

COMPETENCY-BASED OCCUPATIONAL FRAMEWORK FOR REGISTERED APPRENTICESHIP

IT Generalist

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ABOUT THE URBAN INSTITUTE

The nonprofit Urban Institute is dedicated to elevating the debate on social and economic policy. For nearly five decades, Urban scholars have conducted research and offered evidence-based solutions that improve lives and strengthen communities across a rapidly urbanizing world. Their objective research helps expand opportunities for all, reduce hardship among the most vulnerable, and strengthen the effectiveness of the public sector.

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Competency-Based Occupational Frameworks

The Urban Institute, under contract by the U.S. Department of Labor, has worked with employers, subject matter experts, labor unions, trade associations, credentialing organizations and academics to develop Competency-Based Occupational Frameworks (CBOF) for Registered Apprenticeship programs. These frameworks defined the **purpose** of an occupation, the **job functions** that are carried out to fulfill that purpose, the **competencies** that enable the apprentice to execute those job functions well, and the **performance criteria** that define the specific knowledge, skills and personal attributes associated with high performance in the workplace. This organizational hierarchy – Job Purpose – Job Functions – Competencies – Performance Criteria – is designed to illustrate that performing work well requires more than just acquiring discrete knowledge elements or developing a series of manual skills. To perform a job well, the employee must be able to assimilate knowledge and skills learned in various settings, recall and apply that information to the present situation, and carry out work activities using sound professional judgement, demonstrating an appropriate attitude or disposition, and achieving a level of speed and accuracy necessary to meet the employer’s business need.

The table below compares the terminology of Functional Analysis with that of traditional Occupational Task Analysis to illustrate the important similarities and differences. While both identify the key technical elements of an occupation, Functional Analysis includes the identification of behaviors, attributes and characteristics of workers necessary to meet an employer’s expectations.

Framework Terminology	Traditional Task Analysis Terminology
Job Function – the work activities that are carried out to fulfill the job purpose	Job Duties – roles and responsibilities associated with an occupation
Competency – the actions an individual takes and the attitudes he/she displays to complete those activities	Task – a unit of work or set of activities needed to produce some result
Performance Criteria – the specific knowledge, skills, dispositions, attributes, speed and accuracy associated with meeting the employer’s expectations	Sub Task – the independent actions taken to perform a unit of work or a work activity

Although designed for use in competency-based apprenticeship, these Competency-Based Occupational Frameworks also support time-based apprenticeship by defining more clearly and precisely what the apprentice is expected to learn and do during the allocated time-period.

CBOFs are comprehensive in to encompass the full range of jobs that may be performed by individuals in the same occupation. As employers or sponsors develop their individual apprenticeship programs, they can extract from or add to the framework to meet their unique organizational needs.

Components of the Competency-Based Occupational Framework

Occupational Overview: This section of the framework provides a description of the occupation including its purpose, the setting in which the job is performed and unique features of the occupation.

Work Process Schedule: This section includes the job functions and competencies that would likely be included in an apprenticeship sponsor’s application for registration. These frameworks provide a point of reference that has already been vetted by industry leaders so sponsors can develop new programs knowing that they will meet or exceed the consensus expectations of peers. Sponsors maintain the ability to customize their programs to meet their unique needs, but omission of a significant number of job functions or competencies should raise questions about whether or not the program has correctly identified the occupation of interest.

Cross-cutting Competencies: These competencies are common among all workers, and focus on the underlying knowledge, attitudes, personal attributes and interpersonal skills that are important regardless of the occupation. That said, while these competencies are important to all occupations, the relative importance of some versus is others may change from one occupation to the next. These relative differences are illustrated in this part of the CBOF and can be used to design pre-apprenticeship programs or design effective screening tools when recruiting apprentices to the program.

Detailed Job Function Analysis: This portion of the framework includes considerable detail and is designed to support curriculum designers and trainers in developing and administering the program. There is considerable detail in this section, which may be confusing to those seeking a more succinct, higher-level view of the program. For this reason, we recommend that the Work Process Schedule be the focus of program planning activities, leaving the detailed job function analysis sections to instructional designers as they engage in their development work.

