



Course Syllabus
AP Computer Science A
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Course Description

Students will learn to design and implement computer programs that solve problems relevant to today's society, including art, media, and engineering. AP Computer Science A teaches object-oriented programming using the Java language and is meant to be the equivalent of a first semester, college-level course in computer science. It will emphasize problem solving and algorithm development, and use hands-on experiences and examples so that students can apply programming tools and solve complex problems.

This course will prepare students for the end-of-course AP Exam, which is scheduled on May 6, 2021..

Curriculum

We will be using Edhesive curriculum from the Amazon Future Engineers program. The AP Computer Science A course teaches fundamental programming topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and ethical and social implications of computing.

Unit Topics

Semester 1	Semester 2
1. Primitive Types	6. Array
2. Using Objects	7. ArrayList
3. Boolean Expressions and If Statements	8. 2D Array
4. Iteration	9. Inheritance
5. Writing Classes	10. Recursion
	11. AP Exam Prep

Student Forum

Students interact with their peers (both locally and around the world), edhesive course instructors, and teaching assistants in a moderated, online forum.

What You Can Expect of Your Instructor

The course instructor serves more as a facilitator of learning than as a traditional lecturer. The instructor is sensitive to the needs of new learners of sophisticated computer applications and has an understanding of the challenges associated with teaching and learning software applications.

What is Expected of Students

- Respect other students in the classroom
- Respect classroom and equipment
- Class Computers – Please do not change any settings, do not download anything from the Internet (Instant Messenger, games, etc.), and only use the Internet for approved activities from the instructor.
- Follow expectations and guidelines of UCHS students

Assessment

Grading is based on various coding activities, review questions, assignments, larger coding activities, and tests. Summative Assessments count for 70% of a student's grade and Formative Assessments count for 30% of a student's grade. Students may re-do/re-take assignments or projects to improve upon their learning.