



Australian Government

UEE31225 Certificate III in Instrumentation and Control

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Modification History

Release	Comments
1	This qualification was first released in UEE Electrotechnology Training Package Release 8.0.

Qualification Description

This qualification covers competencies to select, install, set up, test, fault find, repair and maintain systems and devices for measurement and recording of physical/chemical phenomenon and related process control.

This qualification has no minimum work placement hours.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

A total of 1060 weighting points comprising:

920 core weighting points listed below; **plus**

140 general elective weighting points from the general elective units listed below.

Choose a total of 140 **weighting points** elective units from the list below, of which between 0 and 60 **weighting points** can be taken from Group A; and between 80 and 140 **weighting points** must be taken from Group B; or all minimum 140 **weighting points** can be taken from Group B

Up to 60 weighting points of the general elective units Group A, may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided selected units contribute to the vocational

outcome of the qualification. If weighting points are not listed for an imported unit in any other UEE qualification, default weighting will be 10 points.

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.

Core units		Weighting Points
UEECD0007	Apply work health and safety regulations, codes and practices in the workplace	20
UEECD0016	Document and apply measures to control WHS risks associated with electrotechnology work*	20
UEECD0019	Fabricate, assemble and dismantle utilities industry components*	40
UEECD0020	Fix and secure electrotechnology equipment*	20
UEECD0043	Solve problems in direct current circuits*	80
UEECD0045	Solve problems in multiple path extra-low voltage (ELV) a.c. circuits*	40
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications*	40
UEECO0028	Engage in instrumentation, control, machine repair or switchgear work and competency development activities	60
UEEIC0013	Develop, enter and verify discrete control programs for programmable controllers*	60
UEEIC0021	Find and rectify faults in process final control elements*	40
UEEIC0022	Install instrumentation and control apparatus and associated equipment*	20
UEEIC0023	Install instrumentation and control cabling and tubing*	20
UEEIC0029	Set up and adjust PID control loops*	40

UEEIC0030	Set up and adjust advanced PID process control loops*	40
UEEIC0031	Set up and configure human-machine interface (HMI) and industrial networks*	60
UEEIC0038	Solve problems in density/level measurement components and systems*	40
UEEIC0039	Solve problems in flow measurement components and systems*	40
UEEIC0041	Solve problems in pressure measurement components and systems*	40
UEEIC0043	Solve problems in temperature measurement components and systems*	40
UEEIC0047	Use instrumentation drawings, specifications, standards and equipment manuals*	40
UEEIC0048	Verify compliance and functionality of instrumentation and control installations*	40
UEERE0001	Apply environmentally and sustainable procedures in the energy sector	20
UEERL0004	Disconnect - reconnect electrical equipment connected to low voltage (LV) installation wiring*	60
Group A: Imported and common elective units		Weighting Points
BSBOPS203	Deliver a service to customers	20
CPCWHS1001	Prepare to work safely in the construction industry	10
HLTAID009	Provide cardiopulmonary resuscitation	10
HLTAID011	Provide First Aid	10
ICTICT214	Operate application software packages	20
UEECD0011	Comply with scheduled and preventative maintenance program processes	20
UEECD0035	Provide basic instruction in the use of electrotechnology apparatus	20

UEECO0002	Maintain documentation	20
UEECO0015	Provide quotations for installation or service jobs	20
UEECO0017	Source and purchase material/parts for installation or service jobs	20
Group B: General elective units		Weighting Points
UEECD0050	Use and maintain the integrity of a portable gas detection device*	20
UEECS0033	Use engineering applications software on personal computers	40
UEEEEC0060	Repairs basic electronic apparatus faults by replacement of components*	40
UEEEEC0069	Troubleshoot digital sub-systems*	80
UEEEEC0075	Troubleshoot single phase input d.c power supplies*	40
UEEIC0004	Calibrate, adjust and test measuring instruments*	40
UEEIC0033	Set up gas analysis measuring and control instruments*	20
UEEIC0035	Set up scientific analysis measuring and control instruments*	20
UEEIC0036	Set up water analysis measuring and control instruments*	20
UEEIC0037	Set up weighting measuring and control instruments*	20
UEEIC0045	Troubleshoot medical equipment control systems*	120
UEEIC0046	Troubleshoot process control systems*	60
UEEHA0004	Enter a classified hazardous area to undertake work related to electrical equipment	40
UEEHA0022	Determine the explosion-protection requirements to meet a specified classified hazardous area*	40
UEEHA0025	Install explosion-protected equipment and associated apparatus and wiring systems*	60

