Powering Skills Organisation Ltd

COMPANION VOLUME IMPLEMENTATION GUIDE

UEE Electrotechnology
Release 8.0



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About Powering Skills Organisation

Powering Skills Organisation (PSO) is one of ten Jobs and Skills Councils established by the Federal Government to provide industry with a stronger voice. PSO brings together employers, unions and governments in a tripartite arrangement to find solutions to skills and workforce challenges. We ensure Australia's vocational education and training (VET) sector delivers industry led outcomes for learners and employers. PSO works to find solutions to skills and workforce challenges of our diverse stakeholder network, utilising strong collaboration between industry and training providers.

Jobs and Skills Councils have four (4) broad roles:

- Industry Stewardship which involves gathering industry intelligence to reliably represent the views and needs of industry back to the VET system and its decision-makers.
- Workforce Planning which enables industry to identify its workforce development issues and design high-impact solutions, which are then captured in the Committee's national Workforce Plan for the industry.
- Training Product Development which focusses on improving the quality, speed to market and responsiveness of training products to employer and workforce needs.
- Implementation, promotion and monitoring which involves supporting training providers, promoting careers and monitoring how well the system is meeting the needs of industry and learners.

Powering Skills Organisation (PSO) appointed in the Energy, Gas and Renewables sectors. The JSCs initiative is an exciting step towards ensuring Australia's future workforce has the skills that they need for this country's industries to continue to grow rapidly.

One of the four key functions of PSO is training product development. This requires JSCs to develop training products in line with standards set by Skills Ministers to improve the quality, speed to market (where appropriate) and responsiveness of training products. PSO manages four training packages: UEE, UEG, UEP and UET.

UEE - Electrotechnology Training Package

The UEE - Electrotechnology Training Package is a vital component of the VET system. It is tailored to the electrotechnology sector, providing structured learning pathways for individuals aiming to enter or advance within this field. This training package covers a wide array of topics relevant to electrotechnology, including electrical installation, maintenance, renewable energy systems, and energy efficiency practices

UEG - Gas Industry Training Package

The UEG – Gas Industry Training Package serves as the VET package for the gas sector in Australia. This package provides a structured framework for individuals seeking to enter or advance within the gas labour force. It covers a diverse range of topics essential to gas operations, including gas supply, distribution, infrastructure maintenance, safety protocols, and emerging technologies like hydrogen.

UEP - Electricity Supply Industry - Generation Sector Training Package

The Electricity Supply Industry - Generation Sector Training Package is the VET package for those aspiring to work within electricity generation in Australia. This package serves as a roadmap for individuals seeking to enter or advance within the sector, covering a diverse spectrum of topics essential to power generation (including power plant operations, renewable energy integration and emerging technologies).

UET - Transmission, Distribution and Rail Sector

The UET- Transmission, Distribution, and Rail Sector Training Package is tailored to the needs of these critical sectors. It is used by individuals working in and aspiring to work in roles related to electricity transmission, distribution, and rail infrastructure. This training package covers a broad spectrum of topics essential to these sectors, including infrastructure maintenance, safety protocols, technological advancements, and regulatory compliance

PSO is committed to deliver responsive and flexible training products that have high educational standing and can be readily delivered by RTOs, including piloting emerging products and testing new approaches to meet RTO, industry and learners' needs.

Overview Information

This Companion Volume Implementation Guide (CVIG) is designed to assist assessors, trainers, Registered Training Organisations (RTOs) and enterprises in delivering the delivering the UEE Electrotechnology Training Package.

Nationally endorsed training packages are developed to meet the Standards for Training Packages 2012 which were ratified by Commonwealth and State/Territory ministers.

It provides advice about the structure of the Training Package, its key features and useful links to more detailed information on a range of related topics.

In addition to providing information relevant to all training packages, this guide also provides information and advice about the history, structure, key features and application of the delivering the UEE Electrotechnology Training Package.

Version Control and modification history

Training Packages are dynamic documents and are amended periodically to reflect the latest industry practices. Training Packages are version controlled so it is essential that the latest release is always used.

In the version control and modification history table below, the latest information is provided first.

Version Number	Release Date	Comments
8.0	May 2025	This is the eighth release of this Training Package. Release 8.0 contains: 10 Updated Qualifications • UEE32125 Certificate III in Appliance Service • UEE30125 Certificate III in Business Equipment • UEE30225 Certificate III in Computer Systems Equipment • UEE31425 Certificate III in Security Equipment • UEE30425 Certificate III in Data and Voice Communications • UEE31025 Certificate III in Fire Protection Control • UEE31225 Certificate III in Instrumentation and Control • UEE30625 Certificate III in Electrical Machine Repair • UEE30725 Certificate III in Switchgear and Controlgear • UEE41025 Certificate IV in Energy Management and Control 7 updated Qualifications with imported elective units • UEE43225 Certificate IV in Industrial Automation and Control • UEE51020 Diploma of Instrumentation and Control Engineering • UEE51120 Diploma of Engineering Technology - Refrigeration and Air Conditioning • UEE60220 Advanced Diploma of Electronics and Communications Engineering • UEE61720 Advanced Diploma of Engineering Technology - Electronics • UEE62122 Advanced Diploma of Engineering Technology - Electrical • UEE62325 Advanced Diploma of Electrical Engineering - Coal Mining 1 updated Unit of Competency • UEECO0023 Participate in electrical work and competency development activities 3 new Units of Competency • UEECO0026 Engage in appliance, business or computer equipment servicing work and competency development • UEECO0027 Engage in communications, security equipment or fire protection work and competency development • UEECO0028 Engage in instrumentation, control, machine or switchgear work and competency development 10 updated imported units of competency • MEM234010 Design microcontroller applications • MEM30027 Prepare basic programs for programmable logic controllers • MEM234014 Design a robotic system • MEM30031 Operate computer-aided design (CAD) system to produce basic drawing elements • MEM30032 Produce basic engineering drawings • MEM30033 Use computer-aided design (CAD) to create and display 3D models • RIIRIS601E Establish and maintain risk management systems • UEPOPS003 Apply quality systems to work

		• UEPOPS047 Maintain quality systems within the team • UEPOPS065 Monitor implementation of quality control for production and maintenance
7.0	February 2025	This is the seventh release of this Training Package. Release 7.0 contains: 7 updated Qualifications: • UEE32225 Certificate III in Air-Conditioning and Refrigeration • UEE42725 Certificate IV in Air Conditioning and Refrigeration Servicing • UEE42825 Certificate IV in Air-conditioning Systems Energy Management and Control • UEE42925 Certificate IV in Refrigeration and Air Conditioning Systems • UEE50325 Diploma of Electrical and Refrigeration and Air Conditioning • UEE51225 Diploma of Electrical and Refrigeration and Air Conditioning • UEE62525 Advanced Diploma of Air Conditioning and Refrigeration Engineering 2 updates Skillsets: • UEESS00220 RAC - Install, Commission, Service and Maintain Variable Refrigerant Flow Air Conditioning Systems • UEESS00221 RAC - Inspect, Test and Repair Fire and Smoke Control Features of Mechanical Services Systems 1 updated Units of Competency • UEERS0022 Find and repair rail signalling system faults 4 updated imported Units of Competency • UETDRMP007 Perform rescue from a live low voltage panel • MEM30031 Operate computer-aided design (CAD) system to produce basic drawing elements • MEM30032 Produce basic engineering drawings • MEM30033 Use computer-aided design (CAD) to create and display 3D models 1 new Unit of Competency • UEERA0099 Install, commission, service and maintain air conditioning systems 1 new imported Unit of Competency • BSBESB402 Establish legal and risk management requirements of new business ventures
6.1	November 2024	This is a minor release of this training package. Release 6.1 contains: 32 updated Units of Competency: • UEEAS0007 Assemble, mount and connect control gear and switchgear • UEEAS0009 Mount and wire control panel equipment • UEEEL0026 Align and install traction lift equipment • UEEEL0027 Carry out low voltage electrical field testing and report findings • UEEEL0028 Conduct compliance and functional verification of electrical apparatus and existing circuits • UEEEL0029 Conduct compliance inspection of LV electrical installations with demand exceeding 100 A per phase • UEEEL0030 Conduct compliance inspection of single phase LV electrical installations • UEEEL0031 Conduct compliance inspection of special LV electrical installations • UEEEL0032 Conduct electrical tests on HV electrical machines • UEEEL0033 Conduct electrical tests on LV electrical machines • UEEEL0034 Conduct mechanical tests on electrical machines and components • UEEEL0037 Design electrical installations with a low voltage demand greater than 400 A per phase • UEEEL0038 Design switchboards rated for high fault levels (greater than 400 A) • UEEEL0039 Design, install and verify compliance and functionality of general electrical installations • UEEEL0044 -Diagnose and rectify faults in complex lift systems • UEEEL0045 -Diagnose and rectify faults in traction lift systems • UEEEL0046 Find and repair faults in LV d.c. electrical apparatus and circuits • UEEEL0049 Install and maintain emergency safety systems • UEEEL0050 Install and replace low voltage current transformer metering • UEEEL0051 Investigate and report on electrical incidents and causes • UEEEL0052 Maintain and service traction lift systems and equipment • UEEEL0053 Maintain operation of electrical marine equipment and systems • UEEEL0054 Maintain operation of electrical mining equipment and systems

		• UEEEL0057 Plan electrical installations with a low voltage demand up to 400 A per phase • UEEEL0059 Plan low voltage switchboard and control panel layouts • UEEEL0067 Rewind single phase machines • UEEEL0068 Rewind three phase low voltage induction machines • UEEEL0069 Select and arrange equipment for special LV electrical installations • UEEEL0071 Select low voltage power factor correction equipment • UEEEL0072 Set up and place LV electrical apparatus and associated circuits into service • UEEEL0073 Verify compliance and functionality of special LV electrical installations • UEERL0007 Disconnect-reconnect 3.3kV electric propulsion components of self-propelled earth moving vehicles 2 updated Qualifications • UEE53020 – Diploma of Electrical Systems Engineering • UEE30920 – Certificate III in Electronics and Communication
6.0	February 2023	This is the sixth release of this Training Package. Release 6.0 contains 3 new Units of Competency • UEERS0020 Apply rail signalling principles • UEERS0026 Maintain communications-based signalling equipment • UEERS0035 Maintain wayside asset protection Equipment - 15 updated Units of Competency • UEERS0021 Assemble and wire electrical rail signalling equipment • UEERS0022 Find and repair rail signalling system faults • UEERS0023 Inspect, test and certify rail power signal equipment • UEERS0024 Install and maintain rail track circuit leads and bonds • UEERS0025 Maintain active level crossing equipment • UEERS0027 Maintain computer-based interlocking rail systems • UEERS0028 Maintain mechanical rail signalling equipment and infrastructure • UEERS0029 Maintain non-vital telemetry systems • UEERS0030 Maintain power-operated point actuating devices • UEERS0031 Maintain rail signalling power supplies • UEERS0032 Maintain trackside signal and train protection equipment • UEERS0033 Maintain train detection equipment • UEERS0034 Maintain vital relay interlocking systems • UEERS0036 Repair rail signalling power and control cables • UEERS0037 Test copper rail signalling Cables - 2 new Skill Sets • UEESS00189 Rail Signalling Constructor Skill Set • UEESS00190 Electrical - Rail Signalling Principles Skill Set 6 updated Qualifications • UEE41223 Certificate IV in Electrical – Rail Signalling • UEE30820 Certificate III in Electrotechnology Electrician • UEE33020- Certificate III in Electrical Fitting • UEE40620- Certificate IV in Electrotechnology - Systems Electrician • UEE43020- Certificate IV in Electrical Equipment and Systems • UEE53020- Diploma of Electrical Systems Engineering 5 Units of Competency deleted • UEECD0058 Observe safety practices are followed in the vicinity of isolated electrical cables • UEERS0002 Decommission electrical and electromechanical rail signalling from service • UEERS0003 Develop rail signalling system maintenance programs • UEERS0007 Install and maintain non-vital screen-based control systems • UEERS0015 Maintain electronic and microprocessor-based remote control systems
5.0	21 December 2022	This is the fifth release of this Training Package. Release 5.0 contains: 13 new Units of Competency • UEERE0051 Apply electrical principles to renewable energy design • UEERE0054 Conduct site survey for grid connected photovoltaic and battery storage systems • UEERE0055 Conduct site survey for off-grid photovoltaic/generating set systems • UEERE0057 Coordinate the design of micro-grid renewable energy systems • UEERE0058 Coordinate the installation, fault finding and repair of micro grid systems

		• UEERE0070 Fault find and repair grid-connected photovoltaic power supply systems • UEERE0071 Fault find and repair off-grid PV/genset systems to an electrical installation • UEERE0072 Inspect grid connected renewable energy systems • UEERE0073 Inspect micro grid renewable energy systems • UEERE0074 Inspect off-grid renewable energy systems • UEERE0079 Install off-grid power conversion equipment to electrical installation • UEERE0080 Install photovoltaic power conversion equipment to grid • UEERE0082 Maintain renewable energy (RE) apparatus 25 updated Units of Competency • UEERE0052 Assess energy loads and uses for energy efficiency in commercial facilities • UEERE0053 Assess energy loads and uses for energy efficiency in industrial properties and enterprises • UEERE0056 Coordinate maintenance of renewable energy (RE) apparatus and systems • UEERE0059 Design energy management controls for electrical installations in buildings • UEERE0060 Design grid-connected battery storage systems • UEERE0061 Design grid-connected photovoltaic power supply systems • UEERE0062 Design micro-hydro systems • UEERE0063 Design off-grid photovoltaic/generating set systems • UEERE0064 Design renewable energy (RE) heating systems • UEERE0065 Design wind energy systems • UEERE0066 Develop effective engineering strategies for energy reduction in buildings • UEERE0067 Develop engineering solutions to renewable energy (RE) problems • UEERE0068 Develop strategies to address sustainability issues for electrical installations • UEERE0069 Diagnose and rectify faults in renewable energy (RE) control systems • UEERE0075 Install and maintain micro hydro energy systems to power conversion equipment • UEERE0076 Install and maintain wind energy systems to power conversion equipment • UEERE0077 Install battery storage equipment power conversion equipment to grid • UEERE0078 Install battery storage to power conversion equipment • UEERE0081 Install photovoltaic systems to power conversion equipment • UEERE0083 Maintain safety and tidiness of remote area power supply systems • UEERE0084 Manage renewable energy (RE) projects • UEERE0085 Plan renewable energy (RE) projects • UEERE0086 Promote sustainable energy practices • UEERE0087 Provide basic sustainable energy solutions for energy management in residential premises • UEERE0088 Work safely with remote area power supply systems 19 new Skill Sets • UEESS00191 Grid-connected Battery Storage Systems Designer-Installer Skill Set • UEESS00192 Grid-connected Battery Storage Systems Installer Skill Set • UEESS00196 Grid-connected Renewable Energy System Site Surveyor Skill Set • UEESS00197 Grid-connected Renewable Energy Systems Inspector Skill Set • UEESS00198 Hybrid Photovoltaic, Wind and Battery Storage Systems Installer Skill Set • UEESS00199 Micro-hydro Systems Designer Installer Skill Set • UEESS00200 Micro-hydro Systems Designer Skill Set • UEESS00201 Micro-hydro systems Installer Skill Set • UEESS00202 Micro-grid Renewable Energy Systems Inspector Skill Set • UEESS00203 Micro-grid Systems Design Coordinator Skill Set • UEESS00204 Micro-grid Systems Installation and Maintenance Coordinator Skill Set • UEESS00205 Off-grid Photovoltaic/Generating Set Systems Designer-Installer Skill Set • UEESS00206 Off-grid Photovoltaic/Generating Set Systems Installer Skill Set • UEESS00207 Off-grid Photovoltaic Generating Set Systems Designer Skill Set • UEESS00208 Off-grid Renewable Energy System Site Surveyor Skill Set • UEESS00209 Off-grid Renewable Energy Systems Inspector Skill Set • UEESS00217 Wind Energy Systems Designer-Installer Skill Set • UEESS00218 Wind Energy Systems Designer Skill Set • UEESS00219 Wind Energy Systems Installer Skill Set 10 updated Skill Sets • UEESS00193 Grid-connected Photovoltaic and Battery Storage Systems Designer Skill Set • UEESS00194 Grid-connected Photovoltaic Systems Designer- Installer Skill Set • UEESS00195 Grid-connected Photovoltaic Systems Installer Skill Set • UEESS00210 Sustainable - Electrical Installations Sustainability Strategies Skill Set • UEESS00211 Sustainable - Energy Assessment of Commercial Facilities Skill Set • UEESS00212 Sustainable - Energy Assessment of Industrial Properties and Enterprises Skill Set • UEESS00213 Sustainable - Energy Assessment of Residential, Office and Retail Premises Skill Set • UEESS00214 Sustainable - Energy Efficiency Systems Designer Skill Set • UEESS00215 Sustainable - Energy Efficiency Systems Developer Skill Set • UEESS00216 Sustainable - Identify Energy Efficiency Strategies Skill Set

		17 updated Qualifications • UEE40120 Certificate IV in Computer Systems • UEE40720 Certificate IV in Electronics and Communications • UEE41520 Certificate IV in Video and Audio Systems • UEE43220 Certificate IV in Industrial Automation and Control • UEE43322 Certificate IV in Electrical - Renewable Energy • UEE50122 Diploma of Computer Systems Engineering • UEE50520 Diploma of Electronics and Communications Engineering • UEE50722 Diploma of Renewable Energy Engineering • UEE50920 Diploma of Industrial Electronics and Control Engineering • UEE51020 Diploma of Instrumentation and Control Engineering • UEE60220 Advanced Diploma of Electronics and Communications Engineering • UEE60922 Advanced Diploma of Renewable Energy Engineering • UEE61521 Advanced Diploma of Instrumentation and Control Engineering • UEE61720 Advanced Diploma of Engineering Technology – Electronics • UEE62022 Advanced Diploma of Engineering Technology - Renewable Energy • UEE62220 Advanced Diploma of Electrical - Engineering • UEE62122 Advanced Diploma of Engineering Technology – Electrical 33 updated Qualifications with imported elective units • UEE10120 Certificate I in ElectroComms Skills • UEE20120 Certificate II in Split Air Conditioning and Heat Pump Systems • UEE20520 Certificate II in Computer Assembly and Repair • UEE20720 Certificate II in Data and Voice Communications • UEE20920 Certificate II in Electronic Assembly • UEE21020 Certificate II in Fire Alarms Servicing • UEE21220 Certificate II in Antennae Equipment • UEE21420 Certificate II in Remote Area Power Supply Maintenance • UEE21620 Certificate II in Security Assembly and Set-up • UEE21720 Certificate II in Technical Support • UEE21920 Certificate II in Electronics • UEE22120 Certificate II in Sustainable Energy (Career Start) • UEE30320 Certificate III in Custom Electronics Installations • UEE30420 Certificate III in Data and Voice Communications • UEE30620 Certificate III in Electrical Machine Repair • UEE30720 Certificate III in Switchgear and Controlgear • UEE30820 Certificate III in Electrotechnology Electrician • UEE30920 Certificate III in Electronics and Communications • UEE31420 Certificate III in Security Equipment • UEE32120 Certificate III in Appliance Service • UEE32220 Certificate III in Air Conditioning and Refrigeration • UEE40220 Certificate IV in Electrical - Data and Voice Communications • UEE40320 Certificate IV in Installation Inspection and Audits • UEE40520 Certificate IV in Electrical - Air Conditioning Split Systems • UEE40620 Certificate IV in Electrotechnology - Systems Electrician • UEE41020 Certificate IV in Energy Management and Control • UEE41120 Certificate IV in Electrical - Lift Systems • UEE41720 Certificate IV in Rail - Communications and Network Systems • UEE50420 Diploma of Electrical Engineering • UEE51120 Diploma of Engineering Technology - Refrigeration and Air Conditioning • UEE62420 Advanced Diploma of Engineering Technology - Air Conditioning and Refrigeration • UEE62520 Advanced Diploma of Air Conditioning and Refrigeration Engineering • UEE63020 Advanced Diploma of Electrical Systems Engineering 11 Units of Competency deleted • UEERE0002 Assemble and connect remote area power supplies • UEERE0005 Assess energy loads and uses for energy efficiency in residential, office and retail premises • UEERE0017 Maintain and repair facilities associated with remote area essential service operations • UEERE0024 Attend to breakdowns in remote area power supplies (RAPS) • UEERE0025 Carry out basic repairs to renewable energy (RE) apparatus • UEERE0026 Conduct checks in the demand side use of remote area power supplies (RAPS) • UEERE0028 Design hybrid renewable power systems • UEERE0035 Install ELV stand-alone photovoltaic power systems • UEERE0038 Install, configure and commission LV wind energy conversion systems rated up to 10 kW • UEERE0039 Install, set up and maintain ELV micro-hydro systems rated up to 6.4 kW • UEERE0040 Maintain and monitor remote area essential service operations

		6 Qualifications deleted • UEE32020 Certificate III in Renewable Energy - ELV • UEE41620 Certificate IV in Renewable Energy • UEE42020 Certificate IV in Electrical - Photovoltaic systems • UEE43120 Certificate IV in Energy Efficiency and Assessment • UEE60420 Advanced Diploma of Computer Systems Engineering • UEE61820 Advanced Diploma of Engineering Technology - Computer Systems
4.0	24 October 2024	This is the fourth release of this Training Package. Release 4.0 contains: 16 new Units of Competency • UEECD0064 Interpret, produce and modify electrical drawings • UEEEL0077 Evaluate and report on performance of LV machines • UEEEL0079 Plan and analyse LV electrical apparatus and circuits • UEEEL0080 Design and analyse wiring systems, circuits, control and protection for electrical installations • UEEHA0016 Assess the fitness-for-purpose of explosion- protected equipment • UEEHA0017 Classify areas where a combustible dust hazard may arise • UEEHA0018 Classify areas where flammable gas or vapour hazards may arise • UEEHA0019 Conduct a conformity assessment review of explosion-protected equipment • UEEHA0021 Design explosion-protected of electrical systems and installations • UEEHA0024 Inspect, maintain and fit plugs/couplers for reeling, trailing and flexible cables - coal mining • UEEHA0027 Manage continuous supervision inspection of electrical installations for hazardous areas • UEEHA0028 Perform compliance audits of hazardous areas and related electrical installation • UEEHA0030 Repair reeling, trailing and flexible cables used in coal mining • UEEHA0036 Test reeling, trailing and flexible cables and their attachments used in coal mining • UEEHA0037 Verify compliance of repaired reeling, trailing and flexible cables and attachments - coal mining • UEEIC0051 Evaluate motor drive systems and diagnose faults 15 updated Units of Competency • UEEEL0078 Install and commission whole current electricity meters • UEEHA0020 Conduct detailed inspection of electrical installations for hazardous areas • UEEHA0022 Determine the explosion-protection requirements to meet a specified classified hazardous area • UEEHA0023 Develop and manage periodic electrical inspection and maintenance programs for hazardous areas • UEEHA0025 Install explosion-protected equipment and associated apparatus and wiring systems • UEEHA0026 Maintain equipment associated with hazardous areas • UEEHA0029 Plan electrical installations for hazardous areas • UEEHA0031 Supervise repair and overhaul of explosion- protected equipment type flameproof (Ex d) • UEEHA0032 Supervise repair and overhaul of explosion- protected equipment type increased safety (Ex e) • UEEHA0033 Supervise repair and overhaul of explosion- protected equipment type intrinsically safe (Ex i) • UEEHA0034 Supervise repair and overhaul of explosion- protected equipment type pressurised (Ex p) • UEEHA0035 Supervise repair and overhaul of explosion- protected rotating machines • UEEHA0038 Conduct visual and close inspection of electrical installations for hazardous areas • UEEHA0039 Supervise repair and overhaul of explosion- protected equipment type Group III ('t') • UEERA0098 Inspect, test and repair fire and smoke control features of mechanical services systems 2 updated Skill Sets • UEESS00187 Electrical - Install and commission whole current electricity meters • UEESS00188 RAC - Inspect, Test and Repair Fire and Smoke Control Features of Mechanical Services Systems 3 updated qualifications • UEE42622 Certificate IV in Hazardous areas – Electrical • UEE61222 Advanced Diploma of Engineering – Explosion protection • UEE62122 Advanced Diploma of Engineering Technology – Electrical
3.2	7 June 2022	This minor release of this Training Package. Release 3.2 contains:

		5 new Units of Competency • UEEEL0008 Evaluate and modify low voltage heating equipment and controls • UEEEL0009 Evaluate and modify low voltage lighting circuits, equipment and controls • UEEEL0010 Evaluate and modify low voltage socket outlets circuits • UEEEL0012 Install low voltage wiring, appliances, switchgear and associated accessories • UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits 5 updated Units of Competency • UEEEL0003 Arrange circuits, control and protection for electrical installations • UEEEL0005 Develop and connect electrical control circuits • UEEEL0018 Select wiring systems and select cables for low voltage electrical installations • UEEEL0020 Solve problems in low voltage a.c. circuits • UEEEL0023 Terminate cables, cords and accessories for low voltage circuits
3.1	TBC	This minor release of this Training Package. Release 3.1 contains updates to imported superseded units in: 1 Unit of Competency • UEEEL0039 Design, install and verify compliance and functionality of general electrical installations 36 Qualifications • UEE20120 Certificate II in Split Air Conditioning and Heat Pump Systems • UEE20920 Certificate II in Electronic Assembly • UEE21020 Certificate II in Fire Alarms Servicing • UEE21220 Certificate II in Antennae Equipment • UEE21420 Certificate II in Remote Area Power Supply Maintenance • UEE21720 Certificate II in Technical Support • UEE22020 Certificate II in Electrotechnology (Career Start) • UEE22120 Certificate II in Sustainable Energy (Career Start) • UEE30120 Certificate III in Business Equipment • UEE30220 Certificate III in Computer Systems Equipment • UEE30320 Certificate III in Custom Electronics Installations • UEE30420 Certificate III in Data and Voice Communications • UEE30620 Certificate III in Electrical Machine Repair • UEE30720 Certificate III in Switchgear and Controlgear • UEE30820 Certificate III in Electrotechnology Electrician • UEE30920 Certificate III in Electronics and Communications • UEE31020 Certificate III in Fire Protection Control • UEE31220 Certificate III in Instrumentation and Control • UEE31420 Certificate III in Security Equipment • UEE32020 Certificate III in Renewable Energy - ELV • UEE32220 Certificate III in Air Conditioning and Refrigeration • UEE33020 Certificate III in Electrical Fitting • UEE40220 Certificate IV in Electrical - Data and Voice Communications • UEE40320 Certificate IV in Installation Inspection and Audits • UEE40620 Certificate IV in Electrotechnology - Systems Electrician • UEE40820 Certificate IV in Electrical - Fire Protection Control Systems • UEE40920 Certificate IV in Industrial Electronics and Control • UEE41120 Certificate IV in Electrical - Lift Systems • UEE41220 Certificate IV in Electrical - Rail Signalling • UEE41620 Certificate IV in Renewable Energy • UEE41720 Certificate IV in Rail - Communications and Network Systems • UEE42220 Certificate IV in Instrumentation and Control • UEE43020 Certificate IV in Electrical Equipment and Systems • UEE43220 Certificate IV in Industrial Automation and Control • UEE50320 Diploma of Electrical and Refrigeration and Air Conditioning • UEE51120 Diploma of Engineering Technology - Refrigeration and Air Conditioning
3.0	12 October 2021	This is the third release of this Training Package. Release 3.0 contains: 5 new Units of Competency • UEEL0075 Inspect, test and maintain emergency alarm systems and equipment • UEERA0096 Inspect, test and repair fire and smoke control features of mechanical services systems • UEERA0097 Install, commission, service and maintain variable refrigerant flow air conditioning systems • UEERE0049 Apply safe work practices in the rooftop solar industry • UEERE0050 Identify and isolate multiple supply systems

		1 updated Unit of Competency • UEEEL0076 Inspect, test and maintain emergency lighting systems 4 new Skill Sets • UEESS00181 Electrical – Inspect, Test and Maintain Emergency Lighting and Alarm Systems and Equipment • UEESS00182 Identify and Isolate Multiple Supply Systems • UEESS00183 RAC - Inspect, Test and Repair Fire and Smoke Control Features of Mechanical Services Systems • UEESS00184 RAC - Install, Commission, Service and Maintain Variable Refrigerant Flow Air Conditioning Systems 2 updated Skill Sets • UEESS00185 Sustainable - Designer-Installer of Grid Connected Photovoltaic Systems Skill Set • UEESS00186 Sustainable - Installer of Grid Connected Photovoltaic Systems Skill Set 1 transitioned Qualification • UEE61521Advanced Diploma of Instrumentation and Control Engineering Minor changes to a range of UEE Training Package components were made at the same time as products endorsed as part of Release 3.0 was published. This included: • Fixing minor errors in 10 Units of Competency • Fixing minor errors in 4 Qualifications • Adding units to the general electives of 18 Qualifications
2.0	2 October 2020	This is the second release of this Training Package. Release 2.0 contains: • Seventy-nine (79) qualifications • Fifty (50) Skill Sets • Five hundred and thirty (530) Units of Competency
1.0	13 April 2017	This is the first release of this Training Package. Release 1.0 contains two new Units of Competency: • UEERE4001 Install, maintain and fault find battery storage systems for grid-connected photovoltaic systems and • UEERE5001 Design battery storage systems for grid-connected photovoltaic systems

TRAINING PACKAGES, THE AUSTRALIAN QUALIFICATIONS FRAMEWORK AND COMPETENCY STANDARDS

Training Packages

Training packages specify the knowledge and skills required by individuals to perform effectively in the workplace, known as 'competencies' and expressed in units of competency. Training packages also detail how units of competency can be packaged into nationally recognised skill sets and qualifications that align with the AQF.

Training packages prescribe assessment requirements, but they do not prescribe how an individual should be trained.

Training packages are used for a number of purposes, but they are predominantly used:

- by RTOs, to design training curriculum tailored to support individual learner needs, and the needs of employers and industry
- by employers, to assist with workforce design, development and structure.

Training packages consist of the following nationally endorsed training products, which are:

- units of competency, which specify the standard of performance required in the workplace
- assessment requirements (associated with each unit of competency)
- qualifications aligned to the AQF (Certificate I to Advanced Diploma, and Graduate Certificate and Graduate Diploma)
- credit arrangements specifying existing arrangements between training package qualifications and higher education qualifications in accordance with the AQF.

Training packages also consist of the following non-endorsed training product components:

- skill sets
- companion volume implementation guides

Training package products development rules, owned by Skills Ministers, are reviewed regularly to ensure they remain fit for-purpose. These rules, referred to as the Training Package Organising Framework (TPOF), comprise the:

- **Standards for Training Packages ('the Standards')** – setting the overarching design and development requirements of training products for endorsement by Skills Ministers.
- **Training Package Products Policy (TPPP)** – outlining the design rules that must be adhered to when developing or modifying a training product.
- **Training Package Products Development and Endorsement Process Policy (TPPDEPP)** – outlining the process for developing and seeking the endorsement of training products.

Also, of relevance to the design, development and delivery of training packages are the:

- National Vocational Education and Training Regulator Act 2011
- Standards for Registered Training Organisations 2015
- Standards for Vocational Education and Training Regulators 2015
- National Register of Vocational Education and Training
- Australian Qualifications Framework
- Standards for VET Accredited Courses 2021

The above mentioned legislation can be located on the Australian Government ComLaw website.

Australian Qualifications Framework

The Australian Qualifications Framework (AQF) provides a comprehensive, nationally consistent framework for all qualifications in post-compulsory education and training in Australia. In the Vocational Education and Training (VET) sector the AQF enables national recognition of qualifications and Statements of Attainment.

The UEE Electrotechnology Training Package provides details of the Units of Competency that must be achieved to award AQF qualifications.

The rules around which Units of Competency can be combined to make up a valid AQF qualification are referred to as the packaging rules. The packaging rules must be followed to ensure the integrity of nationally recognised qualifications issued.

The packaging rules are defined within each qualification in a Training Package.

Competency Standards

The broad concept of industry competency is the ability to perform particular tasks and duties to the standard of performance expected in the workplace. Competency standards cover all aspects of workplace performance and involve:

- Performing individual tasks
- Managing a range of different tasks
- Responding to contingencies or breakdowns
- Dealing with the responsibilities of the workplace, including working with others.

Workplace competency is the ability to apply relevant skills and knowledge consistently over time and in the required workplace situations and environments.

Competency standards are determined by industry to meet industry skill needs and focus on what is expected of a competent individual in the workplace.

AUSTRALIAN QUALIFICATIONS FRAMEWORK QUALIFICATIONS, SKILL SETS AND UNITS OF COMPETENCY IN THE UEE ELECTROTECHNOLOGY TRAINING PACKAGE

Qualifications

The UEE Electrotechnology Training Package provides details of the Units of Competency that must be achieved to award AQF qualifications.

The rules around which Units of Competency can be combined to make up a valid AQF qualification are referred to as the packaging rules. The packaging rules must be followed to ensure the integrity of nationally recognised qualifications issued.

Codes and titles

There are mandatory conventions specified in the Standards for Training Packages for the titles and codes used in Training Packages and their components.

QUALIFICATION CODE Mandatory Field	The qualification code contains the three alpha characters identifying the Training Package, a numeric character identifying the AQF level, a two numeric character sequence identifier, and two numeric characters identifying the year the qualification was endorsed. It must comply with the length specified in the AVETMIS Standard.
QUALIFCATION TITLE Mandatory Field	A Unique title that reflects the qualification outcome. It must comply with the length specified in the AVETMIS Standard (no more than 100 characters).

Extract from *Standards for Training Packages*
Extract from *Training Package Products Policy*

The title of each endorsed Training Package qualification is unique. Qualification titles use the following sequence:

- First, the qualification is identified as either Certificate I, Certificate II, Certificate III, Certificate IV, Diploma, Advanced Diploma, Graduate Certificate, or Graduate Diploma
- This is followed by the words ‘in’ for Certificates I to IV and Graduate Certificate, and ‘of’ for Diploma, Advanced Diploma and Graduate Diploma
- Then, the industry descriptor, for example Warehousing
- Then, if applicable, the occupational or functional stream in brackets, for example (Track Work).

Each qualification has an eight-character code where the:

- First three characters identify the Training Package
- First number identifies the AQF qualification level
- Second and third numbers identify a qualification’s position in the sequence of qualifications at that AQF qualification level
- Fourth and fifth numbers identify the year in which the qualification was endorsed.

For example: UET30721 Certificate III in ESI – Rail Traction

AQF Qualifications in the UEE Electrotechnology Training Package

The following AQF qualifications are in the UEE Electrotechnology Training Package:

AQF	Code	Qualification Title
AQF 1	UEE10120	Certificate I in ElectroComms Skills
AQF 2	UEE20120	Certificate II in Split Air Conditioning and Heat Pump Systems
	UEE20520	Certificate II in Computer Assembly and Repair
	UEE20720	Certificate II in Data and Voice Communications
	UEE20920	Certificate II in Electronic Assembly
	UEE21020	Certificate II in Fire Alarms Servicing
	UEE21220	Certificate II in Antennae Equipment
	UEE21420	Certificate II in Remote Area Power Supply Maintenance
	UEE21620	Certificate II in Security Assembly and Set-up
	UEE21720	Certificate II in Technical Support
	UEE21920	Certificate II in Electronics
	UEE22020	Certificate II in Electrotechnology (Career Start)
	UEE22120	Certificate II in Sustainable Energy (Career Start)
AQF 3	UEE30125	Certificate III in Business Equipment
	UEE30225	Certificate III in Computer Systems Equipment
	UEE30320	Certificate III in Custom Electronics Installations
	UEE30420	Certificate III in Data and Voice Communications
	UEE30625	Certificate III in Electrical Machine Repair
	UEE30725	Certificate III in Switchgear and Controlgear
	UEE30820	Certificate III in Electrotechnology Electrician
	UEE30920	Certificate III in Electronics and Communications
	UEE31025	Certificate III in Fire Protection Control
	UEE31225	Certificate III in Instrumentation and Control
	UEE31425	Certificate III in Security Equipment
	UEE32125	Certificate III in Appliance Service
	UEE32225	Certificate III in Air Conditioning and Refrigeration
	UEE33020	Certificate III in Electrical Fitting
AQF 4	UEE40120	Certificate IV in Computer Systems
	UEE40220	Certificate IV in Electrical - Data and Voice Communications
	UEE40320	Certificate IV in Installation Inspection and Audits
	UEE40420	Certificate IV in Electrical - Instrumentation
	UEE40520	Certificate IV in Electrical - Air Conditioning Split Systems
	UEE40620	Certificate IV in Electrotechnology - Systems Electrician
	UEE40720	Certificate IV in Electronics and Communications
	UEE40820	Certificate IV in Electrical - Fire Protection Control Systems
	UEE40920	Certificate IV in Industrial Electronics and Control
	UEE41025	Certificate IV in Energy Management and Control
	UEE41120	Certificate IV in Electrical - Lift Systems
	UEE41223	Certificate IV in Rail Signalling
	UEE41520	Certificate IV in Video and Audio Systems
	UEE41720	Certificate IV in Rail - Communications and Network Systems
	UEE42120	Certificate IV in Electrotechnology - Electrical Contracting
	UEE42220	Certificate IV in Instrumentation and Control
	UEE42622	Certificate IV in Hazardous areas - Electrical
	UEE42725	Certificate IV in Air Conditioning and Refrigeration Servicing
	UEE42825	Certificate IV in Air-conditioning Systems Energy Management and Control

	UEE42925	Certificate IV in Refrigeration and Air Conditioning Systems
	UEE43020	Certificate IV in Electrical Equipment and Systems
	UEE43225	Certificate IV in Industrial Automation and Control
	UEE43322	Certificate IV in Electrical - Renewable Energy
AQF 5	UEE50122	Diploma of Computer Systems Engineering
	UEE50220	Diploma of Electrical and Instrumentation
	UEE50325	Diploma of Electrical and Refrigeration and Air Conditioning
	UEE50420	Diploma of Electrical Engineering
	UEE50520	Diploma of Electronics and Communications Engineering
	UEE50722	Diploma of Renewable Energy Engineering
	UEE50920	Diploma of Industrial Electronics and Control Engineering
	UEE51020	Diploma of Instrumentation and Control Engineering
	UEE51120	Diploma of Engineering Technology - Refrigeration and Air Conditioning
	UEE51225	Diploma of Air Conditioning and Refrigeration Engineering
	UEE53020	Diploma of Electrical Systems Engineering
AQF 6	UEE60220	Advanced Diploma of Electronics and Communications Engineering
	UEE60620	Advanced Diploma of Industrial Electronics and Control Engineering
	UEE60922	Advanced Diploma of Renewable Energy Engineering
	UEE61222	Advanced Diploma of Engineering - Explosion protection
	UEE61521	Advanced Diploma of Instrumentation and Control Engineering
	UEE61720	Advanced Diploma of Engineering Technology - Electronics
	UEE62022	Advanced Diploma of Engineering Technology - Renewable Energy
	UEE62122	Advanced Diploma of Engineering Technology - Electrical
	UEE62220	Advanced Diploma of Electrical - Engineering
	UEE62325	Advanced Diploma of Electrical Engineering - Coal Mining
	UEE62420	Advanced Diploma of Engineering Technology - Air Conditioning and Refrigeration
	UEE62525	Advanced Diploma of Air Conditioning and Refrigeration Engineering
	UEE63020	Advanced Diploma of Electrical Systems Engineering

Skill Sets

Codes and titles

Skill Sets are single Units of Competency or combinations of Units of Competency from an endorsed Training Package/s that link to a licensing or regulatory requirement or a defined industry need.

Source: Training Package Products Policy

A Skill Set is awarded with the issuing of a Statement of Attainment.

Each Skill Set has a code that is automatically issued by training.gov.au (TGA) where the:

- First three characters identify the Training Package
- Next two characters indicate that it is a Skill Set
- Numbers identify the Skill Set's position in the sequence of Skill Sets.

Skill Sets in the UEE Electrotechnology Sector Training Package

The following Skill Sets are in the UEE Electrotechnology Sector Training Package:

Code	Skill Set Title
UEESS00131	Data Communications - ACMA 'Open' Cabling Provider Skill Set
UEESS00132	Data Communications - ACMA 'Restricted' Telecommunications Cabling Registration Skill Set
UEESS00133	Restricted - Disconnection/Reconnection of Fixed Wired Low Voltage Electrical Equipment
UEESS00134	Data Communications - Install Aerial Communication Cables Skill Set
UEESS00135	Instrumentation - Programmable Control Systems Skill Set
UEESS00137	Data Communications - Install Below Ground Communication Cables Skill Set

UEESS00138	Data Communications – Test, Report and Rectify Faults in Data and Voice Installations Skill Set
UEESS00139	Data Communications - Restricted Telecommunications Cabler Registration - ACMA Skill Set
UEESS00140	Data Communications – Premises Cabling for NBN Rollout Skill Set
UEESS00141	Electrical - Providing Advice on Lighting Products Skill Set
UEESS00142	Data Communications – Plan an Integrated Cabling Installation System Skill Set
UEESS00143	Instrumentation - Develop an integrated system interface for access through a touch screen Skill Set
UEESS00144	Instrumentation - Develop Integrated Systems Skill Set
UEESS00145	Instrumentation - Plan the installation of integrated systems Skill Set
UEESS00146	RAC - Design Ammonia Refrigeration Systems Skill Set
UEESS00147	RAC- Design Complex Carbon Dioxide Refrigeration Systems Skill Set
UEESS00148	RAC - Design Hydrocarbon Refrigeration Systems Skill Set
UEESS00149	RAC - Design Secondary Refrigeration Systems Skill Set
UEESS00150	RAC - Install and Commission Ammonia Refrigeration Systems Skill Set
UEESS00151	RAC - Install and Commission Carbon Dioxide Refrigeration Systems Skill Set
UEESS00152	RAC - Install and Commission Flammable Refrigerant Air Cond. and Refrigeration Systems Skill Set
UEESS00153	RAC - Operate Ammonia Refrigeration Plant Skill Set
UEESS00154	RAC - Service and Repair Ammonia Refrigeration Systems Skill Set
UEESS00155	RAC - Service and Repair Carbon Dioxide Refrigeration and Heat Pump Systems Skill Set
UEESS00156	RAC - Service and Repair Carbon Dioxide Refrigeration Systems Skill Set
UEESS00157	RAC - Service and Repair Flammable Refrigerant Refrigeration and Air Conditioning Systems Skill Set
UEESS00158	RAC - Service and Repair Secondary Refrigeration Systems Skill Set
UEESS00164	Sustainable - Energy Efficiency Auditor Skill Set
UEESS00169	Data Communications - Install and Modify Performance Data Communication Structured Cabling Skill Set
UEESS00170	Install and Modify Performance Data Communication Optical Fibre Cabling Skill Set
UEESS00171	Fire Detection and Alarm Systems - Installation, Maintenance, Commissioning and Servicing Skill Set
UEESS00172	Attachment of Cords and Plugs to Single Phase Low Voltage Electrical Equipment Skill Set
UEESS00173	Attachment of Cords/Cables and Plugs to Low Voltage Three Phase Electrical Equipment Skill Set
UEESS00174	Electrical Safety Testing of Electrical Cord Connected Equipment and Cord Assemblies Skill Set
UEESS00175	Apply Compliance Requirements to all Aspects of Electrical Work Skill Set
UEESS00176	Apply Currency of Safe Working Practices and Compliance Verification of Electrical Installations
UEESS00177	Data Communications – Plan an Integrated Cabling Installation System - Electricians Skill Set
UEESS00178	Electrical - Develop and Implement Maintenance Programs Skill Set
UEESS00180	Electrical - Plan, Manage and Report on Electrical Projects Skill Set
UEESS00181	Electrical – Inspect, Test and Maintain Emergency Lighting and Alarm Systems and Equipment
UEESS00182	Identify and Isolate Multiple Supply Systems
UEESS00187	Electrical - Install and commission whole current electricity meters Skill Set
UEESS00189	Rail Signalling Constructor Skill Set
UEESS00190	Electrical - Rail Signalling Principles Skill Set
UEESS00191	Grid-connected Battery Storage Systems Designer-Installer Skill Set
UEESS00192	Grid-connected Battery Storage Systems Installer Skill Set
UEESS00193	Grid-connected Photovoltaic and Battery Storage Systems Designer Skill Set
UEESS00194	Grid-connected Photovoltaic Systems Designer-Installer Skill Set
UEESS00195	Grid-connected Photovoltaic Systems Installer Skill Set
UEESS00196	Grid-connected Renewable Energy System Site Surveyor Skill Set
UEESS00197	Grid-connected Renewable Energy Systems Inspector Skill Set
UEESS00198	Hybrid Photovoltaic, Wind and Battery Storage Systems Installer Skill Set
UEESS00199	Micro-hydro Systems Designer Installer Skill Set
UEESS00200	Micro-hydro Systems Designer Skill Set
UEESS00201	Micro-hydro systems Installer Skill Set
UEESS00202	Micro-grid Renewable Energy Systems Inspector Skill Set
UEESS00203	Micro-grid Systems Design Coordinator Skill Set
UEESS00204	Micro-grid Systems Installation and Maintenance Coordinator Skill Set
UEESS00205	Off-grid Photovoltaic/Generating Set Systems Designer-Installer Skill Set

UEESS00206	Off-grid Photovoltaic/Generating Set Systems Installer Skill Set
UEESS00207	Off-grid Photovoltaic Generating Set Systems Designer Skill Set
UEESS00208	Off-grid Renewable Energy System Site Surveyor Skill Set
UEESS00209	Off-grid Renewable Energy Systems Inspector Skill Set
UEESS00210	Sustainable - Electrical Installations Sustainability Strategies Skill Set
UEESS00211	Sustainable - Energy Assessment of Commercial Facilities Skill Set
UEESS00212	Sustainable - Energy Assessment of Industrial Properties and Enterprises Skill Set
UEESS00213	Sustainable - Energy Assessment of Residential, Office and Retail Premises Skill Set
UEESS00214	Sustainable - Energy Efficiency Systems Designer Skill Set
UEESS00215	Sustainable - Energy Efficiency Systems Developer Skill Set
UEESS00216	Sustainable - Identify Energy Efficiency Strategies Skill Set
UEESS00217	Wind Energy Systems Designer-Installer Skill Set
UEESS00218	Wind Energy Systems Designer Skill Set
UEESS00219	Wind Energy Systems Installer Skill Set
UEESS00220	RAC - Install, Commission, Service and Maintain Variable Refrigerant Flow Air Conditioning Systems
UEESS00221	RAC - Inspect, Test and Repair Fire and Smoke Control Features of Mechanical Services Systems

Units of Competency

Codes and titles

Units of Competency are nationally agreed statements about the skills and knowledge required for effective performance in the workplace. They outline work outcomes as defined by regulatory requirements and agreed by industry.

As such, they identify the skills and knowledge (as outcomes) that contribute to the whole job function − they do not describe how to perform a particular role.

Each Unit of Competency covers a specific work activity, the range of conditions under which the activity is conducted and the foundation skills essential to performance.

The same Unit of Competency (i.e. specific work activity) can be relevant across a range of AQF qualification levels. It is important to check the packaging rules in qualifications to establish how units can apply.

UNIT CODE Mandatory Field	The unit code contains the three alpha characters identifying the Training Package, followed by alpha and /or a numeric character. It must comply with the length specified in the AVETMIS Standard (no more than 12 characters)
UNIT TITLE Mandatory Field	The title that concisely describes the outcome. It must comply with the length specified in the AVETMIS Standard (no more than 100 characters).

Extract from *Standards for Training Packages*

Extract from *Training Package Products Policy*

There are mandatory conventions specified in the Standards for Training Packages for the titles and codes used in Training Packages and their components.

The codes are assigned to Units of Competency when the Training Package is endorsed, or when new Units of Competency are added to an existing endorsed Training Package.

Each Unit of Competency has a specific character code where the:

- First three characters identify the Training Package
- Next character/s indicates the competency field
- Numbers identify a unit's position in the sequence of units in the competency field in the Training Package.

For example: UETDRDU015 Joint, terminate and maintain low voltage underground polymeric cable

Assessment Requirements

Each Unit of Competency has its own assessment requirements that identify the:

- Performance evidence
- Knowledge evidence
- Assessment conditions.

TITLE Mandatory Field	Assessment Requirements for [Insert Unit of Competency Code and title]

The same code is used for the Unit of Competency and its associated assessment requirements.

