
APPENDIX A

WORK PROCESS SCHEDULE



ON-THE-JOB TRAINING OUTLINE

RELATED INSTRUCTION OUTLINE



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Appendix A
WORK PROCESS SCHEDULE
TECH SUPPORT SPECIALIST
(Computer Support Specialist-Desktop Support Tech)
O*NET-SOC CODE: 15-1232.00 RAPIDS CODE: 2018CB

This schedule is attached to and a part of these Standards for the above identified occupation.

APPRENTICESHIP APPROACH

- Time-based Competency-based Hybrid

TERM OF APPRENTICESHIP

The term of the apprenticeship is competency based with an OJL attainment of one to two years, supplemented the minimum required 328 hours of related instruction.

RATIO OF APPRENTICES TO JOURNEYWORKERS

The apprentice to journey worker ratio is: 1 Apprentice(s) to 1 journey worker(s).

APPRENTICE WAGE SCHEDULE

PROBATIONARY PERIOD

Every applicant selected for apprenticeship will serve a probationary period of 90 days.



Appendix A

ON-THE-JOB TRAINING OUTLINE

TECH SUPPORT SPECIALIST

(Computer Support Specialist-Desktop Support Tech)

O*NET-SOC CODE: 15-1232.00 RAPIDS CODE: 2018CB

Occupational Description: Tech Support Specialists are responsible for analyzing, troubleshooting, and rectifying day-to-day technology problems and challenges. This role may support internal clients (employees within the company) or external customers either in-person, on the phone, or via webchat. The specialist may focus on helping individuals and businesses better use or troubleshoot the company’s own technical products, or the specialist may offer support to those using third- party hardware and software applications to do business. In the latter role, the Tech Support Specialist is the person one might call to troubleshoot one’s Wi-Fi router when the internet is down, obtain online permissions to access accounts or files, or to set up a new employee’s email and workstation. In short, Tech Support Specialists are the steady and calm go-to people for those of us who pull our hair out when something goes wrong with our computers.

Part 1: Basic Hardware	Date: Rating:	Date: Rating:	Date: Rating:
Demonstrate knowledge of various mobile device types, their features, and purpose.			
Demonstrate skills required to manage and troubleshoot computer hardware and peripheral devices.			
Demonstrate knowledge of common computer hardware and interfaces.			
Demonstrate skills required to troubleshoot general computer hardware issues and printer problems.			
Demonstrate skills required to configure peripherals, printers, and related applications to support external hardware.			



Part 2: Basic Networking	Date: Rating:	Date: Rating:	Date: Rating:
Demonstrate knowledge of basic networking concepts (wired and wireless).			
Demonstrate skills required to configure and troubleshoot device connectivity (LAN and Internet Access).			
Part 3: Cloud and Virtualization Technologies	Date: Rating:	Date: Rating:	Date: Rating:
Demonstrate knowledge of cloud computing concepts, including cloud storage and security configurations.			
Demonstrate skills required to configure client-side virtualization, cloud storage applications, and file synchronization features.			
Part 4: Operating System Basics	Date: Rating:	Date: Rating:	Date: Rating:
Demonstrate knowledge of important Microsoft Windows 10 operating system features and their purpose.			
Demonstrate skills required to install, configure, and secure Microsoft Windows 10 operating system versions.			
Demonstrate skills required to troubleshoot Microsoft Windows operating system problems.			
Demonstrate knowledge of important Mac OS and Linux OS desktop operating system features and their purpose.			
Demonstrate skills required to configure, secure, and troubleshoot various operating systems Mac OS and Linux OS.			



Demonstrate skills required to troubleshoot mobile operating systems.			
Part 5: IT Security Basics	Date: Rating:	Date: Rating:	Date: Rating:
Demonstrate knowledge of basic enterprise security concepts and wireless security protocols.			
Demonstrate skills required to perform account management, configure wireless security, and detect and remove malware on workstations and mobile devices.			
Demonstrate skills to troubleshoot common computer security issues.			
Demonstrate skills required to troubleshoot application security issues.			
Part 6: General IT Operations	Date: Rating:	Date: Rating:	Date: Rating:
Demonstrate knowledge of ticketing systems and documentation procedures.			
Demonstrate knowledge of disaster recovery concepts and backup procedures.			
Demonstrate knowledge of licensing and privacy and policy concepts, including how to address prohibited content.			
Demonstrate knowledge of scripting languages, basic functions, and logic structures.			



