IT NETWORK SYSTEMS AND SECURITY

IT Network and Security youth apprentices assist with network systems and cybersecurity processes, including network performance, maintenance, and security of systems and information.

Length of Apprenticeship: One year

COMPETENCIES

Youth apprentices must complete **a total of 10** competencies per year. **Nine** must be from the list below. If necessary, employers can substitute up to **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment. Note that where necessary, skills can be simulated.

Competencies
1. Evaluate work order
2. Install and configure customer infrastructure
3. Verify completion of installation
4. Maintain network documentation
5. Communicate with vendors
6. Perform basic technical network support duties
7. Monitor Network performance
8. Perform routine network system maintenance
9. Apply Network upgrades and patches
10. Maintain information and system security

REGISTERED APPRENTICESHIP BRIDGING OPPORTUNITIES

Some of the related instruction courses can bridge into the following registered apprenticeship:
- IT Service Desk

POST-SECONDARY PATHWAY OPPORTUNITIES

There are several post-secondary pathway opportunities in this area. Following is partial list.
- IT Network Technician Technical Diploma
- Network Enterprise Administrator Technical Diploma
- IT Help Desk Support Specialist Technical Diploma

YOUTH APPRENTICE INFORMATION

Youth Apprentice Name	
YA Coordinator	**YA Consortium**
School District	**High School Graduation Date**

REQUIREMENTS

Requirements

Youth apprentices must complete ALL the items listed below. Check completed areas.

☐ Year 1 Competency checklist

☐ Employability Skills checklist (in this job book) or the DPI Employability Skills Certificate

☐ Related instruction equal to 1 high school credit or at least 3 college credits

☐ Minimum of 450 work hours

HOURS

Record the hours the youth apprentice worked.

Total Hours Employed	Company Name	Telephone Number

CAREER PREPARATION

Youth apprentices must complete **one** of the following during Youth Apprenticeship participation:

☐ 1. Student is participating in a local or regional career pathway*.

Identify the pathway below:

> For more information contact the Wisconsin Department of Public Instruction. Additional help may be found on the WI DPI Wisconsin Pathways – Regional Career Pathways and DPI Career Clusters and Pathways web pages.

> ***Local and Regional career pathways** as defined by the WI DPI means that a student is participating in or has completed at least one CTE class in a cluster pathway sequence and has completed at least one of the other career pathway components: instructional related course, work-based learning, dual college credit, and/or career and technical student organization.

☐ 2. Student has completed one of the following certificates during their YA program or possess current certification earned previously.

 A copy of the certificate must be uploaded with the completed checklist. Select the certificate from the list below.

  ☐ MS- MOS (MIN *2), *MTA
  ☐ CISCO- *Essentials, *CENT, CCT, *Any CCNA
  ☐ COMP TIA- Fundamentals, *A+, SEC+, NET+
  ☐ JAVA
  ☐ .NET
  ☐ *Swift/Android Mobile APPS
  ☐ *LINUX- Essentials
  ☐ Oracle SQL (*JR or higher)
  ☐ Agile
  ☐ Web- HTML
  ☐ User Interface/UX
  ☐ ITIL Foundation
  ☐ SCRUM
  ☐ Cloud – Azure/AWS/Cloud certifications – Microsoft Learn (specific)
  ☐ DWD-BAS Certified Pre-Apprenticeship program
  ☐ Other certificates identified by the CTE Approved Certifications List related to this occupational field (or related to this occupation)
    dwd.wisconsin.gov/det/cteincentive/ (YA certificates excluded)

  Title of Certification:

☐ 3. Student is participating in a [Dual Enrollment Course](#) connected to any postsecondary education provider including UW System, Wisconsin Association of Independent Colleges and Universities (WAICU), and any of the 16 Wisconsin Technical Colleges (WTCS).

College Name:

College Course Title: Course Number:

For more information on Dual Enrollment opportunities, please click on one of the below resources:

- [WTCS](#)
- [WAICU](#)
- UW System – connect with the college of choice.

SIGNATURES

The On-the-Job Learning Performance Standards Guide includes a list of competencies youth apprentices learn through mentoring and training at the worksite.

Instructions for the Worksite Employers/Mentors and School-Base or YA coordinators.

This document should be reviewed with the employer / mentor, school-based or YA coordinator on a regular basis with the youth apprentice to record progress and plan future steps to ensure completion of the required competencies. Mentors, school-based / YA coordinator, and the apprentice sign below.

Employer/Mentor Signature	Employer/Mentor Signature
Employer/Mentor	Employer/Mentor
Business/Company	Business/Company
Date Signed	Date Signed
School-Based and/or YA Coordinator Signature	School-Based and/or YA Coordinator Signature
School-Based and/or YA Coordinator	School-Based and/or YA Coordinator
School District or Organization	School District or Organization
Date Signed	Date Signed
Youth Apprentice Signature	Youth Apprentice Signature
Youth Apprentice	Youth Apprentice
School District / High School	School District / High School
Date Signed	Date Signed

EMPLOYABILITY SKILLS

Youth apprentices must demonstrate key employability skills.

