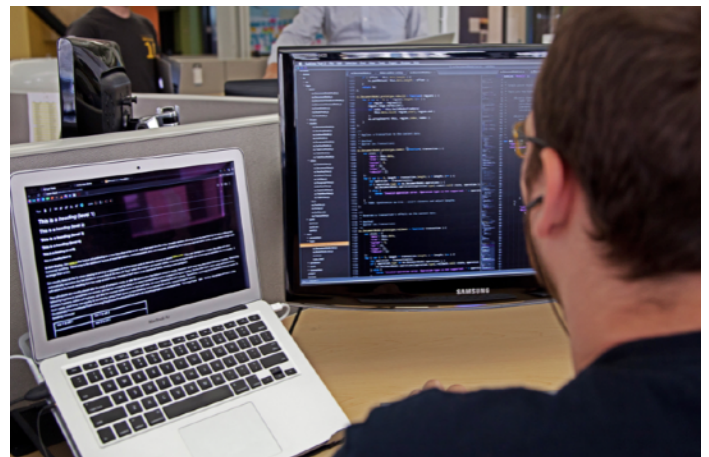




Computer Science is the study of technology, computers, information/data, programming, gaming, networking, automation, etc. From designing a video game to programming satellites, computer scientists use science, math, and technology to become creators, instead of merely consumers, of the technology. The Computer Science Pathway engages students in real-world activities like creating a mobile app and using automation to process and analyze DNA-sequence data. These projects engage students in computational thinking, challenge them to think big, and help illustrate how intricately computer science is woven into our society.

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Advanced Education</b>
<b>Computer Science</b>	Computer Science Essentials	-Computer Science Principles			<b>College Campus Experience</b> Clas-C209, Biol-L105, Chem-C105/125, Chem-C100, Math-M118, Eng-W131, Psy-P103, Spch-S121, Eng-L202, Hist-H113, Hist-H105, Phil-P100, Phil-P140, Info-I101, Acct-211, Educ-108, Art-131, Comm-110  <b>Advanced/AP Courses</b> -AP Statistics, AP Calculus
<b>English</b>	-English 9 -English 9 Honors	-English 10 -English 10 Honors	-English Composition -DC English Composition	-American Literature -DC American Literature	
<b>Math</b>	-Algebra 1	-Geometry -Honors Geometry	-Algebra 2 -Honors Algebra 2	-Pre Calculus	
<b>Science</b>	-Biology	-Chemistry 1 -Environmental Science -Physics	-Environmental Science -Physics -AP Chemistry	-Physics -AP Chemistry	
<b>Social Studies</b>	-World Geography -Civics	-World History -AP World History	-US History -AP US History	-Government -DC Government and -Economics -DC Economics	

<b>Required Electives</b>
2 semesters of fine arts
2 semesters of physical education
1 semester of digital citizenship
1 semester of health
6 semesters of one foreign language or 4 semesters in two foreign languages





## Overview

Computer science careers involve the design, development, support and management of hardware, software, multimedia and systems integration services. In addition to careers in the IT industry, IT careers are available in every sector of the economy from Financial Services to Medical Services, from Sports to Engineering and Environmental Services. Anyone preparing for an IT career should have a solid grounding in math and science.

## Employment Outlook

Employment is projected to grow 12 percent over the next decade, in part due to a greater emphasis on cloud computing, the collection and storage of big data, more everyday items becoming connected to the internet. The median annual wage for computer and information technology occupations is \$79,390, ranging from \$46,620 for computer user support specialists to \$98,430 for computer network architects.

## Possible Careers

- Computer and Information Systems Managers
- Computer and Information Research Scientists
- Aerospace Engineering and Operations Technicians
- Computer, Automated Teller, and Machine Repairers
- Computer Systems Analysts
- Information Security Analysts
- Computer-Controlled Machine Tool Operators
- Computer Programmers
- Software Developers, Applications
- Software Developers, Systems Software
- Database Administrators
- Network and Computer Systems Administrators
- Computer Network Architects
- Computer User Support Specialists
- Computer Network Support Specialists
- Computer Occupations, All Other
- Computer Systems Engineers/Architects
- Computer Hardware Engineers
- Electronics Engineers, Except Computer
- Computer Science Teacher
- Multimedia Artists and Animators
- Computer Operators
- Data Entry Keyers
- Office Machine Operators
- Computer Machine Tool Programmers

**Table 1: Average starting salaries of Class of 2012 graduates, by field of major**

Field of major	Average starting salary
Engineering	\$62,655
Computer science	59,221
Business	53,900
Health sciences	49,196
Communications	43,717
Math and sciences	42,471
Education	40,668
Humanities and social sciences	36,988

**Table 4: Computer science and math bachelor's-level occupations**

Occupation	Projected job openings, 2010-20	Median annual wage, 2012	On-the-job training	Work experience
Computer systems analysts	222,500	79,680	None	None
Software developers, applications	197,900	90,060	None	None
Software developers, systems software	168,000	99,000	None	None
Network and computer systems administrators	155,300	72,560	None	None
Computer programmers	128,000	74,280	None	None
Information security analysts, Web developers, and computer network architects	110,300	86,170, 62,500, and 91,000	None	1 to 5 years
Database administrators	52,700	77,080	None	1 to 5 years
Operations research analysts	30,000	72,100	None	None
Actuaries	18,900	93,680	Long-term	None

Source: U.S. Bureau of Labor Statistics (job openings, Employment Projections program; median annual wages, Occupational Employment Statistics program).