
PETERS TOWNSHIP HIGH SCHOOL

COURSE SYLLABUS: CHS JAVA 0007

Course Overview and Essential Skills

CHS Java is an elective course that can be taken by any student in grades 9-12. This class is our beginning level programming class. CHS Java is a semester course (18 Weeks) that will meet every day for 41 minutes. Students will learn basic skills in programming using Java. Some of the concepts that will be taught can be anywhere from developing algorithms for problem solving, data types, equations, methods, conditional statements, loops, arrays, multidimensional arrays, recursion, and using files.. In addition, students may elect to take the CHS part as well through the University of Pittsburgh. If the student elects to take and passes the CHS portion of the class, the student will receive 3 college credits. I will discuss the CHS portion in detail with the students in class and to parents at Open House or Parent Conference Day.

Course Textbook (Optional...students may elect to take home1 of the classroom textbooks for additional study)

- Title: *Java Programming (Guided Learning with Early Objects)*, 2009, D.S. Malik & Robert P. Burton, ISBN-13: 978-1-4239-0162-4 and ISBN-10: 1-4239-0162-2
- Title: *Java Programming*, 1999, Joyce Farrell, ISBN#: 0-7600-1070-6
- Notes, sample programs, and programming assignments will be given in class and stored on the students H: drive

Course Outline of Material Covered:

Unit or Topic	Course Activities/Resources	Timeframe
Overview of Java Programs covering Applications and Applets	Sample Programs	2 weeks
	Students will take notes, complete simulations and complete testing to demonstrate an understanding of the following topics: <ul style="list-style-type: none">• Classes• Objects• Procedural and Object-Oriented Programming• Identifiers• Modifiers• Algorithms• Syntax and Logical Errors Compiling and Running a Java Program	1 week
Comments, Variables and Constants, Methods, Declaring and Initializing Variables, Equations, Call Statements, Void	Notes Sample Programs Exercises Programming Assignments Test	3 weeks

and Value-Returning Methods, Built-In Methods		
Selection and Repetition Control Structures, If Statements, For, While and Do While Loops, Nested IF Statements, Nested Loops, Case Statement, Counters, Accumulators	Notes Sample Programs Exercises Programming Assignments Test	3 weeks
1D, 2D, Jagged, and Parallel Arrays, Sorting, Strings	Notes Sample Programs Exercises Programming Assignments	3 weeks
Applets, Constructors, Init Method, Listeners, AWT Class, and Lists	Notes Sample Programs Exercises Programming Assignments	2 weeks
Recursion	Notes Sample Programs Exercises Programming Assignments	2 weeks
Exceptions and Advance File I/O	Notes Sample Programs Exercises Programming Assignments Test	2 weeks

****Depending on the needs of the class or changes in the school year, the course outline is subject to change.***

*****For students taking the CHS part (Pitt Tests and Programming Assignments) of the class, additional time will be given to the students to complete their work after the semester class has ended if needed***