



Computer Systems Networking and Telecommunications CIP Code 11.0901

Introduction – Program of Study

Computer support specialists provide technical assistance, support, and advice to customers and other users. This occupational group includes technical support specialists and help desk technicians. These troubleshooters interpret problems and provide technical support for hardware, software, and systems. Support specialists work either within a company that uses computer systems or directly for a computer hardware or software vendor.

Technical support specialists respond to inquiries from their organizations' computer users and may run automatic diagnostics programs to resolve problems. They also install, modify, clean and repair computer hardware and software. In addition, they may write training manuals and train computer users to use new computer hardware and software. These workers also oversee the daily performance of their company's computer systems and evaluate the effectiveness of software programs.

Network and computer systems administrators design, install, and support an organization's computer systems. They are responsible for local area networks (LAN), wide area networks (WAN), network segments, and internet and intranet systems. They work in a variety of environments, including professional offices, small businesses, government organizations, and large corporations. They maintain network hardware and software, analyze problems, and monitor networks to ensure availability to system users. These workers gather data to identify customer needs and then use the information to identify, interpret, and evaluate system and network requirements. Administrators also may plan, coordinate, and implement network security measures.

Systems administrators are responsible for maintaining network efficiency. They ensure that the design of an organization's computer system allows all of the components, including computers, the network, and software, to work properly together. These workers educate users about computer security, install security software, monitor networks for security breaches, and respond to cyber attacks.

Computer support specialists and systems administrators normally work in well lit, comfortable offices or computer laboratories. They usually work about 40 hours a week, but if their employer requires computer support over extended hours, they may be on call for rotating evening or weekend work.

Due to the wide range of skills required, there are many paths of entry to a job as a computer support specialist or systems administrator. Training requirements for computer support specialist positions vary, but many employers prefer to hire applicants with some formal college education. A bachelor degree in computer science or information systems is a prerequisite for some jobs; other jobs, however, may require only a computer related associate degree. And for some jobs, relevant computer experience and certifications may substitute for formal education.

Assumptions of this Program of Study

High quality programs should meet the following standards:

1. Promote positive working relationships.
2. Implement a curriculum that fosters all areas of skill development
3. Use appropriate and effective teaching approaches.
4. Provide ongoing assessments of student progress.
5. Employ and support qualified teaching staff.
6. Establish and maintain relationships and use resources of the community.
7. Provide a safe and healthy learning environment.
8. Implement strong program organization and supervision policies that result in high quality teaching and learning.
9. Integrate academic skills and aptitudes necessary for postsecondary education, gainful employment and a foundation of lifelong learning.

CIP Code

11.0901 Computer Systems Networking and Telecommunications

This is an instructional program that focuses on the design, implementation and management of linked systems of computers, peripherals and associated software and prepares individuals with the technical skills required to support networks and network users. This program includes instruction in networks technologies and standards: system design, architecture, operating systems, security, communications protocols, client support, messaging services, network management, trouble shooting and server optimization.

Those completing the program may be employed as a network administrator, network specialist, network technician, webmaster, client services analyst (end user) or network operator.

For more information, contact:

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