

COMPUTER SCIENCE

What is Computer Science? (from <http://www.uncwil.edu/stuaff/career/Majors/computer.htm>)

“Computer Science is the systematic study of computing systems and computation. The body of knowledge resulting from this discipline contains theories for understanding computing systems and methods; design methodology, algorithms and tools; methods for the testing of concepts; methods of analysis and verification; and knowledge representation and implementation.”

What is this career like? (from <http://www.bls.gov/oco/ocos042.htm>)

“The rapid and widespread use of computers and information technology has generated a need for highly trained workers proficient in various job functions. These computer specialists include computer scientists, database administrators and network systems and data communication analysts. Job tasks and occupational titles used to describe these workers evolve rapidly and continually, reflecting new areas of specialization or changes in technology, as well as the preferences and practices of employers.” Learn more about computer occupations by going to <http://www.bls.gov/oco/ocos042.htm>.

Related Career Titles (from <http://www.uncwil.edu/stuaff/career/Majors/computer.htm>)

Accountant	Numerical Analyst
Contract Admin.	Systems Engineer
Information Scientist	Compensation/Benefits Admin.
Research Analyst	Engineer
Actuary	Operations Research Analyst
Cost Estimator/Analyst	Systems Programmer
Inventory Control Specialist	Computer Consultant
Risk & Insurance Specialist	Engineering Lab Technician
Aerospace Engineer	Physicist
Cryptographer/Cryptologist	Teacher: Science/Math/Computers
Investment Banker	Computer Engineer
Risk Analyst	Environmental Technologist
Air Traffic Controller	Pollution Meteorologist
Data Control Admin.	Technical Support Rep.
ISO 2000 Specialist	Computer Facilities Manager
Robotics Programmer	Estate Planner
Applications Programmer	Production Manager
Data Processing Mgr.	Technical Writer
Market Research Analyst	Computer Installation & Test Specialist
Satellite Communications Specialist	External Auditor
Applied Science Technologist	Production Support Specialist
Database Manager	Transportation Planner

Mathematician	Computer Marketing/Sales Rep
Software Development Specialist	Financial Auditor
Artificial Intelligence Programmer	Psychometrician
Demographer	Treasury Management Specialist
Media Buyer	Computer Programmer
Software Engineer	Financial Consultant
Astronomer	Public Health Statistician
Econometrician	Underwriter
Meteorologist	Computer Scientist
Software Support Specialist	Financial Manager
Investment Manager	Purchasing/Contract Agent
Economist	Urban Planner
Mortgage Researcher	Computer-Aided Design Tech.
Statistician	Hydro Geologist
Biometrician	Quality Assurance Analyst
EDP Auditor	Value Engineer
Network Programmer	Consumer Loan/Credit Officer
Systems Analyst	Hydrologist
Commodity Manager	Rate Analyst
Employee Relations Specialist	Weight Analyst

How do you get ready? (from <http://career.utk.edu/students/majors.asp>)

- Complete informational interviews with 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.

Related Major Skills (from <http://www.uncwil.edu/stuaff/career/Majors/computer.htm>)

Abstract and formal reasoning	Programming language concepts
Knowledge of operating systems	Multi-tasking
Testing	Analyzing
Mathematical skills	Problem-solving
Organizing/simplifying	Logical thinking
Detail oriented	Thoroughness
Work independently and in teams	Advanced quantitative abilities

Statistical analysis	Designing systems
Written and oral communication skills	Marketing concepts
Research	Classifying/systemizing
Efficiency	Systematic
Critical thinking	JavaScript

What about the future? (from <http://www.bls.gov/oco/ocos042.htm>)

Computer scientists and database administrators are projected to be some of the fastest growing occupations over the next decade. Strong employment growth, combined with a limited supply of qualified workers, will result in excellent employment prospects for this occupation and a high demand for their skills.

Employment of these computer specialists is expected to grow as organizations continue to adopt and integrate increasingly sophisticated technologies. Job increases will be driven by very rapid growth in computer systems design and related services, which are projected to be some of the fastest growing industries in the U.S. economy.

The demand for networking to facilitate the sharing of information, the expansion of client-server environments, and the need for computer specialists to use their knowledge and skills in a problem-solving capacity will be major factors in the rising demand for computer scientists and database administrators. Firms will continue to seek out computer specialists who are able to implement the latest technologies and apply them to meet the needs of businesses as they struggle to maintain a competitive advantage.

