
WORK PROCESSES

Program Name: ELECTRICIAN O*Net: 47-2111.00
Dept: X31

Description: Naval ships require several miles of cable to supply power, from its source, throughout the ship. Electrician apprentices learn to install, operate and test electrical systems onboard ships. These systems include lighting, power distribution, machinery, interior communications, fire control/weapons systems, testing, and nuclear plant work. They will work with drawings to devise a plan for their jobs, so they can lay off equipment location and cable runs. Electricians construct and install various electrical components and are required to complete a rigorous series of electrical theory courses to complement on-the-job training.

APPROXIMATE HOURS

A. ORIENTATION AND SAFETY	300
<ul style="list-style-type: none">1. Company regulations2. Company security procedures3. Safe work practices: Plant, roadway, shop, shipboard safety4. Specific job related safety training and qualifications	
B. USE AND CARE OF TOOLS AND EQUIPMENT	400
<ul style="list-style-type: none">1. Miscellaneous hand tools and portable power tools2. Wire strippers and crimping tools3. Taps and Dies4. Stud welding equipment	
C. USE AND CARE OF ELECTRICAL INSTRUMENTS	300
<ul style="list-style-type: none">1. Digital multimeter/tester2. Oscilloscope3. Function generator4. Tachometer5. Megohmmeter	
D. LAYOUT	500
<ul style="list-style-type: none">1. Utilize drawings, wiring diagrams, schematic diagrams2. Use of method books3. Use of work instructions	

	APPROXIMATE HOURS
E. FABRICATION	850
1. Foundations and attachments	
2. Cable racks	
3. Wireways	
F. EQUIPMENT INSTALLATION AND HOOKUP	3800
1. Tubes, clamps, connectors, transits	
2. Lights, receptacles, switches, circuit breakers	
3. Panel boards, switchboards, load centers	
4. Motors, generators, transformers, motor controllers	
5. Electronic and communication equipment	
G. TEST AND MAINTAIN EQUIPMENT	900
1. Continuity and insulation test	
2. Troubleshoot and repair	
3. Energize and test circuits	
4. Preventive maintenance	
H. RELATED TECHNICAL INSTRUCTIONS	950
TOTAL HOURS	8000

SAFETY IS THE FIRST PRIORITY IN ALL APRENTICESHIP PROGRAMS AND, AS THE SPONSOR'S PRIMARY RESPONSIBILITY, MUST BE TAUGHT AND PRACTICED CONTINUOUSLY IN ALL ON-THE-JOB WORK PROCESSES