Units of Competency in the UEE Electrotechnology Training Package

UEE Electrotechnology Competency Fields

The following table identifies the Unit of Competency letter codes for the competency field:

CODE	Competency Field
AS	Assembly
EC	Electronics and Communications
CO	Commercial
CS	Computer Systems
CD	Cross Discipline
DV	Data and Voice
EL	Electrical
EC	Electronics and Communications
IC	Instrumentation and Control
RA	Refrigeration and air-conditioning
RE	Renewable Energy
HA	Hazardous
RS	Rail Signalling
RL	Restricted Licensing
CO	Research

The following Units of Competency are in the UEE Electrotechnology Training Package:

UEEAS0001	Assemble electronic components
UEEAS0002	Conduct quality and functional tests on assembled electronic apparatus
UEEAS0003	Modify electronic sub-assemblies
UEEAS0004	Select electronic components for assembly
UEEAS0005	Set up and check electronic component assembly machines
UEEAS0006	Use lead-free soldering techniques
UEEAS0007	Assemble, mount and connect control gear and switchgear
UEEAS0008	Fabricate and assemble bus bars
UEEAS0009	Mount and wire control panel equipment
UEECD0001	Analyse materials for suitability in electrical equipment
UEECD0002	Analyse static and dynamic parameters of electrical equipment
UEECD0003	Apply industry and community standards to engineering activities
UEECD0004	Apply material science to solving electrotechnology engineering problems
UEECD0005	Apply physics to solving electrotechnology engineering problems
UEECD0006	Apply technologies and concepts to energy sector work activities
UEECD0007	Apply work health and safety regulations, codes and practices in the workplace
UEECD0008	Carry out preparatory energy sector work activities

UEECD0009	Carry out routine work activities in an energy sector environment
UEECD0010	Compile and produce an energy sector detailed report
UEECD0011	Comply with scheduled and preventative maintenance program processes
UEECD0012	Contribute to risk management in electrotechnology systems
UEECD0013	Develop and implement energy sector maintenance programs
UEECD0014	Develop design briefs for electrotechnology projects
UEECD0015	Develop engineering solutions to photonic system problems
UEECD0016	Document and apply measures to control WHS risks associated with electrotechnology work
UEECD0017	Establish and follow a competency development plan in an electrotechnology engineering discipline
UEECD0018	Establish, maintain and evaluate energy sector WHS/OHS systems
UEECD0019	Fabricate, assemble and dismantle utilities industry components
UEECD0020	Fix and secure electrotechnology equipment
UEECD0021	Identify and select components, accessories and materials for energy sector work activities
UEECD0022	Identify building techniques, methods and materials used in energy sector work activities
UEECD0023	Identify effects of energy on machinery and materials in an energy sector environment
UEECD0024	Implement and monitor energy sector WHS policies and procedures
UEECD0025	Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits
UEECD0026	Manage risk in electrotechnology activities
UEECD0027	Participate in development and follow a personal competency development plan
UEECD0028	Plan an integrated cabling installation system
UEECD0029	Plan electrotechnology projects
UEECD0030	Prepare electrotechnology/utilities drawings using manual drafting and CAD equipment and software
UEECD0031	Prepare engineering drawings using manual drafting and CAD for electrotechnology applications
UEECD0032	Produce detailed electrotechnology/utilities drawings using CAD equipment and software
UEECD0033	Produce products for carrying out energy sector work activities
UEECD0034	Produce routine tools/devices for carrying out energy sector work activities
UEECD0035	Provide basic instruction in the use of electrotechnology apparatus
UEECD0036	Provide engineering solutions for problems in complex multiple path circuits
UEECD0037	Provide engineering solutions for uses of materials and thermodynamic effects
UEECD0038	Provide solutions and report on routine electrotechnology problems
UEECD0039	Provide solutions to basic engineering computational problems
UEECD0040	Solve basic problems electronic and digital equipment and circuits
UEECD0041	Solve electrotechnical engineering problems
UEECD0042	Solve problems in ELV single path circuits
UEECD0043	Solve problems in direct current circuits
UEECD0044	Solve problems in multiple path circuits
UEECD0045	Solve problems in multiple path extra-low voltage (ELV) a.c. circuits
UEECD0046	Solve problems in single path circuits
UEECD0047	Supervise and coordinate energy sector work activities
UEECD0048	Undertake computations in an energy sector environment
UEECD0049	Use advanced computational processes to provide solutions to energy sector engineering problems
UEECD0050	Use and maintain the integrity of a portable gas detection device
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications
UEECD0052	Use routine equipment/plant/technologies in an energy sector environment
UEECD0053	Write specifications for computer systems engineering projects
UEECD0054	Write specifications for electronics and communications engineering projects
UEECD0055	Write specifications for industrial electronics and control projects
UEECD0056	Apply methods to maintain currency of industry developments
UEECD0057	Manage electrotechnology projects
UEECD0059	Write specifications for electrical engineering projects
UEECD0060	Write specifications for electrotechnology engineering projects
UEECD0061	Write specifications for refrigeration and air conditioning engineering projects
UEECD0062	Write specifications for renewable energy engineering projects

UEECD0063	Write work activity reports
UEECD0064	Interpret, produce and modify electrotechnology drawings
UEECO0001	Estimate electrotechnology projects
UEECO0002	Maintain documentation
UEECO0003	Manage contract variations
UEECO0007	Participate in electronics and communications work and competency development activities
UEECO0010	Participate in refrigeration and air conditioning work and competency development activities
UEECO0013	Prepare specifications for the supply of materials and equipment for electrotechnology projects
UEECO0014	Prepare tender submissions for electrotechnology projects
UEECO0015	Provide quotations for installation or service jobs
UEECO0016	Receive and store materials and equipment for electrotechnology work
UEECO0017	Source and purchase material/parts for installation or service jobs
UEECO0018	Contribute to the commercialisation of products/applications/services
UEECO0019	Contribute to the conduct of a research project
UEECO0020	Contribute to the development of a product/application/service
UEECO0021	Contribute to the planning of a research project
UEECO0023	Participate in electrical work and competency development activities
UEECO0025	Provide quotations for inspection and compliance audit services
UEECO0026	Engage in appliance, business or computer equipment servicing work and competency development
UEECO0027	Engage in communications, security equipment or fire protection work and competency development
UEECO0028	Engage in instrumentation, control, machine or switchgear work and competency development
UEECS0001	Administer computer networks
UEECS0002	Analyse and implement biometric measuring techniques and applications
UEECS0003	Assemble, set up and test computing devices
UEECS0004	Commission industrial computer systems
UEECS0005	Design and implement advanced routing for internetworking systems
UEECS0006	Design and implement multi-layer switching for internetworking systems
UEECS0007	Design and implement network systems for internetworking
UEECS0008	Design and implement remote access for internetworking systems
UEECS0009	Design and implement security for internetworking systems
UEECS0010	Design and implement wireless LANs/WANs for internetworking systems
UEECS0011	Design and manage enterprise computer networks
UEECS0012	Design embedded controller control systems
UEECS0013	Develop and validate biometric equipment/systems installation
UEECS0014	Develop computer network services
UEECS0015	Develop energy sector computer network applications infrastructure
UEECS0016	Develop energy sector directory services
UEECS0017	Develop industrial control programs for microcomputer equipped devices
UEECS0018	Develop web pages for engineering applications
UEECS0019	Develop, implement and test object-oriented code
UEECS0020	Evaluate and modify object-oriented code programs
UEECS0021	Install and administer UNIX/LINUX-based networked computers
UEECS0022	Install and configure a client computer operating system and software
UEECS0023	Install and configure network systems for internetworking
UEECS0024	Integrate multiple computer operating systems on a client server local area network
UEECS0025	Modify/redesign industrial computer systems
UEECS0026	Plan industrial computer systems projects
UEECS0027	Provide programming solution for computer systems engineering problems
UEECS0028	Select, install, configure and test multimedia components
UEECS0029	Set up and configure basic local area network (LAN)
UEECS0030	Set up, configure and test biometric devices
UEECS0031	Set up, create and implement content for a web server
UEECS0032	Support computer hardware and software for engineering applications

UEECS0033	Use engineering applications software on personal computers
UEEDV0001	Assemble and connect telecommunication frames and cabinets
UEEDV0002	Install aerial telecommunication cables
UEEDV0003	Install and connect cabling for direct access to telecommunications service
UEEDV0004	Install and connect data and voice communication equipment
UEEDV0005	Install and maintain cabling for multiple access to telecommunication services
UEEDV0006	Install and modify optical fibre performance data communication cabling
UEEDV0007	Install underground communication cables
UEEDV0008	Install, modify and verify coaxial and structured communication copper cabling
UEEDV0009	Select and arrange data and voice equipment for local area networks
UEEDV0010	Select and arrange equipment for wireless communication networks
UEEDV0011	Set up and configure basic data communication systems
UEEDV0012	Set up and configure the wireless capabilities of communications and data storage devices
UEEDV0013	Solve problems in voice and data communications circuits
UEEDV0014	Test, report and rectify faults in data and voice installations
UEEEC0001	Analyse the performance of wireless-based electronic communication systems
UEEEC0002	Assemble and install reception antennae and signal distribution equipment
UEEEC0003	Assemble and set up basic security systems
UEEEC0004	Assemble and set up fixed video/audio components and systems in buildings and premises
UEEEC0005	Assess electronic apparatus compliance
UEEEC0006	Carry out repairs of predictable faults in video and audio replay/recording apparatus
UEEEC0007	Commission electronics and communications systems
UEEEC0008	Commission large fire protection systems
UEEEC0009	Commission satellite and microwave communication systems
UEEEC0010	Design and develop advanced digital systems
UEEEC0011	Design and develop electronics/computer systems projects
UEEEC0012	Design custom electronic equipment installations
UEEEC0013	Design electronic printed circuit boards
UEEEC0014	Design signal-conditioning sub-systems
UEEEC0015	Develop basic plans for integrating security systems
UEEEC0016	Develop engineering solutions to RF amplifier problems
UEEEC0017	Develop engineering solutions to analogue electronic problems
UEEEC0018	Develop engineering solutions to audio electronic problems
UEEEC0019	Develop software solutions for microcontroller-based systems
UEEEC0020	Develop solutions for air surveillance apparatus and systems
UEEEC0021	Diagnose and rectify faults in air navigation circuits and systems
UEEEC0022	Diagnose and rectify faults in camera circuits and equipment
UEEEC0023	Diagnose and rectify faults in digital transmission circuits and systems
UEEEC0024	Diagnose and rectify faults in electronic display circuits
UEEEC0025	Diagnose and rectify faults in recording and replay equipment
UEEEC0026	Enter and verify programs for fire protection systems
UEEEC0027	Enter instructions and test wired and wireless security systems
UEEEC0028	Fault find and repair complex power supplies
UEEEC0029	Fault find and repair electronic apparatus
UEEEC0030	Fault find and repair electronic medical equipment
UEEEC0031	Fault find and repair global positioning systems
UEEEC0032	Fault find and repair high-volume office equipment
UEEEC0033	Fault find and repair navigation systems
UEEEC0034	Fault find and repair radar apparatus and systems
UEEEC0035	Fault find and repair satellite-based surveillance and observation systems
UEEEC0036	Fault find and repair sonar apparatus and systems
UEEEC0037	Fault find and repair telecommunication apparatus and systems
UEEEC0038	Find and repair microwave amplifier section faults in electronic apparatus

UEEEC0039	Install and test microwave antennae and waveguides
UEEEC0040	Install commercial video/audio system components
UEEEC0041	Install fire detection and warning system apparatus
UEEEC0042	Install large security systems
UEEEC0043	Manage computer systems/electronics projects
UEEEC0044	Modify - redesign electronics and communications systems
UEEEC0045	Modify digital signal processing (DSP) based sub-systems
UEEEC0046	Operate and maintain amateur radio communication stations
UEEEC0047	Plan large electronic projects
UEEEC0048	Program and commission commercial access control security systems
UEEEC0049	Program and commission commercial security closed-circuit television systems
UEEEC0050	Program and commission commercial security systems
UEEEC0051	Program and commission commercial video/audio systems
UEEEC0052	Program and test large security systems
UEEEC0053	Provide engineering solutions to air traffic control system problems
UEEEC0054	Provide gate array solutions for complex electronics systems
UEEEC0055	Repair basic computer equipment faults by replacement of modules/sub-assemblies
UEEEC0056	Repair predictable faults in audio components
UEEEC0057	Repair predictable faults in general electronic apparatus
UEEEC0058	Repair predictable faults in television receivers
UEEEC0059	Repair routine business equipment faults
UEEEC0060	Repairs basic electronic apparatus faults by replacement of components
UEEEC0061	Set up and adjust commercial radio frequency (RF) transmission and reception systems
UEEEC0062	Set up and test residential video/audio equipment
UEEEC0063	Solve fundamental electronic communications system problems
UEEEC0064	Solve oscillator problems
UEEEC0065	Solve problems in basic electronic circuits
UEEEC0066	Troubleshoot amplifiers in an electronic apparatus
UEEEC0067	Troubleshoot basic amplifier circuits
UEEEC0068	Troubleshoot communication systems
UEEEC0069	Troubleshoot digital sub-systems
UEEEC0070	Troubleshoot faults in television receivers
UEEEC0071	Troubleshoot fire protection systems
UEEEC0072	Troubleshoot microcontroller-based hardware systems
UEEEC0073	Troubleshoot professional audio reproduction components
UEEEC0074	Troubleshoot resonance circuits in an electronic apparatus
UEEEC0075	Troubleshoot single phase input d.c power supplies
UEEEC0076	Verify compliance and functionality of fire protection system installations
UEEEC0077	Verify functionality and compliance of custom electronic installations
UEEEL0001	Apply compliance requirements to all aspects of electrical work
UEEEL0002	Apply currency of safe working practices and compliance verification of electrical installations
UEEEL0003	Arrange circuits, control and protection for electrical installations
UEEEL0004	Carry out basic repairs to electrical components and equipment
UEEEL0005	Develop and connect electrical control circuits
UEEEL0006	Develop detailed and complex drawings for electrical systems using CAD systems
UEEEL0007	Develop detailed electrical drawings
UEEEL0008	Evaluate and modify low voltage heating equipment and controls
UEEEL0009	Evaluate and modify low voltage lighting circuits, equipment and controls
UEEEL0010	Evaluate and modify low voltage socket outlets circuits
UEEEL0011	Evaluate performance of low voltage electrical apparatus
UEEEL0012	Install low voltage wiring, appliances, switchgear and associated accessories
UEEEL0014	Isolate, test and troubleshoot low voltage electrical circuits
UEEEL0015	Manage large electrical projects

UEEEL0016	Provide advice on effective and energy efficient lighting products
UEEEL0017	Repair and maintain mechanical components of electrical machines
UEEEL0018	Select wiring systems and select cables for low voltage electrical installations
UEEEL0019	Solve problems in direct current (d.c.) machines
UEEEL0020	Solve problems in low voltage a.c. circuits
UEEEL0021	Solve problems in magnetic and electromagnetic devices
UEEEL0022	Supply effective and efficient lighting products for domestic and small commercial applications
UEEEL0023	Terminate cables, cords and accessories for low voltage circuits
UEEEL0024	Test and connect alternating current (a.c.) rotating machines
UEEEL0025	Test and connect transformers
UEEEL0026	Align and install traction lift equipment
UEEEL0027	Carry out low voltage electrical field testing and report findings
UEEEL0028	Conduct compliance and functional verification of electrical apparatus and existing circuits
UEEEL0029	Conduct compliance inspection of LV electrical installations with demand exceeding 100 A per phase
UEEEL0030	Conduct compliance inspection of single phase LV electrical installations
UEEEL0031	Conduct compliance inspection of special LV electrical installations
UEEEL0032	Conduct electrical tests on HV electrical machines
UEEEL0033	Conduct electrical tests on LV electrical machines
UEEEL0034	Conduct mechanical tests on electrical machines and components
UEEEL0035	Design effective and efficient lighting for public, open and sports areas
UEEEL0036	Design effective and efficient lighting for residential and commercial buildings
UEEEL0037	Design electrical installations with a low voltage demand greater than 400 A per phase
UEEEL0038	Design switchboards rated for high fault levels (greater than 400 A)
UEEEL0039	Design, install and verify compliance and functionality of general electrical installations
UEEEL0040	Develop compliance policies and plans to conduct an electrical contracting business
UEEEL0041	Develop engineering solution for synchronous machine and control problems
UEEEL0042	Develop engineering solutions for d.c. machine and control problems
UEEEL0043	Develop engineering solutions for induction machine and control problems
UEEEL0044	Diagnose and rectify faults in complex lift systems
UEEEL0045	Diagnose and rectify faults in traction lift systems
UEEEL0046	Find and repair faults in LV d.c. electrical apparatus and circuits
UEEEL0047	Identify, shut down and restart systems with alternate supplies
UEEEL0049	Install and maintain emergency safety systems
UEEEL0050	Install and replace low voltage current transformer metering
UEEEL0051	Investigate and report on electrical incidents and causes
UEEEL0052	Maintain and service traction lift systems and equipment
UEEEL0053	Maintain operation of electrical marine equipment and systems
UEEEL0054	Maintain operation of electrical mining equipment and systems
UEEEL0055	Overhaul and repair major switchgear and control gear
UEEEL0056	Place and connect electrical coils
UEEEL0057	Plan electrical installations with a low voltage demand up to 400 A per phase
UEEEL0058	Plan large electrical projects
UEEEL0059	Plan low voltage switchboard and control panel layouts
UEEEL0060	Prepare quotations for the supply of effective and efficient lighting products for lighting projects
UEEEL0061	Provide advice on the application of energy efficient lighting for ambient and aesthetic effect
UEEEL0062	Provide engineering solutions to problems in complex polyphase power circuits
UEEEL0063	Provide photometric data for illumination system design
UEEEL0064	Rewind HV three phase induction machines rated for voltages above 3.3 kV
UEEEL0065	Rewind HV three phase induction machines rated for voltages to 3.3 kV
UEEEL0066	Rewind LV direct current machines
UEEEL0067	Rewind single phase machines
UEEEL0068	Rewind three phase low voltage induction machines
UEEEL0069	Select and arrange equipment for special LV electrical installations

UEEEL0070	Select effective and efficient light sources and luminaries for given locations and designs
UEEEL0071	Select low voltage power factor correction equipment
UEEEL0072	Set up and place LV electrical apparatus and associated circuits into service
UEEEL0073	Verify compliance and functionality of special LV electrical installations
UEEEL0074	Wind electrical coils
UEEEL0075	Inspect, test and maintain emergency alarm systems and equipment
UEEEL0076	Inspect, test and maintain emergency lighting systems
UEEEL0077	Evaluate and report on the performance of LV machines
UEEEL0078	Install and commission whole current electricity meters
UEEEL0079	Plan and analyse LV electrical apparatus
UEEEL0080	Plan and analyse wiring systems, circuits, control and protection for electrical installations
UEEHA0004	Enter a classified hazardous area to undertake work related to electrical equipment
UEEHA0008	Design gas detection systems
UEEHA0016	Assess the fitness-for-purpose of explosion-protected equipment
UEEHA0017	Classify areas where a combustible dust hazard may arise
UEEHA0018	Classify areas where flammable gas or vapour hazards may arise
UEEHA0019	Conduct a conformity assessment review of explosion-protected equipment
UEEHA0020	Conduct detailed inspection of electrical installations for hazardous areas
UEEHA0021	Design explosion-protected electrical systems and installations
UEEHA0022	Determine the explosion-protection requirements to meet a specified classified hazardous area
UEEHA0023	Develop and manage periodic electrical inspection and maintenance programs for hazardous areas
UEEHA0024	Inspect, maintain and fit plugs/couplers for reeling, trailing and flexible cables - coal mining
UEEHA0025	Install explosion-protected equipment and associated apparatus and wiring systems
UEEHA0026	Maintain equipment associated with hazardous areas
UEEHA0027	Manage continuous supervision inspection of electrical installations for hazardous areas
UEEHA0028	Perform compliance audits of hazardous areas and related electrical installation
UEEHA0029	Plan electrical installations for hazardous areas
UEEHA0030	Repair reeling, trailing and flexible cables used in coal mining
UEEHA0031	Supervise repair and overhaul of explosion-protected equipment type flameproof (Ex d)
UEEHA0032	Supervise repair and overhaul of explosion-protected equipment type increased safety (Ex e)
UEEHA0033	Supervise repair and overhaul of explosion-protected equipment type intrinsically safe (Ex i)
UEEHA0034	Supervise repair and overhaul of explosion-protected equipment type pressurised (Ex p)
UEEHA0035	Supervise repair and overhaul of explosion-protected rotating machines
UEEHA0036	Test reeling, trailing and flexible cables and their attachments used in coal mining
UEEHA0037	Verify compliance of repaired reeling, trailing and flexible cables and attachments - coal mining
UEEHA0038	Conduct visual and close inspection of electrical installations for hazardous areas
UEEHA0039	Supervise repair and overhaul of explosion-protected equipment type Group III ('t')
UEEIC0001	Analyse complex electronic circuits controlling fluids
UEEIC0002	Assemble, enter and verify operating instructions in microprocessor equipped devices
UEEIC0003	Assist in commissioning process and instrumentation control systems
UEEIC0004	Calibrate, adjust and test measuring instruments
UEEIC0005	Configure and maintain industrial control system networks
UEEIC0006	Design and configure Human-Machine Interface (HMI) networks
UEEIC0007	Design and use advanced programming tools, PC networks and HMI Interfacing
UEEIC0008	Design electronic control systems
UEEIC0009	Develop an electrical integrated system interface for access through a touch screen
UEEIC0010	Develop and test code for microcontroller devices
UEEIC0011	Develop electrical integrated systems
UEEIC0012	Develop structured programs to control external devices
UEEIC0013	Develop, enter and verify discrete control programs for programmable controllers
UEEIC0014	Develop, enter and verify programs in supervisory control and data acquisition systems
UEEIC0015	Develop, enter and verify word and analogue control programs for programmable logic controllers
UEEIC0016	Diagnose and rectify faults in a.c. motor drive systems

UEEIC0017	Diagnose and rectify faults in d.c. motor drive systems
UEEIC0018	Diagnose and rectify faults in digital controls systems
UEEIC0019	Diagnose and rectify faults in servo drive systems
UEEIC0020	Fault find and repair analogue circuits and components in electronic control systems
UEEIC0021	Find and rectify faults in process final control elements
UEEIC0022	Install instrumentation and control apparatus and associated equipment
UEEIC0023	Install instrumentation and control cabling and tubing
UEEIC0024	Plan the electrical installation of integrated systems
UEEIC0025	Provide solutions to extra-low voltage (ELV) electro-pneumatic control systems and drives
UEEIC0026	Provide solutions to fluid circuit operations
UEEIC0027	Provide solutions to pneumatic-hydraulic system operations
UEEIC0028	Provide solutions to problems in industrial control systems
UEEIC0029	Set up and adjust PID control loops
UEEIC0030	Set up and adjust advanced PID process control loops
UEEIC0031	Set up and configure human-machine interface (HMI) and industrial networks
UEEIC0032	Set up electronically controlled robotically operated complex systems
UEEIC0033	Set up gas analysis measuring and control instruments
UEEIC0034	Set up industrial field control devices
UEEIC0035	Set up scientific analysis measuring and control instruments
UEEIC0036	Set up water analysis measuring and control instruments
UEEIC0037	Set up weighting measuring and control instruments
UEEIC0038	Solve problems in density/level measurement components and systems
UEEIC0039	Solve problems in flow measurement components and systems
UEEIC0040	Solve problems in polyphase electronic power control circuits
UEEIC0041	Solve problems in pressure measurement components and systems
UEEIC0042	Solve problems in single phase electronic power control circuits
UEEIC0043	Solve problems in temperature measurement components and systems
UEEIC0044	Troubleshoot measuring and analysis systems
UEEIC0045	Troubleshoot medical equipment control systems
UEEIC0046	Troubleshoot process control systems
UEEIC0047	Use instrumentation drawings, specifications, standards and equipment manuals
UEEIC0048	Verify compliance and functionality of instrumentation and control installations
UEEIC0049	Manage instrumentation and control projects
UEEIC0050	Plan instrumentation and control projects
UEEIC0051	Evaluate motor drive systems and diagnose faults
UEERA0001	Analyse the operation of HVAC air and hydronic systems
UEERA0002	Analyse the psychrometric performance of HVAC/R systems
UEERA0003	Analyse the thermodynamic performance of HVAC/R systems
UEERA0004	Analyse vibration and noise in refrigeration and air conditioning systems
UEERA0005	Apply safety awareness and legal requirements for ammonia refrigerant
UEERA0006	Apply safety awareness and legal requirements for carbon dioxide refrigerant
UEERA0007	Apply safety awareness and legal requirements for flammable refrigerants
UEERA0008	Audit HVAC/R control systems for compliance with regulations and standards
UEERA0009	Audit energy use for commercial HVAC/R systems
UEERA0010	Commission complex heating, ventilation and air conditioning (HVAC) systems
UEERA0011	Commission complex refrigeration systems and equipment
UEERA0012	Commission complex refrigeration/air conditioning control systems
UEERA0013	Commission refrigeration/air conditioning hydronic systems
UEERA0014	Design ammonia refrigerated systems
UEERA0015	Design carbon dioxide refrigerated systems
UEERA0016	Design commercial refrigeration systems and select components
UEERA0017	Design complex air conditioning systems and select equipment
UEERA0018	Design complex commercial refrigeration systems and select equipment

UEERA0019	Design complex control systems for refrigeration or heating, ventilation, air conditioning systems
UEERA0020	Design complex industrial refrigeration systems and select equipment
UEERA0021	Design control systems for refrigeration or heating, ventilation and air conditioning systems
UEERA0022	Design heating, ventilation and air conditioning (HVAC) systems and select components
UEERA0023	Design hydrocarbon refrigerated systems
UEERA0024	Design hydronic systems and select equipment
UEERA0025	Design industrial refrigeration systems and select components
UEERA0026	Design mechanical ventilation/exhaust systems and select equipment
UEERA0027	Design secondary refrigerant systems
UEERA0028	Determine noise and vibration encountered in HVAC/R applications
UEERA0029	Develop heat exchanger design specifications
UEERA0030	Develop specifications and prepare drawings for HVAC/R projects
UEERA0031	Diagnose and rectify faults in air conditioning and refrigeration control systems
UEERA0032	Diagnose and rectify faults in complex air conditioning/refrigeration systems
UEERA0033	Diagnose faults in complex HVAC/refrigeration control systems
UEERA0034	Establish heat loads for commercial refrigeration and/or air conditioning applications
UEERA0035	Establish the basic operating conditions of air conditioning systems
UEERA0036	Establish the basic operating conditions of vapour compression systems
UEERA0037	Establish the basic operating conditions of vapour compression systems - appliances
UEERA0038	Establish the thermodynamic parameters of refrigeration and air conditioning systems
UEERA0039	Evaluate and report on building services energy management systems
UEERA0040	Evaluate and report on the indoor air quality of buildings
UEERA0041	Evaluate new and alternative technologies applicable to electrotechnology applications
UEERA0042	Evaluate thermodynamic and fluid parameters of refrigeration systems
UEERA0043	Find and rectify faults in appliance control systems and devices
UEERA0044	Find and rectify faults in single phase motors and associated controls
UEERA0045	Find and rectify faults in three phase motors and associated controls
UEERA0046	Install and commission ammonia refrigeration systems, components and associated equipment
UEERA0047	Install and commission carbon dioxide refrigeration systems, components and associated equipment
UEERA0048	Install and commission flammable refrigerant air conditioning and refrigeration systems
UEERA0049	Install and start up single head split air conditioning and water heating heat pump systems
UEERA0050	Install refrigerant pipe work, flow controls and accessories
UEERA0052	Install, commission, service and maintain low temperature systems
UEERA0053	Install, commission, service and maintain medium temperature systems
UEERA0054	Maintain microbial control of refrigeration and air conditioning systems
UEERA0055	Manage refrigeration and air conditioning projects
UEERA0056	Monitor and adjust refrigeration energy management systems
UEERA0057	Operate ammonia refrigeration plant
UEERA0058	Plan refrigeration and air conditioning projects
UEERA0059	Prepare and connect refrigerant tubing and fittings
UEERA0060	Produce HVAC/R control system diagrams
UEERA0061	Produce HVAC/R system design drawings
UEERA0062	Recover and charge refrigerants
UEERA0063	Recover, pressure test, evacuate, charge and leak test refrigerants - appliances
UEERA0064	Recover, pressure test, evacuate, charge and leak test refrigerants - split systems
UEERA0065	Repair and service ammonia refrigeration systems
UEERA0066	Repair and service carbon dioxide refrigeration systems
UEERA0067	Repair and service secondary refrigeration systems
UEERA0068	Repair and service self-contained carbon dioxide refrigeration and heat pump systems
UEERA0069	Resolve problems in beverage dispensers
UEERA0070	Resolve problems in central plant air conditioning systems
UEERA0071	Resolve problems in dairy refrigeration systems
UEERA0072	Resolve problems in hydronic systems

UEERA0073	Resolve problems in ice making systems
UEERA0074	Resolve problems in industrial refrigeration systems
UEERA0075	Resolve problems in post-mix refrigeration systems
UEERA0076	Resolve problems in refrigerated beverage vending cabinets
UEERA0077	Resolve problems in transport refrigeration systems
UEERA0078	Resolve problems in ultra-low temperature refrigeration systems
UEERA0079	Safely handle refrigerants and lubricants
UEERA0080	Select basic commercial refrigeration system equipment, components and accessories
UEERA0081	Select refrigerant piping, accessories and associated controls
UEERA0082	Select residential air conditioning system equipment, components and accessories
UEERA0083	Service and repair microwave ovens
UEERA0084	Service and repair self-contained flammable refrigerants air conditioning and refrigeration systems
UEERA0085	Service clothes washing machines and dryers
UEERA0086	Service dishwasher machines
UEERA0087	Service electrical heating appliances
UEERA0088	Service gas heating appliances
UEERA0089	Service refrigeration appliances
UEERA0090	Service room air conditioners
UEERA0091	Service small electrical appliances and power tools
UEERA0092	Solve problems in low voltage refrigeration and air conditioning circuits
UEERA0093	Verify functionality and compliance of appliances
UEERA0094	Verify functionality and compliance of refrigeration and air conditioning installations
UEERA0095	Recover refrigerant from stationary self-contained end of life decommissioned equipment
UEERA0097	Install, commission, service and maintain variable refrigerant flow air conditioning systems
UEERA0098	Inspect, test and repair fire and smoke control features of mechanical services systems
UEERA0099	Install, commission, service and maintain air conditioning systems
UEERE0001	Apply environmentally and sustainable procedures in the energy sector
UEERE0006	Conduct periodic maintenance of remote area power supply battery banks
UEERE0007	Conduct periodic maintenance of remote area power supply generator sets
UEERE0008	Conduct periodic maintenance of remote area power supply photovoltaic arrays
UEERE0009	Conduct periodic maintenance of remote area power supply wind generators
UEERE0013	Develop strategies to address environmental and sustainability issues in the energy sector
UEERE0014	Develop strategies to address sustainability issues for electrical installations
UEERE0015	Implement and monitor energy sector environmental and sustainable policies and procedures
UEERE0018	Maintain and repair remote area power generation facilities
UEERE0019	Maintain safety and tidiness of remote area power supply systems
UEERE0020	Promote sustainable energy practices in the community
UEERE0021	Provide basic sustainable energy solutions for energy reduction in residential premises
UEERE0023	Work safely with remote area power supply systems
UEERE0049	Apply safe work practices in the rooftop solar industry
UEERE0050	Identify and isolate multiple supply systems
UEERE0051	Apply electrical principles to renewable energy design
UEERE0052	Assess energy loads and uses for energy efficiency in commercial facilities
UEERE0053	Assess energy loads and uses for energy efficiency in industrial properties and enterprises
UEERE0054	Conduct site survey for grid-connected photovoltaic and battery storage systems
UEERE0055	Conduct site survey for off-grid photovoltaic/generating set systems
UEERE0056	Coordinate maintenance of renewable energy (RE) apparatus and systems
UEERE0057	Coordinate the design of micro-grid renewable energy systems
UEERE0058	Coordinate the installation, fault finding and repair of micro grid systems
UEERE0059	Design energy management controls for electrical installations in buildings
UEERE0060	Design grid-connected battery storage systems
UEERE0061	Design grid-connected photovoltaic power supply systems
UEERE0062	Design micro-hydro systems

UEERE0063	Design off-grid photovoltaic/generating set systems
UEERE0064	Design renewable energy heating systems
UEERE0065	Design wind energy systems
UEERE0066	Develop effective engineering strategies for energy reduction in buildings
UEERE0067	Develop engineering solutions to renewable energy (RE) problems
UEERE0068	Develop strategies to address sustainability issues for electrical installations
UEERE0069	Diagnose and rectify faults in renewable energy (RE) control systems
UEERE0070	Fault find and repair grid-connected photovoltaic power supply systems
UEERE0071	Fault find and repair off-grid photovoltaic/generating set systems to an electrical installation
UEERE0072	Inspect grid connected renewable energy systems
UEERE0073	Inspect micro grid renewable energy systems
UEERE0074	Inspect off-grid renewable energy systems
UEERE0075	Install and maintain micro hydro energy systems to power conversion equipment
UEERE0076	Install and maintain wind energy systems to power conversion equipment
UEERE0077	Install battery storage equipment power conversion equipment to grid
UEERE0078	Install battery storage to power conversion equipment
UEERE0079	Install off-grid power conversion equipment to electrical installation
UEERE0080	Install photovoltaic power conversion equipment to grid
UEERE0081	Install photovoltaic systems to power conversion equipment
UEERE0082	Maintain renewable energy (RE) apparatus
UEERE0083	Maintain safety and tidiness of remote area power supply systems
UEERE0084	Manage renewable energy (RE) projects
UEERE0085	Plan renewable energy (RE) projects
UEERE0086	Promote sustainable energy practices
UEERE0087	Provide basic sustainable energy solutions for energy management in residential premises
UEERE0088	Work safely with remote area power supply systems
UEERL0001	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply
UEERL0002	Attach cords, cables and plugs to electrical equipment for connection to 1000 V a.c. or 1500 V d.c.
UEERL0003	Conduct in-service safety testing of electrical cord connected equipment and cord assemblies
UEERL0004	Disconnect - reconnect electrical equipment connected to low voltage (LV) installation wiring
UEERL0005	Locate and rectify faults in low voltage (LV) electrical equipment using set procedures
UEERL0006	Attach HV flexible cables and plugs
UEERL0007	Disconnect-reconnect 3.3 kV electric propulsion components of self-propelled earth moving vehicles
UEERL0008	Disconnect-reconnect explosion-protected appliances and control devices connected to LV installation
UEERS0020	Apply rail signalling principles
UEERS0021	Assemble and wire electrical rail signalling equipment
UEERS0022	Find and repair rail signalling system faults
UEERS0023	Inspect, test and certify rail power signal equipment
UEERS0024	Install and maintain rail track circuit leads and bonds
UEERS0025	Maintain active level crossing equipment
UEERS0026	Maintain communications based signalling equipment
UEERS0027	Maintain computer-based interlocking rail systems
UEERS0028	Maintain mechanical rail signalling equipment and infrastructure
UEERS0029	Maintain non-vital telemetry systems
UEERS0030	Maintain power-operated point actuating devices
UEERS0031	Maintain rail signalling power supplies
UEERS0032	Maintain trackside signal and train protection equipment
UEERS0033	Maintain train detection equipment
UEERS0034	Maintain vital relay interlocking systems
UEERS0035	Maintain wayside asset protection equipment
UEERS0036	Repair rail signalling power and control cables
UEERS0037	Test copper rail signalling cables

QUALIFICATION MAPPING INFORMATION

Attachment A: Qualification mapping information

The qualification mapping information maps shows codes and title changes and equivalency between different releases of the UEE Electrotechnology Training Package.

SKILL SETS MAPPING INFORMATION

Attachment B: Skill sets mapping information

The Skill Sets information shows codes and title changes and equivalency between different releases of the UEE Electrotechnology Training Package Skill Sets.

UNIT OF COMPETENCY MAPPING INFORMATION

Attachment C: Units of Competency mapping information

The Unit of Competency mapping information shows code and title changes and equivalency between different releases the UEE Electrotechnology Training Package Units of Competency.

PRE-REQUISITE UNITS OF COMPETENCY

Candidates must be deemed competent in the required prerequisite Unit/s of Competency prior to the determination of competency in the Units of Competency they appear in. Some Units of Competency within the UEE Training Package have prerequisites that are streamed to facilitate different industry pathways and care must be taken to ensure the correct prerequisite requirements are implemented.

This UEE Electrotechnology Training Package has a separate Pre-requisite Companion Volume which can be located on VETNet. This Companion Volume lists all prerequisites in UEE and Imported units. **NOTE:** If units do not contain pre-requisites, they are not included in this Companion Volume.

The content in this companion volume was correct at the time of publishing; however, the best source of information about pre-requisite requirements is the actual units of competency. To ensure accuracy, the endorsed units of competency should always be checked.

Qualifications in the UEE Training Package contain the following in the Packaging Rules field:

- There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Where imported units are selected, care must be taken to ensure all pre-requisite units specified are complied with. Where units in qualifications have pre-requisites, the asterisk (*) appears after the title as follows:

UEECD0028	UEECD0028 Plan an integrated cabling installation system*

IMPORTED UNITS AND THEIR PREREQUISITE UNITS

The UEE Electrotechnology Training Package includes imported Units of Competency from other Training Packages.

Please check the relevant assessment requirements of the source Training Package by accessing the national training website www.training.gov.au (TGA) or a physical copy regarding any special conditions that may apply to the assessment of imported Units of Competency.

For up-to-date releases of the imported units, refer to www.training.gov.au or the respective JSC.

Where imported units are included in the core or electives of a qualification they do not count as units imported under the qualification packaging rule where:

> "units may be selected from any relevant nationally endorsed Training Package or accredited course"

The general elective units selected under the above packaging rule must contribute to the vocational outcomes of the qualification.

Where imported units are selected, care must be taken to ensure that all prerequisite units specified are complied with. If weighting points are not listed for an imported unit in any other UEE qualification, default weighting will be 10 points.

Where any of the Units of Competency listed below are used to form a qualification or Skill Set, they do not count as Units of Competency imported under the qualification packaging rule.

Where imported units are selected, care must be taken to ensure that all prerequisite Units of Competency specified, and weighting point allocations are complied with.

Code	Title
BSB Business Services Training Package	
BSBESB402	Establish legal and risk management requirements of new business ventures
BSBHRM413	Support the learning and development of teams and individuals
BSBINS402	Coordinate workplace information systems
BSBINS501	Implement information and knowledge management systems
BSBLDR413	Lead effective workplace relationships
BSBLDR414	Lead team effectiveness
BSBLDR522	Manage people performance
BSBOPS203	Deliver a service to customers
BSBOPS402	Coordinate business operational plans
BSBOPS404	Implement customer service strategies
BSBPEF402	Develop personal work priorities
BSBSTR401	Promote innovation in team environments
BSBSTR402	Implement continuous improvement
BSBSTR501	Establish innovative work environments
BSBSTR502	Facilitate continuous improvement
BSBTWK502	Manage team effectiveness
CPC Construction, Plumbing and Services Training Package	
CPCCWHS1001	Prepare to work safely in the construction industry
CPCWHS1001	Prepare to work safely in the construction industry
CPP Property Services Training Package	
CPPBDN6106	Produce building information modelling for building design projects
CPPFES2043	Apply regulations to prevent ozone depleting substance and synthetic greenhouse gas emissions
CPPFES2043A	Prevent ozone depleting substance and synthetic greenhouse gas emissions
CPPHES4005	Assess household energy use and efficiency improvements
HLT Health Training Package	
HLTAID009	Provide cardiopulmonary resuscitation
HLTAID011	Provide First Aid
ICT Information and Communications Technology	
ICTICT203	Operate application software packages
ICTICT214	Operate application software packages
ICTICT518	Research and review hardware technology options for organisations
ICTNWK307	Provide network systems administration
ICTNWK309	Configure and administer network operating systems
ICTNWK424	Install and operate small enterprise branch networks
ICTNWK426	Install and configure client-server applications and services
ICTNWK561	Design enterprise wireless local area networks
ICTNWK624	Configure advanced internetwork routing solutions
ICTNWK625	Plan and configure advanced internetwork switching solutions
ICTPRG302	Apply introductory programming techniques
ICTPRG430	Apply introductory object-oriented language skills
ICTPRG440	Apply introductory programming skills in different languages
ICTPRG443	Apply intermediate programming skills in different languages

ICTPRG444	Analyse software requirements
ICTPRG534	Deploy applications to production environments
ICTPRG549	Apply intermediate object-oriented language skills
ICTTEN203	Install and configure a home or small office network
ICTTEN204	Install and configure a small to medium business network
ICTTEN205	Build and maintain a secure network
ICTTEN312	Install telecommunications network equipment
ICTTEN409	Commission an electronic system
ICTTEN419	Implement and troubleshoot enterprise routers and switches
ICTTEN420	Design, install and configure an internetwork
ICTTEN421	Apply advanced routing protocols to network design
ICTTEN422	Configure and troubleshoot advanced network switching
ICTTEN423	Install and maintain a wide area network
ICTWEB447	Build basic website using development software and ICT tools
MEM Manufacturing and Engineering Training Package	
MEM16006	Organise and communicate information
MEM16008	Interact with computing technology
MEM234010	Design microcontroller applications
MEM234014	Design a robotic system
MEM30027	Prepare basic programs for programmable logic controllers
MEM30031	Operate computer-aided design (CAD) system to produce basic drawing elements
MEM30032	Produce basic engineering drawings
MEM30033	Use computer-aided design (CAD) to create and display 3D models
MSS Sustainability Training Package	
MSS402003	Apply competitive systems and practices
MSS402022	Apply quick changeover procedures
MSS402023	Apply Just in Time procedures
MSS402042	Apply 5S procedures
MSS402084	Undertake root cause analysis
MSS402085	Contribute to the application of a proactive maintenance strategy
Chemical, Hydrocarbons and Refining Industry Training Package	
PMASUP410	Develop plant documentation
RII Resources and Infrastructure Industry Training Package	
RIIRAI609D	Establish and maintain electrical installations, reticulation and protection system
RIIRIS601E	Establish and maintain the risk management system
RIIWHS202E	Enter and work in confined spaces
RIIWHS204E	Work safely at heights
RIIWHS205E	Control traffic with stop-slow bat
TLI – Transport and Logistics Training Package	
TLIF0008	Apply safety critical communications in the rail environment
TLIF0020	Safely access the rail corridor
TLIF2010	Apply fatigue management strategies
TLILIC0003	Licence to operate a forklift truck
UEP Electricity Supply Industry – Generation Sector Training Package	
UEPOPS003	Apply quality systems to work
UEPOPS047	Maintain quality systems within the team
UEPOPS065	Monitor implementation of quality control for production and maintenance
UET Transmission, Distribution and Rail Sector Training Package	
UETDRIS017	Perform high voltage field switching operation to a given schedule
UETDRIS018	Perform low voltage field switching operation to a given schedule
UETDRIS025	Diagnose and resolve faults in distribution systems
UETDRIS026	Diagnose and resolve faults in electrical apparatus
UETDRIS027	Diagnose and resolve faults in transmission systems

UETDRIS031	Maintain insulating oil
UETDRIS032	Solve problems in network equipment
UETDRIS033	Solve problems in network protection
UETDRMP007	Perform rescue from a live low voltage panel
UETDRRF004	Perform rescue from a live LV panel
UETDRSB001	Perform substation switching operations to a given schedule
UETDRSB007	Install and maintain substation direct current systems
UETDRSB010	Maintain capacitor bank equipment

MEETING PRE-REQUISITE REQUIREMENTS

Imported units where UEE units are pre-requisites

At the time of publishing the UEE Electrotechnology Training Package, there were a number of imported units which contained UEE11 units as pre-requisites which have been superseded/replaced. Because these units have been superseded/replaced they could not be packaged in the qualifications. Many of these will have direct mapping relationships, however some have been split and/or joined to create new units.

Training Providers will need to apply mapping/RPL/direct credit processes to ensure all pre-requisite requirements are met. The relationship between the new/old units is not direct, and detailed mapping will need to be completed to ensure all requirements have been met.

REGULATION AND LICENSING IMPLICATIONS FOR IMPLEMENTATION

Persons employed in the electrotechnology industry need to fulfil competency and training requirements as detailed in the regulations relevant to their occupation and state/territory. Persons assessed as complying with these requirements are usually provided with some form of certification by the respective authority. These certificates are required by the relevant state/territory or before a person can work in the occupation or undertake the duties covered under the legislation. These certificates are separate to national VET qualifications issued by RTOs.

Electricians in any state/territory in Australia need to be able to demonstrate a set of minimum capabilities in order to be granted an electrician's licence.

What this means is that a person seeking an electrician's licence needs to be able to work competently and safely when performing tasks independently or under supervision.

In addition, they need to be able to carry out these tasks across a variety of industries and work environments.

In 2001, the National Uniform Electrical Licensing Advisory Council (NUELAC) released a uniform set of requirements for licensed electricians known as Essential Performance Capabilities (EPCs). Revised in 2014, the most recent version of the EPCs was endorsed by Electrical Regulatory Authorities Council (ERAC) in 2024. Updates to the EPCs ensure that current technologies and updated safety practices are addressed, while removing obsolete content.

The list of EPCs provides advice to industry, particularly RTOs, about the regulatory requirements that an apprentice electrician must satisfy before being issued with an electrical licence.

The updated 2024 ERAC EPC requirement for licensed electricians may be found here.

Where applicable, Units of Competency, Skill Sets and qualifications in the UEE Electrotechnology Training Package Release 8 describe licensing and/or regulatory requirements related to the tasks they cover. These may differ between jurisdictions and should be checked with the appropriate regulator prior to commencing training and/or assessment.

Licensing and registration requirements that apply to specific industries and VET, vary between each jurisdiction, state and territory, and can regularly change. For this reason, it is best to contact the relevant regulator for details of licensing requirements in each jurisdiction.

Refrigerant Handling Licence

A Refrigerant Handling Licence must be held by any person who carries out work in relation to refrigeration and air conditioning (RAC) equipment.

The following statements appear in the Certificate III in Air Conditioning and Refrigeration to provide refrigeration and air conditioning licence requirements or Restricted Electrical Licence requirements, these are also listed in other relevant air conditioning and refrigeration qualifications:

- **Refrigerant Handling Licence**: The achievement of the qualification meets the training components for the full national Refrigerant Handling Licence which is required to work on refrigeration and air conditioning equipment that carries the risk of a fluorocarbon refrigerant being emitted while decanting the refrigerant or manufacturing, installing, commissioning, servicing, maintaining or decommissioning refrigeration and air conditioning equipment.
- **Refrigeration and Air Conditioning Occupational Licence**: Additional and/or other conditions may apply in some jurisdictions subject to regulations related to refrigeration/air conditioning work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.
- **Electrical Occupation Licence**: The achievement of this qualification with the core restricted electrical units meet the electrical regulatory requirements for related restricted electrical work in most state/territories. This is required to work on electrical installations which are designed to operate at voltages greater than 50 volt (V) alternating current (a.c.) or 120 V direct current (d.c.).
- Air Conditioning and Refrigeration Licensing and registration requirements that apply to specific industries and VET, vary between each jurisdiction, state and territory, and can regularly change. For a list or licensing and regulatory bodies please visit the Australian Refrigeration Council (ARC) Industry website.

Electrical Occupation licencing

Electrical Occupation (Restricted) licencing may vary between each jurisdiction, state and territory, and can regularly change. Units of Competency in the UEE Electrotechnology Training Package which cover Restricted Licences include codes which begin with UEE**RL**… Regulatory requirements in each jurisdiction should be checked prior to commencing training and assessment.

In some instances, additional information may be required to support licencing requirements in some jurisdictions from the relevant Regulator about what is required prior to commencement to ensure candidates are not disadvantaged at completion of the unit/s.

Rail Signalling Entry and Licencing Requirements

The Certificate IV in Rail signalling has two entry pathways. These pathways reflect the different Licencing requirements across jurisdictions.

Care must be taken to ensure jurisdictional licencing requirements are complied with by the pathway selected, and qualification certification documentation is correctly completed.

Students should be made aware that if the Electrical Fitter pathway is used this will limit which Australian States/Territories they can undertake rail signalling work in.

Qualification certification documentation (testamur) must indicate which pathway was used to ensure employers in jurisdictions where an unrestricted licence is required can easily identify appropriate candidates for employment.

Information about Qualification Pathways

In some jurisdictions a qualification may need to be completed in a certain way to achieve a licence, and qualifications may include a statement similar to the following to support this:

> *"Where required for Licencing, the certification documentation issued must indicate if the qualification was completed as an apprenticeship or Trades Recognition Australia (TRA) pathway"*

Information should be sought from the relevant Regulator prior to commencement to ensure candidates are not disadvantaged at completion of the qualification. Please ensure certification documentation is compliant with the AQF Issuance Policy.

IMPLEMENTATION INFORMTATION

KEY FEATURES OF THE TRAINING PACKAGE AND THE INDUSTRY THAT WILL IMPACT ON THE SELECTION OF TRAINING PATHWAYS

Pathways define a sequence of learning or experience that can be followed to attain competency and describe the way in which training, and assessment is undertaken in an education or training program. They are **not mandatory** and may vary depending on the qualification or training program, the needs of the individual and the industry.

The UEE Electrotechnology Training Package is flexible, and many pathways can be constructed to align with individual requirements and business needs. RTOs can work with their clients to apply the flexibility available in the packaging rules to ensure 'fit for purpose outcomes'.

INDUSTRY SECTORS AND OCCUPATIONAL OUTCOMES OF QUALIFICATIONS

UEE Electrotechnology Training Package, qualifications and industry-specific Units of Competency align to occupations across the following sectors:

- Computer Systems
- Data and Voice Communications
- Electrical
- Electronic
- Instrument and Industrial Control
- Rail Signalling
- Refrigeration and Air Conditioning
- Renewable and Sustainable Energy.

QUALIFICATION ENTRY REQUIREMENTS

Entry requirements are the knowledge, skills or experience required to enter a qualification. They may be expressed as Units of Competency, qualifications or vocational outcomes and **must** be demonstrated prior to commencing the qualification.

