



NEVADA LABOR COMMISSIONER  
NEVADA STATE APPRENTICESHIP COUNCIL  
2023 Joint Standards of Apprenticeship

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## **Appendix A**

### **WORK PROCESS SCHEDULES AND RELATED INSTRUCTION OUTLINE**

***Communications Workers of America Local 9413 / Battle Born  
JATC***

**Communications Technician**

**O\*NET-SOC CODE: 49-2022.00 RAPIDS CODE: 0618**

APPROVED BY  
THE NEVADA LABOR COMMISSIONER AND THE NEVADA STATE APPRENTICESHIP COUNCIL

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**Toni Giddens, Nevada State Apprenticeship Director**

**REGISTRATION DATE: \_\_\_\_\_**

**RAPIDS PROGRAM ID NUMBER: \_\_\_\_\_**

**DEVELOPED IN COOPERATION WITH THE  
THE NEVADA LABOR COMMISSIONER, THE NEVADA STATE APPRENTICESHIP COUNCIL, AND  
THE U.S. DEPARTMENT OF LABOR**

## Appendix A

### WORK PROCESS SCHEDULE

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

#### 1. TYPE OF OCCUPATION

X    Time-based                      ☐    Competency-based                      ☐    Hybrid

#### 2. TERM OF APPRENTICESHIP

The term of the occupation shall be defined by the attainment of all competencies of the position. 1) If the program uses a time-based approach, requires the completion of not less than 2,000 hours of [work experience,] on-the-job learning, consistent with training requirements as established by practice in the trade; (2) If the program uses a competency-based approach, specifies the skills that must be demonstrated by an apprentice and addresses how on-the-job learning will be integrated into the program; or (3) If the program uses a hybrid approach, specifies the skills that must be acquired and the minimum number of hours of on-the-job learning that must be completed by an apprentice.

This would be expected to occur within approximately 4500 hours (must be at least 2,000 hours) of OJL, supplemented by the minimum of 144 hours of related instruction per year of the apprenticeship.

#### 3. RATIO OF APPRENTICES TO JOURNEYWORKERS

The apprentice to journey worker/fully trained worker ratio is: 1 apprentice(s) to 2 journey worker/fully trained worker(s).

#### 4. APPRENTICE WAGE SCHEDULE

An apprentice minimum starting wage will be at least \$19.75 per hour. Apprentices shall be paid a progressively increasing schedule of wages based on either a percentage or a dollar amount of the current hourly journey worker/fully trained worker wage. A journey worker/fully trained worker minimum wage will be at least \$51 per hour.

##### 1-Year Term Example:

1<sup>st</sup>                      6 months = % or \$                      2<sup>nd</sup>                      6 months = % or \$

Periodic review and evaluation of the apprentice's on-the-job learning and related technical instruction will be conducted in alignment with the wage schedule established.

**5. WORK PROCESS SCHEDULE** (See attached Work Process Schedule)

The sponsor may modify the work processes to meet local needs prior to submitting these Standards to the appropriate Registration Agency for approval.

**6. RELATED INSTRUCTION OUTLINE** (See attached Related Instruction Outline)

The sponsor may modify the related instruction to meet local needs prior to submitting these Standards to the appropriate Registration Agency for approval.

## Appendix A

### WORK PROCESS SCHEDULE

The term of the occupation shall be defined by the attainment of all competencies, both technical and behavioral, of the position, which would be expected and approximated to occur within 4500 hours of OJL, supplemented by a minimum of 144 hours of related instruction per year of apprenticeship.

#### Apprenticeship Competencies – Technical

Item	Work Processes	Approx. Hours
A	Safety.	200
B	Safety demonstration throughout performance is required.	450
C	Cable installation using floor duct, conduit, stud drilling, pathways equipment and associated tools and equipment.	650
D	Cable terminations using industry standards and material, equipment and color code	525
E	Pulling copper / fiber cable from Telecommunications Rooms to Work area outlets and from TR to TR	425
F	Placing and terminating jacks and other equipment including protective and signaling equipment (cameras, etc) at work area outlets	525
G	Building code and standards requirements and floor plans	225
H	Backboard layouts and equipment with wire management	250
I	Termination of connecting blocks and patch panels	150
J	Jumpers, cross connects, and patch cords	125
K	Building Racks with wire management	175
L	Placement of grounding and bonding conductors and equipment	100
M	Job planning, print reading	200
N	Testing and acceptance of Structured Cabling Installation	100
O	Computers and customer equipment	200
P	Working with Local Area Networks (LAN)	200
Q		
	<b>Total hours (approximate)</b>	4500

The above on-the-job-learning (OJL) work process competencies are intended as a guide. It need not be followed in any sequence, and it is understood that some adjustments may be necessary in the hours allotted for different work experience. In all cases, the apprentice is to receive sufficient experience to make them fully competent and use good workmanship in all work processes, which are a part of the industry. In addition, the apprentice shall be fully instructed in safety and OSHA requirements.

**Apprenticeship Competencies – Behavioral**

In addition to mastering all the essential technical competencies, an apprentice must consistently demonstrate at an acceptable level the following behavioral competencies, to complete the apprenticeship.

