

COMPUTER SUPPORT TECHNICIAN (Competency-Based)

APPENDIX A

O*NET CODE 15-1151.00

Competency/performance-based apprenticeship occupations are premised on attainment of demonstrated, observable and measurable competencies in lieu of meeting time-based work experience and on-the-job learning requirements. In competency/performance-based occupations apprentices may accelerate the rate of competency achievement or take additional time beyond the approximate time of completion.

This training outline is a minimum standard for Work Processes and Related Instruction. Changes in technology and regulations may result in the need for additional on-the-job or classroom training.

Potential Job Titles: Junior Network/System Administrator, Junior Support Analyst, Computer Lab Support, Junior Network Support Specialist.

Work Processes

A. Workplace Basics

1. Describe workplace structure.
2. Describe workplace policies and procedures; general and Information Technology (IT) -related.
3. Demonstrate an understanding of general ideas regarding workplace ethics, interpersonal communication, and personal safety.
4. Demonstrate efficient basic task/time management, status reporting, work order updates, team participation.
5. Demonstrate ability to communicate technical ideas/concepts when assisting users unfamiliar with IT jargon.

B. Computer Basics

1. Identify and demonstrate knowledge of basic computer hardware, including but not limited to:
 - a. Central Processing Unit (CPU)
 - b. hard drive
 - c. memory
 - d. ports

- e. buses
 - f. slots.
2. Identify and demonstrate knowledge of computer peripherals, including but not limited to
 - a. Keyboard
 - b. Monitor
 - c. Mouse
 - d. Printers
 - e. Scanners
 - f. all-in-one printers
 - g. external hard drives
 - h. thumb drives (memory sticks, USB drives).
 3. Identify and demonstrate knowledge of basic computer software by: installing, configuring, and providing customer assistance in using common software, such as Microsoft Office and/or Apple equivalents.
 4. Perform hardware and software upgrades (if applicable).
 5. Install and configure PC/Mac operating system features.
 6. Install and configure components needed for network operating system, such as: Domain Name Servers (DNS), Windows Internet Network Servers (WINS), Domain Controllers.
 7. Install and configure network devices, such as servers, printers, scanners, Internet Protocol (IP) phones, etc.
 8. Install and configure remote user connections, such as: Remote Access Servers, Virtual Private Networks (VPN), Outlook Web Access.
 9. Install and configure wireless connections.
 10. Troubleshoot hardware, software, connectivity issues.

C. Cybersecurity Fundamentals

1. Demonstrate an understanding of, and explain importance of information security.
2. Develop familiarity with password protocols.
3. Identify and describe sponsor-specific information security policies and practices.
4. Install and configure firewall services.

5. Demonstrate ability to maintain user accounts and access privileges.
6. Troubleshoot information security issues.

D. Networking Fundamentals

1. Explain difference between main network types: peer-to-peer and client-server.
2. Demonstrate and explain concepts of a Local Area Network (LAN) and a Wide Area Network (WAN).
3. Configure a network operating system, including protocols, accessibility, and layering.
4. Demonstrate a basic understanding of routers and their functions.
5. Troubleshooting network issues.
6. Demonstrate a basic understanding of LAN issues.
7. Demonstrate a basic understanding of network infrastructure cabling.

E. Additional Computing Topics (if applicable)

1. Demonstrate a basic understanding of databases and their application; multi-media software; video conferencing applications.

Approximate Total Hours 1,000-2,000

Apprentices in Competency-Based Programs shall participate in no fewer than 1,000 documented hours of on-the-job training, and until they have demonstrated a competency for each skill in the Work Processes.

Apprenticeship work processes are applicable only to training curricula for apprentices in approved programs. Apprenticeship work processes have no impact on classification determinations under Article 8 or 9 of the Labor Law. For guidance regarding classification for purposes of Article 8 or 9 of the Labor Law, please refer to <https://dol.ny.gov/public-work-and-prevailing-wage>

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APPENDIX B

RELATED INSTRUCTION

Safety/Health/Environment

1. General Workplace Safety
2. First Aid & CPR (minimum 6.5 hours every 3 years)
3. Right-to-Know/ Safety Data Sheets (SDS)
4. Sexual Harassment Prevention Training – must comply with Section 201-g of the Labor Law

Computer and Network Components and Operations

1. Hardware
2. Peripherals
3. Software
4. Installation and configuration of software
5. Operating Systems, e.g., Microsoft, MacOS
6. Troubleshooting
7. Networks: Local Area Network (LAN); Wide Area Network (WAN)
8. Domain Name Servers
9. Domain Controllers
10. Transmission Control Protocol (TCP) / Internet Protocol (IP)
11. Installation and configuration of various network devices
12. Network Functions
13. Routers
14. Routing Protocol
15. Cybersecurity
16. Databases (if Work Process E is selected in Appendix A)
17. Multi-Media applications (if Work Process E is selected in Appendix A)
18. Video applications (if Work Process E is selected in Appendix A)

Professional Development

1. Technical Support Communication
2. Time Management
3. Basic Project Management
4. Team and Supervisor Communication Skills
5. Customer Service Fundamentals

Other Courses as Necessary

At least 144 hours of Related Instruction per year must be available for the apprentice at the time of his/her indenture. However, the apprentice may test out earlier if able to demonstrate competence for each topic on the Related Instruction outline.

Appendix B topics are approved by New York State Education Department.