

NO RTEC JOB SPECIFIC COMPETENCY

ELECTRICIAN (Construction)

DOT:824.261-010 / O*NET-SOC: 47-2111.00 SVP 7

Job Description: Plans layout, installs, and repairs wiring, electrical fixtures, apparatus, and control equipment. Physical Demands Mildly Active w/medium lifting, carrying or moving (up to 50 lbs); General Educational Development - R4 M4 L3; Aptitudes Above average General Learning Ability, Numerical, Spatial, Form Perception; Average Verbal, Motor Coordination, Finger Dexterity and Manual Dexterity.

Note: While many localities require electricians to be licensed, licensing requirements vary from area to area. Please check your area for licensing requirements, if any.

CORE SKILL COMPETENCIES/INDICATORS:

1. Can demonstrate an understanding of the principles of basic electricity and electronics. (IN, S, T)
2. Can demonstrate a familiarity with the materials and techniques of construction. (IN, S, T)
3. Can demonstrate an understanding of the National Electrical Code. (IN, S, T)
4. Can demonstrate an understanding of State and local building code requirements. (IN, S, T)
5. Can demonstrate an understanding of occupation-specific safety standards and procedures. (R, IN, S)
6. Can demonstrate ability to read and interpret diagrams, manuals, schematics or blueprints. (R, IN, S)
7. Can demonstrate ability to properly identify, select, and operate electrician's tools, such as screwdrivers, pliers, knives, hacksaws, pipe threaders, conduit benders, and soldering guns. (R, S, T)
8. Can demonstrate ability to identify, select, and operate electrician's testing equipment, such as ohmmeters, ammeters, voltmeters, oscilloscopes, and continuity testers. (R, S, T)
9. Can demonstrate ability to plan layout of electrical wiring, equipment, and fixtures consistent with specifications and local codes. (R, IN, S, T)
10. Can demonstrate ability to plan new or modified installations to minimize waste of materials or provide access for future maintenance. (R, IN, S, T)
11. Can demonstrate ability to prepare sketches of location of wiring and equipment, or follow blueprints/diagrams to determine location of equipment and conformance of safety codes. (R, IN, S, T)
12. Can demonstrate proper techniques used to measure, cut, bend, thread, assemble and install electrical conduits. (R, IN, S, T)
13. Can demonstrate ability to construct and fabricate other electrical parts, using hand tools and specifications. (R, IN, S, T)
14. Can demonstrate proper techniques used to install control and distribution apparatus, such as switches, outlets, relays, and circuit-breaker panels. (R, IN, S, T)
15. Can demonstrate proper technique used to pull wire through an electrical conduit. (R, IN, S, T)
16. Can demonstrate proper technique used to splice wires. (R, IN, S, T)
17. Can demonstrate proper techniques used to connect wiring to circuit breakers, transformers, lighting fixtures, thermostats, intercoms, signaling systems, power equipment, or other components. (R, IN, S, T)
18. Can demonstrate proper techniques used to connect power cables to equipment, such as electric ranges or motors, and to install grounding leads. (R, IN, S, T)
19. Can demonstrate proper technique used to check circuit connections to ensure electrical compatibility and safety of components. (R, IN, S, T)

20. **Can effectively observe functioning of installed equipment or system to detect hazards, defects, and need for adjustments, relocation, replacement, or repair. (R, IN, S, T)**
21. **Can demonstrate ability to diagnose and repair or replace malfunctioning apparatus and components, such as transformers, circuit breakers, fuses, motors, generators, and fixtures. (R, IN, S, T)**
22. **Can demonstrate ability to make changes in parts of circuits to improve performance of equipment. (R, IN, S, T)**
23. **Can demonstrate ability to keep accurate records and/or write reports, as needed. (IN, S)**
24. **Can demonstrate the ability to work under stress to meet scheduled deadlines. (R, I)**