

WORK PROCESS SCHEDULE  
 COMPUTER SYSTEMS ANALYST  
 O\*NET-SOC CODE: 15-1121.00 RAPIDS CODE: 2017HY

<b>Work Process and Classroom Training Duties and Hours</b>		<b>On-the-Job Learning Hours</b>
<b>Period 1 General Practices - Foundations</b>		
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 a working understanding of the organization's office tools such as copiers, fax machines etc.	16 - 24
<b>Period 2 General Practices - Computer Basics</b>		
1	Demonstrate a working knowledge of the components of a computer and perform basic troubleshooting on communication issues within a computer.	80 - 160
	<u>Example On-the-Job Duties:</u> Identify the components of standard desktop personal computers. Install and configure computer components. Maintain and troubleshoot peripheral components. Install and configure operating systems.	
2	Demonstrate a working knowledge of the hardware components of a computer and perform basic troubleshooting on hardware related issues	60 - 120
	<u>Example On-the-Job Duties:</u> Install and configure system components. Troubleshoot system components.	
3	Demonstrate a working knowledge of basic networking, to allow the flow of information between multiple computers	80 - 160
	<u>Example On-the-Job Duties:</u> Manage, maintain, troubleshoot, install, operate and configure basic network infrastructure.	
<b>Period 3 General Practices - Security Basics</b>		
1	Demonstrate knowledge of "best practices" in general network security	80 - 160
	<u>Example On-the-Job Duties:</u> Implement secured network communications. Designate how to manage public key infrastructure and certificates.	
2	Create a security awareness program in the organization which is used to communicate "best practices" for end users	80 - 160
	<u>Example On-the-Job Duties:</u> Establish security best practices for creating and running web-based applications. Set a policy to enforce organizational security policies. Design systems for monitoring the security infrastructure and manage security incidents.	
3	Create an asset tag inventory of all equipment, and verify following license agreements on software, under the jurisdiction of the IT Department	80 - 160
	<u>Example On-the-Job Duties:</u> 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.	

<b>Period 3 Client Operating System Basics</b>		
1	Install and configure client operating systems for the organization.	100 - 160
<b>Period 3 Network Operating Systems</b>		
1	Demonstrate a working knowledge of how to configure and troubleshoot network operating systems	60 - 120
	<u>Example On-the-Job Duties:</u> Install and configure servers. Configure and troubleshoot DNS. Configure and manage WINS. Configure and troubleshoot DHCP. Configure and troubleshoot IPv6 TCP/IP. Configure and troubleshoot Routing and Remote Access. Install, configure, and troubleshoot the Network Policy Server Role service.	
2	Demonstrate a working knowledge of how to configure and troubleshoot Active Directory	60 - 120
	<u>Example On-the-Job Duties:</u> 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
	<u>Example On-the-Job Duties:</u> Configure, identity, and access solutions with Windows Server 2008 Active Directory. Describe identity and access solutions. Configure Active Directory Certificate Services. Deploy and manage certificates.	
4	Demonstrate a working knowledge of how to configure and troubleshoot IIS and terminal services	60 - 120
	<u>Example On-the-Job Duties:</u> Describe the IIS 7.0 modular architecture and workloads. Describe the three methods for installing IIS 7.0 and Install IIS 7.0 using each of the three identified methods.	
	<u>Example On-the-Job Duties:</u> Install and configure the TS role, TS settings, and TS Licensing Role. Identify when to use the per-user and per-device licensing modes, and identify the appropriate licensing scope and configure forest, domain, and workgroup licensing. Configure TS connection properties using TS console and Group Policy. Troubleshoot TS connection properties for a single user and multiple users. Identify the considerations for the types of applications that can be installed in a TS environment.	
5	Plan and administer Windows Server 2008	60 - 120
	<u>Example On-the-Job Duties:</u> Plan for both Windows Server installation and upgrades. Plan and implement network connectivity by using IPv4-related technologies and plan a migration strategy to IPv6. Plan the deployment of Active Directory related services.	
6	Design a Windows Server 2008 Network Infrastructure	60 - 120
	<u>Example On-the-Job Duties:</u> Describe key components of network infrastructure design. Describe how to design a secure network. Design a plan for allocating IP addresses to workstations and servers. Design an appropriate name resolution system that incorporates Domain Name System (DNS). Optimize a name resolution system that incorporates DNS and Windows Internet Name Service (WINS). Design a solution for network access using Network Access Protection (NAP) solution.	
7	Design a Windows Server 2008 Active Directory Infrastructure	60 - 120
	<u>Example On-the-Job Duties:</u> Design an Active Directory infrastructure and services in Windows Server.	

