WORK PROCESS SCHEDULE

NETWORK AND COMPUTER SYSTEMS ADMINISTRATOR

(Existing Title: Network Support Technician)

O\*NET-SOC CODE: 15-1142.00 RAPIDS CODE: 1132HY

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| **Work Process and Classroom Training Duties and Hours** | **On-the-Job Learning Hours** |
| **Period 1 General Practices - Foundations**  |
| 1 | Demonstrate a working understanding of the organization’s structure, personnel rules, responsibilities and general understanding of work ethics, interpersonal communications and related policies. Understands and practices safety procedures and rules. | 8 - 20  |
| 2 | Demonstrate a working understanding of the goals, mission and vision | 16 - 24  |
| 3 | Demonstrate an understanding and practice of the policies as written in the company handbook. | 16 - 24  |
|   | **Subtotal hours for Period 1** | **40 - 68** |
| **Period 2 General Practices - Computer Basics**  |
| 1 | Demonstrate a working knowledge of the hardware components of a computer and perform basic troubleshooting on operational issues within a computer. | 80 - 160  |
|   | ~~Example On-the-Job Duties: Identify the components of standard desktop personal computers. Install and configure computer components. Maintain and troubleshoot peripheral components. Install and configure operating systems.~~Example On-the-Job Duties: Identify the hardware components of personal computers. Install, configure, maintain and troubleshoot hardware components.  |   |
| 2 | ~~Demonstrate a working knowledge of the hardware components of a computer and perform basic troubleshooting on hardware related issues~~Demonstrate a working knowledge of the software components of a computer and become familiar with the various utilities built into the operating system. | 60 - 120  |
|   | Example On-the-Job Duties: ~~Install and configure system components. Troubleshoot system components~~Know where to find settings to change operating system components like: Display settings, Network settings, File associations, Event logs |   |
| 3 | Demonstrate a working knowledge of basic networking, to allow the flow of information between multiple computers | 80 - 160  |
|   | ~~Example On-the-Job Duties: Manage, maintain, troubleshoot, install, operate and configure basic network infrastructure.~~Example On-the-Job Duties: Install, configure and troubleshoot basic network infrastructure |   |
|   | **Subtotal hours for Period 2** | **220 - 440** |
| **Period 3 General Practices - Security Basics**  |
| 1 | Demonstrate knowledge of “best practices” in general network security. | 80 - 160  |
|   | Example On-the-Job Duties: Understand and implement best security practices for a network. Configure User Account Controls. Configure Local Security Policies. Configure Windows Firewall. Configure Windows Defender. Set indexing locations and modify advanced options. Create a library and set security permissions. Create and deploy a search connector. |   |
| 2 | Design a security awareness program in the organization which is used to communicate “best practices” for end users | 80 - 160  |
|  | Example On-the-Job Duties: Become proficient with a commerical security awareness program with the goal of being able to relay best practices information to the end users. |  |
|  |  |   |
|  | **Subtotal hours for Period 3** | **240 – 480****160-320** |
| **Period 4 Workstation Operating System Basics**  |
| 1 | Install and configure client operating systems for the organization.  | 100 - 160  |
|   | Example On-the-Job Duties: Install and update operating systems and applications. |   |
|   | **Subtotal hours for Period 4** | **100 - 160** |
| **Period 5 Server Operating Systems**  |
| 1 | Demonstrate a working knowledge of how to configure and troubleshoot server operating systems.  | 60 - 120  |
|   | Example On-the-Job Duties: Install and configure servers. Configure and troubleshoot **domain name system (DNS)**. Configure and troubleshoot Dynamic Host Configuration Protocol (DHCP). Configure and troubleshoot **Transmission Control Protocol**/Internet Protocol (**TCP**/IP).  |   |
| 2 | Demonstrate a working knowledge of how to configure and troubleshoot Active Directory.  | 60 - 120  |
|   | Example On-the-Job Duties: Configure Active Directory Domain Services. Perform backup and restore, and monitor and troubleshoot Active Directory related issues. |   |
