



Electrician

Working with electrical and electronic equipment and systems for industrial, commercial and domestic purposes; and electrical transmission and distribution equipment.

The electrical industry started with light and now **includes all electrical appliances, equipment and systems** that work with the flick of a switch. Work in industries such as installation and servicing, maritime installation, mining, plant servicing, control, energy supply, fire protection, process, security and/or signalling (rail).

When you have successfully completed the **Certificate III in Electrotechnology Systems Electrician** (usually via an Australian Apprenticeship), you can apply for the relevant electrical licence in your state or territory. Because of their skills, many Systems Electricians move quickly into related jobs.

The available qualifications have been designed specifically for a person to be able to perform work in a variety of situations and environments whilst assuring reliability, integrity and safety of systems and equipment. It takes commitment and willingness to be a competent and qualified Systems Electrician. If you want to see if you're suited to a career as a Refrigeration and Air Conditioning Technician then try the EE-Oz Training Standards pre apprenticeship test.

Electricians may perform the following tasks:

- read electrical, architectural and mechanical **diagrams, drawings or specifications** to determine job requirements
- plan the **layout of wiring** systems
- test for, locate and **repair electrical malfunctions**
- **install electrical** and electronic control systems and insulated cables
- install electrical equipment such as storage heaters, water heaters, electrical signs, switchboards and motors
- assemble and fabricate electrical and **electronic components** and appliances
- **connect** electrical equipment to power supplies
- connect switches, outlets and other fittings
- connect circuit breakers
- maintain **automated production** processes

With experience and possibly some business training, electricians may specialise as **electrical contractors**, who order materials, organise staff to meet customer needs and carry out other tasks associated with running a business.

Electricians may work in workshops, in private homes or in manufacturers' factories. They may have a considerable amount of contact with the public. They may work in confined spaces and have to stand for long periods. They may also be required to work at heights on masts, towers and roofs.

Electricians must be aware of **safety regulations** and must often wear and use supplied protective equipment to minimise risks. Systems Electricians specialise and work in:

- high speed, complex and sophisticated electrical, electronic and communications equipment
- wiring installations, including lighting, fire protection and security
- electronic controls
- smart wiring systems
- automated process technologies and robotics
- programming controllers
- state of the art test instruments
- variable speed motors
- optical, data and voice devices and systems
- microwave and digital TV technologies
- mobile phones

As an Systems Electrician you may also be required to:

- attend to breakdowns
- coordinate materials
- supply projects
- provide technical leadership in the workplace.