

**MASCONOMET REGIONAL SCHOOL DISTRICT
COURSE SYLLABUS**

COURSE NAME: Computer Science AP **DEPARTMENT:** Business Education

COURSE NUMBER: 5841 **GRADE LEVEL(S):** 11,12

PHASE: Honors **YEAR** X **SEM** **QRTR**

I. Course Description:

This course provides an introduction to Java Programming. Topics include creating Java applications, manipulating data using methods, decision making and repetition with reusable objects, arrays, loops, and layout managers using external classes, sorting and searching, writing data to a sequential data file, using collections and strings in a reusable class, and understanding abstract classes and interfaces. Topics found on the AP Computer Science A exam will be covered in class.

II. Central Objectives:

- A. Students will demonstrate their knowledge of computer terminology as it relates to computer technology and specifically as it relates to the Java programming language.
- B. Students will demonstrate their knowledge of problem solving with computers.
- C. Students will demonstrate their knowledge of Object-Oriented Programming.
- D. Students will demonstrate their knowledge of processing information and data using Java.
- E. Students will demonstrate their knowledge of using Java to interface with the world-wide web and HTML pages.

III. Major Activities:

Objective Tests: Students will be expected to show mastery of the Java language.

Programming Assignments & Projects: Students will be expected to solve a variety of problems utilizing concepts learned.

Unit Tests: At the end of each textbook lesson, students will be expected to show mastery to that lessons topics.

Quizzes and Homework Assignments

Computer Science AP Test Questions & Problems

IV. General Expectations:

- A. Each student is expected to attend class every day.
- B. Each student is expected to be punctual to class and be prepared for daily assignments.
- C. Students are expected to participate in class discussions.
- D. Each student should be prepared to successfully complete the Computer Science AP exam.

V. Evaluation:

Homework Assignments

Programming Assignments and Projects

Quizzes and Workbook Assignments

Unit Objective Tests

Unit Problem Tests

Mid-Term Exam

Computer Science AP Exam

Texts & Materials:

Fundamentals of Java, Second Edition, by Lambert and Osborne, Thomson Publishing, Copyright 2011,2007

Sun Java SDK, Standard Edition 1.5.0_02

Sun Java SDK, Standard Edition Documentation

Textpad 4.7.3 Evaluation Copy

VI. Scope and Sequence:

Getting Started with Java

The Next Step with Java

Arrays, Recursion, and Complexity
Using Abstract Data Types
Implementing Abstract Data Types
Graphics, Files, Applets, and Swing

Updated 6/11