P-TECH Advanced Placement Computer Science Principles
2021 - 2022

Mr. Hoffman

This class meets periods 1, 3 and 4 on alternating days throughout the school year.

AP Computer Science Principles

This is an Advanced Placement course administered by the College Board. Students will be assessed and scored by the College Board based on a test and a programming project. Students scoring a three or higher from the College Board will receive three college credits from most colleges and universities.

The course covers programming, using computing tools creatively, the fundamentals of networking and the internet, using and interpreting data, cybersecurity, the social impacts of computing, and other related topics.

Code.org

We will use the AP Computer Science Principles curriculum from Code.org as the basis of this course. For most of the year, the curriculum will be taught as two parallel classes each day:

- Programming -- Code.org units 3, 4, 5, 6, 7, 8.
- Everything else -- Code.org units 1, 2, 9 & 10.

AP assessments

- **Multiple choice exam** (70 questions); 12:00 - 2:00 PM, Monday, **May 9**, at PCTA. **70%** of AP score.
- **Create performance task**; due in class by Friday, **April 8** (end of 3rd quarter). Students will write a program of their own design *in class* and provide written responses to four prompts to explain the purpose and function of their program. **30%** of your AP score.

The AP course and test is fully funded by the Providence Public Schools. However, a **$40** deposit is required, which will be fully refunded immediately upon completion of the AP exam and performance task.

The Create performance task is submitted via College Board digital portfolio and scored by the College Board.

Grading breakdown

The exact percentages will vary per marking period, but a starting point for grading is:

- 50% -- Unit tests, projects and end of week quizzes.
- 50% -- Daily classwork grades.

Classwork and homework

Daily lessons are expected to be done during class time. In general, homework will not be assigned, given the amount of class time we have, but students are expected to make up work because of absences, and students will need to allocate time to study at home for quizzes and tests.

Plagiarism

Copying text or computer code without attribution is a serious matter in this class. The College Board has access to the best anti-cheating technology available and if they catch you inappropriately copying answers in your performance tasks, not only will you fail this course, you will bring down an extensive investigation of PCTA and PTech, which will risk the future of this program. This is serious business.

On the other hand, collaboration is an important part of programming, and we will often work in groups and pairs. We will work extensively to understand when it is appropriate to use and cite other work, and when it is necessary to create original work as an individual.

In particular, we will use a few strategies to discourage plagiarism:

- Nearly all work should be done in class.
- Documenting your process in longer projects in a development diary.
- Grades for both class assignments and official AP performance tasks depends on explaining in your own words how your program works and uses concepts from the course.