- a. **Related Technical Instruction:** Under each job function appears a list of foundational knowledge, skills, tools and technologies that would likely be taught in the classroom to enable the apprentice’s on-the-job training safety and success.

- b. Performance Criteria: Under each competency, we provide recommended performance criteria that could be used to differentiate between minimally, moderately and highly competent apprentices. These performance criteria are generally skills-based rather than knowledge-based, but may also include dispositional and behavioral competencies.

Using the Competency-Based Occupational Framework to Develop a Registered Apprenticeship Program

When developing a registered apprenticeship program, the Work Process Schedule included in this CBOF provides an overview of the job functions and competencies an expert peer group deemed to be important to this occupation. The Work Process Schedule in this document can be used directly, or modified and used to describe your program content and design as part of your registration application.

When designing the curriculum to support the apprenticeship program – including on the job training and related technical instruction – the more detailed information in Section 5 could be helpful. These more detailed job function documents include recommendations for the key knowledge and skill elements that might be included in the classroom instruction designed to support a given job function, and the performance criteria provided under each competency could be helpful to trainers and mentors in evaluating apprentice performance and insuring inter-rater reliability when multiple mentors are involved.

IT Generalist Occupational Overview

Occupational Purpose and Context

The IT generalist provides a large number of support functions, particularly if he or she works in a small- to medium-size company that has a small IT department with few specialist positions. IT generalists support a variety of functions that range from setting up technology for employees to maintaining internal networks, supporting telework functions and providing help desk support. This position works with a variety of individuals, including IT colleagues, staff at all levels within an organization, external clients and vendors.

The IT generalist maintains functioning information technology equipment and networks, provides support to technology users, ensures security of information and IT infrastructure and upholds company policies regarding use, security and redundancy of data.

Potential Job Titles

IT Generalist, Network Manager, Network Support Technician, Network Administrator, IT Administrator, Help Desk Specialist, IT Technician, IT Professional, IT Technical Support Professional

Attitudes and Behaviors

IT generalists must have strong communications and customer service skills, must understand technology and be able to troubleshoot faults, must think logically and analytically, must be able to learn quickly and must be patient.

Apprenticeship Prerequisites

Commercial Driver's License; Must be able to lift heavy loads; Must be able to pass drug testing and physical exam; Must have good driving record.

Occupational Pathways

An individual may begin an IT generalist apprenticeship having had little to no formal IT education or training; however, typically such an individual will be an IT hobbyist or enthusiast and enjoy working with technology. IT generalists can move into leader and manager positions and with additional training can specialize in particular areas within information technology. Often vendor certifications are required to move into more specialized or advanced positions.

Certifications, Licensure and Other Credential Requirements

CREDENTIAL	Offered By	Before, During or After Apprenticeship
Multiple vendor certifications available	Microsoft, Cisco, CompTIA, software/hardware vendors	During or after

Job Functions

JOB FUNCTIONS		Core or Optional
1.	Sets up and removes employee or client workstations or devices, including setting up access controls	Core or Optional
2.	Installs, provides user support for, or troubleshoots hardware and commercial software	Core or Optional
3.	Supports internal or external clients in the use of audio/visual technology and conference technology	Optional
4.	Installs, maintains and troubleshoots networks	Core or Optional
5.	Makes minor software modifications to improve performance or customize to user needs	Core or Optional
6.	Assists in maintaining or updating web content and manages user access profiles and authorities	Optional

7.	Monitors and helps maintain network security by adhering to security policies	Core or Optional
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Stackable Programs

This occupational framework is designed to link to the following additional framework(s) as part of a career laddering pathway.

Stackable Programs		Base or Higher Level	Stacks on top of
1.	Links to Cyber Security Support Technician	Higher Level	IT Generalist

Options and Specializations

The following options and specializations have been identified for this occupation. The Work Process Schedule and individual job function outlines indicate which job functions and competencies were deemed by industry advisors to be optional. Work Process Schedules for Specializations are included at the end of this document.

