

COMPUTER/COMPUTER SCIENCE COURSES

Ideal Course Sequence for Computer Science Classes

Year 1	Year 2	Year 3	Year 4
<ul style="list-style-type: none"> • Computer Programming I and • Computer Programming II 	<ul style="list-style-type: none"> • AP Computer Science Principles 	<ul style="list-style-type: none"> • AP Computer Science A • Cisco I 	<ul style="list-style-type: none"> • FVTC Courses • Youth Apprentice Classes • Cisco II

(Classes can be taken in any order.)

Keyboarding

.50 CR

Years 9-12

Prerequisite: None

#6005RW

Keyboarding is designed to teach the students to “touch type” while giving the student a working knowledge of the computer so that they will be able to type letters, reports and other business documents with accuracy and speed. Highly recommended for students that type at less than 30 words per minute.

Computer Applications

.50 CR

Years 9-10

Prerequisite: None

#6007 or 6007RW

In this class you will learn how to use Microsoft (Word, Excel, and PowerPoint) and Google products in a productive and professional capacity. Having these skills will make you more employable, but your knowledge and ability to use these programs will allow you to complete homework in high school and college better, faster, and more efficiently. Get these skills today, to be more marketable tomorrow.

**Office for the 21st Century AS
#6013 or 6013RW**

.50 CR - 1 Laude Point

Years 9-10

**Prerequisite: Middle School Teacher
Recommendation**



In this course, students will learn career-ready skills in Microsoft Office and an overview of Computer Science. Students will gain hands-on experience in Word, Excel, and PowerPoint that will prepare them to take Microsoft Office Specialty Certifications (MOS) at the end of each unit and could receive Advanced Standing at FVTC. Students can use these certifications on their resumes when they apply for jobs. Additionally, students will receive an introduction to computer science in which they will learn about various topics in the field of study. (Students can take either Office for the 21st Century or Computer Applications for the required graduation requirement, but students cannot take both.)

**Advanced Microsoft Office TC
#6053**

.50 CR - 1 Laude Point

Years 10-12

Prerequisite: Comp Apps or Office 21st



Students will learn intermediate skills in Word, Excel, and PowerPoint. In this Microsoft Office College Series course, students will learn lifelong computer skills in these programs. This class will prepare students to take the Microsoft Office Specialist certification exams, and it will prepare student to meet the college software competency requirements.

**Computer Animation/Game Design
#6057**

.50 CR

Years 10-12

Prerequisite: Multi-Media Web

This beginning animation course exposes students to the range of traditional and digital techniques used in 2-D or 3-D computer animation. In the first half of the class students will learn the principles of animation using basic theory and mechanics of their drawing skills. They will study the fundamental principles of character design, layout, and storyboarding. The second half of the class, students will also be exposed to the game and the app development process of game design. Students will create games while learning the basic programming that is involved in the game design process.

**Digital Video
#6061**

.50 CR

Years 9-12

Prerequisite: None

Do you like making videos? Digital Video class focuses on learning post-production software using Adobe Premiere and After Effects while learning the fundamental skills necessary to complete a high-quality video. This project-based class gives students the chance to create different kinds of videos using different techniques while having the opportunity to collaborate with other students in and out of class.

Multi-Media & Web Design #6071 .50 CR Years 9-12 Prerequisite: Comp. Apps or equivalent

Do you like working with computers and graphics? This is an introductory course for you in digital media. Students will use different techniques on how to edit images using Adobe products to use on the Web. The class will also cover an overview on how to create basic web pages using HTML and Computer Programming Concepts.

Adv. Multi-Media & Web Design #6073 .50 CR Years 10-12 Prerequisite: Multi-Media & Web Design


Do you want to do more with graphics? In this course students will dive in deeper on concepts in photo editing and webpage development. Students will apply this knowledge to a student developed project that is of student interest. Adobe Certification will be encouraged for students to work towards.

Computer Programming I #6069 .50 CR Years 9-12 Prerequisite: None

Are you ready to start to learn the basics of programming? Computer Programming I is an introductory course in computer programming that is approachable and engaging. This course will focus on basic programming concepts that all programming languages use while becoming familiar with the program development process. The class will start in Block base programming language such as SNAP and will transfer into text base programming using Python programming language.

Computer Programming II #6067 .50 CR Years 9-12 Prerequisite: Computer Programming I or AP Computer Science Principles

This class is a continuation of Computer Programming I. The class will continue in the Python programming language and instructs students correct programming structure and style. The topics covered include input, output, conditionals, looping, variables, lists, functions, and libraries. Structured programming and good style are emphasized.

AP Computer Science A #6121RW-6122RW  1 CR - 2 Laude Points Years 10-12 Prerequisite: None

This course is equivalent to a first-semester, college-level course in computer science for CS majors. The course introduces students to computer science using the industry-standard Java Programming language and presents fundamental topics that include problem solving. AP CS A has been described as one of the most challenging and rewarding courses offered at the AP level. It introduces students to the importance of resilience and project planning through the implementation of several large-scale and complex projects. The daily student-centered lesson plans emphasize practice through working on problems, group activities, and projects that help integrate the learning objectives.



AP Computer Science Principles
#6123RW-6124RW



1 CR - 2 Laude Points

Years 9-12

Prerequisite: Completion of Algebra

Are you looking for a hands-on engaging class to develop problem solving skills? Computer Science Principles introduces students to the foundational concepts of computer science and explores how computing and technology can impact the world. The class will be introduced to the concepts on digital information, how the Internet works, cyber security, data science, programming, and the global impact that computer science has on society.

Cisco Networking I

1 CR

Years 10-12

Prerequisite: Geometry

#9101-9102

Teaches students valuable Internet technology skills, including networking, Unix, Web design, and other IT essentials. The curriculum covers a broad range of topics from basics to how to build a network, to how to build a website, and more complex IT concepts, such as applying advanced trouble shooting.

Cisco Networking II

1 CR

Years 11-12

Prerequisite: Cisco Networking I

#9103

This is a continuation of Cisco Networking I. Topics covered include Spanning Tree Protocol, Virtual LANs, Domains, VLAN Trunk Protocol (VTP), Wide Area Networks and troubleshooting.

