Computer Management and Support

Computer Management and Support is a one-credit course that provides students with skills necessary to manage a stand-alone computer on a home network. Topics in this course include computer hardware, computer operating systems, network architecture, network protocols, career opportunities, and network design and security.

Career and technical student organizations are integral, cocurricular components of each career and technical education course. These organizations serve as a means to enhance classroom instruction while helping students develop leadership abilities, expand workplace-readiness skills, and broaden opportunities for personal and professional growth.

**Computer Hardware**

Students will:

1. Explain functions of personal computer (PC) hardware components and peripheral devices.
2. Demonstrate procedures for installing a printer to a personal or home computer.
3. Apply procedures for computer optimization, including performing scandisk, performing disk defragmentation, installing random access memory (RAM), and installing and uninstalling programs.
   - Identifying the startup process and other service management components
   - Analyzing disk space for availability
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**Operating Systems**

5. Discuss the evolution of computer operating systems.
   - Comparing capabilities and limitations of various computer operating systems
6. Utilize research results to analyze new and emerging operating systems for optimization.
7. Determine procedures for downloading and uploading files to external devices.
8. Utilize file structures to create folders and copy and move files.
9. Demonstrate password, user rights, and folder privileges on a personal computer.
10. Evaluate virus safeguards, firewalls, and security on a personal computer.
Network Architecture

11. Compare types of networks, including copper, fiber-optic, and wireless.

12. Utilize technical research materials to determine the process for customizing user interface on a personal or home computer.
   Examples: desktop setup, monitor configuration

13. Identify functions of a protocol.

14. Determine a network address for verifying network connectivity.

15. Determine troubleshooting procedures for problems pertaining to limited or no network connectivity.

16. Compare a variety of network designs, including local area networks (LANs) and wide area networks (WANs).

17. Apply the procedure for constructing a LAN for home use, including selecting network devices and configuring a home network.

18. Configure Internet and e-mail settings.

Career Opportunities

19. Determine career and entrepreneurial opportunities, responsibilities, and educational and credentialing requirements related to computer maintenance and home networking.