Introduction

As the advancement of computers and technology continue to grow, the discipline of computer science has enjoyed similar growth. Computers are used in a variety of settings including; manufacturing, banks, management, businesses, communications and farms. Computers have diversity in applications which allow a wide range of professions. If you are talented in mathematics and can reason logically about complex matters, computer science is the major for you.

Functional Skill Set for Computer Science Majors

- Abstract and Formal Reasoning
- Knowledge of Operating Systems
- Testing
- Mathematical Skills
- Organizing/Simplifying
- Detail-oriented
- Work independently and in teams
- Statistical Analysis
- Written and oral communication skills
- Research
- Efficiency
- Critical Thinking
- Programming Language Concepts
- Multi-tasking
- Analyzing
- Problem-solving
- Logical thinking
- Thoroughness
- Advanced Quantitative Abilities
- Designing systems
- Marketing concepts
- Classifying/Systemizing
- Systematic
- JavaScript
Related Career Titles for Computer Science Majors

- Account Executive
- Applications
- Applications Development Manager
- Auxiliary Equipment Operator
- Business
- Business owner
- Capacity Planning
- Coder
- Communications
- Communications Specialist
- Comp. Sales/Marketing Rep
- Computer Aided Designer
- Computer Applications Engineers
- Computer Center Tech
- Computer Engineer
- Computer Graphics Artists
- Computer Operations/Manager
- Computer Operator
- Computer Research Scientist
- Computer Scientist
- Computer Training Specialist
- Console Operator
- Consultant
- Contract
- Course Instructor
- Customer Support Rep
- Data Base
- Data Base Engineering
- Data Communications Manager
- Data Entry Operator
- Data Processing Equipment Repairers
- Database Manager
- Design Engineer
- Director, Data Processing
- Documentation Librarian
- Drafter
- Educational Media Technician
- Electrical Engineer
- Equipment Dealer
- Ergonomics (Human Factors)
• Fabricator
• Field Engineering
• Field Service Representative
• Graphics Design Operator
• Hardware Engineer
• Industrial Engineer
• Info Security Managers
• Instructional Materials Designer
• Job Control Clerk
• Librarian
• Line Supervisor
• Manager, Database 1719205
• Manufacturing Engineer
• Manufacturing Systems Specialist
• Manufacturing-Central Engineer
• Marketing Analyst
• Marketing Researcher
• Mechanical Engineer
• MIS Director
• Network Administrator
• Network Analyst
• Operations Manager
• Operations Manager
• Operations Programmer, Developer
• Operations Research Analyst
• Planning Manager
• Product Assurance Engineer
• Product Manager
• Production Manager
• Programmer
• Project Manager
• Retail Store Manager
• Sales Associate
• Sales Marketing manager
• Sales/Marketing Engineer
• Scientific Research
• Secondary Education Teacher
• Service Manager
• Service Technician
• Software Designer
• Software/Hardware Designer
• Support
• Systems
• Systems Analyst
• Systems Designer
• Systems Engineer
• Systems Support 1712
• Technical Specialist
• Technical Writer
• Telecommunications Specialist
• University Professor
• Webmaster

Some Organizations that Typically Employ Computer Science Majors:

• Arts/Entertainment
• Banks
• Business and Administration
• Central Intelligence Agency
• College & Universities
• Computer Consultant Firms
• Computer Corporations
• Construction
• Consulting Firms
• Data Processing Firms
• Department of Commerce
• Department of Defense
• Department of Energy
• Department of Human Services
• Department of the Air Force
• Department of the Army
• Department of the Navy
• Elementary & Secondary Schools
• Engineering Firms
• Financial Firms
• Government
• Home
• Hospitals
• Industry Private Sector
• Insurance Companies
• International Agencies
• Manufacturing Firms
• Marketing Research Depts. & Firms
• Medicine
• Military
- National Security Agency
- Professional & Technical Journals
- Publishing/communications
- Research & Development Firms
- Telecommunications
- Test Development corporation
- Transportation
- Utilities Companies
- Veterans Administration
- Weather Bureaus

**Start a Strategic Plan**

Participate in internships.
Complete field experience placements and day on the job.
Get first-hand experience through internships or co-ops.
Develop 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 technology.
Stay current on programming languages.
Earn a master’s degree for upper level positions.
Seek the Certified Computing Professional designation by passing a series of exams and experience requirements.
Develop interpersonal skills; must 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 the M.B.A. degree for advanced positions.
Plan to continually educate self on new computer languages and technology.
Work in university computer labs.
Develop communication skills and interest in helping others.
Gain knowledge in a variety of computer areas including minor programming, software, hardware, etc.
Plan to stay abreast of latest technology and software.
Gain experience as webmaster through part-time jobs, internships, or volunteering to design web pages for student organizations.
Learn web-related programming languages.
Develop a flare for 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, hardware/software engineering, etc.
Obtain a strong technical knowledge of computers 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.
Certification required for public school teaching.
Earn a doctoral degree in computer science for post-secondary positions.
Develop a research specialty.
Gain experience working with other students through tutoring or positions in computer labs.
Develop excellent communication skills; must be interested in helping customer solve problems.
Work in university computer labs.
Take technical writing courses to develop skills.
Seek related work experience through part-time jobs.