The DWD YA program employability skills requirement may be attained and demonstrated through two processes. (See options listed below.) Employability skills must be completed for every year a student is in the program. The DPI Employability Skills Certificate may be counted as meeting one of those two years, provided the certificate is earned in the same year the student is enrolled in youth apprenticeship or they can complete the YA Employability Skills in the OJL. The Employability Skills Certificate must be obtained through the DPI.

1. If a student has successfully completed a Wisconsin Department of Public Instruction (DPI) State-Certified Cooperative Education, Co-Op Employability Skill certification then they have met the YA Employability Skills requirement for that year. A copy of the student's DPI Co-Op Employability Skill Certificate must be maintained on file with their YA regional consortium.

   ☐ Earned Wisconsin Employability Skills Certificate (checked if applicable) or,

2. Completed and rated "Employability Skills" through this YA OJL guide as described below.

3	*Exceeds Expectations:* Exceeds entry-level criteria; requires minimal supervision; consistently displays this behavior
2	*Meets Expectations:* Meets entry-level criteria; requires some supervision; often displays this behavior
1	*Working to Meet Expectations:* Needs improvement; requires much assistance and supervision; rarely displays behavior

The following skills are required of all youth apprentices.

Employability Skills	Rating		
Competency and Rating Criteria	**Minimum Rating of 2 for EACH Check Rating**		
	1	**2**	**3**
1. Develops positive work relationships with others *Examples of qualities and habits that the employee might exhibit include . . .* • Interacts with others with respect and in a non-judgmental manner • Responds to others in an appropriate and non-offensive manner • Helps co-workers and peers accomplish tasks or goals • Applies problem-solving strategies to improve relations with others • When managing others, shows traits such as compassion, listening, coaching, team development, and appreciation	☐	☐	☐
2. Communicates effectively with others *Examples of qualities and habits that the employee might exhibit include . . .* • Adjust the communication approach for the target audience, purpose, and situation to maximize impact • Organizes messages/information in a logical and helpful manner • Speaks clearly and writes legibly	☐	☐	☐

Employability Skills	Rating		
Competency and Rating Criteria	**Minimum Rating of 2 for EACH Check Rating**		
	1	**2**	**3**
• Models behaviors to show active listening • Applies what was read to actual practice • Asks appropriate questions for clarity			
3. Collaborates with others *Examples of qualities and habits that the employee might exhibit include . . .* • Works effectively in teams with people of diverse backgrounds regardless of sex, race, ethnicity, nationality, sexuality, religion, political views, and abilities • Shares responsibility for collaborative work and decision making • Uses the problem-solving process to work to work through differences of opinion in a constructive manner to achieve a reasonable compromise • Avoids contributing to an unproductive group conflict • Shares information and carries out responsibilities in a timely manner	☐	☐	☐
4. Maintains composure under pressure *Examples of qualities and habits that the employee might exhibit include . . .* • Uses critical thinking to determine the best options or outcomes when faced with a challenging situation • Carries out assigned duties while under pressure • Acts in a respectful, professional, and non-offensive manner while under pressure • Applies stress management techniques to cope under pressure	☐	☐	☐
5. Demonstrates integrity *Examples of qualities and habits that the employee might exhibit include . . .* • Carries our responsibilities in an ethical, legal and confidential manner • Responds to situations in a timely manner • Takes personal responsibility to correct problems • Models behaviors that demonstrate self-discipline, reliability, and dependability	☐	☐	☐
6. Performs quality work *Examples of qualities and habits that the employee might exhibit include . . .* • Carries out written and verbal directions accurately • Completes work efficiently and effectively • Preforms calculations accurately • Conserves resources, supplies, and materials to minimize costs and environmental impact • Uses equipment, technology, and work strategies to improve workflow • Applies problem-solving strategies to improve productivity • Adheres to worksite regulations and practices	☐	☐	☐

Employability Skills	Rating		
Competency and Rating Criteria	**Minimum Rating of 2 for EACH Check Rating**		
	1	**2**	**3**
• Maintains an organized work area			
7. Provides quality goods or services (internal and external) *Examples of qualities and habits that the employee might exhibit include . . .* • Shows support for the organizational goals and principles by own personal actions • Displays a respectful and professional image to customers • Displays an enthusiastic attitude and desire to take care of customer needs • Seeks out ways to increase customer satisfaction • Produces goods to workplace specifications	☐	☐	☐
8. Shows initiative and self-direction *Examples of qualities and habits that the employee might exhibit include . . .* • Prioritizes and carries out responsibilities without being told • Responds with enthusiasm and flexibility to handle tasks that need immediate attention • Reflects on any unsatisfactory outcome as an opportunity to learn • Improves personal performance by doing something different or differently • Analyzes how own actions impact the overall organization • Supports own action with sound reasoning and principles • Balances personal activities to minimize interference with work responsibilities	☐	☐	☐
9. Adapts to change *Examples of qualities and habits that the employee might exhibit include . . .* • Shows flexibility and willingness to learn new skills for various job roles • Uses problem-solving and critical-thinking skills to cope with changing circumstances • Modifies own work behavior based on feedback, unsatisfactory outcomes, efficiency, and effectiveness • Displays a "can do" attitude	☐	☐	☐
10. Demonstrates safety and security regulations and practices *Examples of qualities and habits that the employee might exhibit include . . .* • Follows personal safety requirements • Maintains a safe work environment • Demonstrates professional role in an emergency • Follows security procedures • Maintains confidentiality	☐	☐	☐

