

# Computer Science

<http://www.pacificu.edu/as/compsci>

## Computer Science Majors

Students interested in majoring in Computer Science should begin by taking **CS150 Introduction to Computer Science I** and the highest level math class possible (presumably Math226 Calculus I) in the Fall of their freshman year. CS150 is only offered during the fall semester and is required for ALL other CS classes in the major. Missing this class delays taking any other CS course in the major until a person's sophomore year. It is possible for someone to take Math125 Precalculus in the Fall and Math226 Calculus in the Spring of their freshman year without falling behind. We would like all CS majors to complete the mathematics requirements by the end of their sophomore year.

Note 1: **CS 121 Our Digital World**, **CS 122 Introduction to Digital Media** and **CS130 Introduction to Software Tools** are NOT appropriate first courses for anyone wishing to major in CS.

Note 2: **Math125 Precalculus** is a Corequisite for CS150 Introduction to Computer Science I. A student must be currently enrolled in or have completed Math125 (or its equivalent) by the start of CS150. Further, a grade of C or better in Math 125 is required for a student to enroll in CS250. A student who is placed into Math122 College Algebra is not eligible to enroll in CS150.

Scheduling template for the first two years of the Computer Science major:

### **Freshman Year**

<b>Fall</b>		<b>Winter III</b>		<b>Spring</b>	
CS150 Intro to CS I	(4)	Core Req (2)		CS250 Intro to CS II	(4)
Math226 Calculus I	(4)			Math240 Discrete Math	(4)

Core Req	(4)		Core Req	(4)
First-Year Seminar	<u>(4)</u>		Core Req	(4)
<b>Total:</b>	<b>16</b>	<b>2</b>		<b>16</b>

### Sophomore Year

<b>Fall</b>		<b>Winter III</b>		<b>Spring</b>	
CS300 Data Structures	(4)	Core Req (2)		Upper division CS course	(4)
Core Req	(4)			Math 207/306*	(4)
Core Req	(4)			Core Req	(4)
Elective	<u>(4)</u>			Elective	<u>(4)</u>
<b>Total:</b>	<b>16</b>	<b>2</b>			<b>16</b>

\*Note: Math 301 can also be used to satisfy the Computer Science Major. Math 301 is offered alternate years. Check the online class schedule for availability.

Note: Anyone thinking about trying to complete the Computer Science major in three years should talk directly to a Computer Science faculty member to see if this is possible.

### Computer Science Minors

Students interested in minoring in Computer Science need to have completed Math125 Precalculus and CS250 Introduction to Computer Science II by the end of their sophomore year and completed at least one upper division course by the end of their junior year. Students completing the Math125 and CS250 requirements during their junior year will need to take three upper division electives during their senior year.

## **Introductory level Computer Science courses**

**CS121 (Our Digital World) and CS 122 (Introduction to Digital Media)** are intended to be an introduction to computers and the Internet from both a hardware and a software perspective. These classes will cover the latest computer trends and introduce students to a wide variety of topics that they can use in whatever subject area they plan to pursue. There is no prerequisite for these courses; they are intended for students wishing to become more at ease with computers, the Internet, software, and hardware. CS 122 is required for the Integrated Media major.

Note 1: CS 121 and CS 122 are NOT appropriate courses for a student intending to major in Computer Science.

**CS 130 Introduction to Software Tools** is intended to give students the ability to manipulate, analyze, graph, and report on data using software such as: Excel, R and Word. Students majoring in a science, business, psychology, and sociology will find this course very useful.

Note 2: CS130 is NOT an appropriate course for a student intending to major in Computer Science.

**CS150 Introduction to Computer Science I** is intended to teach the fundamentals of computer programming. While it is the first course for the CS major, it is also appropriate for any student who is interested in programming since the course assumes no previous programming experience. This course is required for the Mathematics and Bioinformatics majors. It can be used towards a major in Physics and Applied Science and is beneficial for students majoring in any of the Sciences, Integrated Media, Business, and Economics.