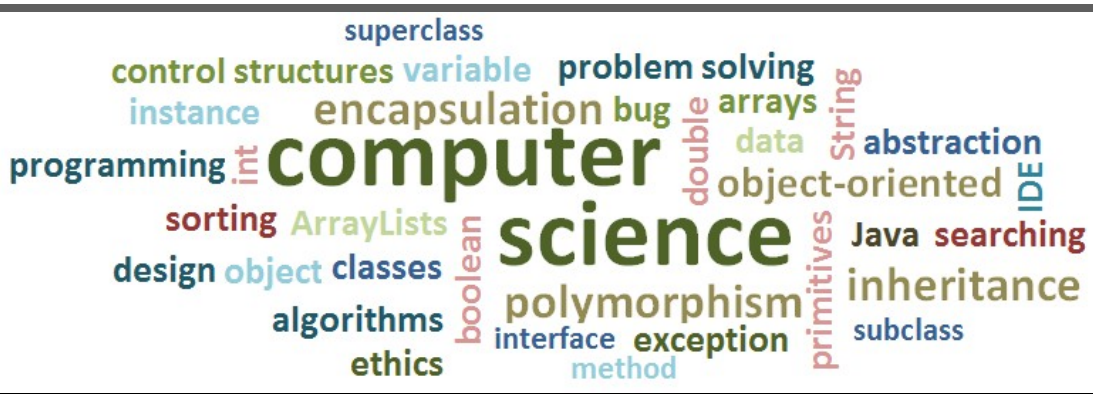
AP



Questions? Contact Mr. Buskey at Bruce.Buskey@lcps.org

- Equivalent to a first semester college-level computer science course
- Counts as a ***Mathematics OR Science*** elective; weighted 1.0; grades 10-12
- May earn college credit with an AP exam score of 3, 4, or 5
- Students should have successfully completed *Computer Math: Introduction to Computer Science*

Main Themes in AP Computer Science

- Object Oriented Programming using *Java*
- Inheritance, Encapsulation and Polymorphism
- Problem solving
- Program design
- Organization of data
- Approaches to processing data
- Ethics of computing

Assignments

- Frequent computer work outside of class is expected
- Expect to read and work independently
- Many programming labs & projects
- Expect a college-level workload
- Expect homework every day
- Expect a lot of vocabulary
- Expect a pre-course summer assignment

- Daily labs
- Frequent quizzes
- Individual work & projects
- Tests timed & modeled after the AP exam

AP Exam

- Given in May, 3 hours long
- 40 multiple choice (75 mins)
- 4 free response questions requiring code writing (105 mins)

More Information

Much more information for AP Computer Science is available at the College Board's AP Central website:

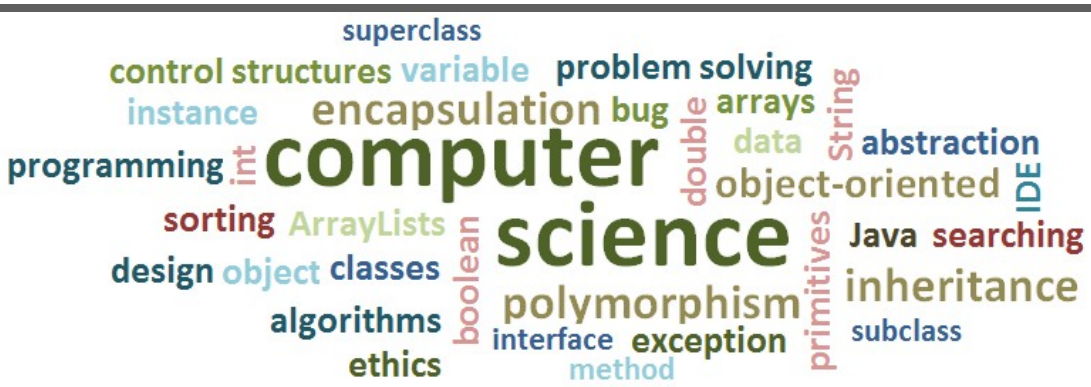
apcentral.collegeboard.com

The full course description can be viewed by scanning the following QR code:

AP Computer Science A is equivalent to a first-semester, college-level course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The AP Computer Science A course curriculum is compatible with many CS1 courses in colleges and universities.

College Board, 2016

Computer Math (Pre-AP Comp Sci)



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- No prior programming knowledge required
- Counts as a Mathematics elective; grades 10-12.
- Prerequisites for AP Computer Science
- **Students who have taken Java courses should talk with Mr. Buskey prior to signing up for this course**.

• Object Oriented Programming using *Java* • Problem solving • Program design • Organization of data • Graphics • Games • Audio-Visual	• Most work completed during class time. • Expect to read and work independently and as a group.	• Daily labs • Individual work & projects • Quizzes and tests
	• Many programming labs and projects • Time management	• Collaboration • Extensions and enhancements for advanced students

Computer math is intended to provide students with an introductory level to programming. The course introduces students to computer science with fundamental topics that include loops, arrays, data types, debugging, structure, graphics, developing logic skills, and several other topics. The course emphasizes both object oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems.