



**Australian Government**

# **AUR30312 Certificate III in Automotive Electrical Technology**

**Release: 1**

## AUR30312 Certificate III in Automotive Electrical Technology

### Modification History

Release	Comment
Release 1	Replaces AUR30308 Certificate III in Automotive Electrical Technology

### Description

This qualification covers the skills and knowledge required to service, diagnose and repair electrical systems and components in vehicles in the automotive electrical service and repair industry.

#### Job roles and employment outcomes

The Certificate III in Automotive Electrical Technology prepares new employees or recognises and develops existing workers who service, diagnose and repair vehicle electrical and electronic systems and components.

Job roles related to this qualification include:

- automotive electrician
- automotive electrical technician
- automotive electrical diagnostic technician.

#### Application

This qualification is suitable for an Australian apprenticeship pathway.

### Pathways Information

#### Pathways into the qualification

Credit may be granted towards this qualification by those who have completed AUR20412 Certificate II in Automotive Electrical Technology in this Training Package or other relevant qualifications.

#### Pathways from the qualification

Further training pathways from this qualification include AUR40612 Certificate IV in Automotive Electrical Technology or other relevant qualifications.

## **Licensing/Regulatory Information**

There are no specific licences that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements, depending on the work context. Local regulations should be checked for details.

## **Entry Requirements**

This qualification may be accessed by direct entry.

## Employability Skills Summary

### EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills as identified by the automotive, service and repair industry for this qualification. The employability skills facets described here are broad industry requirements that may vary depending on qualification packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
<b>Communication</b>	<ul style="list-style-type: none"> <li>clearly communicating workplace verbal and non-verbal information and ideas with workplace colleagues, including using automotive terms</li> <li>completing workplace reports</li> <li>using and contributing to workplace procedures</li> <li>maintaining workplace records</li> <li>communicating with colleagues and clients to handle verbal enquiries, such as clarifying instructions and responding to requests for information</li> <li>interpreting the needs of customers</li> <li>reading and interpreting workplace-related documentation</li> </ul>
<b>Teamwork</b>	<ul style="list-style-type: none"> <li>identifying and describing own role and role of others</li> <li>working with diverse individuals and groups</li> <li>applying knowledge of own role to complete activities efficiently to support team activities and tasks</li> </ul>
<b>Problem solving</b>	<ul style="list-style-type: none"> <li>recognising a workplace problem or potential problem and taking action</li> <li>determining problems needing priority action</li> <li>referring problems outside area of responsibility to appropriate person and suggesting possible causes</li> <li>seeking information and assistance to solve problems</li> <li>using a range of problem-solving techniques</li> <li>taking action to resolve concerns</li> <li>developing practical responses to common breakdowns in workplace systems and procedures</li> </ul>
<b>Initiative and enterprise</b>	<ul style="list-style-type: none"> <li>adapting to new and emerging situations in the workplace</li> <li>being proactive and creative in responding to workplace problems, changes and challenges</li> </ul>
<b>Planning and organising</b>	<ul style="list-style-type: none"> <li>planning own work requirements and prioritising actions to achieve required outcomes and ensure tasks are completed on time</li> <li>identifying risk factors and taking action to minimise risk</li> </ul>
<b>Self-management</b>	<ul style="list-style-type: none"> <li>selecting and using appropriate equipment, materials, processes and procedures</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

	<ul style="list-style-type: none"><li>• recognising limitations and seeking timely advice</li><li>• planning own work requirements, setting own work program and managing time to ensure tasks are completed on time</li><li>• following workplace documentation, such as codes of practice and operating procedures</li></ul>
<b>Learning</b>	<ul style="list-style-type: none"><li>• asking questions to gain information</li><li>• identifying sources of information, assistance and expert knowledge to expand knowledge, skills and understanding</li><li>• participating in self-improvement activities</li><li>• participating in development of workplace continuous improvement strategies</li><li>• helping others develop competency</li></ul>
<b>Technology</b>	<ul style="list-style-type: none"><li>• applying and operating electrical and electronic diagnostic test equipment effectively</li><li>• performance testing components, systems and equipment</li><li>• using a range of workplace tools and equipment efficiently and safely</li><li>• storing and caring for components, parts, tools, test equipment and support equipment</li><li>• applying digital literacy skills when fault finding vehicle systems and components</li><li>• using business technology to collect, analyse and provide information in both written and verbal formats</li></ul>

## Packaging Rules

To be awarded this qualification, competency must be demonstrated in **32 units** of competency, consisting of:

- **20 core units**
- plus
- **12 elective units**, of which:
  - up to **12** elective units may be chosen from the elective units listed below
  - up to **6** elective units may be chosen from a Certificate II qualification or above in this Training Package or another endorsed Training Package or accredited course, provided that the units chosen contribute to the vocational outcome of this qualification and do not duplicate the outcome of another unit chosen for the qualification.

