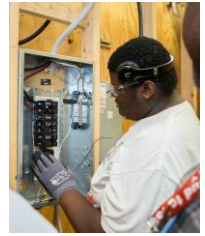




EMPLOYABILITY PROFILE

ELECTRICAL TRADES



Industry-Based Skill Standards Proficiency Definitions

NA = Not Applicable

1 = Introduced

2 = Developing

3 = Proficient

4 = Mastery

	9th	10th	11th	12th
Safety				
Demonstrates proper safety practices, tool safety, use of personal protective apparel, and recognizes safety hazards commonly encountered when working with electricity				
Hand Tools				
Demonstrates proper selection and use of hand tools including pouch tools, neon testers, cable cutters, pliers and crimpers, tape measures, and multimeters				
Reading and Interpreting Blueprints / Estimating				
Reads and interprets blueprints and schematics, accurately identifies symbols, develops material lists from plans, estimates material and labor costs				
Power Tools and Multimeter use				
Demonstrates safe use of power tools including drills and drivers, sawzall, hammer drill, circular saw, powder activated tools, and pneumatic tools commonly used				
Electrical Distribution, Theory, and Service Entrances				
Understands the distribution of electrical service, basic electrical theory including Ohms Law, AC/DC, parallel and series circuits, and service entrance installation				
Wiring Methods using NMC and MC materials				
Demonstrates proper wiring methods for installations common to residential wiring using Romex and other NMC or MC cable according to NEC and utility codes				
Installation of basic switches and receptacles				
Installation of basic switches and receptacles including metal and plastic boxes, single and multiple receptacle and switch boxes, junction boxes, and low voltage wiring				
GFCI circuits and Waterproof receptacles				
Installation of advanced circuitry including GFCI receptacles, waterproof receptacles, underground feeds, and other unique installation techniques				
Installation of fixtures				
Demonstrates the correct termination techniques at fixtures including ceiling, fluorescent, fan/light, photocells, wall mounted lighting, and low voltage fixtures				

	9th	10th	11th	12th
Safety in a Commercial Setting (OSHA 10)				
Understands and demonstrates safe working habits in a commercial setting, participates and earns OSHA 10 certification credential				
Emergency Medical Procedures / CPR / First Aid				
Completes training in emergency medical procedures earning basic first aid and CPR lifesaver certification through an accredited provider. Identifies potential health risks				
Electrical Codes				
Understands and demonstrates use of National Electric Code and local codes when planning and installing residential wiring circuits in all settings				
Circuit and Load Calculations				
Demonstrates the ability to calculate loads and circuit wiring based on understanding and use of both electrical theory and codes. Can accurately complete calculations				
Installation of complex three and four way switches				
Installs complex switch circuitry including two, three, and four-way circuits in various configurations, can install simple and complex low voltage switches and relays				
Wiring Methods using Conduit and Wiremold				
Demonstrates the ability to install wiring using conduit and wiremold methods. Can use tools common to conduit installation techniques including benders and reamers				
Low Voltage circuits and installation techniques				
Demonstrates the ability to use appropriate techniques associated with the installation of low voltage circuits and devices including installation of transformers				
Troubleshooting and Diagnosing				
Demonstrates the ability to use electrical theory, tools and equipment to diagnose and troubleshoot circuitry following detailed schematics and installation guides				
Alternative Energy (wind, solar, geothermal, etc.)				
Has a basic understanding of alternative energy sources, their production, distribution, and use commonly found in residential and light commercial settings				

Industry Certifications / Credential / Endorsement	yes	no
OSHA 10 Safety Certification		

Articulated College Credit or Advanced Standing	
Alfred State University	
Onondaga Community College	
Mohawk Valley Community College	

