohibited. Using the computers to access information during a test is prohibited as well. You can use page 34 in your Student Handbook in your Agenda to review the consequences.

Late Work Policy

Being tardy in assignments can hinder the learning process. It is essential that you, the student, complete all assignments in a timely manner. However, late assignments will be accepted since the goal of this course is to attain mastery of content. Any late work is accepted at half credit.

There will be a final date of acceptance so grades may be posted in an appropriate time.

Absence Policy

If you are absent, collect any missing assignments from the website. You are given the number of days you were absent to return missed work. You are still responsible for work due on the day you were absent, it is to be turned in the day of your return.

Credit on missed work is based on the type of absence and the amount of time taken to return the work. If the absence is excused, and the work is returned according to the amount of time missed, it will be accepted as full credit. If the absence is unexcused, the work is accepted for half credit. If you are absent for a unit test, quiz, or other assessment, you will have one week from your return to complete the assignment in your own time (before or after school).

Course Outline

Each section in the course is intended to introduce the basics of Computer Science with progressively more complex languages, ending with the syntax and logic of the Java language.

Mobile App and CS Basics

Unit 1: App Inventor Basics

Unit 2: Input and Output Analysis

Unit 3: Interaction and Animation

Unit 4: Big Data and Simulation

Unit 5: Lists and Data

Basics Java Language

Unit 1: Basic Training

Unit 2: Conditional Basics

Unit 3: Loop Basics

Unit 4: Object-Oriented Programming Basics with Greenfoot

Unit 5: Arrays

Unit 6: Physics / Graphics (optional)

Final Project