### Core units

Unit code	Unit title
<b>Common – Environment</b>	
AURAEA3003	Monitor environmental and sustainability best practice in the automotive mechanical industry
<b>Common – Health and Safety</b>	
AURASA2002	Apply safe working practices in an automotive workplace
<b>Electrical – Technical – Tools and Equipment</b>	
AURETK2002	Use and maintain automotive electrical test equipment
<b>Electrical – Technical – Electrical and Electronic</b>	
AURETR2006	Carry out soldering of electrical wiring and circuits
AURETR2007	Demonstrate knowledge of automotive electrical circuits and wiring systems
AURETR2009	Install, test and repair vehicle lighting and wiring systems
AURETR2010	Fabricate, test and repair wiring harnesses and looms
AURETR2012	Test and repair basic electrical circuits
AURETR2035	Demonstrate knowledge of petrol and diesel engine operation
AURETR3023	Diagnose and repair electronic spark ignition engine management systems
AURETR3024	Diagnose and repair electronic compression ignition engine management systems
AURETR3025	Test, charge and replace batteries

Unit code	Unit title
AURETR3027	Install ancillary electronic control unit systems and components
AURETR3028	Diagnose and repair instruments and warning systems
AURETR3029	Diagnose and repair charging systems
AURETR3030	Diagnose and repair starting systems
AURETR3031	Diagnose and repair ignition systems
AURETR3032	Repair electrical systems
AURETR3043	Service and repair electronic body management systems
<b>Mechanical Miscellaneous – Technical</b>	
AURTTA3018	Carry out diagnostic procedures

**Elective units**

Unit code	Unit title	Prerequisite
<b>Common – Foundation Skills</b>		
AURFAA2003	Communicate effectively in an automotive workplace	
<b>Common – Tools and Equipment</b>		
AURAKA3002	Adapt work processes to new technologies	
<b>Common – Management, Leadership and Supervision</b>		
AURAMA2001	Work effectively with others	
AURAMA2002	Communicate business information	
<b>Common – Quality</b>		
AURAQA3002	Inspect technical quality of work	
AURAQA3003	Maintain quality systems	
<b>Common – Technical</b>		
AURATA3004	Provide technical guidance	

Unit code	Unit title	Prerequisite
AURATA3005	Estimate complex jobs	
<b>Electrical – Technical – Brakes</b>		
AURETB3001	Repair electric braking systems	
<b>Electrical – Technical – Hybrid Vehicle and Battery Electric Vehicle</b>		
AURETH3001	Depower battery electric vehicles	
AURETH3002	Service and maintain battery electric vehicles	AURETH3001
<b>Electrical – Technical – Electrical and Electronic</b>		
AURETR2005	Install, test and repair electrical security systems and components	
AURETR2008	Remove and replace electrical units and assemblies	
AURETR2011	Install and test basic ancillary electrical components	
AURETR2013	Inspect and service charging systems	
AURETR2014	Inspect and service starting systems	
AURETR2015	Inspect and service batteries	
AURETR2016	Read and apply vehicle wiring schematics and drawings	
AURETR2042	Remove, refit and test electrical componentry for operation following body repair activities	
AURETR3017	Overhaul charging system alternators	
AURETR3018	Overhaul starting motors	
AURETR3019	Inspect, service and repair AC electric motor drive systems	
AURETR3021	Inspect, service and repair electronic management, monitoring and tracking systems	
AURETR3022	Diagnose and repair vehicle dynamic control systems	
AURETR3026	Remove, replace and program electrical and electronic units and assemblies	



