**ELECTRICIAN**

**RAPIDS: 0159D**  
**O*NET/SOC: 47-2111.00**  
**REVISION DATE: 09/2019**

**TRADE DESCRIPTION:** Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes. May install or service street lights, intercom systems, or electrical control systems.

**TASK PERFORMANCE:** Demonstrate knowledge and skills for qualifying as Journeyman. Applicable Job Qualification Requirements will be used as a guide in performing tasks and demonstrating knowledge in the following skill areas. Actual work time must be recorded in the Work Experience Log; each skill area must be completed.

**Applicable Ratings/MOS/NEC**

**USMC MOS:** 1141, 1142, 1169

**USCG:** EM

**USN:** CE, EM, ET


**Related Instruction:**

Trade related On-The-Job-Training (OJT) or Any Trade related schools/courses totaling 432 or more hours.

**Additional Requirement:**

None

<table>
<thead>
<tr>
<th>Skill</th>
<th>Description</th>
<th>Hours</th>
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<tbody>
<tr>
<td>A</td>
<td>PRELIMINARY WORK</td>
<td>500</td>
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Total Hours: **6000**
- Inspect electrical systems, equipment, or components to identify hazards, defects, or the need for adjustment or repair, and to ensure compliance with codes.

- Prepare sketches or follow blueprints to determine the location of wiring or equipment and to ensure conformance to building and safety codes.

- Advise management on whether continued operation of equipment could be hazardous.

- Construct or fabricate parts, using hand tools, according to specifications.

- Provide preliminary sketches or cost estimates for materials or services.

**B RESIDENTIAL AND COMMERCIAL FINISH WORK**

- Connect wires to circuit breakers, transformers, or other components.

- Use a variety of tools or equipment, such as power construction equipment, measuring devices, power tools, and testing equipment, such as oscilloscopes, ammeters, or test lamps.

- Place conduit, pipes, or tubing, inside designated partitions, walls, or other concealed areas, and pull insulated wires or cables through the conduit to complete circuits between boxes.

- Repair or replace wiring, equipment, or fixtures, using hand tools or power tools.

- Install ground leads and connect power cables to equipment, such as motors.

- Assemble, install, test, or maintain electrical or electronic wiring, equipment, appliances, apparatus, or fixtures, using hand tools or power tools.

- Fasten small metal or plastic boxes to walls to house electrical switches or outlets.

**C TROUBLESHOOTING**

- Test electrical systems or continuity of circuits in electrical wiring, equipment, or fixtures, using testing devices, such as ohmmeters, voltmeters, or oscilloscopes, to ensure compatibility and safety of system.

- Diagnose malfunctioning systems, apparatus, or components, using test equipment and hand tools to locate the cause of a breakdown and correct the problem.

- Provide assistance during emergencies by operating floodlights or generators, placing flares, or driving needed vehicles.

**D WORK SITE MANAGEMENT**

- Plan layout and installation of electrical wiring, equipment, or fixtures, based on job specifications and local codes.

- Work from ladders, scaffolds, or roofs to install, maintain, or repair electrical wiring, equipment, or fixtures.
- Maintain current electrician's license or identification card to meet governmental regulations.

- Direct or train workers to install, maintain, or repair electrical wiring, equipment, or fixtures.

- Perform business management duties, such as maintaining records or files, preparing reports, or ordering supplies or equipment.

- Perform physically demanding tasks, such as digging trenches to lay conduit or moving or lifting heavy objects.