| 3 | Demonstrate a working knowledge of how to configure and troubleshoot identity and access solutions.  | 60 - 120  |
|   | Example On-the-Job Duties: Configure, identity, and access solutions with Windows Server Active Directory. Describe identity and access solutions. Configure Active Directory Certificate Services. Deploy and manage certificates. |   |
| 4 | Plan and administer Windows Server  | 60 - 120  |
|  | Example On-the-Job Duties: Plan for both Windows Server installation and upgrades. Plan and implement network connectivity by using Internet Protocol version 4 (IPv4)-related technologies and plan a migration strategy to IPv6. Plan the deployment of Active Directory related services. |   |
|   | **Subtotal hours for Period 5** | **240 - 480** |
| P**eriod 6 General Practices - Advanced Networking** |
| 1 | Perform installation and maintenance of cloud services | 60 - 120  |
|   | Example On-the-Job Duties: Set up and maintain email solutions, passwords, virtual servers, and desktops |   |
| 2 | Mange LAN Bandwidth | 60 - 120  |
|   | Example On-the-Job Duties: Configure and troubleshoot network and expand the switched network from a small LAN to a medium-sized LAN. Use multiple switches, to support VLANs, trunking, and spanning tree.  |   |
| 3 | Recognize security threats in a network.  | 60 - 120  |
|  | **Subtotal hours for Period 6** | **180 - 360** |
| **Period 7 Advanced Security** |
| 1. | Advanced Firewall Configuration | 60-120 |
|  | Example: Recognize, locate source, and remediate security threats  |  |
| 2 | Improve wired and wireless communications | 60-120 |
|  | **Subtotal of hours for period 7** | **120-240** |
| **Period 8 Demonstrating Learned Competencies Learned**  |
| 1 | Utilize all of the skills taught during all of the GPs and document ways to improve the company’s ~~current Active Directory design.~~ current processes and make efficiency recommendations. | 1040 – 1044  |
|   | Example On-the-Job Duties: Configure Network Access Protection. Configure Internet Protocol security (IPsec). Monitor and troubleshoot IPsec. Configure and manage Distributed File System. Configure and manage storage technologies. Configure availability of network resources and content. Configure server security compliance. |   |
|   | Example On-the-Job Duties: Configure Active Directory Lightweight Directory Services. Configure Active Directory Federation Services. Configure Active Directory Rights Management Services. Maintain access management solutions. Troubleshoot identity and access solutions. |   |
|   | Example On-the-Job Duties: Create a plan for file and print services to meet an organization’s printing, file storage, and access needs. Create a plan to secure the Windows Server environment. Create local and remote administration strategies for administering a Windows Server environment. Create a monitoring plan for the Windows Server environment. Create a plan that will help mitigate the effects of various disaster scenarios on the IT infrastructure. Create a plan for using virtualization in a Windows Server environment. |   |
|  2 | Design a system to identify fundamental concepts of computer security and security threats. Implement secure network communications. ~~Manage public key infrastructure (PKI) and certificates.~~ |   |
|   | Example On-the-Job Duties: ~~Use the Cisco command-line interface to discover neighbors on the network and managing the router’s startup and configuration procedures. Implement and troubleshooting~~ **~~Open Shortest Path First~~** ~~(OSPF) and~~ **~~Enhanced Interior Gateway Routing Protocol~~** ~~(EIGRP) routing. Access Control Lists,~~ **~~Network Address Translation~~** ~~(NAT),~~ **~~Page Attribute Table~~** ~~(PAT), and IPv6 Associated Certification.~~Capture traffic on a firewall and monitor inbound and outbound communications. Determine which traffic is being blocked and why. |   |
|   | Example On-the-Job Duties: ~~Implement and troubleshooting OSPF and EIGRP routing. Access Control Lists, NAT, PAT, and IPv6 Associated Certification.~~Configure ports that need to be opened, setup application monitoring, configure filters for individual/group base user accounts.  |   |
|   | **Subtotal hours for Period 7** | **1040 - 1044** |
| **Total Work Process Hours** | **2060 - 3032**  |
| **Total Work Process Hours** | **2100 - 3112** |