Unit code	Unit title	Prerequisite
AURETR3036	Service and repair electronically controlled suspension systems	
AURETR3044	Service and repair electronic drive management systems	
<b>Electrical – Technical – Air Conditioning and HVAC</b>		
AURETU2001	Install air conditioning systems	
AURETU2002	Recover vehicle refrigerants	
AURETU2003	Service air conditioning and HVAC systems	
AURETU3004	Diagnose and repair air conditioning and HVAC systems	
AURETU3005	Retrofit and modify air conditioning and HVAC systems	
AURETU4007	Overhaul air conditioning system components	
<b>Mechanical – Heavy Vehicle – Technical – Emission and Exhaust</b>		
AURHTZ3001	Diagnose and repair heavy vehicle emission control systems	
<b>Mechanical – Light Vehicle – Technical – Brakes</b>		
AURLTB3003	Diagnose and repair light vehicle hydraulic braking systems	
<b>Mechanical – Light Vehicle – Technical – Steering and Suspension</b>		
AURLTD3004	Repair steering systems (light vehicle)	
AURLTD3005	Repair suspension systems (light vehicle)	
<b>Mechanical – Light Vehicle – Technical – Engines</b>		
AURLTE2001	Remove and install light vehicle engine assemblies	
AURLTE3002	Repair engines and associated engine components (light vehicle)	
<b>Mechanical – Light Vehicle – Technical – Fuel Systems</b>		
AURLTF3001	Diagnose and repair mechanical fuel injection systems	
<b>Outdoor Power Equipment – Technical – Electrical and Electronic</b>		

Unit code	Unit title	Prerequisite
AURPTR2002	Test and service outdoor electric powered equipment	
<b>Marine – Technical – Engines</b>		
AURRTE3005	Diagnose and repair marine electrical systems and components	
<b>Marine – Technical – Electrical and Electronic</b>		
AURRTR3002	Install marine electronic systems and components	
AURRTR3003	Test, diagnose and repair marine electronic systems and components	
AURRTR3004	Install marine electrical systems and components	
<b>Mechanical Miscellaneous – Technical</b>		
AURTTA2004	Carry out servicing operations	
AURTTA2005	Select and use bearings, seals, gaskets, sealants and adhesives	
AURTTA3017	Carry out vehicle safety and roadworthy inspections	
AURTTA3019	Carry out advanced diagnostic procedures	
AURTTA4021	Carry out diagnosis of complex system faults	
<b>Mechanical Miscellaneous – Technical – Brakes</b>		
AURTTB2001	Inspect and service braking systems	
<b>Mechanical Miscellaneous – Technical – Cooling Systems</b>		
AURTTC3003	Diagnose and repair cooling systems	
<b>Mechanical Miscellaneous – Technical – Engines</b>		
AURTTE2004	Inspect and service engines	
<b>Mechanical Miscellaneous – Technical – Fuel Systems</b>		
AURTTF2001	Service petrol fuel systems	
AURTTF3004	Repair diesel fuel injection systems	

Unit code	Unit title	Prerequisite
<b>Mechanical Miscellaneous – Technical – Tools and Equipment</b>		
AURTTK2002	Use and maintain workplace tools and equipment	
<b>Mechanical Miscellaneous – Technical – Alternative Fuels</b>		
AURTTL3010	Install LPG, CNG and LNG electrical control equipment	
<b>Mechanical Miscellaneous – Technical – Welding, Grinding, Machining and Soldering</b>		
AURTTW2001	Carry out soft soldering techniques	
<b>Mechanical Miscellaneous – Technical – Emission and Exhaust</b>		
AURTTZ2002	Repair exhaust system components	
<b>Vehicle Body – Technical</b>		
AURVTA3002	Remove and replace supplementary restraint systems	
AURVTA3004	Inspect vehicle systems and determine preferred repair action	
<b>Vehicle Body – Technical – Trimming and Upholstery</b>		
AURVTT2003	Remove and replace vehicle interior trim components	
<b>Vehicle Body – Technical – Welding, Grinding, Machining and Soldering</b>		
AURVTW2001	Carry out manual metal arc welding procedures	
AURVTW2002	Carry out brazing procedures	
AURVTW2003	Carry out gas metal arc welding procedures	
AURVTW2004	Carry out gas tungsten arc welding procedures	
AURVTW2008	Carry out oxy acetylene welding, thermal cutting and thermal heating procedures	
<b>Imported Units</b>		
BSBINN301A	Promote innovation in a team environment	
BSBWHS301A	Maintain workplace safety	
TAEDEL301A	Provide work skill instruction	

## **Custom Content Section**

Not applicable.