Options and Specializations	Option	Specialization

Levels

Industry advisors have indicated that individuals in this occupation may function at different levels, based on the nature of their work, the amount of time spent in an apprenticeship, the level of skills or knowledge mastery, the degree of independence in performing the job or supervisory/management responsibilities.

Level	Distinguishing Features	Added Competencies	Added Time Requirements

Work Process Schedule

WORK PROCESS SCHEDULE		ONET Code: 15-1151.00	
IT Generalist		RAPIDS Code: 1059	
JOB TITLE:			
LEVEL:		SPECIALIZATION:	
STACKABLE PROGRAM <input type="checkbox"/> yes <input type="checkbox"/> no			
BASE OCCUPATION NAME: Base credential for IT pathway			
Company Contact: Name			
Address:		Phone	Email
Apprenticeship Type:		Prerequisites	
<input type="checkbox"/> Competency-Based <input type="checkbox"/> Time-Based <input type="checkbox"/> Hybrid			
JOB FUNCTION 1: Sets up and removes employee or client workstations or devices, including setting up access controls			
Competencies	Core or Optional	RTI	OJT
A. Sets up desktop, laptop and other devices for employees	Core		
B. Installs software on network or individual users' computers, laptops or devices and sets appropriate access controls or authorities	Core		
C. Sets up user identifications and passwords and implements policies regarding passwords and user/administrator permissions	Core		
D. Establishes secure external connections to network or desktops using secure remote access technology	Core		
E. Installs printers on networks or individual devices	Core		

F. Sets up network map, employee folders and centralized data repositories	Core		
G. Sets up email account for users and establishes storage limits and backup parameters	Core		
H. Maintains and manages software licenses	Core		
I. Removes users from network, archives data and files, removes workstations and disables devices for users exiting the organization or prohibited from using IT resources	Core		

JOB FUNCTION 2: Installs, provides user support for, or troubleshoots hardware and commercial software

Competencies	Core or Optional	RTI	OJT
A. Uses FAQ's or other job aids to troubleshoot hardware or software faults	Core		
B. Uses logic to discover source of faults and recommends appropriate solutions	Core		
C. Demonstrates ability to use basic software, including set-up of preferred default settings, instructs other users on the basic features of standard software packages, and identifies and remedies typical faults in relevant software packages	Core		
D. Identifies situations in which the fault must be escalated to a higher-level technology support individual, including an outside vendor	Core		
E. Contacts outside vendors or vendor-supported help desk to solve difficult problems or procure software patches	Core		
F. Prioritizes "tickets" or requests for help based on business need, staff hierarchy or urgency of problems	Core		

JOB FUNCTION 3: Supports internal or external clients in the use of audio/visual technology and conference technology

Competencies	Core or Optional	RTI	OJT
A. Sets up and links audiovisual equipment, including projectors, screens, laptops, cameras and related device	Optional		
B. Installs, launches, operates and troubleshoots software designed to facilitate presentations, web-based conferencing and audioconferencing	Optional		
C. Tests equipment and software prior to use to ensure sound and video quality is acceptable	Optional		
D. Sets up, schedules and manages web-based or video conferences	Optional		
E. Provides support to users during meetings, conferences or webinars	Optional		
F. Sets up user accounts on voice technologies or systems, including voicemail	Optional		

JOB FUNCTION 4: Installs, maintains and troubleshoots networks

Competencies	Core	RTI	OJT
A. Installs and maintains wired and wireless networks	Core		
B. Connects devices to networks physically and using remote access technologies	Core		
C. Installs network security software and devices and monitors system for signs of hacking, intrusion or viruses	Core		
D. Tests resiliency of security devices or software and monitors bandwidth utilization	Core		
E. Establishes and sets access levels and permissions based on employees' job roles and company policies	Core		
F. Assists in setting up, configuring and managing servers including data storage	Core		
G. Sets up user identification parameters on servers	Core		
H. Assists in monitoring server use, efficacy of data back-up and storage systems and	Core		

integrity of redundant systems or technologies			
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JOB FUNCTION 5: Makes minor software modifications to improve performance or customize to user needs

