Lakeland
COMMUNITY COLLEGE
INFORMATION TECHNOLOGY AND COMPUTER SCIENCE

CAREER SKILLS FOR
Computer Science and Software Engineering

ADDITIONAL RESOURCES

Association for Computing Machinery
acm.org
Association for Information Systems (AIS)
aisnet.org
Association of Information Technology Professionals (AITP)
aitp.org
CompTIA (A+, Network+ and Security+)
comptia.org
IEEE Computer Society
computer.org
Information Technology Association of America (ITAA)
itaa.org
Oracle (OCA, OCP)
academy.oracle.com

VENDOR AND PROFESSIONAL CERTIFICATIONS

Vendor and professional certifications are an important extra for entry-level positions. Earning a certificate or certification demonstrates a minimum level of technical knowledge and competence. Some relevant certifications are:

Microsoft Certified Solution Developer (MCSD)
Oracle Certified Associate
Oracle Certified Professional
Java Programmer
O'Reilly Python Programming Certificate
IEEE Certified Software Development Associate (CSDA)

There are also certifications and licensure opportunities for computer scientists and software engineers who are further along in their career. These opportunities include:

Professional Engineer (PE) Exam for Software Engineers
IEEE Software Developer Master Certification

FOR MORE INFORMATION CONTACT:

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Graduates of the Computer Science/Engineering Software program gain expertise in computer software development and theory. This program was developed to facilitate transfer to baccalaureate programs in computer science and computer engineering. Use this fact sheet to investigate your academic and career options, and to master your job search.

JOB-SPECIFIC SKILLS

Skills and knowledge you will obtain at Lakeland to tackle different areas in the field.

THEORETICAL CONCEPTS:
- Data structures and volatile data storage
- Numeracy (understanding and working with numbers)
- Software engineering

INTERPERSONAL SKILLS:
- Adaptability
- Leadership
- Teamwork
- Time Management

GENERAL MANAGEMENT SKILLS:
- Decision making
- Presentation preparation
- Report writing
- Understand core business functions and how information technology interrelates with business

HARDWARE/SOFTWARE SKILLS:
- Data retrieval
- File management (organize, file and store)
- Hardware architecture and design
- Operating Systems history and concepts
- Software tools and packages

PROGRAMMING SKILLS:
- Logic and problem-solving
- Programming skills in multiple languages

TRANSFERABLE SKILLS

Skills you have acquired throughout your life that will help you excel in the field include:
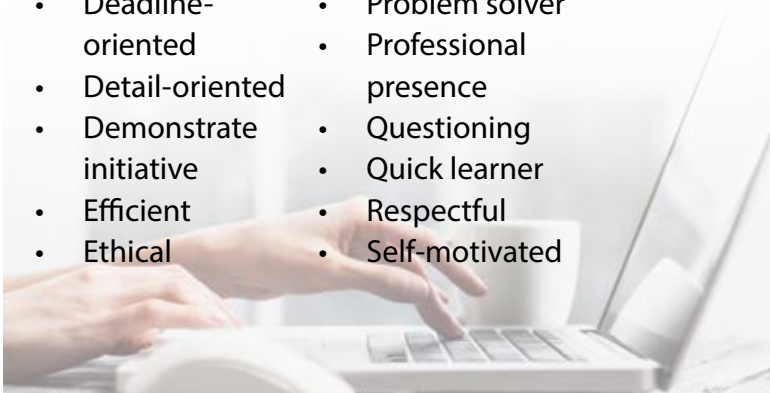
- Ability to multitask
- Leadership
- Logical thinking
- Organizational proficiency
- Penchant for learning
- Problem-solving
- Verbal and written communication

PERSONAL ATTRIBUTES

These nontechnical attributes will enable you to be a competent, reliable employee in any company.

- Accurate
- Adaptable
- Analytical
- Collaborative
- Creative
- Critical thinker
- Customer-focused
- Deadline-oriented
- Detail-oriented
- Demonstrate initiative
- Efficient
- Ethical
- Flexible
- Honest
- Independent
- Investigative
- Logical
- Organized
- Patient
- Personable
- Problem solver
- Professional presence
- Questioning
- Quick learner
- Respectful
- Self-motivated

RELATED JOB TITLES

Note: This is only a representative list and does not exhaust all possible titles in the field.

- Actuary
- Business analyst
- Computer programmer
- Configuration center technician
- Database administrator
- Data analyst
- IT consultant
- IT manager
- Security specialist
- Software architect
- Software engineer
- Systems analyst
- Technical writer
- Test engineer
- User experience (UX)/user interface (UI) designer
- Video game developer
- Web developer

Many positions may require a bachelor's degree or higher.

For additional information and resources, visit computingcareers.acm.org

POSSIBLE EMPLOYERS

Note: This is only a representative list and does not exhaust all types of employers.

- Aerospace companies
- Banks and financial institutions
- Bioscience companies
- Consulting companies
- Education institutions
- Government agencies
- Health care facilities
- Insurance providers
- Manufacturing companies
- Nonprofit Organizations
- Public accounting firms
- Real estate companies
- Research facilities
- Retail businesses
- Self-employment
- Service agencies
- Technology companies
- Wholesale companies

QUICK FACTS

Software Developers

Percent change in employment, projected 2014-24

Category	Percent
Software developers, applications	19%
Software developers	17%
Software developers, systems software	13%
Computer occupations	12%
Total, all occupations	7%