

# What's this job all about?

Electricians install, test, and maintain electrical systems. In the past electricians chose to work either in construction or maintenance. Today many work in both. In general, construction electricians assemble and install electrical systems.

Maintenance electricians maintain and repair systems.

If you choose to work in this field in Alaska, you should be prepared to work in all types of weather conditions. Your work may also take you to different locations, so you may have to stay away from home for periods of time if you are working on a big project.

### Here's what Electricians do:

- Read blueprints to learn where to put circuits, outlets, and other equipment.
- Plan how to install wires and conduit (pipe or tubing) in the walls and concealed areas of homes and businesses.
- Install metal or plastic boxes for switches and outlets.
- Pull insulated wires or cables to boxes to complete circuits.
- Connect wires to circuit breakers, transformers, and other components.
- Use soldering guns.
- Test that all the circuits work properly.
- Follow the national electric code as well as state and local building codes.
- Install fiber optic or coaxial cables for computers and telephones.
- Connect motors to electrical power.
- Install electronic controls for industrial equipment.
- Use hand tools like screwdrivers, pliers, knives, and hacksaws and use power tools and testing equipment, like voltmeters.
- Keep electrical systems and equipment in good working order.
- Inspect equipment and fix problems.
- Check equipment for safety and warn managers when equipment is not safe.
- Install new electrical equipment and repair systems.

### How much money can I make?

**Median Wage: \$28.03 per hour.**

In Alaska, the median wage for electricians is \$4,859 per month. Half of all electricians earn between \$3,831 and \$5,888 per month (\$22.10 and \$33.97 per hour) and wages vary according to region and type of work. Apprentices start at about half the wage of skilled workers and receive raises as their skills improve. Full-time electricians may receive benefits such as health insurance, sick leave, and paid vacation. Those who work for small companies may need to provide their own insurance.



Michelle Rushton, 21, is an apprentice electrician. She is shown here learning about the iron worker trade as part of her experience in Alaska Works "Women in the Trades" program.

# MICHELLE 21

R U S H T O N

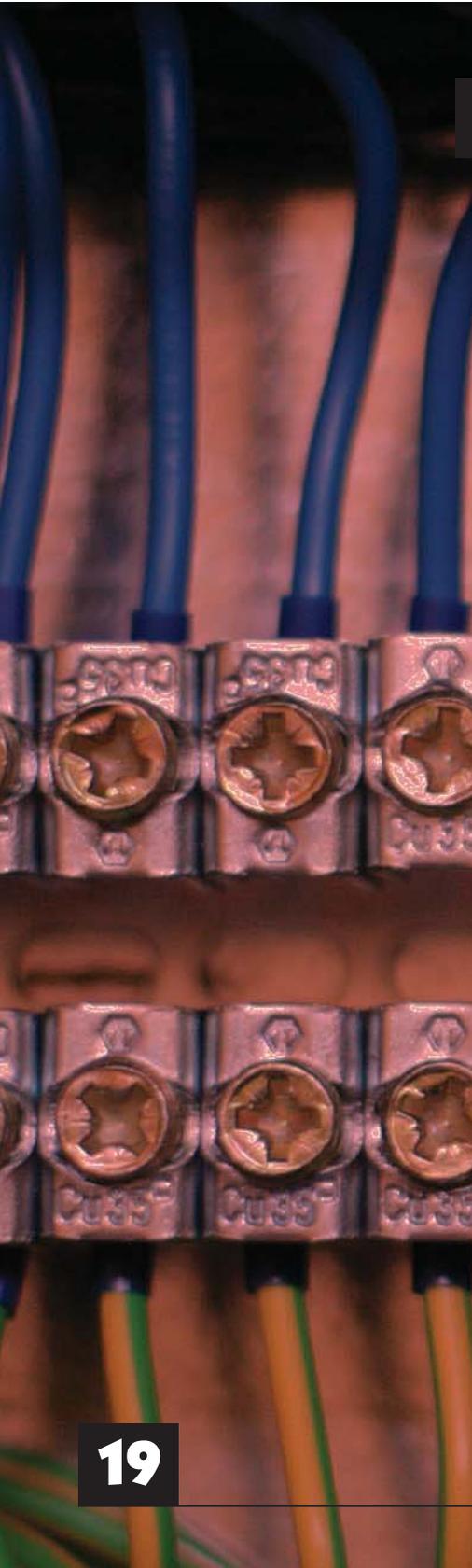
Michelle Rushton likes to work hard and she likes to work outside. Like many young people who finish high school, Michelle started looking seriously at what she wanted to do with her life after she received her GED. Luckily for her, she saw an ad in the newspaper for Alaska Works Partnership's "Women in the Trades Program" and decided to apply. "The program is a 30-day program that exposed us to all the trades," Michelle said. "It was really great for me because it opened my eyes to a lot of things."

Michelle had never before been talked to about the possibility of a career in the construction industry. "No one ever talked to me about the trades when I was growing up," she said. "The program made me realize that it is a great opportunity to be in a trade." Michelle said one of her hardest decisions after being in the Alaska Works Partnership program, and being exposed to a variety of construction trades, was picking which trade she wanted to pursue. "I had the hardest time deciding what to go in to because I respect them all," she said.

But her interest in working hard and the opportunity to work both inside and outside ultimately attracted Michelle to apply for the electrical apprenticeship program. Michelle was accepted and is now working alongside a journeyman electrician learning the intricacies of her job.

"I show up at 7 a.m. every day, attend safety meetings a couple of times a day and then my day involves doing whatever the journeyman tells me to do," she said. Michelle loves the work – both inside and outside – and says she's even learned to deal with working alongside of mostly men all day long.

"It's a great field for women," she said. "It's a great field for anyone."



## Electricians

### How long does it take to receive training?

There are a number of pathways to becoming an electrician in Alaska. You can become an apprentice through a union or non-union program. You can attend a trade school or technical program to learn skills, but when you finish your trade-related course and get a certificate of completion, you still need to finish all parts of an approved apprenticeship program. Apprenticeship programs in this field take about four years to complete the minimum of 8000 hours of on-the-job training and a minimum of 144 hours per year of related classroom instruction required to reach a journeyman level.

### When I'm ready to work, will there be job openings?

In Alaska, about 2,035 electricians are employed. Nationally, about 659,400 electricians work in this occupation. The outlook for job openings for electricians is excellent to 2014. Average growth is projected. Nationally, the number of jobs for electricians is expected to grow as fast as average through the year 2014.

*Please see the Training Programs section of this booklet to find out more about training in these career fields in Alaska.*

## HELPFUL HIGH SCHOOL COURSES

A high school degree is almost always required to work as an electrician. Here is a list of high school courses that will help prepare you:

### **Business**

Introduction to Business

### **Construction Trades**

Exploration of Construction Careers  
Construction

### **Electricity and Electronics**

Residential Wiring  
Industrial Electricity, Electronics  
Construction Trades Work Experience

### **Drafting**

Drafting  
Blueprint Reading

### **Energy, Power, and Transportation Technologies**

Energy and Power

### **Health and Safety Education**

Safety and First Aid  
Industrial and Technology Education  
Exploration of Careers  
General Industrial Arts

### **Industrial Safety and First Aid**

Industrial and Technology Education Work  
Experience

### **Life and Physical Sciences**

Physics

### **Mathematics**

Integrated Math, General Math  
Applied Math, Pre-Algebra  
Algebra, Business Math

### **Physical Education**

Physical Education, Fitness and Conditioning  
Activities