Competencies	Core	RTI	OJT
A. Surveys user needs to understand what modifications are needed	Optional		
B. Modifies a program within a software package, including securing permission from vendors to do so	Optional		
C. Inserts or loads organizational templates or standards into software, such as presentation templates in PowerPoint or equivalent software	Optional		
D. Monitors computer performance and recommends/makes upgrades or modifications as necessary to improve speed or other performance parameters	Optional		
E. Uses software to set up needed business functions, such as workflows, tracking, archiving or other functions	Optional		

JOB FUNCTION 6: Assists in maintaining or updating web content and manages user access profiles and authorities

Competencies	Core	RTI	OJT
A. Sets user/author access permissions based on organization's policies	Optional		
B. Uploads new content to organization's website or removes old content as instructed	Optional		
C. Tests functionality of links embedded in the website	Optional		
D. Notifies appropriate person if incorrect, outdated or otherwise problematic content is identified	Optional		
E. Notifies appropriate person if website is not functioning properly	Optional		

JOB FUNCTION 7: Monitors and helps maintain network security by adhering to security policies

Competencies	Core	RTI	OJT
A. Monitors adherence to password policies, including enforcement of password update intervals	Core		
B. Sets user access levels and permissions based on organizational policies	Core		
C. Monitors antiviral software to understand potential threats and updates as needed	Core		
D. Reads, attends conferences or interacts with other IT professionals to know and understand current threat levels and mechanisms	Core		
E. Ensures that encryption technology and access controls are utilized to protect sensitive data	Core		
F. Ensures that off-site staff are using secure connections to access network	Core		
G. Assists in or monitors use of back-up technologies and network redundancies to minimize risk	Core		

Specialization

Type of Specialization: _____

JOB FUNCTION 1:		
Competencies	RTI	OJT

JOB FUNCTION 2:		
Competencies	RTI	OJT

JOB FUNCTION 3:		
Competencies	RTI	OJT

JOB FUNCTION 4:		
Competencies	RTI	OJT
JOB FUNCTION 5:		
Competencies	RTI	OJT

Related Technical Instruction Plan

COURSE NAME	Course Number
	Hours
LEARNING OBJECTIVES	
COURSE NAME	Course Number
	Hours
LEARNING OBJECTIVES	
COURSE NAME	Course Number
	Hours
LEARNING OBJECTIVES	
COURSE NAME	Course Number
	Hours

LEARNING OBJECTIVES

Large empty grey rectangular area for entering learning objectives.

COURSE NAME

Course Number

Hours

LEARNING OBJECTIVES

Large empty grey rectangular area for entering learning objectives.

Cross-Cutting Competencies

		COMPETENCY**								
		0	1	2	3	4	5	6	7	8
Personal Effectiveness	Interpersonal Skills	0	1	2	3	4	5	6	7	8
	Integrity	0	1	2	3	4	5	6	7	8
	Professionalism	0	1	2	3	4	5	6	7	8
	Initiative	0	1	2	3	4	5	6	7	8
	Dependability and Reliability	0	1	2	3	4	5	6	7	8
	Adaptability and Flexibility	0	1	2	3	4	5	6	7	8
	Lifelong Learning	0	1	2	3	4	5	6	7	8
Academic	Reading	0	1	2	3	4	5	6	7	8
	Writing	0	1	2	3	4	5	6	7	8
	Mathematics	0	1	2	3	4	5	6	7	8
	Science & Technology	0	1	2	3	4	5	6	7	8
	Communication	0	1	2	3	4	5	6	7	8
	Critical and Analytical Thinking	0	1	2	3	4	5	6	7	8
	Basic Computer Skills	0	1	2	3	4	5	6	7	8
Workplace	Teamwork	0	1	2	3	4	5	6	7	8
	Customer Focus	0	1	2	3	4	5	6	7	8
	Planning and Organization	0	1	2	3	4	5	6	7	8
	Creative Thinking	0	1	2	3	4	5	6	7	8
	Problem Solving & Decision Making	0	1	2	3	4	5	6	7	8
	Working with Tools & Technology	0	1	2	3	4	5	6	7	8
	Checking, Examining & Recording	0	1	2	3	4	5	6	7	8
	Business Fundamentals	0	1	2	3	4	5	6	7	8
	Sustainable	0	1	2	3	4	5	6	7	8
	Health & Safety	0	1	2	3	4	5	6	7	8

