

SOFTWARE ENGINEERING- Career Resource Guide

Career Options

Application Programmer	Write programs that tell computers how to perform specific tasks. Develop user-oriented programs that apply to engineering or science.
Computer Security Specialist	Protect data and computer resources from viruses, natural disasters, fraud and invasion of privacy.
Computer/Software Engineer	Design software including coding, testing, debugging, documentation and implementation. Evaluate existing communications, hardware and software.
Consultant	Work independently or in a firm to identify technical problems and provide solutions. Conduct testing and feasibility studies.
Design Engineer	Design software and hardware for specific business or engineering applications. Construct and test prototypes and models.
Process Engineer	Oversee the process for developing a software product. Work with managers, programmers, distributors and the public.
Software Product Manager	Develop business plans, determine if software is compatible with system, and oversee pricing, packaging, shipping and contracts with customers.
Systems Analyst	Examine the overall informational needs of the company and design or recommend computer systems and networks to address those needs. May conduct coding, testing, debugging, documentation and implementation of software.
Systems Programmer	Design and develop software to create a computer system. Develop programming standards and evaluate and modify existing software.
Telecommunication Analyst	Design communication networks. Install and operate data links.

Business & Industry Job Titles

Application Programmer	Project Engineer
Applications Engineer	Reliability Engineer
Computer Engineer	Research and Development
Computer Programmer	Sales
Computer Security Specialist	Software Design & Development
Consultant	Software Engineer
Design Engineer	Software Programmer
Information Systems Engineer	Systems Analyst
Network Engineer	Systems Designer
Operations System Manager	Systems Programmer
Process Engineer	Technical Writer
Product Development Engineer	Telecommunication Analyst

Periodicals of Interest

(Several of these resources may be found at the RMU Library.)

Engineers Guide to Business
 Software Engineering
 Software Engineering: A Beginner's Guide
 Software Engineering Economics
 Software Engineering Handbook

Associations & Societies

Association for Computing Machinery (ACM) *	www.acm.org
Association for the Advancement of Artificial Intelligence (AAAI) *	www.aaai.org
Association for Women in Computing **	www.awc-hq.org
Computing Research Association *	www.cra.org
IEEE Computer Society *	www.computer.org
National Society of Black Engineers (NSBE) *	www.nsbe.org
National Society of Professional Engineers (NSPE) *	www.nspe.org
Society of Hispanic Professional Engineers **	www.shpe.org
Society of Women Engineers **	www.swe.org

* Contains employment listings

** Contains employment listings for members

Career & Employment Websites

About Job Searching: Technical	www.jobsearchtech.about.com
Computerjobs.com	www.computerjobs.com
Computerwork.com	www.computerwork.com
Dice	www.dice.com
Diversity- Careers in Engineering & Information Technology	www.diversitycareers.com
EngineeringJobs	www.engineeringjobs.com
Graduating Engineer & Computer Careers Online	www.graduatingengineer.com
iHireTechnology	www.ihiretechnology.com
IT Careers at CareerBuilder.com	www.informationtechnology.careerbuilder.com
Occupational Outlook Handbook- Search Computer Programmers/Software Developers	www.bls.gov/ooh
Pittsburgh Career Connector (Pittsburgh Technology Council)	www.pghcareerconnector.com

Note: A helpful list of general job search websites is available on the Internet Tip Sheet at www.rmu.edu/careercenter.

Selected RMU Academic, Professional & Leadership Organizations

Association of Computing Machinery	Society of Women Engineers
Community Advisors	Student Government Association
Office of Student Civic Engagement	Student Information Technology Advisory Committee
Society for the Advancement of Management	Student Program Board

Salary Information

RMU Salary Survey	Mean	Range
Engineering (all concentrations) - 2015	\$49,813	\$20,000 - \$67,000
Engineering (all concentrations) - 2014	\$55,031	\$40,000 - \$69,000

Bachelor-Level Internship Organizations

Bayer Corporation	PHW Inc.
Bombardier Transportation	PLS Logistics Services
Centria	Robert Morris University IT Department
DDI	Rockwell Software
Eaton Cutler-Hammer	RoPro Design
Iron Bridge Integration, Inc.	Tate-Jones, Inc.
Lucas Systems	United States Steel Corporation
Modern Glass	Westinghouse Electric
NASA/LARSS	Wilcox Bros.

Bachelor-Level Hiring Organizations

Bayer Corporation	NASA
Boeing Industries	NetApp
Exceptional Innovations, LLC	PA Supreme Court
FedEx	Raytheon
Honeywell	Ryder Transportation
Management Science Associates	Schroeder Industries, LLC
Michael Baker Corporation	The Proud Company
Modern Glass	United States Steel Corporation