Australian Government

UEE50911 Diploma of Industrial Electronics and Control Engineering

Release 4

INDUSTRY
SKILLS
COUNCILS
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UEE50911 Diploma of Industrial Electronics and Control Engineering

Modification History

Release	Action	Core/Elective	Details	Points
2	Add	Group B	UEENEEH150A Assemble and set up basic security systems	80
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40
2	Edit		Edit Name to Reflect correct Unit Title UEENEEI124A Fault find and repair analogue circuits and components in electronic control systems	

3	Edit	Group B	Edit Name to reflect correct Unit title UEENEEI102A Solve problems in pressure measurement components and systems	40
3	Edit	Group B	Edit Name to reflect correct Unit title UEENEEI103A Solve problems in density_level measurement components and systems	40
3	Edit	Group B	Edit Name to reflect correct Unit title UEENEEI104A Solve problems in flow measurement components and systems	40
3	Edit	Group B	Edit Name to reflect correct Unit title UEENEEI105A Solve problems in temperature measurement components and systems	40
3	Edit	Group C	Edit Name to reflect correct Unit title UEENEEI151A Develop, enter and verify word and analogue control programs for programmable logic controllers.	60

4	Edit	Core	Correct title of UEENEEE101A - Apply	20

			Occupational Health and Safety regulations, codes and practices in the workplace	
4	Edit	Core	Correct title of UEENEEE102A - Fabricate, assemble and dismantle utilities industry components	40
4	Edit	Core	Correct title of UEENEEE124A - Compile and produce an energy sector detailed report	60
4	Edit	Elective	Correct title of UEENEED101A Use computer applications relevant to a workplace	20
4	Edit	Elective	Correct title of UEENEED110A Set up, create and implement content for a web server	120
4	Edit	Elective	Correct title of UEENEED111A Develop, implement and test object oriented code	140
4	Edit	Elective	Correct title of UEENEED144A Commission industrial computer systems	20
4	Edit	Elective	Correct title of UEENEED145A Modify-redesign of industrial computer systems	20
4	Edit	Elective	Correct title of UEENEEG110A Find and repair faults in LV d.c. electrical apparatus and circuits	60
4	Edit	Elective	Correct title of UEENEEG111A Carry out basic repairs to electrical components and equipment	40
4	Edit	Elective	Correct title of UEENEEG113A Install and maintain emergency safety systems	60
4	Edit	Elective	Correct title of UEENEEG116A Diagnose and rectify faults in traction lift systems	80
4	Edit	Elective	Correct title of UEENEEG119A Maintain operation of electrical marine equipment and systems	60
4	Edit	Elective	Correct title of UEENEEG129A Overhaul and repair major switchgear and controlgear	60
4	Edit	Elective	Correct title of UEENEEG131A Evaluate performance of low voltage electrical apparatus	40
4	Edit	Elective	Correct title of UEENEEG132A Carry out low voltage electrical field testing and report findings	60

4	Edit	Elective	Correct title of UEENEEI103A Solve problems in density/level measurement components and systems	40
4	Edit	Elective	Correct title of UEENEEI116A Assemble, enter and verify operating instructions in microprocessor equipped devices	20
4	Edit	Elective	Correct title of UEENEEI119A Set up industrial field control devices	60
4	Edit	Elective	Correct title of UEENEEI126A Provide solutions to pneumatic-hydraulic system operations	80
4	Edit	Elective	Correct title of UEENEEI148A Solve problems in single phase electronic power control circuits	60
4	Edit	Elective	Correct title of UEENEEI149A Solve problems in polyphase electronic power control circuits	60

Description

Scope
This qualification provides competencies to develop, select, commission, maintain and diagnose faults/malfunctions of equipment and systems for the monitoring and control of plant, machines and processes.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

Not applicable.

Packaging Rules

Completion requirements

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

All the Core competency standard units, defined in the Core Competency Standard Units table below and

A combination of Elective competency standard units to achieve a total weighting of 480 points in accordance with the Elective Competency Standard Units table below.

All the required prerequisite competency standard units

Note: UEENEEG105A - Those holding an 'Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its pre-requisite requirements.

Core Competency Standard Units All Core competency standard units to be achieved		Weighting Points
UEENEEE038B	Participate in development and follow a personal competency development plan	20
UEENEEE075B	Write specifications for industrial electronics and control projects	40
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEG006A	Solve problems in single and three phase low voltage machines	80

UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG103A	Install low voltage wiring and accessories	20
UEENEEG104A	Install appliances, switchgear and associated accessories for low voltage electrical installations	20
UEENEEG105A	Verify compliance and functionality of low voltage general electrical installations	40
UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	40
UEENEEG107A	Select wiring systems and cables for low voltage general electrical installations	60
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	40
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEK132A	Develop strategies to address environmental and sustainability issues in the energy sector	20
UEENEEI124A	Fault find and repair analogue circuits and components in electronic control systems	60
UEENEEI139A	Diagnose and rectify faults in digital controls systems	60
Total points in core		**1120**

Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 480 points from the following groups:

Group		Minimum points	Maximum points
A	**Imported and Common Elective Units** Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 5. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	220
B	**Qualification Elective Units**	0	100
C	**Qualification Elective Units**	0	120
D	**Qualification Elective Units** You may select all your elective units from this Group	260	480

Group A – Imported and Common Elective Units You may complete units to a maximum weighting of 220		Weighting Points
BSBMGT502B	Manage people performance	70
BSBINM501A	Manage an information or knowledge management system	50
BSBMGT516C	Facilitate continuous improvement	60
BSBINN502A	Build and sustain an innovative work environment	50
BSBWOR502B	Ensure team effectiveness	60
UEENEEC001B	Maintain documentation	20
UEENEEC002B	Source and purchase material/parts for installation or service jobs	20
UEENEEC003B	Provide quotations for installation or service jobs	20
UEENEEC010B	Deliver a service to customers	20
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	20

UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
	Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 5. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points. Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework	Up to 220 points

Group B – Qualification Elective Units You may complete units to a maximum weighting of 100		Weighting Points
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEG110A	Find and repair faults in LV d.c. electrical apparatus and circuits	60
UEENEEG111A	Carry out basic repairs to electrical components and equipment	40
UEENEEG113A	Install and maintain emergency safety systems	60
UEENEEG116A	Diagnose and rectify faults in traction lift systems	80
UEENEEG118A	Maintain operation of electrical mining equipment and systems	60
UEENEEG119A	Maintain operation of electrical marine equipment and systems	60
UEENEEG129A	Overhaul and repair major switchgear and controlgear	60
UEENEEH102A	Repair basic electronic apparatus faults by replacement of components	40
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEH150A	Assemble and set up basic security systems	80
UEENEEI101A	Use instrumentation drawings, specification, standards and equipment manuals	40
UEENEEI102A	Solve problems in pressure measurement components and systems	40
UEENEEI103A	Solve problems in density/level measurement components and systems	40
UEENEEI104A	Solve problems in flow measurement components and systems	40
UEENEEI105A	Solve problems in temperature measurement components and systems	40

| UEENEEI116A | Assemble, enter and verify operating instructions in microprocessor equipped devices | 20 |
| UEENEEI150A | Develop, enter and verify discrete control programs for programmable controllers | 60 |

Group C – Qualification Elective Units You may complete units to a maximum weighting of 120		Weighting Points
UEENEEC005B	Estimate electrotechnology projects	40
UEENEED116A	Develop computer network services	120
UEENEEG132A	Carry out low voltage electrical field testing and report findings	60
UEENEEG179A	Develop detailed electrical drawings	60
UEENEEI119A	Set up industrial field control devices	60
UEENEEI120A	Provide solutions to problems in industrial control systems	60
UEENEEI125A	Provide solutions to fluid circuit operations	60
UEENEEI126A	Provide solutions to pneumatic-hydraulic system operations	80
UEENEEI148A	Solve problems in single phase electronic power control circuits	60
UEENEEI149A	Solve problems in polyphase electronic power control circuits	60
UEENEEI151A	Develop, enter and verify word and analogue control programs for programmable logic controllers.	60
UEENEEI152A	Develop, enter and verify programs in Supervisory Control and Data Acquisition systems	60
UEENEEI155A	Develop structured programs to control external devices	40

Group D – Qualification Elective Units	Weighting

You must complete units to a minimum weighting of 260 You may select all your elective units from this Group		**Points**
UEENEED110A	Set up, create and implement content for a web server	120
UEENEED111A	Develop, implement and test object oriented code	140
UEENEED144A	Commission industrial computer systems	20
UEENEED145A	Modify-redesign of industrial computer systems	20
UEENEEG131A	Evaluate performance of low voltage electrical apparatus	40
UEENEEG180A	Develop detailed and complex drawings for electrical systems using CAD systems	60
UEENEEI145A	Diagnose and rectify faults in a.c. motor drive systems	60
UEENEEI146A	Diagnose and rectify faults in d.c. motor drive systems	60
UEENEEI147A	Diagnose and rectify faults in servo drive systems	60
UEENEEI156A	Develop and test code for microcontroller devices	60
UEENEEI157A	Configure and maintain industrial control system networks	60

Note:
1. Prerequisite pathways shall be identified and met for all elective units selected.
2. In selecting elective units considerations to career planning advice should be given to units that form part of a prerequisite pathway for the progression to achieve particular competencies or qualification at a higher level.
3. Registered training organisations shall provide competency development advice in relation to any licensing requirements to practice that apply, or can contribute towards the qualification requirement, prior to establishing the competency development plan.
END OF QUALIFICATION

Custom Content Section

Not applicable.