# OAKS CHRISTIAN ONLINE

# **AP Computer Science Syllabus**

# **Course Description**

This AP Computer Science course is equivalent to the first semester of a college level computer science course. The course involves developing the skills to write programs or part of programs to correctly solve specific problems. AP Computer Science 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.

This is a yearlong course consisting of 10 units. Upon successful completion students will receive 1 credit towards high school graduation.

## **Course Overview**

#### Semester 1

- Primitive Types
- Using Objects
- Boolean Expressions and if Statements
- Iteration
- Writing Classes

#### Semester 2

- Arrays
- ArrayList
- 2D Array
- Inheritance
- Recursion

# **Required Course Materials**

Please access the list of course materials from the OC Online book ordering system and order your materials as soon as possible. Oftentimes, course materials are on back order and you may experience a delay in receiving them, causing students to fall behind in their online coursework. When ordering used or rented materials, be careful that online access codes are also current.

## **Methods of Evaluation**

Students will demonstrate mastery through the following formative and summative assessments:

- 40% Assignments
- 10% Participation (Discussion Posts, Synchronous Sessions)
- 10% Quizzes
- 25% Final Exam
- 15% Unit Tests