



**Electrical Technology**

**Program of Study Scope & Sequence  
with  
Certification Outcomes**

**46.0399**

<b>Task #</b>	<b>Task Description</b>	<b>Level/ Marking Pd</b>	<b>Career Path CIP/Soc  47-211 Electricians</b>	<b>Career Path CIP/Soc 47-3013 Helpers, Electricians</b>	<b>Certification to test for</b>
102	Identify causes of job site accidents.	1.1	X	X	OSHA 30 Construction  OSHA 10 Construction
105	Properly don fall protection.	1.1	X	X	
106	Identify four classes of fire extinguishers.	1.1	X	X	
107	Confirm circuits are de-energized before working on them.	1.1	X		
108	Perform lockout/tagout.	3.1	X		
109	Inspect and use ladders.	1.1	X	X	Ladder safety- Articulated Step A-frame Extension

110	Complete job site hazard analysis form.	1.1	X	X		
111	Identify arc-flash hazards and protection (NFPA70E).	3.1-4.1	X			
201	Use screwdrivers.	1.1	X	X		
202	Use pliers.	1.1	X	X		
203	Use a keyhole/drywall saw.	3.4-4.4	X	X		
204	Use a hydraulic knockout/punch tool.	3.1-4.1	X			
205	Use a tape measure.	1.1	X	X		
206	Use wire strippers.	1.1	X	X		
207	Use wire cutters.	1.1	X	X		
208	Use a utility knife.	1.1	X			
209	Use a torpedo level.	1.1	X			
210	Use a hammer.	1.1	X			
211	Use a conduit reamer.	2.2	X			
212	Use a hacksaw.	2.2	X			
213	Use an MC Cable splitter (roto split).	1.3	X			
214	Use an adjustable or non adjustable wrenches.	2.1	X			
215	Use a ratchet and sockets.	2.1	X			
216	Use nut drivers.	2.1	X			
302	Use a hammer drill.	3.2-4.2	X			
303	Use a reciprocating saw.	3.3-4.3	X			

304	Use a portable hand-held band saw.	3.1	X			
306	Use a drill.	1.2	X			
310	Use an oscillating multipurpose tool.	3.4	X			
311	Use impact driver.	1.2	X			
401	Identify types of blueprint plans.	2.3	X			
402	Identify blueprint symbols.	1.2	X			
403	Interpret blueprint plans.	2.3	X			
405	Develop electrical details on a blueprint.	2.4	X			
406	Use a measuring tool to scale.	2.4	X			
501	Identify, select, and install various types of anchors and supports.	3.2	X			
601	Install non-metallic (NM) Cable.	1.2	X			
602	Install metal-clad cable (MC).	2.1	X			
605	Terminate a coaxial cable.	3.3	X			
609	Identify telecommunications cable types.	3.3	X			
610	Terminate a RJ45 connector.	3.3	X			
611	Install SE cable.	2.2	X			
612	Terminate and splice conductors.	1.2	X			
701	Install a duplex receptacle.	1.2	X			
702	Install a single pole switch.	1.2	X			

703	Install a 3-way switch.	1.3	X			
704	install a 4-way switch.	1.3	X			
705	Install a split-wired duplex receptacle.	1.2	X			
706	Install a Ground Fault Circuit Interrupter (GFCI) receptacle.	1.2	X			
707	Install an Arc-Fault Circuit Interrupter (AFCI).	1.3	X			
708	Install a time control switch.	1.3	X			
709	Install a range receptacle.	3.3	X			
710	Install a dryer receptacle.	3.3	X			
711	Install various branch circuits.	1.2	X			
712	Install connected/ smart devices.	3.1	X			
801	Install surface-mounted lighting fixture.	1.2	X			
802	Install recessed lighting fixtures.	1.4	X			
803	Install a ceiling fan.	1.4	X			
804	Install special purpose lighting.	1.4	X			
805	Identify IC and non-IC recessed lighting fixtures.	1.4	X			
901	Install Electrical Metallic Tubing (EMT).	2.2	X			
903	Design a surface raceways system (wire mold).	3.4-4.2	X			
904	Install flexible raceway.	2.3	X			
908	Bend a stub 90°.	2.2	X			
909	Bend an offset.	2.2	X			
910	Bend a back to back 90°.	2.3	X			

911	Cut, ream, and deburr raceway systems.	2.2	X			
912	Install conductors in a raceway system.	2.3				
1001	Install a hard-wired smoke detector.	1.3				
1002	Install door-bell system	3.1				
1003	Trim out electrical devices.	3.2				
1004	Install an occupancy sensor.	1.3				
1005	Install a photocell.	1.3				
1101	Use a multimeter to test a circuit.	2.3				
1103	Use a plug-in circuit tester.	2.3				
1104	Use a clamp-on ammeter.	2.3				
1106	Use a circuit tracer.	2.3				
1107	- Use a network cable tester.	3.3				
1108	Apply Ohm's/Watt's law calculations to electrical applications.	2.3-4.1				
1201	Install an overhead service.	2.2				
1202	Identify parts of an underground service.	2.2				
1209	Identify types of safety disconnect switches.	1.3				
1210	Terminate a service panel/load center/sub-panel.	2.2				
1301	Identify the purpose of the NEC.	1.4				
1302	Use Chapter 9 Tables.	2.4-4.1				
1303	Use the NEC as a reference to questions and competencies that students perform for all electrical installations.	2.4-4.2				

1304	Identify the publisher of the NEC.	1.4				
1305	Identify the code cycle of the NEC.	1.4				
1401	Identify renewable energy sources.	3.3-4.4				
1402	Identify procedures for installing a wind turbine system	3.3-4.3				
1404	Identify procedures for installing a solar energy system.	3.3-4.4				
1407	Evaluate the demand and consumption of electrical energy.	3.3-4.3				