In the UEE Electrotechnology Training Package the following qualifications include entry requirements. All qualifications listed are post-trade training for Electricians or Electrical Fitters. The Entry Requirement Qualification or Licence is required to satisfy underpinning skill and knowledge requirements and prerequisites requirements of units contained within the qualifications.

Code	Qualification Title	Rationale
UEE40220	Certificate IV in Electrical - Data and Voice Communications	This is a post-trade qualification for Electricians.
UEE40320	Certificate IV in Installation Inspection and Audits	This is a post-trade qualification for Electricians.
UEE40420	Certificate IV in Electrical - Instrumentation	This is a post-trade qualification for Electricians.
UEE40520	Certificate IV in Electrical - Air Conditioning Split Systems	This is a post-trade qualification for Electricians.
UEE40620	Certificate IV in Electrotechnology - Systems Electrician	This is a post-trade qualification for Electricians.
UEE40820	Certificate IV in Electrical - Fire Protection Control Systems	This is a post-trade qualification for Electricians.
UEE40920	Certificate IV in Industrial Electronics and Control	This is a post-trade qualification for Electricians.
UEE41025	Certificate IV in Energy Management and Control	This is a post-trade qualification for Electricians.
UEE41120	Certificate IV in Electrical - Lift Systems	This is a post-trade qualification for Electricians.
UEE41223	Certificate IV in Electrical – Rail Signalling	This is a post-trade qualification for Electricians and Electrical Fitters if jurisdictional requirements allow. Also dependent on STA requirements it can be completed in conjunction with the entry

		requirement qualification/s as long as the entry requirement qualification is completed prior to issuing the Certificate IV.
UEE43322	Certificate IV in Electrical - Renewable Energy	This is a post-trade qualification for Electricians.
UEE42120	Certificate IV in Electrotechnology – Electrical Contracting	This is a post-trade qualification for Electricians.
UEE42622	Certificate IV in Hazardous areas – Electrical	This is a post-trade qualification for Electricians.
UEE43020	Certificate IV in Electrical Equipment and Systems	This is a post-trade qualification for Electrical Fitters.
UEE50220	Diploma of Electrical and Instrumentation	This is a post-trade qualification for Electricians.
UEE50420	Diploma of Electrical Engineering	This is a post-trade qualification for Electricians.
UEE50722	Diploma of Renewable Energy Engineering	This is a post-trade qualification for Electricians.
UEE50920	Diploma of Industrial Electronics and Control Engineering	This is a post-trade qualification for Electricians.
UEE53020	Diploma of Electrical Systems Engineering	This is a post-trade qualification for Electrical Fitters.
UEE60620	Advanced Diploma of Industrial Electronics and Control Engineering	This is a post-trade qualification for Electricians.
UEE60922	Advanced Diploma of Renewable Energy Engineering	This is a post-trade qualification for Electricians.
UEE61222	Advanced Diploma of Engineering - Explosion protection	This is a post-trade qualification for Electricians.
UEE62122	Advanced Diploma of Engineering Technology - Electrical	This is a post-trade qualification for Electricians.
UEE62220	Advanced Diploma of Electrical - Engineering	This is a post-trade qualification for Electricians.
UEE62325	Advanced Diploma of Electrical Engineering - Coal Mining	This is a post-trade qualification for Electricians.
UEE63020	Advanced Diploma of Electrical Systems Engineering	This is a post-trade qualification for Electrical Fitters.

SKILL SET ENTRY REQUIREMENTS

Entry requirements are the knowledge, skills or experience required to enter a Skill Set. They may be expressed as Units of Competency, qualifications or vocational outcomes and must be demonstrated prior to commencing the Skill Set.

In the UEE Electrotechnology Training Package the following Skill Sets include entry requirements.

Code	Skill Set Title	Entry requirement and rationale
UEESS00135	Instrumentation - Programmable Control Systems Skill Set	UEECD0007 Apply work health and safety regulations, codes and practices in the workplace Cover underpinning skills and knowledge.
UEESS00138	Data Communications - Test, Report and Rectify Faults in Data and Voice Installations Skill Set	ACMA 'Open' Cabling Registration and nationally recognised endorsements for structured cable and optical fibre. Required accreditation.
UEESS00139	Data Communications - Restricted Telecommunications Cabler Registration - ACMA Skill Set	UEECD0042 Solve problems in ELV single path circuits Cover underpinning skills and knowledge.
UEESS00140	Data Communications - Premises Cabling for NBN Rollout Skill Set	Australian Communications and Media Authority (ACMA) 'Open' Cabling Registration. Required accreditation.
UEESS00142	Data Communications - Plan an Integrated Cabling Installation System Skill Set	Australian Communications and Media Authority (ACMA) 'Open' Cabling Registration. Required accreditation.
UEESS00143	Instrumentation - Develop an Integrated System Interface for	UEEIC0011 Develop electrical integrated systems

	Access Through a Touch Screen Skill Set	Cover underpinning skills and knowledge.
UEESS00144	Instrumentation - Develop Integrated Systems Skill Set	UEECD0025 Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits OR UEEEL0023 Terminate cables, cords and accessories for low voltage circuits AND ICTICT203 Operate application software packages Cover underpinning skills and knowledge.
UEESS00145	Instrumentation - Plan the Installation of Integrated Systems Skill Set	UEECD0025 Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits OR UEEEL0023 Terminate cables, cords and accessories for low voltage circuits Cover underpinning skills and knowledge
UEESS00146	RAC - Design Ammonia Refrigeration Systems Skill Set	UEERA0034 Establish heat loads for commercial refrigeration and/or air conditioning applications AND UEERA0042 Evaluate thermodynamic and fluid parameters of refrigeration systems OR Diploma of Air Conditioning and Refrigeration Engineering OR Advanced Diploma of Air Conditioning and Refrigeration Engineering OR Advanced Diploma of Engineering Technology - Air Conditioning and Refrigeration Cover underpinning skills and knowledge.
UEESS00147	RAC- Design Complex Carbon Dioxide Refrigeration Systems Skill Set	
UEESS00148	RAC - Design Hydrocarbon Refrigeration Systems Skill Set	
UEESS00149	RAC - Design Hydrocarbon Refrigeration Systems Skill Set	
UEESS00150	RAC - Install and Commission Ammonia Refrigeration Systems Skill Set	UEERA0053 Install, commission, service and maintain medium temperature systems AND UEERA0051 Install, commission, service and maintain air conditioning systems OR Certificate III in Air Conditioning and Refrigeration Cover underpinning skills and knowledge
UEESS00151	RAC - Install and Commission Carbon Dioxide Refrigeration Systems Skill Set	
UEESS00152	RAC - Install and Commission Flammable Refrigerant Air Cond. and Refrigeration Systems Skill Set	
UEESS00154	RAC - Service and Repair Ammonia Refrigeration Systems Skill Set	
UEESS00156	RAC - Service and Repair Carbon Dioxide Refrigeration Systems Skill Set	
UEESS00158	RAC - Service and Repair Secondary Refrigeration Systems Skill Set	
UEESS00155	RAC - Service and Repair Carbon Dioxide Refrigeration and Heat Pump Systems Skill Set	UEERA0051 Install, commission, service and maintain air conditioning systems OR UEERA0089 Service refrigeration appliances OR Certificate III in Air Conditioning and Refrigeration OR Certificate III in Appliance Service Cover underpinning skills and knowledge.
UEESS00157	RAC - Service and Repair Flammable Refrigerant Refrigeration and Air Conditioning Systems Skill Set	
UEESS00164	Sustainable - Energy Efficiency Auditor Skill Set	Degree in Electrical Engineering, an Advanced Diploma or Diploma of Electrical Engineering or an electrical trade qualification from the UEE Electrotechnology Training Package or equivalent. Cover underpinning skills and knowledge.
UEESS00177	Data Communications - Plan an Integrated Cabling Installation System - Electricians Skill Set	Australian Communications and Media Authority (ACMA) 'Open' Cabling Registration OR

		a current electrical licence issued in an Australian state or territory. Required accreditation
UEESS00178	Electrical - Develop and Implement Maintenance Programs Skill Set	UEEEL0039 Design, install and verify compliance and functionality of general electrical installations OR a current 'Unrestricted Electrical Licence' issued in an Australian state or territory. Required licence.
UEESS00187	Electrical - Install and commission whole current electricity meters	
UEESS00180	Electrical - Plan, Manage and Report on Electrical Projects Skill Set	
UEESS00181	Electrical – Inspect, Test and Maintain Emergency Lighting and Alarm Systems and Equipment	UEEEL0039 Design, install and verify compliance and functionality of general electrical installations OR Certificate III in Electrotechnology Electrician Required licence.
UEESS00221	RAC - Inspect, Test and Repair Fire and Smoke Control Features of Mechanical Services Systems	Certificate III in Air Conditioning and Refrigeration Covers underpinning skills and knowledge.
UEESS00220	RAC - Install, Commission, Service and Maintain Variable Refrigerant Flow Air Conditioning Systems	
UEESS00214	Sustainable - Energy Efficiency Systems Designer Skill Set	Degree in Electrical Engineering, an Advanced Diploma or Diploma of Electrical Engineering or an electrical trade qualification from the UEE Electrotechnology Training Package or equivalent. Cover underpinning skills and knowledge.
UEESS00215	Sustainable - Energy Efficiency Systems Developer Skill Set	
UEESS00216	Sustainable - Identify Energy Efficiency Strategies Skill Set	

PATHWAYS ADVICE

Generally, all qualifications in the UEE Electrotechnology Training Package are suitable for delivery via an Australian Apprenticeship pathway.

The Australian Apprenticeships website offers information about traineeships and apprenticeships and includes links to State and Territory Training Authorities (STAs) that monitor provision.

VET in Schools programs are packaged and delivered in a variety of ways across Australia. However, it is highly recommended that schools work together in partnership with an RTO where qualifications or Skill Sets result in strong transferable skills relevant to the needs of the individual and commercial enterprises.

The UEE Electrotechnology Training Package qualifications provide pathways in the following disciplines:

- Computer Systems
- Data and Voice Communications
- Electrical
- Electronic
- Instrument and Industrial Control
- Rail Signalling
- Refrigeration and Air Conditioning
- Renewable and Sustainable Energy.

Skill Set Pathways

UEE Training Package Skill Sets provide pathways to a range of UEE qualifications. The Table below show the AQF levels of qualifications the Skill Set provides a pathway to.

Code	Skill Set Title	Pathways
UEESS00131	Data Communications - ACMA 'Open' Cabling Provider Skill Set	AQF 3-6 UEE qualifications
UEESS00132	Data Communications - ACMA 'Restricted' Telecommunications Cabling Registration Skill Set	AQF 2-4 UEE qualifications
UEESS00133	Restricted - Disconnection/Reconnection of Fixed Wired Low Voltage Electrical Equipment	AQF 3 and 4 UEE qualifications

UEESS00134	Data Communications - Install Aerial Communication Cables Skill Set	AQF 3-6 UEE qualifications
UEESS00135	Instrumentation - Programmable Control Systems Skill Set	AQF 4-6 UEE qualifications
UEESS00137	Data Communications - Install Below Ground Communication Cables Skill Set	AQF 3-6 UEE qualifications
UEESS00138	Data Communications - Test, Report and Rectify Faults in Data and Voice Installations Skill Set	AQF 3-6 UEE qualifications
UEESS00139	Data Communications - Restricted Telecommunications Cabler Registration - ACMA Skill Set	AQF 2-4 UEE qualifications
UEESS00140	Data Communications - Premises Cabling for NBN Rollout Skill Set	AQF 3-6 UEE qualifications
UEESS00141	Electrical - Providing Advice on Lighting Products Skill Set	AQF 3-6 UEE qualifications
UEESS00142	Data Communications - Plan an Integrated Cabling Installation System Skill Set	AQF 3-6 UEE qualifications
UEESS00143	Instrumentation - Develop an Integrated System Interface for Access Through a Touch Screen Skill Set	AQF 3-6 UEE qualifications
UEESS00144	Instrumentation - Develop Integrated Systems Skill Set	AQF 3-6 UEE qualifications
UEESS00145	Instrumentation - Plan the Installation of Integrated Systems Skill Set	AQF 3-6 UEE qualifications
UEESS00146	RAC - Design Ammonia Refrigeration Systems Skill Set	AQF 5 and 6 UEE qualifications
UEESS00147	RAC- Design Complex Carbon Dioxide Refrigeration Systems Skill Set	AQF 5 and 6 UEE qualifications
UEESS00148	RAC - Design Hydrocarbon Refrigeration Systems Skill Set	AQF 5 and 6 UEE qualifications
UEESS00149	RAC - Design Secondary Refrigeration Systems Skill Set	AQF 5 and 6 UEE qualifications
UEESS00150	RAC - Install and Commission Ammonia Refrigeration Systems Skill Set	AQF 3-6 UEE qualifications
UEESS00151	RAC - Install and Commission Carbon Dioxide Refrigeration Systems Skill Set	AQF 3-6 UEE qualifications
UEESS00152	RAC - Install and Commission Flammable Refrigerant Air Cond. and Refrigeration Systems Skill Set	AQF 3-6 UEE qualifications
UEESS00153	RAC - Operate Ammonia Refrigeration Plant Skill Set	AQF 3-6 UEE qualifications
UEESS00154	RAC - Service and Repair Ammonia Refrigeration Systems Skill Set	AQF 3-6 UEE qualifications
UEESS00155	RAC - Service and Repair Carbon Dioxide Refrigeration and Heat Pump Systems Skill Set	AQF 3-6 UEE qualifications
UEESS00156	RAC - Service and Repair Carbon Dioxide Refrigeration Systems Skill Set	AQF 3-6 UEE qualifications
UEESS00157	RAC - Service and Repair Flammable Refrigerant Refrigeration and Air Conditioning Systems Skill Set	AQF 3-6 UEE qualifications
UEESS00158	RAC - Service and Repair Secondary Refrigeration Systems Skill Set	AQF 3-6 UEE qualifications
UEESS00164	Sustainable - Energy Efficiency Auditor Skill Set	AQF 4-6 UEE qualifications
UEESS00169	Data Communications - Install and Modify Performance Data Communication Structured Cabling Skill Set	AQF 3-6 UEE qualifications
UEESS00170	Install and Modify Performance Data Communication Optical Fibre Cabling Skill Set	AQF 3-6 UEE qualifications
UEESS00171	Fire Detection and Alarm Systems - Installation, Maintenance, Commissioning and Servicing Skill Set	AQF 3-6 UEE qualifications
UEESS00172	Attachment of Cords and Plugs to Single Phase Low Voltage Electrical Equipment Skill Set	AQF 2-4 UEE qualifications
UEESS00173	Attachment of Cords/Cables and Plugs to Low Voltage Three Phase Electrical Equipment Skill Set	AQF 2-4 UEE qualifications
UEESS00174	Electrical Safety Testing of Electrical Cord Connected Equipment and Cord Assemblies Skill Set	AQF 2-4 UEE qualifications
UEESS00177	Data Communications - Plan an Integrated Cabling Installation System - Electricians Skill Set	AQF 3-6 UEE qualifications
UEESS00178	Electrical - Develop and Implement Maintenance Programs Skill Set	AQF 5 and 6 UEE qualifications
UEESS00180	Electrical - Plan, Manage and Report on Electrical Projects Skill Set	AQF 5 and 6 UEE qualifications

