

ELECTRICIAN

ELECTRICIAN - EDUCATIONAL PATHWAYS

Entry Level

Employers require applicants who have completed at least Year 10 but most prefer applicants who have successfully completed Years 11 & 12 or a School Based Apprenticeship / Traineeship, Curriculum Framework Course or a Pre-Apprenticeship Course. After successfully completing UEE220111 Certificate II in Electrotechnology (Career Start)

TRADE QUALIFICATION

Applicants commencing an apprenticeship as an electrician would enrol into UEE30820 Certificate III in Electrotechnology Electrician. At the completion of this qualification individuals may like to complete further training to become a specialist in the following areas –

UEE40620 - Certificate IV in Electrotechnology - Systems Electrician

This qualification covers competencies to select, install, commission, fault find and maintain electrical systems and equipment with options, typically in explosion protection; electrical machines; electrical inspection; safety auditing; contracting; lifts and energy supply/distribution.

UEE42620 - Certificate IV in Hazardous areas – Electrical

This qualification provides competencies to supervise selection, installation, commissioning maintenance and testing of explosion-protected equipment and systems for control and monitoring of plant and processes. The qualification provides competencies in working with explosion-protection techniques. Site-specific work permits maybe required to work in a hazardous environment.

UET40521 - Certificate IV in ESI - Power Systems Substations

This qualification provides the skills and knowledge to work in power system substations in the electricity supply industry (ESI). This qualification covers selecting, installing, setting up, testing, fault finding, repairing and maintaining electrical systems and equipment in buildings and premises. It also provides a career in installation and maintenance of substations, such as the maintenance of high voltage (HV) power system, including circuit breakers and transformers. It includes substation switching, inspection and diagnosing and rectifying faults. Options are available for skills to be obtained in high current direct current (d.c.) switchgear and equipment, installation of HV plant and equipment and/or the maintenance and commissioning of discrete protection and control systems.

UEE41920 - Certificate IV in Electrical - Renewable Energy

This qualification provides competencies to select, install, set up, test, fault find, repair and maintain electrical systems and equipment in buildings and premises. It includes requirements and competencies to select, install, set up, test, fault find, repair and maintain stand-alone renewable energy (RE) equipment and systems.

UEE42020 - Certificate IV in Electrical - Photovoltaic systems

This qualification provides competencies to select, install, set up, test, fault find, repair and maintain electrical systems and equipment in buildings and premises. It includes requirements and competencies to select, install, set up, test, fault find, repair and maintain photovoltaic (PV) systems and associated equipment.

UEE50420 - Diploma of Electrical Engineering

This qualification cover competencies to develop, select, commission, maintain and diagnose faults/malfunctions on advanced electrical equipment and systems. The entry requirement for this qualification is: UEE30820 Certificate III in Electrotechnology Electrician or a current 'Unrestricted Electricians License' or its equivalent issued in an Australian state or territory.

UEE62220 - Advanced Diploma of Electrical - Engineering

This qualification covers competencies to design and validate/evaluate electrical equipment and systems, manage risk, estimate and manage projects and provide technical advice/sales. It develops competencies in the ethical and responsible application of mathematics, science, engineering techniques, standards and codes of practice, engineering design practices, supervision and management of physical, human and financial resources in engineering.

For further information or advise contact

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CAREER PATHWAYS/SPECIALISATIONS

Some examples of specialized jobs that you could consider at the commencement of your apprenticeship.

Domestic/Residential/Construction Electricians - The most “common” type of electricians, these electricians work to install and maintain anything from lights to a complete wiring systems including renewable energy systems such as rooftop solar and batteries of a high-rise building, residential estate, home.

Commercial Electricians - typically work on commerce related sites and large projects that may include solar and battery farms, office buildings, shopping malls.

Maintenance electricians - ensure the safe and efficient working of large and critical electrical systems in plants, factories, workshops, hospitals, broadcasting systems, lift systems. This may involve maintaining complete utility, electronics and power grids in building complexes or fixing heavy machinery in factories or warehouses. They also make routine inspections of equipment to check their operating conditions and make proactive replacements and repairs.

