



# Electrical Fundamentals

Youth Apprenticeship

## ELECTRICAL FUNDAMENTALS

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Electrical Fundamentals youth apprentices gain skills related to the use of construction safety, drawings and blueprints, materials, tools, and electrical worksite procedures. Apprentices must adhere to industry safety and security standards.

**Length of Apprenticeship:** One or two years

## OCCUPATIONAL COMPETENCIES

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**Year 1:** Electrical Fundamentals youth apprentices must complete a **total of 15** Electrical Fundamentals Competencies and a **minimum of 1** Electrical Specialty Competency. Employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment. Year 1 competencies are completed with employer guidance. Youth apprentices must also complete the following during the first year:

**Youth Apprentices must also complete the following during Year 1:**

- First Aid Certification
- Occupational Safety Health Administration (OSHA) 10 or 30 Certification

**Year 2:** Electrical Fundamentals youth apprentices must complete the fifteen Electrical Fundamentals Competencies with minimal supervision and a minimum of 2 different Electrical Specialty Competency than the first year. A specialty competency may be repeated only if the type of construction (residential or commercial) differs from the first year. Employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment. Year 2 competencies are completed with minimal employer guidance.

**Select construction type and circle the applicable year:**

- Residential completed during Year: One and/or Two
- Commercial completed during Year: One and/or Two

Note where necessary, skills can be simulated.

Electrical Fundamentals Competencies	Electrical Specialty Competencies
<ol style="list-style-type: none"> <li>1. Follow safety procedures</li> <li>2. Read construction drawings and plans</li> <li>3. Interpret symbols and procedures</li> <li>4. Contribute to a job task plan</li> <li>5. Work as a member of a construction team</li> <li>6. Prepare work area for construction</li> <li>7. Select construction materials</li> <li>8. Use hand and light duty tools</li> <li>9. Use power tools and equipment</li> <li>10. Perform materials handling</li> <li>11. Install materials per job specifications</li> <li>12. Perform construction measurements</li> <li>13. Maintain a clean and safe work area</li> <li>14. Clean up job site</li> <li>15. Practice quality craftsmanship</li> </ol>	<ol style="list-style-type: none"> <li>16. Assist with cutting wire, cable, conduit, and raceway, cording and cutting chasses</li> <li>17. Assist with pulling wires and attaching wires</li> <li>18. Assist with connecting conductors to switches, receptacles or appliances</li> <li>19. Assist with installation of switches, outlet boxes and fixture boxes</li> <li>20. Assist with installation of feeders and circuits</li> </ol>

## APPRENTICESHIP BRIDGING OPPORTUNITIES

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Some of the related instruction courses can bridge into the following registered apprenticeship:

- Electrical Construction
- Residential Wirer

## POST-SECONDARY PATHWAY OPPORTUNITIES

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There are several post-secondary pathway opportunities in this area. The following is a partial list.

- Construction Electrician
- Residential Electrician