








# INFORMATION TECHNOLOGY



## CAREER MAP

	HIGH SCHOOL DIPLOMA/ EQUIVALENCY	ASSOCIATE'S DEGREE (2-3 YEARS)	BACHELOR'S DEGREE (4 YEARS)	POSTGRADUATE CERTIFICATE (1-4 YEARS)
PROGRAMMING & SOFTWARE DEVELOPMENT	Junior Developers	 Computer Network Support Specialists	Software Developers Computer Systems Analysts Computer and Information Systems Managers Computer Programmers	Computer and Information Research Scientists
NETWORKS AND COMPUTER SYSTEMS		Computer Network Support Specialists	Computer Network Architects Database Administrators	
INFORMATION AND SUPPORT SERVICES	Help Desk Technicians Information Technology Technician Customer Service Representatives		Sales Representatives Sales Managers Operations Research Analysts Quality Assurance Engineers	
WEB DEVELOPMENT AND DIGITAL COMMUNICATIONS	Web Administrators	Multimedia Artists and Animators	Web Developers Marketing Managers Graphic Designers Technical Writers User Interface (UX/UI) Designers	
CYBERSECURITY		Cybersecurity Technician	Information Security Analysts Cyber Crime Investigator	Cybersecurity Engineer/ Architect

Information Technology is the study or use of systems (especially computer and telecommunications) for storing, retrieving, and sending information. Though not classified as its own industry, jobs in the Information Technology sector are prevalent in all industries.

NOTE: PATHWAYS WITH NO OCCUPATIONS LISTED UNDER AN EDUCATION LEVEL INDICATES NO HIGH-GROWTH OCCUPATIONS AT THAT LEVEL

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	DESCRIPTION	SKILLS, CERTIFICATIONS, AND EXPERIENCE	NUMBER OF JOB POSTINGS (2018)	AVERAGE SALARY RANGE
PROGRAMMING AND SOFTWARE DEVELOPMENT	Careers in programming and software development involved the design, development, implementation, and maintenance of computer systems and software. Daily job tasks require knowledge of computer operating systems and coding languages. These are the people who develop cutting-edge technologies and applications across all industries.	<ul style="list-style-type: none"> <li>Communication Skills</li> <li>Coding Language Experience</li> <li>Project Management Certification</li> <li>IT Infrastructure Library Certification (ITIL)</li> </ul>	18,600	\$71,400 - \$120,400
NETWORKS AND COMPUTER SYSTEMS	Employees in this pathway build, install, maintain, and repair network and computer systems. Daily tasks can include installation of local area networks, network segments, intranets, data communication systems, and more.	<ul style="list-style-type: none"> <li>Troubleshooting Skills</li> <li>Coding Language Experience</li> <li>Cisco Certified Network Professional Certification (CCNP)</li> <li>Cisco Certified Network Associate Certification (CCNA)</li> </ul>	5,900	\$57,900 - \$144,700
INFORMATION AND SUPPORT SERVICES	People working in this pathway are tasked with assisting with deployment of information technology systems and supporting the management and growth of such systems. Daily tasks may involve assisting customers with product support, selling software or computer systems, and project managing the rollout of new products.	<ul style="list-style-type: none"> <li>Customer Service Skills</li> <li>Problem Solving Skills</li> <li>Sales Experience</li> <li>Microsoft Office Experience</li> </ul>	9,100	\$57,200 - \$148,400
WEB DEVELOPMENT AND DIGITAL COMMUNICATIONS	The web and digital communication pathway includes workers involved in the creation, design and production of interactive multimedia products and services, including development of digitally-generated or computer-enhanced media used in business, training, entertainment, communications and marketing.	<ul style="list-style-type: none"> <li>Creativity Skills</li> <li>Teamwork Skills</li> <li>Communication Skills</li> <li>Adobe Software Experience</li> </ul>	5,700	\$61,600 - \$143,900
CYBERSECURITY	Cybersecurity is the protection of internet-connected systems including hardware, software, and data from digital attacks. Daily tasks include developing, implementing, upgrading, and monitoring security measures and safeguards for computer systems and data. They may involve responding to security breaches and viruses.	<ul style="list-style-type: none"> <li>Problem Solving Skills</li> <li>Communication Skills</li> <li>Coding Language Experience</li> <li>Information Systems Security Professional Certification (CISSP)</li> </ul>	2,700	\$68,100 - \$123,100

Sources: JobsEq, 2018; Burning Glass, Labor Insights, 2018; NAICS.com, 2019 Mecklenburg County