UEESS00181	Electrical – Inspect, Test and Maintain Emergency Lighting and Alarm Systems and Equipment	AQF 3-6 UEE qualifications
UEESS00182	Identify and Isolate Multiple Supply Systems	AQF 4 UEE qualifications
UEESS00187	Electrical - Install and commission whole current electricity meters Skill Set	AQF 3-6 UEE qualifications
UEESS00189	Rail Signalling Constructor Skill Set	AQF 3-6 UEE qualifications
UEESS00190	Electrical - Rail Signalling Principles Skill Set	AQF 3-6 UEE qualifications
UEESS00191	Grid-connected Battery Storage Systems Designer-Installer Skill Set	AQF 5 and 6 UEE qualifications
UEESS00192	Grid-connected Battery Storage Systems Installer Skill Set	AQF 4-6 UEE qualifications
UEESS00193	Grid-connected Photovoltaic and Battery Storage Systems Designer Skill Set	AQF 5 and 6 UEE qualifications
UEESS00194	Grid-connected Photovoltaic Systems Designer-Installer Skill Set	AQF 5 and 6 UEE qualifications
UEESS00195	Grid-connected Photovoltaic Systems Installer Skill Set	AQF 4-6 UEE qualifications
UEESS00196	Grid-connected Renewable Energy System Site Surveyor Skill Set	AQF 4-6 UEE qualifications
UEESS00197	Grid-connected Renewable Energy Systems Inspector Skill Set	AQF 5 and 6 UEE qualifications
UEESS00198	Hybrid Photovoltaic, Wind and Battery Storage Systems Installer Skill Set	AQF 4-6 UEE qualifications
UEESS00199	Micro-hydro Systems Designer Installer Skill Set	AQF 4-6 UEE qualifications
UEESS00200	Micro-hydro Systems Designer Skill Set	AQF 5 and 6 UEE qualifications
UEESS00201	Micro-hydro systems Installer Skill Set	AQF 4-6 UEE qualifications
UEESS00202	Micro-grid Renewable Energy Systems Inspector Skill Set	AQF 5 and 6 UEE qualifications
UEESS00203	Micro-grid Systems Design Coordinator Skill Set	AQF 5 and 6 UEE qualifications
UEESS00204	Micro-grid Systems Installation and Maintenance Coordinator Skill Set	AQF 5 and 6 UEE qualifications
UEESS00205	Off-grid Photovoltaic/Generating Set Systems Designer-Installer Skill Set	AQF 5 and 6 UEE qualifications
UEESS00206	Off-grid Photovoltaic/Generating Set Systems Installer Skill Set	AQF 4-6 UEE qualifications
UEESS00207	Off-grid Photovoltaic Generating Set Systems Designer Skill Set	AQF 5 and 6 UEE qualifications
UEESS00208	Off-grid Renewable Energy System Site Surveyor Skill Set	AQF 4-6 UEE qualifications
UEESS00209	Off-grid Renewable Energy Systems Inspector Skill Set	AQF 5 and 6 UEE qualifications
UEESS00210	Sustainable - Electrical Installations Sustainability Strategies Skill Set	AQF 4-6 UEE qualifications
UEESS00211	Sustainable - Energy Assessment of Commercial Facilities Skill Set	AQF 4-6 UEE qualifications
UEESS00212	Sustainable - Energy Assessment of Industrial Properties and Enterprises Skill Set	AQF 4-6 UEE qualifications
UEESS00213	Sustainable - Energy Assessment of Residential, Office and Retail Premises Skill Set	AQF 4-6 UEE qualifications
UEESS00214	Sustainable - Energy Efficiency Systems Designer Skill Set	AQF 5 and 6 UEE qualifications
UEESS00215	Sustainable - Energy Efficiency Systems Developer Skill Set	AQF 5 and 6 UEE qualifications
UEESS00216	Sustainable - Identify Energy Efficiency Strategies Skill Set	AQF 5 and 6 UEE qualifications
UEESS00217	Wind Energy Systems Designer-Installer Skill Set	AQF 5 and 6 UEE qualifications
UEESS00218	Wind Energy Systems Designer Skill Set	AQF 5 and 6 UEE qualifications
UEESS00219	Wind Energy Systems Installer Skill Set	AQF 4-6 UEE qualifications
UEESS00220	RAC - Install, Commission, Service and Maintain Variable Refrigerant Flow Air Conditioning Systems	AQF 3-6 UEE qualifications
UEESS00221	RAC- Inspect, Test and Repair Fire and Smoke Control Features of Mechanical Services Systems	AQF 3-6 UEE qualifications

These following Skill Sets do not provide any articulation to any qualification or other unit of competency:

- UEESS00175 Apply Compliance Requirements to all Aspects of Electrical Work Skill Set
- UEESS00176 Apply Currency of Safe Working Practices and Compliance Verification of Electrical Installations.

CREDIT ARRANGEMENTS

Credit transfer arrangements between qualifications in this Training Package and higher education qualifications are encouraged between providers, but no national credit arrangements exist at this time.

ACCESS AND EQUITY

Good vocational education, training and assessment includes making adjustments to meet the learning and assessment needs of individuals. An open mind, common sense and tailoring training and assessment to individual circumstances should ensure individuals achieve the standards employers and RTOs expect.

Adjustments can be made to assist learners to access and participate in VET. Adjustments are reasonable if they achieve this purpose and take into account factors such as the nature of the learner's ability and disability, the views of the learner, the potential effect of the adjustment on the learner and others, and the costs and benefits of making the adjustment.

Reasonable adjustments need only be that – reasonable. It is about identifying what adjustments might reasonably be made and how they may be put into place.

Assessment processes and techniques should be modified for distance-based learners, be culturally appropriate and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed.

An individual's access to the assessment process should not be adversely affected by restrictions placed on the location or context of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

FOUNDATION SKILLS

Language, literacy and numeracy skills can make the difference between whether or not someone succeeds in training and at work. These important skills are now called 'core skills' or 'foundation skills' because they are at the core of – or the foundation to – other more specific technical skills.

All Units of Competency in UEE Electrotechnology Training Packages clearly describe the foundation skills that are essential to performance in the elements and performance criteria of the unit.

There is a distinction between 'core skills' and 'foundation skills' in Training Packages, which can be summarised as follows:

- **Core skills** are those described in the ACSF: learning, numeracy, oral communication (speaking and listening), reading and writing.
- **Foundation skills** is the term that the Australian Government uses in a number of different contexts, including vocational units of competency, to capture language, literacy and numeracy skills and employment skills.

In the UEE Electrotechnology Training Package, foundation skills are explicit in the performance criteria in each Unit of Competency.

This is achieved with the use of key words or phrases to indicate foundation skills that are essential to performance. It is important to note that foundation skills may not have the same meaning in every instance and do need to be considered in the relevant job context.

The significance of each of these skills will also vary in respect to job roles and the strengths of individuals. It is important for users of the Training Package to contextualise relevant foundation skills identified in Units of Competency and assessment requirements.

FSK Foundation Skills Training Package

The FSK Foundation Skills Training Package allows RTOs to choose and deliver foundation skills units, qualifications and Skill Sets that will enable learners to build the specific foundation skills they need to achieve vocational competency.

Foundation skills units provide additional information about the types of language, literacy and numeracy skills that are needed to meet the requirements of vocational units.

The Training Package can be downloaded from www.training.gov.au.

HEALTH AND SAFETY IMPLICATIONS IN THE INDUSTRY

Work health and safety (WHS)/occupational health and safety (OHS) has been referenced in Units of Competency to refer to the relevant legislation. As not all jurisdictions have implemented the Model Work Health and Safety (WHS) Act the combined term is used to recognise that either the national model or existing state instrument will apply, as specified by the relevant regulatory authority.

In jurisdictions where the Model WHS Act has not been implemented, RTOs are advised to contextualise the Unit of Competency by referring to the existing state/territory OHS legislative requirements.

RESOURCES AND EQUIPMENT RELEVANT TO THE TRAINING PACKAGE

The assessment requirements relevant to each Unit of Competency refer to the relevant resources and equipment required for assessment.

Where a specific plant or piece of equipment is referred to, it must be used in the relevant assessment.

In particular, for assessment, access is required to:

- a range of relevant exercises, case studies and/or simulations
- typical plant of that used in the industry
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and personal protective equipment (PPE) currently used in the Electrotechnology industry.

Specific assessment requirements and strategies are defined in the relevant Units of Competency where applicable.

RTOs can only conduct training and/or assessment of the qualifications and/or Units of Competency in this Training Package provided they are covered by their Scope of Registration.

The assessment requirements for each Unit of Competency specify the relevant resources and equipment required to achieve the vocational outcomes of the UEE Electrotechnology Training Package.

RANGE OF CONDITIONS

The Range of Conditions tables provide non-essential industry specified advice on resources, definitions and conditions that may be relevant for assessment of a Unit of Competency.

LEGAL CONSIDERATIONS FOR LEARNERS IN THE WORKPLACE/ON PLACEMENTS

Legal requirements that apply to specific industries and VET vary across each state and territory, and the Commonwealth and can change. Contact relevant state/territory and Commonwealth departments to determine specific legal requirements.

SUPPORTING LEARNER TRANSITION BETWEEN EDUCATION SECTORS

There are no formal transition arrangements between the VET sector and the higher education sector for the Units of Competency being submitted to the AISC.

AUSTRALIAN STANDARDS

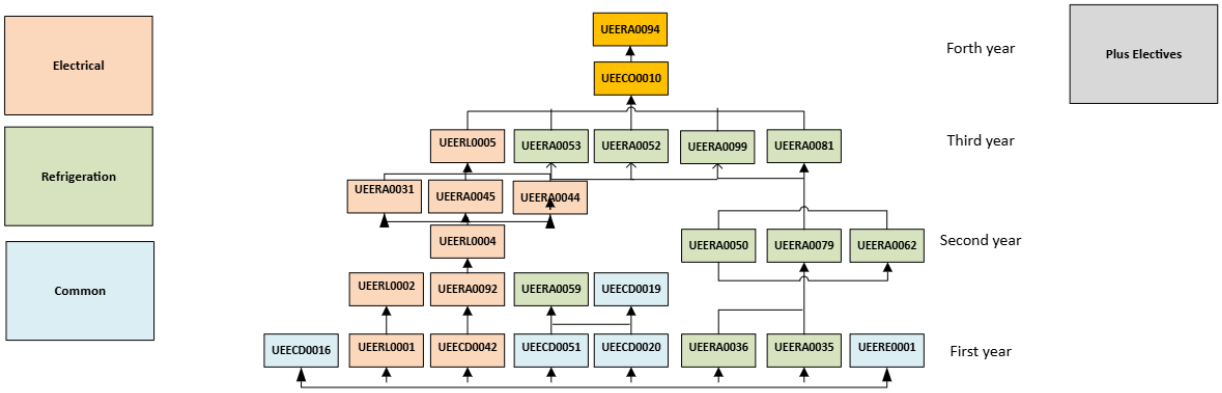
Unit	Relevant Australian Standards
UEERA0096 Inspect, test and repair fire and smoke control features of mechanical services systems	• AS1851 Routine servicing of fire protection systems and equipment • AS1668 The use of ventilation and air-conditioning in buildings • AS1670.1 Fire detection, warning, control and intercom systems - System design, installation and commissioning, Part 1: Fire • National Construction Code (NCC)
UEEEL0076 Inspect, test and maintain emergency lighting systems	• AS/NZS 2293 Emergency lighting and exit signs for buildings series • National Construction Code (NCC)
UEEEL0075 Inspect, test and maintain emergency alarm systems and equipment	• AS1670.1 Fire detection, warning, control and intercom systems - System design, installation and commissioning, Part 1: Fire • AS 2220.1 Emergency warning and intercommunication systems in buildings, Part 1: Equipment design and manufacture • AS1851 Routine servicing of fire protection systems and equipment • National Construction Code

Definitions

Below provides further advice on specific words within UEE training package products.

Unit	Definition
UEERA0099 - Install, commission, service and maintain air conditioning systems	Within air conditioning equipment - “In accordance with AS3000 - 1.4.131 definition for wiring, equipment - all wiring of an appliance or item of electrical equipment, provided with supply terminals for the purpose of connection to an electrical installation. Therefore, with reference to UEERA0099 'within air conditioning equipment’ refers to replacing, installing and terminating of low voltage (LV)cables after the supply terminal connection point on the air conditioning equipment.”

UEE32225 CERTIFICATE III IN AIR CONDITIONING AND REFRIGERATION – SUGGESTED DELIVERY / ASSESSMENT SEQUENCE FOR RTOS.



ATTACHMENT A: QUALIFICATION MAPPING

Separate Mapping Document to be read injunction with this document

Mapping information for Qualifications can be found in the UEE Electrotechnology CVIG Mapping Information Attachments A–C.

ATTACHMENT B: SKILL SETS MAPPING

Separate Mapping Document to be read injunction with this document

Mapping information for Skill Sets can be found in the UEE Electrotechnology CVIG Mapping Information Attachments A–C.

ATTACHMENT C: UNITS OF COMPETENCY MAPPING

Separate Mapping Document to be read injunction with this document. The 4th and 5th alpha characters of unit codes indicate competency disciplines.

Mapping information for Units of Competency can be found in the UEE Electrotechnology CVIG Mapping Information Attachments A–C.

ATTACHMENT D: IMPLEMENTATION GUIDANCE

ELECTRICAL ASSESSMENT CONDITIONS

A small number of Electrical (UEEEL…) Units which cover critical EPCs used for issuing of an Electrical Licence include the following additional requirements in the Assessment Conditions:

- *In addition, evidence of Performance Evidence items of this unit marked with a hash (#) must be gathered in authentic workplace operational conditions (not simulated) before final determination of competence in this unit can be made.*

The purpose of these additional requirements is to ensure that evidence for the relevant performance items is gathered in authentic workplace settings and not limited to activities completed in institutional environments.

Where the above requirements are included, evidence must be gathered in authentic operational settings. During training plan development, consideration must be given to the candidate's ability, within the scope of their employment, to demonstrate Performance Evidence requirements on the job. This may require additional work placement/s outside of the apprentice's place of employment, where the employer's normal activities do not provide the scope of works required.

The use of evidence gathering techniques such as, but not limited to, workplace logbooks, journals and/or a profiling system will support implementation of these requirements.

The additional requirements appear in the following units:

- UEEEL0003 Arrange circuits, control and protection for electrical installations
- UEEEL0005 Develop and connect electrical control circuits
- UEEEL0008 Evaluate and modify low voltage heating equipment and controls
- UEEEL0009 Evaluate and modify low voltage lighting circuits, equipment and controls
- UEEEL0010 Evaluate and modify low voltage socket outlets circuits
- UEEEL0012 Install low voltage wiring, appliances, switchgear and associated accessories
- UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits
- UEEEL0018 Select wiring systems and select cables for low voltage electrical installations
- UEEEL0023 Terminate cables, cords and accessories for low voltage circuits
- UEEEL0024 Test and connect alternating current (a.c.) rotating machines.

ATTACHMENT E: COMPANION VOLUME IMPLEMENTATION GUIDE

Quality Assurance Process

The Companion Volume Implementation Guide (CVIG) is initiated in accordance with the requirements of the Standards for Training Packages, effective from 1 January 2023.

Standards for Training Packages is one of three products that form the Training Package Organising Framework that support the development of Training Packages.

The steps in the Quality Assurance (QA) process as they apply to the CVIG are:

1. The CVIG is developed by PSO in accordance with Standards 11 and 12:
   - **Standard 11**: A quality assured CVIG produced by the Training Package developer is available at the time of endorsement and complies with the CVIG template
   - **Standard 12**: Training Package developers produce other quality assured companion volumes to meet the needs of their stakeholders as required.

2. The Implementation Guide is designed to assist assessors, trainers, training providers and enterprises to deliver nationally endorsed industry training packages.

3. Content is validated and amended as part of the validation stage in the implementation of the Standards.

4. The CVIG is submitted for QA with the Training Package changes, to ensure it is available at the time of endorsement.

5. The CVIG is reviewed by PSO to ensure mapping tables are updated and any additional information is added as required. Proposed changes are subject to industry validation as part of the endorsement process.

6. Where changes are made to a Training Package and minor amendments are required for the CVIG, PSO includes amendments as part of the validation phase and incorporates the reference in the version control modification history

ATTACHMENT F: COMPANION VOLUME IMPLEMENTATION GUIDE TEMPLATE

Companion Volume Implementation Guide template

Overview information **Mandatory field**	• Version control and modification history. • List of AQF qualifications, skill sets and units of competency • in the Training Package. • Unit mapping information, including an equivalence table • linking old to new units of competency. • Qualification mapping information, including an equivalence • table linking old to new qualification. • List of imported and pre-requisite units in the Training • Package. • Key work and training requirements in the industry. • Regulation and licensing implications for implementation. • Where units that form part of skill sets include pre-requisite units, list these pre-requisite units.
Implementation information **Mandatory field**	• Information on the key features of the Training Package and the industry that will impact on the selection of training pathways. • Industry sectors and occupational outcomes of qualifications. • Explanation of any mandatory entry requirements for qualifications and skill sets. • Pathways advice, particularly in line with requirements of the AQF Pathways Policy. • Access and equity considerations. • Foundation Skills. • Advice on any health and safety implications in the industry. • Advice about a skill set's relationship with a qualification/s. • Resource and equipment lists relevant to the Training Package. • Legal considerations for learners in the workplace/on placements. • Other information relevant to implementation of the Training Package.
Links **Optional field**	• Resources supporting the companion volume implementation guide. • Other companion volumes as required including: • Learning strategies guidance, describing the diversity of learners and learning strategies • Knowledge guidance, identifying contextual information such as knowledge requirements and resources • Assessment strategies, providing guidance on implementation of assessment requirements. • Training Package developer's quality assurance process for companion volumes.