Part 7: Business Acumen	Date: Rating:	Date: Rating:	Date: Rating:
Demonstrate a basic understanding of the employer’s corporate structure and business model, including its product and services portfolio, its primary customers, and its top competitors.			
Demonstrate a basic knowledge of the employer’s brand messaging, its value proposition in the marketplace, and key success metrics.			
Part 8: Employability Skills	Date: Rating:	Date: Rating:	Date: Rating:
Demonstrate skills to provide competent customer service using active listening and empathy during various interactions (e.g., in-person, over telephone, email, and chat).			
Demonstrate ability to manage stress and other emotions in the workplace to reduce conflict, foster collaboration, and promote wellness.			
Demonstrate skills required to take and give productive critical feedback.			
Demonstrate skills required to problem-solve using critical thinking, clarifying questions, and knowing when to escalate a situation to a superior.			
Demonstrate skills to explain complex issues to non-technical customers without jargon or blaming.			
Demonstrate ability to conduct oneself with integrity, professionalism, and in accordance with organization policy and procedure.			
Demonstrate skills to communicate with colleagues, managers, and end users effectively and clearly, in a timely manner.			



Demonstrate ability to use language, tone of voice, and non- verbal communication to neutralize conflict in the workplace.			
Demonstrate skills required to collaborate effectively with team members from across the organization.			
Demonstrate ability to use respectful cross-cultural communication to work successfully across the organization and with diverse coworkers.			
Demonstrate knowledge required to manage time effectively, minimizing distractions to maintain productivity, prioritize work appropriately, and meet deadlines with situational awareness.			
Demonstrate ability to adapt to changing organizational landscape.			

EVALUATING PERFORMANCE SCALE

This rubric is an example that may be used to rate apprentices:

Rating	Definition
0	Learning: Apprentice has not learned this through RTI or OJL.
1	Understands: Apprentice can explain and discuss issues and concepts; has studied applications; and is familiar with this function, competency, and performance indicators of this occupation.
2	Developing: Apprentice integrates relevant knowledge and skill, and demonstrates this performance indicator with a limited degree of consistency in routine tasks.
3	Competent: Apprentice applies relevant knowledge and skill, and demonstrates this performance indicator with consistency in routine interactions and responsibilities.
4	Skilled: Apprentice demonstrates, applies, and integrates relevant knowledge and skills, and demonstrates this performance indicator with a high degree of consistency and effectiveness in most situations.



5	Master: Apprentice is especially skillful in demonstrating, applying, and integrating relevant knowledge and skills, and demonstrates this performance indicator with a high degree of consistency and effectiveness in routine and complex situations.
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Level 3 ratings are expected for each performance indicator within each competency for successful completion of an apprenticeship program.

Levels 4 and 5 ratings should only be used occasionally to describe exceptional performance.



Appendix A

RELATED INSTRUCTION OUTLINE

O*NET/SOC CODE: 15-1232 RAPIDS CODE: 2018CB

Related Training Provider



Class Number	Class Name	Credits	Hrs/Wk Class	Hrs/Wk Lab	Total Hours
CIS102M	A+ Preparation Hardware	3	2	2	45
CIS103M	A+ Preparation Software	3	2	2	45
CIS116M	Network+ Preparation	4	3	3	60
CYBD220M	Security+ Preparation	4	3	3	60
CIS110M	Microsoft Applications	3	2	2	45
CSIT109	AWS Cloud Foundations	3	2	2	45
	WorkReadyNH				60
TOTAL MINIMUM HOURS					360

Course Curriculum Outline or Course Descriptions:

CIS102M	A+ Preparation Hardware
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The A+ Preparation class is the starting point for a career in IT. It covers maintenance of PCs, mobile devices, laptops, operating systems and printers and prepares students for CompTIA's A+ hardware exam.

Course Objectives

Upon successful completion of this course the student will be able to:

- Identify all major components of a PC computer system and to describe the function of each.
- Describe the main technologies associated with computer networking.



- Identify all major components of a Laptop computer system and to describe the function of each.
- Identify all major components of a printer and to describe the function of each.
- Describe the main technologies associated with the operational procedures of computer hardware.
- Prepare for the CompTIA A+ hardware Exam.

CIS103M

A+ Preparation Software

The A+ Preparation classes are the starting point for a career in IT. The class covers maintenance of PCs, mobile devices, laptops, operating systems and printers, this class prepares students for CompTIA's A+ software including additional materials for the Cyber Investigator.

Course Objectives

Upon successful completion of this course the student will be able to:

- Identify and describe major components of Computer Security
- Identify major components of a Mobile Device Operating systems
- Demonstrate the ability to troubleshoot computer device system software
- Prepare to take the CompTIA A+ software Exam.

CIS116M

Network+ Preparation

Introduces the fundamental concepts and principles that underlie computer network technologies, installation and configuration, media and topologies, management and security. This class prepares students for CompTIA's Network + Exam.

