

## **ELECTRICAL CONSTRUCTION**

### **Observing Safety Practices**

Understand the dangers of electricity - electricity can kill  
Describe what to do in a shock emergency  
Discuss the importance of grounding  
List what to do in an emergency response  
Demonstrate electrical safety  
Demonstrate ladder safety  
Identify and use personal safety equipment  
Demonstrate scaffold safety

### **Tools and Materials**

Identify the tools of the electrical trade  
Identify types of outlet boxes  
Identify types of device boxes  
Identify types of connectors  
Identify types of switches  
Identify types of receptacles  
Identify types of breakers  
Identify types of fuses

### **Use of Electrical Theory**

Use Ohm's Law  
Use the Power Equation  
Describe what a voltage drop is  
Calculate horsepower

### **Making Electrical Connections and Taping**

Perform a pigtail splice  
Install wire nuts

### **Residential Blueprint Reading**

Identify general information on blueprints  
Identify electrical symbols and outlets  
Identify lighting and small appliance circuits  
Identify conductors size and types  
Identify switch control circuits  
Identify GFCI circuits  
Identify Lighting fixtures  
Identify branch circuits  
Identify special purpose outlets  
Identify TV and telephone  
Identify smoke detector  
Identify low voltage system  
Identify service equipment  
Perform service calculation  
Identify circuits for swimming pools

### **National Electric Code**

Use appropriate electrical terms  
Identify grounded conditions  
Describe the code as it applies to branch circuits  
Perform a branch circuit calculation  
Describe the code for service connections  
Describe the code relative to conditions for general wiring

**Residential Wiring**

Demonstrate methods of wiring Nm Cable  
Perform wiring outlets into circuits  
Perform wiring S.P. switch into a circuit  
Perform switching of circuits  
Perform wiring S.P. 3 way and 4 way circuits  
Install electric heat  
Wire a thermostat  
Wire an electric motor  
Install 100 Amp service  
Install S.E.C. cable  
Install breakers  
Install G.F.C.I  
Estimate electrical wiring  
Read an electrical layout blueprint  
Perform a materials take off  
Calculate a materials price list

**Professional Development**

Perform a self assessment  
Develop goals  
Research future occupation  
Discuss cultural diversity  
Complete a community service project  
Participate in a job shadowing activity  
Complete a job application  
Participate in a simulated job interview  
Complete Portfolio

**PERSONAL QUALITIES**

Work Effort  
Safety Habits  
Work Area Organization  
On Task Behavior  
Responsibility  
Initiative  
Team Work  
Respect  
Interpersonal Skills