



Career Pathways: Electrician



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Electrical Construction



About Electricians

An electrician is a skilled tradesperson specializing in the installation, maintenance, and repair of electrical systems. This includes wiring, lighting, circuit boards, and other electrical components in residential, commercial, and industrial settings. Electricians ensure that electrical systems operate safely and efficiently, adhering to local and national electrical codes. Their work can involve reading blueprints, troubleshooting electrical issues, and using various tools and equipment to perform tasks. Electricians often work on new construction projects, renovations, or ongoing maintenance of existing electrical infrastructure. Due to the technical and potentially hazardous nature of their work, electricians undergo extensive training and certification to ensure proficiency and safety in their trade.



Key Tasks

- Install electrical systems and components, such as wiring, lighting, circuit breakers, and outlets in new construction projects or during renovations
- 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
- Diagnose electrical problems by using testing devices and tools to identify issues such as faulty wiring, short circuits, or equipment failures
- Ensure all work complies with local and national electrical codes and regulations to guarantee safety and adherence to standards



Key Skills

- A strong understanding of electrical systems, components, and their functions, as well as familiarity with electrical codes and regulations.
- Proficient in basic math and algebra to calculate electrical loads, measurements, and costs.
- Able to perform physically demanding tasks, such as lifting heavy equipment, climbing ladders, and working in confined spaces.



Education & Certifications

- **High school diploma or GED**
- **Career and Technical Education:** Some electricians attend a technical or community college for a certificate or associate degree in electrical technology.
- **Pre-Apprenticeship Programs:** These programs provide foundational knowledge and skills, making candidates more competitive for apprenticeship positions.
- **Journeyman Electrician License:** After completing an apprenticeship, you must pass a licensing exam to become a journeyman electrician. Licensing requirements vary by state but usually include passing a comprehensive exam on electrical theory, the National Electrical Code (NEC), and local electrical codes.



Industry Sector Employers

- Anthracite Electric, Inc.
- Arlington Industries
- Baldoni Electric
- Commonwealth Energy Group, LLC
- Everon Electrical Contractors
- G.R. Noto Electrical Construction
- General Dynamics
- H&K Group
- Tobyhanna Army Depot



Local College/ University Programs

- Johnson College
- Luzerne County Community College
- Career Technology Center of Lackawanna County
- Pennsylvania College of Technology
- IBEW Local 81



Learn more about Electricians and other career pathways at ScrantonChamber.com

**List above shows a sampling of sector employers and college/university programs which is not limited to the list above.*

Sources:
<https://www.onetonline.org/>

