

How are AP CS A and AP CS P different?

|                            | AP CS A   | AP CS P  |
|----------------------------|---|--|
| Focus                      | Object-oriented programming, with concentration on problem solving and algorithm development, using the Java programming language   | Analyzing design, implementation, regulation, and marketing of digital and hardware tools that meet human needs and shape the evolution of our culture   |
| College Board Big Ideas    | Problem Solving, Algorithms, Data Structures, Program Design, Abstraction, Java is the language of instruction  | Design principles, Abstraction, Data and Information, Global Impact, Internet, Programming, Algorithms, Logic  |
| Taught in                  | E204  | A103   |
| Taught by                  | Mr. DeRuiter, Mr. Greenstein  | Mrs. Frazier   |
| Recommended Background     | Java Programming (get a recommendation from your teacher), good analytic skills   | Organization skills including the ability to infer generalizations from examples. Good collaboration skills.   |
| Homework load              | About 30 min/class day  | About 30 min/class day   |
| Programming Languages Used | Java  | A whole bunch! Our goal is not to learn a specific language's syntax, but to pick an ideal language for a specific goal and apply fundamental features of all languages, so we can read and edit it. We'll use script languages, object oriented languages, and several proprietary languages. Programming background is not needed. |
| How Assessed               | 4-5 tests per semester, plus final; reading and other quizzes; programs (most written in class), written work in problem solving and algorithm development                  | Reading questions; analysis of existing products (software and hardware); many quizzes and tests; participation in discussions and programming (largely collaborative); one final per semester; collaborative projects   |
| Career Path                | Computer Scientists, Computer Programmers, and other careers that require significant involvement with technology (such as engineers and scientists from other disciplines) | Software/Hardware Designers, <u>Managers</u> of projects using software/hardware, Entrepreneurs (New Business Developers), Publishers of digital media (including musicians, artists, journalists, scientists, mathematicians, computer scientists)  |
| AP Exam                    | First week in May: Half MC, Half Free Response (writing Java code)  | Two portfolio projects (one collaborative) due across the year, prior to May. May: MC only.  |

Most likely students will not be able to take BOTH courses. If you attempt to register for both APCSP and APCS A, you will be deprioritized.

*Have questions? Speak with the teachers of the classes. Java Programming is another option if you have no programming background and are interested in APCS A.*