****Cross-cutting competencies are defined in the Competency Model Clearinghouse:**

<https://www.careeronestop.org/CompetencyModel/competency-models/building-blocks-model.aspx>

Cross-Cutting Competencies identify transferable skills – sometimes called “soft skills” or “employability skills” – that are important for workplace success, regardless of a person’s occupation. Still, the relative importance of specific cross-cutting competencies differs from occupation to occupation. The Cross-Cutting Competencies table, above, provides information about which of these competencies is most important to be successful in a particular occupation. This information can be useful to employers or intermediaries in screening and selecting candidates for apprenticeship programs, or to pre-apprenticeship providers that seek to prepare individuals for successful entry into an apprenticeship program.

The names of the cross-cutting competencies come from the U.S. Department of Labor’s Competency Model Clearinghouse and definitions for each can be viewed at:

<https://www.careeronestop.org/CompetencyModel/competency-models/building-blocks-model.aspx>

The scoring system utilized to evaluate the level of competency required in each cross cutting skill aligns with the recommendations of the Lumina Foundation’s Connecting Credentials Framework. The framework can be found at: <http://connectingcredentials.org/wp-content/uploads/2015/05/ConnectingCredentials-4-29-30.pdf>

Detailed Job Functions

Note: We have not yet identified the performance criteria that supports the competencies in the IT generalist framework since information technology applications and requirements can vary widely from one organization to the next.

JOB FUNCTION 1: Sets up and removes employee or client workstations or devices, including setting up access controls

Related Technical Instruction		
Working via phone, online chat or in person to set up technology at employee work stations, for remote employees, and on employee devices.		
KNOWLEDGE	SKILLS	TOOLS & TECHNOLOGIES
<ul style="list-style-type: none"> • Basic components of computers, computer networks, and ancillary technologies • Basic understanding of key software packages, such as email, word processing, database and workflow packages • Intellectual property rights, copyright, licensing, and piracy laws and regulations • Techniques for transporting (in person or by mail) computer hardware and software • Basic installation procedures 	<ul style="list-style-type: none"> • Use of email, chat rooms, and phone • Able to communicate technical information to technical experts as well as non-technical users • Use of internet • Set up user email account, calendar and contacts • Agility and flexibility (if setting up physical workstations or equipment) 	<ul style="list-style-type: none"> • Microsoft Exchange • Microsoft Office Suite • Adobe products • Desktop and laptop computers • Printers, scanners, projection screens, monitors • Handheld devices including smart phones, tablets, etc.

Competency A: Sets up desktop, laptop and other devices for employees	Core or Optional
Competency B: Installs software on network or individual users' computers, laptops or devices and sets appropriate access controls or authorities	Core or Optional
Competency C: Sets up user identifications and passwords and implements policies regarding passwords and user/administrator permissions	Core or Optional

Competency D: Establishes secure external connections to network or desktops using secure remote access technology	Core or Optional
Competency E: Installs printers on networks or individual devices	Core or Optional
Competency F: Sets up network map, employee folders and centralized data repositories	Core or Optional
Competency G: Sets up email account for users and establishes storage limits and backup parameters	Core or Optional
Competency H: Maintains and manages software licenses	Core or Optional
Competency I: Removes users from network, archives data and files, removes workstations and disables devices for users exiting the organization or prohibited from using IT resources	Core or Optional

JOB FUNCTION 2: Installs, provides user support for, or troubleshoots hardware and commercial software

