**Roanoke College**  
*Department of Mathematics/Computer Science/Physics*  
Computer Science Career Advising Guide

<table>
<thead>
<tr>
<th>MAJORS</th>
<th>SKILLS/ATTRIBUTES</th>
<th>RELATED OCCUPATIONS</th>
<th>EXTRACURRICULAR ACTIVITIES</th>
</tr>
</thead>
</table>
| Computer Science B.S. | Problem solving  
 Logical reasoning  
 Aptitude for abstract  
 Ability to analyze  
 Attention to detail and accuracy  
 Patience and persistence  
 Creativity  
 Communication skills (both oral and written)  
 Interpersonal skills (teamwork)  
 Self-motivated  
 Ability to adapt to new ideas and technologies  
 Ability to learn on one's own | Programmer/Analyst  
 --Applications Programmer  
 --Systems Programmer  
 Software Engineer  
 Systems Analyst  
 Network Analyst  
 Director of Computer Operations  
 Software Package Developer  
 Educator  
 Database Administrator | RCSCACM (Student Chapter of the Association for Computing Machinery) |

Computer Science is a discipline that brings a scientific perspective to the study of computational machines and computational processes (algorithmic processes). A computer system involves everything from the user of the computer to the programs that control the computer down to the chips containing the electronic circuitry of the computer. Computer-related jobs are available along the entire spectrum. The computer scientist is primarily concerned with the software aspect of computing—from user interface design and development of systems programs that control the operation of the computer, to theoretical studies of programming languages and computation. The hardware side of computers, such as computer circuit design, is more in the domain of computer or electrical engineering. Applied majors such as Computer Information Systems deal more with applications of computer systems in the business environment.

**Average Starting Salary:** $40,000 - $55,000  
**Employment Outlook:** Excellent, see [http://www.computingcareers.acm.org](http://www.computingcareers.acm.org) for more information

**Recommended Preparation:** Completion of the B.S. in Computer Science or completion of a degree in an area such as mathematics, physics, chemistry, business, or physics with a minor in Computer Science. Extra mathematics and science courses are recommended for application areas such as scientific computing. Extra business courses (or a major in Computer Information Systems) are recommended for applications in business.