Professional Organizations and Associations for Computer Science Majors

Association for Computer Operations Management
742 E Chapman Ave
Orange, CA  92866
http://www.arcat.com/index.html

Information Systems Consultants Association
PO Box 467190
Atlanta, GA  30346

Association of Information Technology Professionals
315 S. Northwest Hwy
Park Ridge, IL  60068
http://www.aiotp.org

National Association of Computer Consultant Businesses
1250 Connecticut Ave NW  8th Floor
Washington DC  20036

Women in Technology International
4641 Burnet Ave.
Sherman Oaks, CA  91403
http://www.witi.com/index-c.shmtl

American Society for Information Science (ASIS)
8720 Georgia Ave  Suite 501
Silver Springs, MD  20910-3602
http://asis.org
Association for Systems Management
24587 Bagley Road
Cleveland, OH 44138

Association of Independent Information
38 Bunkerhill Drive
Huntington, NY 11743

Data Processing Management Association
505 Busse Highway
Parkridge, IL 60068

Association of Records Managers & Administrators, Inc. (ARMA)
4200 Somerest Dr Suite 215
Prairie Village, KS 66208
http://arma.org/

Operations Research Society of America (ORSA)
Mount Royal Guilford St
Baltimore, MD 21202

IEEE Computer Society
http://www.computer.org/pubs/computer/career/career.htm

Computing Research Association
http://www.cra.org

IBM
http://www-1.ibm.com/employment

Intelligent Information Systems (IIS)
http://www2.renewal-iis.com

Microsoft
http://www.microsoft.com/ms.htm

SAS
http://www.sas.com

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# COMPUTER SCIENCE

## What can I do with this major?

The field of computer science is constantly changing. The areas listed below do not exhaust possible career options. See also *What Can I Do With This Major in Management Information Systems*.

<table>
<thead>
<tr>
<th>AREAS</th>
<th>EMPLOYERS</th>
<th>STRATEGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROGRAMMING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systems</td>
<td>Computer vendors</td>
<td>Gain relevant experience through internships or co-ops.</td>
</tr>
<tr>
<td>Scientific Applications</td>
<td>Software and computer companies</td>
<td>Develop an attention to detail and a flair for creativity.</td>
</tr>
<tr>
<td>Business Applications</td>
<td>Any large organization including:</td>
<td>Learn to work well with a team and to meet deadlines.</td>
</tr>
<tr>
<td>Intelligence</td>
<td>Banks, retail chains, manufacturers, universities, and government agencies</td>
<td>Supplement computer degree with courses in business, science, or engineering.</td>
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<tr>
<td>Warehousing</td>
<td>Management consulting firms</td>
<td>Stay current on programming languages.</td>
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<tr>
<td>Information Delivery</td>
<td>Contract and temporary employers</td>
<td>Earn a master’s degree for upper level positions.</td>
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<tr>
<td>Maintenance</td>
<td>Research laboratories</td>
<td>Seek the Certified Computing Professional designation by completing a series of exams and experiential requirements.</td>
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<tr>
<td>Project Management</td>
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<tr>
<td>SYSTEMS DEVELOPMENT</td>
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<tr>
<td>Analysis</td>
<td>Banks and financial institutions</td>
<td>Develop strong interpersonal skills. Learn to communicate effectively with technical and non-technical colleagues.</td>
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<tr>
<td>Design</td>
<td>Insurance companies</td>
<td>Gain programming experience. Many analysts begin their careers as programmers.</td>
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<td>Support</td>
<td>Consulting firms</td>
<td>Become an effective problem solver.</td>
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<tr>
<td>Specialty Systems</td>
<td>Local, state, and federal government</td>
<td>Plan to continually educate self on new computer languages and technology.</td>
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<tr>
<td>Database</td>
<td>Computer companies</td>
<td></td>
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<tr>
<td>Client-Server</td>
<td>Research institutions</td>
<td></td>
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<tr>
<td>Expert</td>
<td></td>
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<tr>
<td>NETWORK TECHNOLOGY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installation and</td>
<td>Variety of organizations and industries</td>
<td>Work in university computer labs.</td>
</tr>
<tr>
<td>Maintenance Administration</td>
<td></td>
<td>Develop good communication skills and an interest in helping others.</td>
</tr>
<tr>
<td>Administration</td>
<td></td>
<td>Gain knowledge in a variety of computer areas including minor programming, software, and hardware.</td>
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<td>Stay abreast of the latest technology and software.</td>
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<td></td>
<td>Earn certifications in networking and computer security.</td>
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<tr>
<td>AREAS</td>
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</tr>
</tbody>
</table>
| **INTERNET**  | Network access points  
Programming  
Software Design  
Systems Analysis  
Hardware Production  
Web Page Design  | Consulting firms  
Self-employed  | 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 ad-
vanced opportunities in programming, analysis, or 
hardware/software design. |
| **CONSULTING**  | Consulting firms  
Self-employed  | 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**  | Public and private schools, K-12  
Colleges and universities  | 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**  | Software/hardware manufacturers  
Retail stores  
Software vendors  | 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.