

Mobile App Design and Computer Coding: Syllabus

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Course description:

This course covers Mobile App Design and Development. Students will learn to design and develop mobile apps for web, iPhone, and other iOS devices. Students will learn the JavaScript and Swift programming languages, Apple's Xcode development tool, other code editors, and web browsers to build mobile apps from scratch. The goal is to enable students to independently produce fully functional app prototypes.

This course covers both design and coding.

Design includes topics like color, typography, use of space, layout, user characteristics, and user experience. It also includes making original graphics with Adobe Illustrator and Photoshop.

Coding includes the JavaScript and Swift programming languages, the Xcode IDE, finding and fixing bugs, variables, constants, expressions, statements, conditionals, loops, arrays, strings, functions, methods, data, and object-oriented programming.

Students will:

- Learn the benefits of coding and understand how coding works.
- Understand mobile design and development principles.
- Identify need and opportunity in app markets.
- Code web apps in HTML5, CSS3, JavaScript, and SVG. (PM class only)
- Learn the Swift programming language.
- Develop a working knowledge of Apple's Xcode app development tool.
- Incorporate sound, motion, maps, geolocation, and web elements into their apps.
- Use Adobe Illustrator to develop original icons and other graphics for their apps.

By the end of the course, successful students receive:

- Certificate of Achievement
- Letter of Competency listing skills learned and the degree of mastery achieved
- Employability skills
- Computer Literacy
- Job skills that will be beneficial for a lifetime
- Job placement assistance

Prerequisites:

- Students should know at least algebra and geometry (or IM-1 and IM-2).
- Students should know their way around a computer and keyboard.

Supplies:

- Pens, Pencils, and Paper
- Colored pencils and ruler
- Thumb drive to back up your work and take it home

Attendance Policies:

Just as with a real job, on time and regular attendance is mandatory. If you are running late or cannot attend class, please call me and let me know ahead of time. Your parents must call the absence hot line, **both** at your home school **and** at SVCTE:

SVCTE Student absence line
408-723-4260

If you have an excused absence, you will be allowed to make up the work. The student handbook defines excused absences (generally illness, medical, home school testing, and religious reasons).

Grading, Assignments, and Reports:

Grading will be based on three factors: technical skills, career readiness, and academic proficiency. Each factor will contribute 1/3 of your grade.

Career readiness will include, but is not limited to: participation, attendance, visual appearance, leadership, communication, listening, self-motivation, time management, on-time task completion, following directions, obeying rules, completing a resume, and making use of the college and career fair.

Technical skills include coding and drawing using Adobe Illustrator and the quality of your work.

Academics will include but are not limited to grades on writing assignments, discussions of current events, research, grammar and spelling, math, content of your apps, quizzes, tests, and group projects.

The big question: Would your instructor hire you? Have you met the characteristics of a professional computer programmer?

Your grade will be calculated as follows (subject to change):

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| Academic Assignments | 33% |
| Technical Projects | 33% |
| Employability | 33% |
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| A | 90–100% |
| B | 80–89% |
| C | 70–79% |
| D | 60–69% |
| F | < 60% |