Related Technical Instruction		
<p>IT generalists are expected to know the basic features of standard software packages, such as those used by the company or organization for email, word processing, working with data, creating presentations and supporting business uses (such as statistical software packages or software packages that operate machines).</p>		
KNOWLEDGE	SKILLS	TOOLS & TECHNOLOGIES
<ul style="list-style-type: none"> • Basic features and functions of standard software packages • Reference materials for use in troubleshooting software, such as FAQs or technical guides • Specifications, default and optional settings, customization menus for standard software packages 	<ul style="list-style-type: none"> • Use logic to problem solve and draw connections between related pieces of information • Good listening skills • Good communication skills, including with senior executives and non-technical experts 	<ul style="list-style-type: none"> • Software to support network functions • Software to support email and chat communications • Software to support basic office functions, such as word processing, data management, presentations, maintaining calendars and maintaining contact lists • Cloud storage and software solutions

Competency A: Uses FAQ's or other job aids to troubleshoot hardware or software faults	Core or Optional
Competency B: Uses logic to discover source of faults and recommends appropriate solutions	Core or Optional
Competency C: Demonstrates ability to use basic software, including set-up of preferred default settings, instructs other users on the basic features of standard software packages, and identifies and remedies typical faults in relevant software packages	Core or Optional
Competency D: Identifies situations in which the fault must be escalated to a higher-level technology support individual, including an outside vendor	Core or Optional

Competency E: Contacts outside vendors or vendor-supported help desk to solve difficult problems or procure software patches	Core or Optional
Competency F: Prioritizes "tickets" or requests for help based on business need, staff hierarchy or urgency of problems	Core or Optional

JOB FUNCTION 3: Supports internal or external clients in the use of audio/visual technology and conference technology (Optional)

Related Technical Instruction		
<p>In some organizations, the IT staff are required to assist in setting up and running audiovisual equipment, including projectors, screens, television panels and online conferencing technologies. This work involves physical set up, such as running cables or attaching equipment to a computer or other device, and can also involve virtual technologies.</p>		
KNOWLEDGE	SKILLS	TOOLS & TECHNOLOGIES
<ul style="list-style-type: none"> • Use of technology ports and cables to connect computers or other devices to projection screens • Setting up screens to receive and display desired presentations or images • Setting up technology to access internet or run audio/video clips • Use of presentation and conferencing software and devices • Use of voice technologies, such as phones or VOIP technologies 	<ul style="list-style-type: none"> • Logic and the ability to connect pieces of equipment • Communication • Meeting deadlines • Patience and staying calm during tense situations • Customer service 	<ul style="list-style-type: none"> • Presentation software • Conferencing software • Cables and connective devices • Telephone systems and VOIP technologies

Competency A: Sets up and links audiovisual equipment, including projectors, screens, laptops, cameras and related devices	Core or Optional
Competency B: Installs, launches, operates and troubleshoots software designed to facilitate presentations, web-based conferencing and audioconferencing	Core or Optional
Competency C: Tests equipment and software prior to use to ensure sound and video quality is acceptable	Core or Optional

Competency D: Sets up, schedules and manages web-based or video conferences	Core or Optional
Competency E: Provides support to users during meetings, conferences or webinars	Core or Optional
Competency F: Sets up user accounts on voice technologies or systems, including voicemail	Core or Optional

JOB FUNCTION 4: Installs, maintains and troubleshoots networks

Related Technical Instruction		
Sets up, maintains and troubleshoots networks including wired and wireless networks, monitors bandwidth utilization and challenges and ensures that data is being stored properly based on company or organizational policies.		
KNOWLEDGE	SKILLS	TOOLS & TECHNOLOGIES
<ul style="list-style-type: none"> • Methods to back up, store, and retrieve data • Network management principles • Basic electronics • Basic structure and function of networks • Network security protocols 	<ul style="list-style-type: none"> • Reading and interpreting written documents • Linking and unlinking devices on a wired or wireless network • Problem solving and logic • Applying information learned in one instance to new situations 	<ul style="list-style-type: none"> • Routers • Cables • Network security software such as antiviral software, firewalls, etc.

