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Electrician

Job 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.

Work Conditions

Electricians work indoors and outdoors, in nearly every type of facility. Almost all electricians work full time, which may include evenings and weekends. Although the work is not as dangerous as other construction occupations, potential injuries include electrical shocks and burns, cuts, and falls.

How to Become an Electrician

Most electricians learn their skills on the job.

Although most electricians learn through an apprenticeship, some start out by attending a technical school. Most states require electricians to be licensed. For more information, contact your local or state electrical licensing board.

- **Education**

- A high school diploma or equivalent is required.
- Some electricians start out by attending a technical school. Many technical schools offer programs related to circuitry, safety practices, and basic electrical information. Graduates usually receive credit toward their apprenticeship.
- After completing their initial training, electricians may be required to take continuing education courses. These courses are usually related to safety practices, changes to the electrical code, and training from manufacturers in specific products.

- **Training**

- Most electricians learn their trade in a 4- or 5-year apprenticeship program. For each year of the program, apprentices must complete at least 144 hours of technical training and 2,000 hours of paid on-the-job training. In the classroom, apprentices learn electrical theory, blueprint reading, mathematics, electrical code requirements, and safety and first-aid practices. They also may receive specialized training related to soldering, communications, fire alarm systems, and elevators.
- After completing an apprenticeship program, electricians are considered to be journey workers and may perform duties on their own, subject to any local licensing requirements. Because of this comprehensive training, those who complete apprenticeship programs qualify to do both construction and maintenance work.
- Several groups, including unions and contractor associations, sponsor apprenticeship programs. The basic qualifications to enter an apprenticeship program are as follows:
 - Minimum age of 18
 - High school education or equivalent
 - One year of algebra
 - Qualifying score on an aptitude test
 - Pass substance abuse screening
- Some electrical contractors have their own training program.



Associated General Contractors of North Dakota
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- **Licenses, Certifications, and Registrations**
 - Most states require electricians to pass a test and be licensed. Requirements vary by state. For more information, contact your local or state electrical licensing board.
 - The tests have questions related to the National Electrical Code, state electrical codes, and local electrical codes.
- **Important Qualities**
 - **Business skills**
Self-employed electricians must be able to bid on new jobs, track inventory, and plan payroll and work assignments.
 - **Color vision**
Electricians must identify electrical wires by color.
 - **Critical-thinking skills**
Electricians perform tests and use the results to diagnose problems. For example, when an outlet is not working, they may use a multimeter to check the voltage, amperage, or resistance to determine the best course of action.
 - **Customer-service skills**
Electricians work with people on a regular basis. As a result, they should be friendly and be able to address customers' questions.
 - **Troubleshooting skills**
Electricians find, diagnose, and repair problems. For example, if a motor stops working, they perform tests to determine the cause of its failure and then, depending on the results, fix or replace the motor.

Wage Information:

The table below shows the estimated Employment Wage Statistics for individuals in North Dakota employed as Electricians in 2013.

Rate Type	Entry level	Mean	Experienced
Annual Wage	\$36,010	\$53,670	\$62,500
Hourly Wage	\$17.31	\$25.80	\$30.05

For more information [click here](#).



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