Employability Skills	Rating		
Competency and Rating Criteria	**Minimum Rating of 2 for EACH Check Rating**		
	1	**2**	**3**
11. Applies job-related technology, information, and media *Examples of qualities and habits that the employee might exhibit include . . .* • Applies technology effectively in the workplace • Assesses and evaluates information on the job • Assesses training manuals, website, and other media related to the job	☐	☐	☐
12. Fulfills training or certification requirements for employment *Examples of qualities and habits that the employee might exhibit include . . .* • Participation in required career-related training and/or educational programs • Passing certification tests to qualify for licensure and/or certification • Participation in company training or orientation	☐	☐	☐
13. Sets personal goals for improvement *Examples of qualities and habits that the employee might exhibit include . . .* • Setting goals that are specific and measurable • Setting work related goals that align with the organization's mission • Identifying strategies to reach goals • Reflecting on goal progress to regularly evaluate and modify goals	☐	☐	☐

COMPETENCIES

Youth apprentices must complete **a total of 10** competencies per year. **Nine** must be from the list below. If necessary, employers can substitute up to **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment. Note that where necessary, skills can be simulated.

Rating Scale

3: Exceeds entry level criteria | Requires minimal supervision | Consistently displays this behavior

2: Meets entry level criteria | Requires some supervision | Often displays this behavior

1: Needs improvement | Requires much assistance and supervision | Rarely displays behavior

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
1. Evaluate work order. • identify the customer • identify services ordered • verify the location of the facility • review equipment needs • follow company procedure regarding installation • read network map • get connectivity to location • install cross connect • assists splicing customer facility • clean fiber optic connectors • install demarcation point (DMARC) • install a Universal Power Supply (UPS) • test connectivity to the premise	☐	☐	☐
2. Install and configure Customer Infrastructure. • install jack and wiring • certify inside wiring • install Wi-Fi gateway routers and modems • optimize Wi-Fi location • install ethernet switches • install VoIP devices • install Set Top Boxes (STB) and remotes • install Wi-Fi extenders • install mesh network • install ethernet over power, MOCA, or HPNA	☐	☐	☐

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
3. Verify completion of installation • hook up customer equipment • test broadband, TV, voice services • install IoT (Internet of Things) devices per company procedures • verify services are working • educate customer on products installed	☐	☐	☐
4. Maintain network documentation • use tracking system • review logs related to network functions • document related network functions • back up network files regularly following facility procedure	☐	☐	☐
5. Communicate with vendors • track vendor orders and receipt of order • reconcile discrepancies with worksite professional and vendor • record addition of products to inventory • contact vendors for service	☐	☐	☐
6. Perform basic technical network support duties • support resolution of network problems • isolate system faults • provide technical support via telephone, E-mail, Web and onsite • respond to user questions within realm of current training and learning • choose correct technical and computer tools to perform task • update documentation of network support to resolution	☐	☐	☐
7. Monitor network performance • monitor system status and performance • identify criticality of issue • follow process to respond to system alerts • follow process to respond to security problems • identify patterns of failure • provide solution recommendations • refer issues to worksite professional • document monitoring activities and results	☐	☐	☐

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
8. Perform routine network system maintenance • follow preventive maintenance plan • run diagnostics as required • report system issues to worksite professional • identify new or replacement networking components needed • analyze maintenance processes and outcomes with worksite professional • complete work with minimum disruption of process flow • document maintenance activities and results	☐	☐	☐
9. Apply network upgrades and patches • use appropriate tools for the upgrade • follow appropriate installation procedure • backs up system before upgrade or patch, as required • complete work with minimum disruption of process flow • refer issues to worksite professional • document installation activities and results	☐	☐	☐
10. Maintain information and system security • identify the impact of sensitive data exposure • use virus and malware protection tool • use strong passwords • monitor security of company and personal data	☐	☐	☐
Competency Substitute (if you replaced a competency above, note the competency and rating)	☐	☐	☐
Comments:			

RELATED INSTRUCTION

Indicate which related instruction courses the youth apprentice completed:

Course Title	Credits	Location

YA POST-PROGRAM COMPLETION SURVEY

The Post-Program Completion Survey form is to be provided to each student completing the Youth Apprenticeship program to capture information on the student's plans after leaving the program. The form should be filled out during the final meeting between the student, mentor, and Local Youth Apprenticeship Coordinator, when the final checklist if filled out and signed. Information captured on this form must be entered online using the Youth Apprenticeship Online Data Application (YODA) System.

DWD is an equal opportunity employer and service provider. If you have a disability and need assistance with this information, please dial 7-1-1 for Wisconsin Relay Service. Please contact the Division of Employment and Training at 888-258-9966 and press 6 to request information in an alternate format, including translated to another language.

STATE OF WISCONSIN

DWD

Department of Workforce Development