Industrial electricians typically work in large-scale power plants, chemical plants, mining operations, process and manufacturing facilities and other types of large-scale operations. These facilities utilise or have in place a lot of heavy machinery and equipment and more electrical work and power than residential or regular commercial buildings, factories or workshops.

Note:

One thing to note is that a licensed electrician can typically work across any of the specialisations listed above. Those listed above are provided as a context information of the array of work environments they may work in at any point in time. Often an electrician can be working, for example, in an industrial setting in the morning and then a domestic site later in the day. Or they may work full time in one environment only. Importantly to note though, is that often the same electrical standards apply across these environments, and this allows an electrician the opportunity to work across these areas without too much effort.

Another considerations is that once you complete your apprenticeship you can consider becoming self-employed and run your own business, or you may wish to increase your technical skills and knowledge. You can achieve the latter by completing further study or targeting a particular company that you would like to work for that might offer new career prospects or opportunities to work with cutting-edge technologies and innovations.

For further information relating to this job. Search the following web sites. Either click on the logo to open the web page or click on the QR code with your app.

 <p>national electrical and communications association</p>		
<p>NECA</p> 	<p>NSW UE ITAB careers</p> 	<p>Master Electricians Australia</p> 
 	 <p>National Careers Institute Your career guides</p>	<p>For further information or advice contact: mae@agrifooditab.com.au www.uensw.com.au Email: tony@uensw.com.au</p>



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HINTS ON HOW TO APPLY FOR THIS JOB

The 11 steps below outline the process you could follow to assist you to secure an electrical apprenticeship-

1. identify your strengths and weaknesses, especially in maths and literacy as these are essential to being successful in an electrical Career. Intermediate maths with a solid pass mark is the minimum. Additionally, subjects like technical drawing and metalwork, woodwork or engineering will give you some basic hand spatial and situational awareness skills that employers look for.
2. decide where you want to work; are you willing to relocate to get your dream job? There may be more opportunities in cities than in regional areas.
3. do some research, as to who the key employers are in the electrical industry and choose the electrical specialisation that you most like then make enquiries to see if they will take on apprentices.
4. research information about these employers or companies that you would like to work for; find out what the entry requirements or essential criteria are that must be met; such as do you need to complete an aptitude or other entry test before getting an interview?
5. make a shortlist of potential prospective employers to contact. You may also like to chat to your job search agent or search some of the online employment agencies such as SEEK, Jobsearch, Indeed or LinkedIn to find job vacancies for electricians in your region.
6. create a quality resume by identifying key elements that should be included therein, and incorporate your academic achievements, experience, interests and passions.
7. identify and practice some interview skills with friends, parents or career advisors to learn tips on how best to perform in an interview.
8. contact potential employers by writing or directly calling them to demonstrate your interest and communication skills. Prospective employers highly value self-starters and prospective career aspirants with initiative who take such steps to seek for themselves employment as an apprentice.
9. talk with the prospective employer about the work they do and if they would be interested in taking you on as an apprentice. If you are still at school, you may be able to take up a school-based apprenticeship. There are opportunities available in some schools that allow you to take on a part-time apprenticeship known as a School-Based Apprenticeship or Traineeship (SBAT). Ask your school if they support this government initiative and ask the employer if they would be interested in such an arrangement. SBATs are a really good way to allow you to finish school and at the same time learn and earn as an apprentice.
10. Your employer should contact the Australian Apprenticeship Support Network (AASNs) - <https://www.australianapprenticeships.gov.au/> for further information on how to sign you up.
11. sign up to your apprenticeship with your employer (and support of your family if you are under 18 years old) to start "learning and earning" to be an electrician.

For further information or advice contact

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HAVE YOU CONSIDERED THESE RELATED JOBS?

There are an array of job options within the electrotechnology and utilities industries that you may like to consider researching; some of which are listed below.

- ⇒ **Lift mechanic**
- ⇒ **Line worker**
- ⇒ **Electrical fitter**
- ⇒ **Refrigeration and air conditioning mechanic**
- ⇒ **Cable jointer**
- ⇒ **Electronics technician**
- ⇒ **Communications – broadcast technician / data comms technician**
- ⇒ **Computer systems technician**
- ⇒ **Instrumentation tradesperson**
- ⇒ **Power station operator**
- ⇒ **Gas networks technician**



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