

Java Programming

Course Outline

Course Overview

The purpose of this course is to provide a solid foundation in the Java programming language. Program planning, object oriented design/development/implementation, and Java language syntax will be emphasized. This course will prepare students for advanced study of the Java programming language as well as introduce students in other fields of computer study to general object programming. Students will become familiar with modern development environments such as JGrasp, BlueJay. Students focus on real programming tasks while learning the relevant theory and concepts along the way. The course will culminate with a final Java application project based on individual student interest.

Course Requirements

Familiarity with an IDE, control structures, Boolean logic, variables, arrays, two-dimensional arrays, ArrayLists, encapsulation, methods, parameters, canvas, algorithms, software development, and data types & structures, objects, classes, inheritance, interfaces, polymorphism, recursion, searching, and sorting.

Course Competencies

[Computer Programming/Programmer. General CIP: 110201](#)

Units of Study

Unit 01 - Intro Java Programming
Unit 02 - Data Types, Definite Loops
Unit 03 - Parameters & Objects
Unit 04 - Conditional Execution
Unit 05 - Program Logic and Indefinite Loops
Unit 06 - File Processing
Unit 07 - Arrays
Unit 08 - Classes
Unit 09 - Inheritance & Interfaces
Unit 10 - ArrayLists
Unit 11 - Recursion
Unit 12 - Graphical User Interface

Grading Practices

Summative Assessment Policy (for end-of-unit tests, essays, and projects):

Students may retake tests and earn a maximum of 90%. Each subsequent retake may earn a maximum of 5% less than the last retake maximum.

Students may correct mistakes in submitted and graded projects and earn back a maximum of half of the points they missed. Students must submit work for regrading in a timely manner, within two weeks of the original due date, but before the last two weeks of course term. Only work due in the last two weeks can be submitted for regrading during those last two weeks.

Late Work and Missing Work Policy:

Students need the teacher's prior approval for submitting late work or missing work.

21st Century Skills (see [Developing 21st Century Skills at PHS](#)):

Communicate effectively
Be critical thinkers and problem solvers
Initiative and self-direct
Be creative and innovate
Work collaboratively
Be responsible citizens

Other:

The following grading standards are used at PHS

Formative assignments are weighted as no more than 20% of your overall grade <ul style="list-style-type: none">• Quizzes• Homework• Classwork	Summative Assessments are weighted at least 80% of your overall grade <ul style="list-style-type: none">• End of unit tests• End of unit essays and projects
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[PHS Website for Outlines](#)