Item #	Behavioral Competencies
1.	Participation in team discussions/meetings
2.	Focus in team discussions/meetings
3.	Focus during independent work
4.	Openness to new ideas and change
5.	Ability to deal with ambiguity by exploring, asking questions, etc.
6.	Knows when to ask for help
7.	Able to demonstrate effective group presentation skills
8.	Able to demonstrate effective one-on-one communication skills
9.	Maintains an acceptable attendance record
10.	Reports to work on time
11.	Completes assigned tasks on time
12.	Uses appropriate language
13.	Demonstrates respect for patients, co-workers, and supervisors
14.	Demonstrates trust, honesty, and integrity
15.	Requests and performs work assignments without prompting
16.	Appropriately cares for personal dress, grooming and hygiene
17.	Maintains a positive attitude
18.	Cooperates with and assists co-workers
19.	Follows instructions/directions
20.	Able to work under supervision
21.	Able to accept constructive feedback and criticism
22.	Able to follow safety rules
23.	Able to take care of equipment and workplace
24.	Able to keep work area neat and clean
25.	Able to meet supervisor's work standards
26.	Able to not let personal life interfere with work
27.	Adheres to work policies/rules/regulations

## RELATED INSTRUCTION OUTLINE

The related instruction has been developed in cooperation with employer-partners as part of the apprenticeship. The following is a set of courses to be delivered by subject matter experts.

Related Technical Instruction (RTI) - This instruction shall include, but not be limited to, at least 110 hours per year for each year of the apprenticeship. The related theoretical education listed below is tightly integrated with real work product. The curriculum is defined as a variety of classes, around which the exams and projects are based. By defining the RTI this way, all competencies required of the students are met, through project work.

### COURSE TOPICS

### HOURS

A. APTE 97.18 - Installation Skills Level 2	54
B. APTE 97.07 - Fiber Optics Installation & Maintenance.	55
C. APTE 97.15 - Introduction to Computers/ Computer Literacy	54
D. APTE 97.14 - Introduction to Computer Networking	54
E. APTE 97.20 - Health & Safety / OSHA	54
F. APTE 97.16 - Installation Skills Level 3	54

### COURSE TOPIC DESCRIPTIONS

- A. Exposure to procedures and practices routinely used in the industry of installing telecommunication cabling and equipment, including EIA/TIA standards, applicable National Electrical Codes (NEC), IEEE codes and standards for the telecommunications industry. Coverage of health and safety issues and procedures. Overview and direct use of appropriate tools, equipment and documentation required to install and maintain communications systems. Demonstrate proficiency in termination and testing of copper cable in accordance to the EIA/TIA 568 and 569 standards. Reading and interpreting layout and distribution frames and wiring. Procedures for installing cable racks and related equipment.
- B. Introduction to Fiber Optic Technology. Provides coverage of theory, installation procedures; testing procedures; proper maintenance and trouble analysis of fiber optic systems. Introduction to multimode and single mode fiber. Coverage of how generic fiber optic systems operate. Procedures for interpreting the output of fiber optic monitor controls, optical time domain reflectometers and error rate test sets. Hands on exercises with fiber connectors, mechanical and fusion splices.
- C. Introduction to Computers/ Computer Literacy 54 Hours Introduction to computers including: What is a computer, What's inside a computer, lap top and desktop computers, Hardware, Software, Microsoft Windows, Internet, World Wide Web, Multimedia, browsers, Microsoft Word, Microsoft Excel, and an awareness of computer software in use including programming languages, electronic mail, storage devices, printing.
- D. The Course provides a thorough overview of networking basics: MAC and IP addressing, hubs, and switches, packets and ports, and OSI versus TCP/IP models, cabling. Topologies and Ethernet basics, basics of TCP/IP and an overview of routing, major TCP/IP applications, http, https protocols, ports and network naming conventions. This course also discusses VLAN, VPNs, IPv6 and remote connectivity. Using wired (Ethernet) and wireless (Wi-Fi) methods to connect the computers and equipment in a network. Sharing files between computers and explaining how

to manage connections to those services with DHCP and DNS addressing. Setting up an internet connection and configuring security and local-storage options for the network.

**COURSE TOPIC DESCRIPTIONS CONTINUED**

- E. Coverage of health and safety issues and procedures in the construction industry. Included in the course will be an introduction to OSHA, Managing safety and health, falls, electrocution, struck-by ( e.g., falling objects, trucks, cranes), caught-in or between (e.g., trench hazards, equipment), personal protective and lifesaving equipment, health hazards in construction, stairways and ladders, OSHA 30 hour certification, confined space entry certification., Lockout/tagout Cert., CPR and first aid training and Certification, overall and direct use of appropriate tools and equipment required to install and maintain communications systems.
  
- F. Introduction to the electronic safety and security provides coverage of theory, devices, equipment, and installation procedures. The course discusses principles of security, intrusion detection systems, exploring the basics of design, and provides examples of the application of various types of sensors used to provide intrusion detection, various types of access control systems, video surveillance fundamentals, notification display devices, special systems such as nurse call, codes, standards, regulations, and organizations.





**SECTION 27 - OFFICIAL ADOPTION OF APPRENTICESHIP STANDARDS**

**Communications Workers of America Local 9413 hereby adopts these standards of apprenticeship.**

*Sponsor(s) designate the appropriate person(s) to sign the standards on their behalf.*

Joshua La Plante                      **Date:**  
**Signature of Sponsor (*designee*)**

Joshua La Plante Director  
**Type Name & Title**