<b>Period 3 General Practices - Advanced Networking</b>		
1	Perform basic Cisco Networking	60 - 120
	<u>Example On-the-Job Duties:</u> Monitor and distribute traffic on an Ethernet LAN and identify switched LAN technology solutions to Ethernet networking issues.	
2	Interconnect Cisco devices	60 - 120
	<u>Example On-the-Job Duties:</u> 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
<b>Period 4 Demonstrating Learned Competencies Learned</b>		
1	Utilize all of the skills taught during all of the GPs and document ways to improve the company's current Active Directory and network design	1040
	Resolve all of the issues on client machines in the final project	
	<u>Example On-the-Job Duties:</u> Configure Network Access Protection. Configure 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.	
	<u>Example On-the-Job Duties:</u> 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.	
	<u>Example On-the-Job Duties:</u> 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.	
	<u>Example On-the-Job Duties:</u> Configure common features for IIS 7.0 and validate functionality of configured features.	
	<u>Example On-the-Job Duties:</u> Install and configure TS Web Access role service, and configure TS Web Access to make TS programs available through a Web site. Configure, monitor, and troubleshoot TS Gateway properties and connectivity issue. Resolve client connectivity issues by verifying end-user configuration. Configure and monitor resource allocation policies using WSRM based on the environment.	
	<u>Example On-the-Job Duties:</u> Design a system to identify fundamental concepts of computer security and security threats. Implement secure network communications. Manage public key infrastructure (PKI) and certificates.	
	<u>Example On-the-Job Duties:</u> Design a solution for operating system deployment and maintenance. Design the deployment of file services. Design print services in Windows Server 2008. Design high availability for applications and services.	
	<u>Example On-the-Job Duties:</u> Use the Cisco command-line interface to discover neighbors on the network and managing the router's startup and configuration procedures. Implement and troubleshooting OSPF and EIGRP routing. Access Control Lists, NAT, PAT, and IPv6 Associated Certification.	
	<u>Example On-the-Job Duties:</u> Implement and troubleshooting OSPF and EIGRP routing. Access Control Lists, NAT, PAT, and IPv6 Associated Certification.	
<b>Total Work Process Hours</b>		<b>2240 - 3428</b>

RELATED INSTRUCTION OUTLINE  
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Listed below are standard hours needed to complete Related Instruction in the Computer Systems Analyst Apprenticeship Program training courses. Instructional hours may vary depending on the apprentice's competency and learning style through New Horizons Computer Learning Centers Mentored Learning training modality. Mastery of the subject matter is monitored through successfully completing certification exams.

Related Instruction Outline		Related Instruction Hours
<b>Period 1: General Practices - Foundations</b>		
1	New apprenticeship orientation session	2- 4
2	Effective Use of Time Management	8
<b>Period 2: General Practices - Computer Basics</b>		
1	Comp TIA A+ Essentials	55
2	Comp TIA A+ Practical Application	55
3	Comp TIA Network +	55
4	Testing	8
5	Testing	8
6	Testing	8
<b>Period 3: General Practices - Security Basics</b>		
1	CompTIA Security +	42
<b>Client Operating System Basics</b>		
2	Microsoft 6292: Installing and Configuring Windows 7 Client	32
3	Passing the certification exam for Microsoft 6292 (70-680)	8
<b>Network Operating Systems</b>		
4	Microsoft 6421: Configuring and Troubleshooting a Windows Server 2008 Network Infrastructure	55
5	Microsoft 6425: Configuring and Troubleshooting Windows Server 2008 Active Directory Domain Services	55
6	Microsoft 6426: Configuring and Troubleshooting Identity and Access Solutions with Windows Server 2008 Active Directory	32
7	6427A: Configuring and Troubleshooting Internet Information Services in Windows Server 2008	32
8	6428A: Configuring and Troubleshooting Windows Server 2008 Terminal Services	20
9	Microsoft 6430: Planning and Administering Windows Server 2008	55
10	Microsoft 6435A: Designing a Windows Server® 2008 Network Infrastructure	55
11	Microsoft 6436A: Designing a Windows Server 2008 Active Directory Infrastructure and Services	55
12	Testing	8
13	Testing	8
14	Testing	8
15	Testing	8
16	Testing	8

<b>Period 4: General Practices - Advanced Networking</b>		
1	Cisco® ICND 1: Interconnecting Cisco Networking Devices (CCENT)	55
2	Cisco® ICND 2: Interconnecting Cisco Networking Devices (CCNA)	55
3	Employer Sponsor Elective Certification Class	55
4	Passing the certification exam for Cisco ICND 1	8
5	Passing the certification exam for Cisco ICND 2	8
6	Passing the Employer Sponsor Elective Certification Class	8
<b>Demonstrating Learned Competencies Learned</b>		
7	Resolve all of the issues on client machines in the final project	8
<b>Related Instruction Suggested Hours:</b>		<b>687</b>
<b>Related Instruction Maximum Hours:</b>		<b>879</b>

\*Maximum time frame allows for students to attend Mentored Learning training sessions, Traditional Instructor Led Training sessions, and/or On-line Live training sessions. Maximum time frame allows for students to repeat sessions where necessary for mastery of skills.