Course Objectives

Upon successful completion of this course, the student will be able to:

- Explain the differences between standard cable types and their properties.
- Explain the functions performed at each level of the TCP/IP layers.
- Describe the functions of communication devices which work at each level of the OSI reference model.
- Distinguish network topologies and types of transmission mediums.
- Determine when connection-oriented or connectionless communication is required.
- Define the advantages and disadvantages of various communication mediums.
- Define the functional areas of LAN management and control and explain the design considerations of a local area network.
- Define and identify performance issues by monitoring networks.
- Recognize and distinguish the different LAN and WAN topologies and the architectures associated with each.



CYBD220M	Security+ Preparation
<p>This course provides students with the knowledge of security concepts, tools and procedures that will enable them to react to security incidents and allows them to create procedures ensuring security personnel. Also it can anticipate computer and computer network related security risks and guard against them. Potential roles include security architect, security engineer, security consultant/specialist, information assurance technician, security administrator, systems administrator and network administrator.</p> <p>Course Objectives</p> <p>Upon successful completion of this course the student will be able to:</p> <ul style="list-style-type: none"> • Implement computer network security • Insure compliance and operational security to computer systems and networks • Identify and deter computer and computer network threats and vulnerabilities • Explain data and host security methods • Configure computer and network access control and identity management • Apply different methods of cryptography being able to identifying various uses and types 	
CIS110M	Microsoft Computer Applications I
<p>This is a one semester course that introduces the student to the world of MS Applications Office Suite. Topics will include the use of Microsoft Internet Explorer as a research tool and MS Applications Office Suite (the most current version the college is licensed for). This grouping of programs includes MS Word, MS Excel and MS Power Point. This is not a course for a student with no computer skills and should not be considered as such; it is an intense and rapid instruction in the use of the most common MS Applications programs. Students will be issued a computer competency examination on the first day of class.</p> <p>Course Objectives</p> <p>Upon completion of this course the student will be able to do the following.</p> <ul style="list-style-type: none"> • Use the Internet as a viable research tool. • Use Microsoft Word to write, edit, rewrite, reedit and produce a research paper in a verity of styles as required by the professors. • Use Microsoft Excel to produce a working spreadsheet. • Use Microsoft PowerPoint to produce a viable presentation 	
CSIT109	AWS Cloud Foundations
<p>AWS Cloud Foundations is intended for students who seek an overall understanding of cloud computing concepts, independent of specific technical roles. It provides a detailed overview of cloud concepts, AWS core services, security, architecture, pricing, and support.</p> <p>Course Objectives</p>	



Upon completion of this course, students will be able to:

- Define the AWS Cloud
- Explain the AWS pricing philosophy
- Identify the global infrastructure components of AWS
- Describe the security and compliance measures of the AWS Cloud, including AWS Identity and Access Management (IAM)
- Create a virtual private cloud (VPC) by using Amazon Virtual Private Cloud (Amazon VPC)
- Demonstrate when to use Amazon Elastic Compute Cloud (Amazon EC2), AWS Lambda, and AWS Elastic Beanstalk
- Differentiate between Amazon Simple Storage Service (Amazon S3), Amazon Elastic Block Store (Amazon EBS), Amazon Elastic File System (Amazon EFS), and Amazon Simple Storage Service Glacier (Amazon S3 Glacier)
- Demonstrate when to use AWS database services, including Amazon Relational Database Service (Amazon RDS), Amazon DynamoDB, Amazon Redshift, and Amazon Aurora
- Explain the architectural principles of the AWS Cloud
- Explore key concepts related to Elastic Load Balancing, Amazon CloudWatch, and Amazon EC2 Auto Scaling

WorkReadyNH

Interpersonal Skills & Teamwork: Demonstrate the ability to work effectively with others

- Interact professionally and respectfully with supervisors and coworkers; work effectively with people who have diverse personalities and backgrounds; respect the diverse opinions, perspectives, customs, contributions, and individual differences of others; understand workplace sensitivity as it relates to harassment, tolerance, diversity and respect; use appropriate strategies and solutions for dealing with conflicts and differences to maintain a smooth workflow; be flexible and open-minded when dealing with a wide range of people; listen to and consider other's viewpoints; use effective strategies to manage conflicts appropriately; use networking and relationship building skills to develop and maintain good working relationships; understand the need for reasonable accommodations in the workplace.

Integrity: Display accepted social and work behaviors

- Treat others with honesty, fairness, and respect; comply with ethical standards for your field; take responsibility for accomplishing work goals within accepted timeframes; accept responsibility for one's decisions and actions; perform quality work; understand the fundamentals of responsible social networking.

