



Course Name: AP Computer Science A v20

Course Credit: 1.0

Course Estimated Completion Time: 10105

Course Description: The AP Computer Science A course is an introductory computer science course. A large part of the course involves developing the skills to write programs or parts of programs that correctly solve specific problems. The course also emphasizes the design issues that make programs understandable, adaptable, and when appropriate, reusable. At the same time, the development of useful computer programs and classes is used as a context for introducing other important concepts in computer science, including the development and analysis of algorithms, the development and use of fundamental data structures, and the study of standard algorithms and typical applications. In addition an understanding of the basic hardware and software components of computer systems and the responsible use of these systems are integral parts of the course.

Prerequisites: Algebra I and II recommended

Honors Lessons:

Course Profile (Includes Honors, if applicable)

Type of Assessment	Quantity	Location(s)
Teacher-graded	47	
Auto-graded	28	
Partial Auto-graded	1	
Discussion-Based (DBA)	6	
Collaboration		
Project-based	42	
Total Assessments	76	

Types of Assessments (Includes Honors, if applicable)

Type of Assessment	Available	Type of Assessment	Available
Multiple Choice	Yes	Essay	
Worksheets	No	Collaborative	
Web 2.0		Short Response	Yes
Project - Based	Yes	Labs	Yes
Self - Check		DBAs	Yes

Scope and Sequence

Segment 1:

- Variables and Expressions
- Strings and User Input
- Condition Statements
- Loops
- Methods
- Introduction to OOP and Classes
- Simple Objects
- Classes Revisited
- Technology and Society

Segment 2:

- Recursion
- Arrays: one and two-dimensional
- Inheritance & Polymorphism
- Abstraction & Interfaces
- Standard Algorithms to manipulate Arrays
- Sorting Algorithms
- Searching Algorithms
- Program Analysis & Exceptions