

## MODESTO CITY SCHOOLS COURSE OUTLINE

<b>Course Title</b>	AP Computer Science A OLL S1	AP Computer Science A OLL S2
<b>Course Number</b>	Oll54301	Oll54302
<b>Recommended Grade</b>	<input type="checkbox"/> 7 <input type="checkbox"/> 8 <input checked="" type="checkbox"/> 9 <input checked="" type="checkbox"/> 10 <input checked="" type="checkbox"/> 11 <input checked="" type="checkbox"/> 12	
<b>Duration</b>	<input type="checkbox"/> Quarter <input checked="" type="checkbox"/> Semester	
<b>Credit</b>	<input type="checkbox"/> 2.5 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> 10	
<b>Repeatable for Credit</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>Required for Graduation</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Meets Graduation Requirement</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>CALPADS Course Number</b>	9067	
<b>CALPADS Course Name</b>	Advanced Placement (AP) Computer Science A	
<b>Meets UC/CSU Requirements</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, which area? <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G	
<b>CTE Course</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>CTE Course Level</b>	<input type="checkbox"/> Introduction <input type="checkbox"/> Concentrator <input type="checkbox"/> Capstone N/A	
<b>Part of a Course Pathway</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, which pathway?	
<b>Credential Requirements</b>		
<b>Replaces</b>	N/A	
<b>Recommended Prerequisites</b>	N/A	
<b>Aligned to Standards Date</b>		
<b>Content Delivery Method</b>	<input type="checkbox"/> Instructor Led <input checked="" type="checkbox"/> Online Provider Modesto Virtual Academy	
<b>Other Information</b>		
<b>Board Approval Date</b>		
<b>Implementation Date</b>	Fall 2020	

**Course Description:**

**Required Text(s):** (Title, Publisher, Year):

**Supplementary Materials(s):**



**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	
<b>Total Assessments</b>	<b>76</b>	

**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