Competency A: Installs and maintains wired and wireless networks	Core or Optional
Competency B: Connects devices to networks physically and using remote access technologies	Core or Optional
Competency C: Installs network security software and devices and monitors system for signs of hacking, intrusion or viruses	Core or Optional
Competency D: Tests resiliency of security devices or software and monitors bandwidth utilization	Core or Optional
Competency E: Establishes and sets access levels and permissions based on employees' job roles and company policies	Core or Optional
Competency F: Assists in setting up, configuring and managing servers including data storage	Core or Optional
Competency G: Sets up user identification parameters on servers	Core or Optional

Competency H: Assists in monitoring server use, efficacy of data back-up and storage systems and integrity of redundant systems or technologies

Core or
Optional

JOB FUNCTION 5: Makes minor software modifications to improve performance or customize to user needs

Related Technical Instruction		
Changing performance parameters, settings, or using software to set up specific functions or processes. In some settings could including writing simple code or making minor modifications to existing code to improve performance. Includes installing vendor-provided patches or updates.		
KNOWLEDGE	SKILLS	TOOLS & TECHNOLOGIES
<ul style="list-style-type: none"> • Functionality and intended use of software • Implications of changing use parameters • Coding logic 	<ul style="list-style-type: none"> • Writing basic code • Manipulating software parameters and settings • Listening and interpreting, including descriptions provided by non-technical staff • Use of advanced features within standard and company-specific software packages • Logic 	

Competency A: Surveys user needs to understand what modifications are needed	Core or Optional
Competency B: Modifies a program within a software package, including securing permission from vendor to do so	Core or Optional
Competency C: Inserts or loads organizational templates or standards into software, such as presentation templates in PowerPoint or equivalent software	Core or Optional
Competency D: Monitors computer performance and recommends/makes upgrades or modifications as necessary to improve speed or other performance parameters	Core or Optional
Competency E: Uses software to set up needed business functions, such as workflows, tracking, archiving or other functions	Core or Optional

JOB FUNCTION 6: Assists in maintaining or updating web content and manages user access profiles and authorities

Related Technical Instruction		
Includes uploading documents, text, video or audio files to website, assigning access levels to others to upload or modify content to the website and monitoring basic web analytics to understand utilization patterns.		
KNOWLEDGE	SKILLS	TOOLS & TECHNOLOGIES
<ul style="list-style-type: none"> Ease of use criteria Organization's policy regarding review and clearance of web information Organization's policy regarding access levels 	<ul style="list-style-type: none"> Basic web design Identifying and assigning permission hierarchy Checking links to ensure functionality 	<ul style="list-style-type: none"> Web development software, e.g. HTML, Java, Wordpress

Competency A: Sets user/author access permissions based on organization's policies	Core or Optional
Competency B: Uploads new content to organization's website or removes old content as instructed	Core or Optional
Competency C: Tests functionality of links embedded in the website	Core or Optional
Competency D: Notifies appropriate person if incorrect, outdated or otherwise problematic content is identified	Core or Optional
Competency E: Notifies appropriate person if website is not functioning properly	Core or Optional

JOB FUNCTION 7: Monitors and helps maintain network security by adhering to security policies

Related Technical Instruction		
KNOWLEDGE	SKILLS	TOOLS & TECHNOLOGIES
<ul style="list-style-type: none"> • Current IT threats and recent security breaches (at your organization and others) • Current threat migration technologies and strategies • Use of access limits to minimize security risks • Privacy laws and limitations on the use and required protections of sensitive data 	<ul style="list-style-type: none"> • Able to identify examples of security threats • Recommend “safe” passwords and password update protocols 	<ul style="list-style-type: none"> • Antiviral software • Firewall technology

Competency A: Monitors adherence to password policies, including enforcement of password update intervals	Core or Optional
Competency B: Sets user access levels and permissions based on organizational policies	Core or Optional
Competency C: Monitors antiviral software to understand potential threats and updates as needed	Core or Optional
Competency D: Reads, attends conferences or interacts with other IT professionals to know and understand current threat levels and mechanisms	Core or Optional
Competency E: Ensures that encryption technology and access controls are utilized to protect sensitive data	Core or Optional
Competency F: Ensures that off-site staff are using secure connections to access network	Core or Optional
Competency G: Assists in or monitors use of back-up technologies and network redundancies to minimize risk	Core or Optional



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