

# Advanced Placement Computer Science using Java

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## Course Description:

These 3 trimesters are comparable to an Introduction to Computer Science course offered in a university computer science department. The Java language is the vehicle for implementing computer-based solutions to problems. Topics include:

### 1<sup>st</sup> Trimester

Intro to Objects, Applets, & Applications  
Intro to Data types & continuation of Objects  
Control Structures

### 2<sup>nd</sup> Trimester

Looping & Recursion  
One & Two Dimensional Arrays  
Sorting & Searching Algorithms - Big O Notation

### 3<sup>rd</sup> Trimester

Advanced Class Design & ArrayLists  
Interfaces & Polymorphism  
Inheritance  
Final Project

## Materials Needed:

- Three ring loose leaf binder(s) for class notes
- A flash drive for saving work

## Grading:

Projects - Every unit you will be asked to complete 3 or 4 programming projects. A programming project could require 1, 2, or 3 class periods to finish. Most students will finish the projects during class. These projects will count 20% of your trimester grade.

Completing these projects should lead to your mastery over the topics that you will see on the exams.

Exams - There will be one exam for each unit. All exams contain 3 components: multiple choice, free response, and a test project. The test project must be completed on a computer and submitted no later than the day the exam is taken. These exams will count 80% of your trimester grade.

Scores will usually be posted on PowerSchool within 48 hours of being submitted.

Grading Scale:	97 - 100	A+
	93 - 96	A
	90 - 92	A-
	87 - 89	B+
	83 - 86	B
	80 - 82	B-
	77 - 79	C+
	73 - 76	C
	70 - 72	C-
	67 - 69	D+
	63 - 66	D
	60 - 62	D-
	Below 60	F

**Extra Help:**

Additional help for this class is available, by prior arrangement, before and after school, and during periods 1 and 5. Please ask for help if the presentation and explanations given in class do not provide sufficient understanding of the material.

Source: [www.bls.gov/ooh/computer-and-information-technology/home.htm](http://www.bls.gov/ooh/computer-and-information-technology/home.htm)

<b>SHOW ME THE NUMBERS</b> <b>Predicted Job Growth for</b> <b>Select Computing Professions 2010–2020</b>		
Occupation	Predicted Growth	Median Pay 2010
Software Developer	30%	90,530
Database Administrator	31%	73,490
Network Systems Administrator	28%	69,160
Web Developer	22%	65,700
Computer Systems Analyst	22%	77,740
Information Research Scientist	19%	100,660