

T H E **J O B** C E N T E R

**ELECTRICIAN**



Electricians connect, test, and repair wiring throughout homes and businesses, providing light, power, and temperature control.

Look around you. In an increasingly technological society, the need for electricians is everywhere. Electricians are skilled workers who are able to install and maintain the wiring necessary for our power-driven world to function. Many work in the construction industry, wiring new homes and buildings. Others work in the residential arena, doing relatively simple repairs.

Being an electrician is a trade. It is usually learned by on-the-job training or through a four- to five-year apprenticeship that gives a thorough knowledge of all aspects of the trade.

Electricians work with blueprints, which indicate where circuits, panel boards, and other equipment are located, to install electrical systems in factories, buildings, homes, and other structures.

Electricians may work on new construction where they use conduit or plastic-covered wire, depending on the type of structure being built, and metal or plastic boxes to complete circuits. To ensure the connections are safe and complementary, electricians test the connections using equipment, such as voltmeters, oscilloscopes, and ohmmeters.

Other tools employed in the electricians trade include hand tools, such as pliers, screwdrivers, and hacksaws as well as a variety of power tools.

Electricians also may install coaxial or fiber optic cable for telecommunications equipment, such as computers. Some may install wiring for phones.

Preventive maintenance is a focal point for the maintenance electrician, although their work varies greatly. Much of a maintenance electrician's time is spent inspecting wiring and locating and correcting potential problems before a breakdown occurs. This may involve replacing an old fuse box with a new circuit breaker or repairing all types of electrical equipment.

Electricians are responsible for following the National Electric Code in addition to complying with State and local building codes.

Sometimes an electrician's work is done under grueling or uncomfortable conditions. However, their working environment varies depending on the type of job. Much of it is done outside in the elements. It may also require working in tight spaces, such as between walls, and climbing on ladders or scaffolds. In addition to being strenuous, an electrician's job can be dangerous. Electricians must follow strict safety regulations to avoid injuries.

Many construction electricians are members of the International Brotherhood of Electrical Workers or other unions.

He also explained that there are two main steps in residential electricity: rough-in and trim-out. Rough-in is where he installs all of the wires and electrical boxes in the framing of a house. Trim-out is where he comes back after the dry-wall has been put up and the electrical outlets and covers go on. "You learn something new everyday." Denny likes residential electricity better than commercial electricity because he says "it is more fast-paced and the day goes by faster."

Denny has some good advice for anyone interested in going into the field of electricity: "Go to school and work hard."

**Profile**

David Denny  
Bradenton

David Denny has been an Electrician Helper at United Electric since March 2006, 3 months before graduating from the Manatee Technical Institute's Electricity Program. In the Electricity Program Denny learned both residential and commercial electricity.

Denny has a high school diploma, he graduated with an honors degree from the Electronics program at Bayshore High School, and then he graduated from Manatee Technical Institute's Electricity program with honors as well. Denny says his grandfather did this type of work which is what inspired him to go into the field of electricity as well.

"The feeling of accomplishment" is what Denny says he likes most about his position.

**SKILLS REQUIRED**

To manipulate complex electrical components with hand tools and power tools, electricians must be dexterous and knowledgeable about electronics.

**WHERE/HOW TO GET TRAINING**

**Schooling**

Although some electricians do still gain their skills exclusively through on-the-job training, the best way to acquire those skills is through a four- or five-year apprenticeship program. These programs combine classroom instruction with supervised on-the-job training to give trainees a thorough knowledge of all aspects of the job. Apprenticeship programs usually require an applicant to be at least 17 years old and have a high school diploma. Some also require that the applicant have completed at least one year of high school algebra (or a higher math course) with at least a "C" grade.

A physical exam and a drug screening may also be required for entry into an apprenticeship program.

The programs generally accept applicants year-round. Once the apprenticeship program has been completed, the trainee becomes a

journeyman wireman. Although it is not required, continued education is highly recommended to keep electricians informed on technological developments and to keep their skills as up-to-date and marketable as possible.

**Financial Aid**

Grants, scholarships, loans, and work/study programs are available for college students. For most of this aid, prospective students must submit a Free Application for Federal Student Aid, which is available from high school guidance offices and higher education financial aid offices.

For more information on federal financial aid programs, or to apply electronically, visit the U.S. Department of Education's Web site at <http://www.ed.gov>.



For more information on federal financial aid programs, call (800) 4FEDAID

**FUTURE JOB OPPORTUNITIES**

Employment of skilled electricians is expected to grow at a constant rate through 2010.

Further, due to the growing economy, population increase,

and new technologies, there will be increasing demand for construction electricians.

**WORK ENVIRONMENT**

Electricians may wear uniforms of shirts and pants or coveralls over their own clothing.

Because the need for electrical services is widespread, electrical jobs can be found all over the country in a variety of different environments.

**RESOURCES - HOW TO FIND OUT MORE**

**BOOK:**

Careers As an Electrician by Elizabeth Stewart Lytle

**ONLINE:**

- [www.ieci.org](http://www.ieci.org) (Independent Electrical Contractors, Inc.)
- [www.abc.org](http://www.abc.org) (Associated Builders and Contractors)

**GENERAL:**

International Brotherhood of Electrical Workers  
1125 15th St. NW  
Washington, DC 20005  
[www.necanet.org](http://www.necanet.org)

**LOCAL:**

Career Counselor, Vickie Miller, 941-751-7900 ext. 2016

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**JOBS IN THIS FIELD**

Job titles	Place of work	Kind of work	Average salary*
Journeyman apprentice, first year	New construction sites, office buildings, private homes	Works with journeyman to learn electrical trade.	\$9.00-\$12.00 (hourly)
Journeyman apprentice, fourth year	New construction sites, office buildings, private homes	Works while supervised by journeyman.	\$12.00-\$20.00 (hourly)
Journeyman wireman	New construction sites, office buildings, private homes	Wires homes and buildings for electricity. Does repair and maintenance work on electrical systems.	\$20.00-\$27.00 (hourly)

\*Salaries may vary depending on region and experience. Sources: Chronicle Guidance Publications and Occupational Outlook Handbook.