Professionalism & Personal Acceptability: Maintain a socially acceptable demeanor



- Demonstrate self-control by maintaining composure and dealing calmly with stressful situations; accept & give constructive criticism and attempt to learn from mistakes; demonstrate a positive attitude; follow rules and standards of appropriate dress; follow rules and standards of personal hygiene (incl. body cleanliness, clothing, odors); refrain from substance misuse.

Initiative: Demonstrate a willingness to work

- Take initiative in seeking out new responsibilities and work challenges; pursue work with energy, drive, and effort to accomplish tasks; persist at a task until completion, despite interruptions, obstacles, or setbacks; establish and maintain personally challenging and realistic goals; demonstrate the capacity to adapt to new, different or changing environments and requirements; accomplish tasks in a timely manner.

Dependability and Reliability: Display responsible behaviors at work

- Behave consistently, predictably, and reliably, fulfill obligations, complete assignments, and meet deadlines; follow written and verbal directions; comply with organizational rules, policies, and procedures; adhere to company policies regarding time and attendance; understand safety in the workplace as it relates to company policy.

Lifelong Learning: Display a willingness to learn and apply new knowledge and skills

- Demonstrate an interest in personal and professional lifelong learning and development; treat unexpected circumstances as opportunities to learn and adopt new techniques; seek feedback and modify behavior of improvement; broaden knowledge and skills through job shadowing, continuing education and seek mentoring opportunities and volunteering; use newly learned knowledge and skills to complete specific tasks and improve work processes; take charge of personal career development by identifying personal interests and career pathways; pursue opportunities to develop new knowledge, skills, and expertise to address changing workplace demands.

Communications: Give full attention to what others are communicating verbally, non-verbally, or in writing and responding well enough to be understood

- Understand the current job search (and application) process (cover letter, resume, interview, networking resources); provide prompt and efficient responses to meet the requirements, requests, and concerns of customers; receive, attend to, interpret, understand, and respond to verbal messages and other cues; apply active listening skills using reflection, restatement, questioning, and clarification; speak clearly and confidently using common English conventions; confidently present ideas in a persuasive manner in a workplace situation.

Critical and Analytical Thinking: Use logic, reasoning, and analysis to address problems

- Use logic and reasoning to identify strengths and weaknesses of alternative solutions, conclusions, or approaches to problems; use reasoning to analyze, synthesize, compare and interpret information; draw conclusions from relevant or missing information; understand the



underlying relationships among facts and connections between issues; solve problems by breaking them into manageable tasks.

Final Project and Presentation

- Demonstrate the ability to work effectively with others; display accepted social and work behaviors; maintain a socially acceptable demeanor; demonstrate a willingness to work; display responsible behaviors at work; display a willingness to learn and apply new knowledge and skills; give full attention to what others are communicating verbally, non-verbally, or in writing and respond well enough to be understood; use logic, reasoning, and analysis to address problems; actively participate in presentation of final project



SELECTION PROCEDURES

SECTION I – APPLICATION PROCEDURES

- Applicants will be accepted for open apprentice roles based on business conditions. Every person requesting an application will have one made available. Applications are available upon request.
- All applications will be identical in form and requirements.
- Receipt of the properly completed application form will constitute receipt of a completed application.
- Completed applications will be checked for minimum qualifications. No further processing of applicants will occur if deficient in one or more qualifications or requirements or if false statements are made on their applications.
- Applicants meeting the minimum qualifications and submitting the required documents will be notified where and when to appear for an interview.
- The Sponsor will conduct pre-screening interviews with candidates and the make referral to signatory employers. The Sponsor will schedule interviews based on hiring needs.
- Applicants who score a 3 or higher on standardized question rubric will invited for a second interview with employers based upon applicant location, applicant career goals, and applicant interest in scope of practice.
- Applicants who do not score a 3 or higher and are not selected will receive an email notifying them they were not selected for an interview.
- Applications of candidates who do not meet the minimum requirements are stored in a secure location for five years.

SECTION II – SELECTION PROCEDURES

The sponsor has adopted the following selection procedures, consistent with the requirements set forth in 29 CFR § 30.10(b):

- The Sponsor will schedule interviews based upon hiring needs. All applicants who have met the minimum qualifications and have submitted the required documents must be notified of the date, time, and place to appear.
- Prior to the interview, each applicant will be required to review the Apprenticeship Standards and will be provided information about the program. If the applicant has any additional questions on the qualifications of needs additional information, it will be provided by the sponsor.
- The interviewer(s) will rate each applicant during the interview utilizing standardized questions taking into account the information on the application and required documents. The questions and responses will be maintained on file.
- Candidates who score a 3 or higher on interview rubric and selected by consensus of interviewers will notified of a formal offer of employment.
- Selected applicants must respond to the notice of selection within 72 hours of notice.
- Candidates who are not being hired for the apprenticeship will be notified within two weeks from their last interview.