

Careers For Students Majoring In...

COMPUTER SCIENCE



The Career Center

Saint Mary's College of California

What Can I Do With A Major In Computer Science?

The field of computer science is constantly changing. The areas listed below do not exhaust possible career options.

Programming

Areas

Systems
Scientific Applications
Business Applications
Intelligence
Warehousing
Information Delivery
Maintenance
Project Management

Employers

Computer vendors
Software and computer companies
Any large organization including: Bank, Retail chains, Manufacturers, Universities, Government agencies, Management consulting firms
Contract and temporary employers
Research laboratories

Strategies

- Gain relevant experience through internships or co-ops.
- Develop an attention to detail and a flair for creativity.
- Learn to work well with a team and to meet deadlines.
- Supplement computer degree with courses in business, science, or engineering.
- Stay current on programming languages.
- Earn a master's degree for upper level positions.
- Seek the Certified Computing Professional designation by completing a series of exams and experiential requirements.

Systems Development

Areas

Analysis

Design

Support

Quality Assurance

Specialty Systems

Database

Client-Server

Expert

Employers

Banks and financial institutions

Insurance companies

Consulting firms

Manufacturers

Local, state, and federal government

Computer companies

Research institutions

Strategies

- Develop strong interpersonal skills. Learn to communicate effectively with technical and non-technical colleagues.
- Gain programming experience. Many analysts begin their careers as programmers.
- Become an effective problem solver.
- Take business courses. Earn an M.B.A. degree for advanced positions.
- Plan to continually educate self on new computer languages and technology.

Network Technology

Areas

Installation and Maintenance

Administration

Employers

Variety of organizations and industries

Strategies

- Work in university computer labs.
- Develop good communication skills and an interest in helping others.
- Gain knowledge in a variety of computer areas including minor programming, software, and hardware.
- Stay abreast of the latest technology and software.
- Earn certifications in networking and computer security

Internet

Areas

Programming

Software or Web Page Design

Systems Analysis

Hardware Production

Employers

Network access points

Backbone operators

Online Service or Internet Service providers

Computer/equipment vendors

Internet-related companies including: Browsers, Search engines, Website design services, Large businesses

Strategies

- Gain experience as a webmaster through part-time jobs, internships, or volunteering to design web pages for student organizations.
- Learn web-related programming languages.
- Take graphic design courses to develop creativity.
- Learn to communicate and work well with others in a team by participating in group projects or student organizations.

- Earn a master's degree in computer science for advanced opportunities in programming, analysis, or hardware/software design.

Consulting

Areas

System Installation
System Implementation
Training

Employers

Consulting firms
Self-employed

Strategies

- Obtain a strong technical knowledge of computers, a background in business management, and experience as a systems analyst.
- Learn various programming languages and operating systems.
- Develop exceptional analytical and interpersonal skills.

Education

Areas

Teaching
Instructional Technology

Employers

Public and private schools, K-12
Colleges and universities

Strategies

- Certification required for public school teaching.
- Earn a doctoral degree in computer science for post-secondary teaching.
- Earn a graduate degree in information technology or a related field for instructional technology.
- Develop a research specialty for university teaching.

- Gain experience working with other students through tutoring or positions in computer labs.

Non-Technical

Areas

Customer/Product Support
Technical Writing
Sales and Marketing

Employers

Software/hardware manufacturers
Retail stores
Software vendors

Strategies

- Develop excellent communication skills and an interest in helping customers solve problems.
- Work in university computer labs.
- Supplement curriculum with technical writing courses to develop skills.
- Seek related work experiences.

General Information

- Complete informational interviews with current computer science professionals to help establish career goals.
- Having related experience is critical to most employers that hire computer science majors. Obtain an internship, co-op, or part-time job in a relevant area to increase employability.
- Obtain vendor specific certifications or networking certifications to gain a competitive edge.
- Develop strong interpersonal, communication, and other "soft skills." Learn to work well on a team.
- Programming and consulting may go hand-in-hand. Many occupations in these areas have responsibilities that overlap.

Prepared by the Career Planning staff of Career Services at The University of Tennessee, Knoxville.

Career Exploration

IEEE Computer Society
http://www.computer.org/portal/web/buildyourcareer/getting_started

Occupational Outlook Handbook
Database Administrators, and Computer Scientists
<http://stats.bls.gov/oco/ocos042.htm>

Occupational Outlook Handbook
Computer Programmers
<http://stats.bls.gov/oco/ocos110.htm>

Princeton Review
Internet/Intranet Technologies Manager
www.princetonreview.com/cte/profiles/dayInLife.asp?careerID=178

Software Developer
www.princetonreview.com/cte/profiles/dayInLife.asp?careerID=145

Web Programmer
www.princetonreview.com/cte/profiles/dayInLife.asp?careerID=217

Systems Administrator
www.princetonreview.com/cte/profiles/dayInLife.asp?careerID=209

Network Engineer
www.princetonreview.com/cte/profiles/dayInLife.asp?careerID=205

Computer Engineer/Systems Analyst
www.princetonreview.com/cte/profiles/dayInLife.asp?careerID=42

Telecommunications Specialist
www.princetonreview.com/cte/profiles/dayInLife.asp?careerID=155

Occupational Outlook Handbook
www.bls.gov/oco/
Click on "C" for computer science related careers

O'Net-
<http://online.onetcenter.org/find/family?f=15&g=Go>

So you Want to be a Computer Game Developer
www.makegames.com/

Exploring Majors

What Can I Do With a Major in...
University of Delaware
<http://www.udel.edu/CSC/cis.html>

IEEE Computer Society
<http://www.computer.org/portal/web/buildyourcareer/careerwatch>

JOB POSTINGS

SMC Student Job Search - www.stmarys-ca.edu/studentjobs

IEEE Computer Society
<http://careers.computer.org/search/>

Computer World
<http://itjobs.computerworld.com/>

IEEE Computer Society
<http://www.computer.org/portal/web/careers>

IEEE Computer Society
<http://www.ieee.org/web/careers/home/index.html>

Intel
www.intel.com/jobs/index.htm?iid=ftr+jobs

Video Game Job Sites

Interactive Selection (video game)
www.games-jobs.com/

Games Recruit
www.gamesrecruit.com/

Games-Match.com
www.games-match.com

Gamesutra
www.gamasutra.com/

Professional Associations

IEEE Computer Society
<http://www.computer.org>