As technology becomes more sophisticated and complex, however, these positions will demand a higher level of skill and expertise from their employees. Individuals with an advanced degree in computer science or computer engineering or with an MBA with a concentration in information systems should enjoy favorable employment prospects. College graduates with a bachelor's degree in computer science, computer engineering, information science or MIS also should enjoy favorable prospects, particularly if they have supplemented their formal education with practical experience. Because employers continue to seek computer specialists who can combine strong technical skills with good business skills, individuals with a combination of experience inside and outside the IT arena will have the best job prospects.

In addition to growth, many job openings will arise from the need to replace workers who move into managerial positions or other occupations or who leave the labor force.

For a more detailed employment outlook of computer science occupations, refer to <http://www.bls.gov/oco/oco1002.htm>.

Available at Albright College Career Development Center's Resource Library

- Great Jobs for Computer Science Majors, by Jan Goldberg
- Career Opportunities in Computers and Cyberspace, by Harry Henderson
- Careers for Computer Buffs and Other Technological Types, by Marjorie Eberts and Margaret Gisler
- Careers for Cybersurfers and Other Online Types, by Marjorie Eberts and Rachel Kelsey
- Careers for Introverts and Other Solitary Types, by Blythe Camenson
- Careers for Geniuses and Other Gifted Types, Jan Goldberg
- Careers for Puzzle Solvers and Other Methodical Thinkers, by Jan Goldberg
- Careers for Scientific Types and Others with Inquiring Minds, by Jan Goldberg
- Opportunities in Adult Education Careers, by Blythe Camenson
- Opportunities in Computer Careers, by Julie Kling Burns
- Opportunities in High Tech Careers, by Deborah Yanuck and Gary Golter
- Opportunities in Library and Information Science Careers, by Kathleen de la Pena McCook
- Opportunities in Research and Development Careers, by Jan Goldberg
- Opportunities in Teaching Careers, by Janet Fine
- Opportunities in Technical Education Careers, by Robert Connelly
- Opportunities in Technical Writing and Communication Careers, by Jay R. Gould and Wayne A. Losano
- Opportunities in Telecommunications Careers, by Jan Bone
- Opportunities in Training and Development Careers, by Edward E. Gordon, Catherine M. Petrini, and Ann P. Campagna

Disclaimer

Links to Internet sites are provided for your convenience and do not constitute an endorsement by Albright College or the Career Development Center.

Links found at <http://www.uncwil.edu/stuaff/career/Majors/computer.htm>.

Job and Internship Search Links

- Tech-Centric <http://www.tech-centric.net>
- Just Tech Jobs - searchable by skill <http://www.justtechjobs.com>
- Jobs for programmers - 6000 employers <http://www.prgjobs.com>
- Career Marketplace - Technical Jobs and Job Sites <http://www.careermarketplace.com>
- Developers.Net - Great jobs and career information for developers. Over 30,000 jobs in a searchable database on this site! <http://www.developers.net>
- High Tech Jobs Online <http://www.dice.com>
- Java Jobs <http://javajobs.com>
- Computerwork.com <http://www.computerwork.com>
- Society for Technical Communication <http://www.stc.org/index.asp>
- Computer Jobs <http://www.computerjobs.com>
- Code-Jobs.com <http://www.code-jobs.com>
- PlanetRecruit.com: the International Channel <http://www.planetrecurit.com/channel/int>

Career Planning Links:

- Vocational Information Center <http://www.khake.com/page17.html>
- Occupational Outlook Handbook (system analysts, computer scientists, database administrators) <http://stats.bls.gov/oco/ocos042.htm>
- Occupational Outlook Handbook (computer programmers) <http://www.bls.gov/oco/ocos110.htm>
- Career Guide: Decoding the Information Security Profession <https://www.isc2.org/download/careerguide05.pdf>

Professional Associations Links:

- Internet Society <http://www.isoc.org>
- Association for Women in Computing <http://www.awc-hq.org>
- Independent Computer Consultants Association <http://www.icca.org>
- The System Administrators Guild <http://sageweb.sage.org>
- IEEE Computer Society <http://www.computer.org/pubs/computer/career/career.htm>
- Computing Research Association <http://cra.org>
- American Mathematical Society <http://www.ams.org>
- Society for Industrial and Applied Mathematics <http://www.siam.org>

Miscellaneous Links:

- IBM <http://www-1.ibm.com/employment>
- Lucent Technologies <http://www.lucent.com>
- Microsoft <http://www.microsoft.com>
- SAS <http://www.sas.com>