UEEHA002 6	Maintain equipment associated with hazardous areas*	60
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Pre-requisite Requirements

Unit of competency	Prerequisite requirement
UEEEEC0075 Troubleshoot single phase input d.c power supplies	<p>UEEEL0021 Solve problems in magnetic and electromagnetic devices</p> <p>UEEEEC0065 Solve problems in basic electronic circuits</p> <p>UEECD0043 Solve problems in direct current circuits</p> <p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0046 Solve problems in single path circuits</p> <p>UEEEEC0060 Repairs basic electronic apparatus faults by replacement of components</p> <p>UEEEL0020 Solve problems in low voltage a.c. circuits</p> <p>UEECD0019 Fabricate, assemble and dismantle utilities industry components</p> <p>UEEEEC0074 Troubleshoot resonance circuits in an electronic apparatus</p> <p>UEECD0045 Solve problems in multiple path extra-low voltage (ELV) a.c. circuits</p> <p>UEEEL0019 Solve problems in direct current (d.c.) machines</p> <p>UEECD0044 Solve problems in multiple path circuits</p>

<p>UEEIC0031 Set up and configure human-machine interface (HMI) and industrial networks</p>	<p>UEECD0043 Solve problems in direct current circuits</p> <p>UEEIC0043 Solve problems in temperature measurement components and systems</p> <p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEEIC0029 Set up and adjust PID control loops</p> <p>UEEIC0030 Set up and adjust advanced PID process control loops</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0041 Solve problems in pressure measurement components and systems</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p> <p>UEEIC0039 Solve problems in flow measurement components and systems</p> <p>UEEIC0038 Solve problems in density/level measurement components and systems</p>
<p>UEEIC0030 Set up and adjust advanced PID process control loops</p>	<p>UEECD0043 Solve problems in direct current circuits</p> <p>UEEIC0043 Solve problems in temperature measurement components and systems</p> <p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p>

	<p>UEEIC0029 Set up and adjust PID control loops</p> <p>UEECD0046 Solve problems in single path circuits</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0041 Solve problems in pressure measurement components and systems</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p> <p>UEEIC0039 Solve problems in flow measurement components and systems</p> <p>UEEIC0038 Solve problems in density/level measurement components and systems</p> <p>UEECD0044 Solve problems in multiple path circuits</p>
UEEIC0036 Set up water analysis measuring and control instruments	<p>UEECD0043 Solve problems in direct current circuits</p> <p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0046 Solve problems in single path circuits</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p> <p>UEECD0044 Solve problems in multiple path circuits</p>

<p>UEECD0043 Solve problems in direct current circuits</p>	<p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p>
<p>UEEIC0048 Verify compliance and functionality of instrumentation and control installations</p>	<p>UEEIC0031 Set up and configure human-machine interface (HMI) and industrial networks</p> <p>UEECD0043 Solve problems in direct current circuits</p> <p>UEEIC0043 Solve problems in temperature measurement components and systems</p> <p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEEIC0029 Set up and adjust PID control loops</p> <p>UEEIC0030 Set up and adjust advanced PID process control loops</p> <p>UEECD0046 Solve problems in single path circuits</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0041 Solve problems in pressure measurement components and systems</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p> <p>UEEIC0039 Solve problems in flow measurement components and systems</p> <p>UEEIC0038 Solve problems in density/level measurement components and systems</p>

	UEECD0044 Solve problems in multiple path circuits
UEECD0045 Solve problems in multiple path extra-low voltage (ELV) a.c. circuits	<p>UEECD0043 Solve problems in direct current circuits</p> <p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0046 Solve problems in single path circuits</p> <p>UEECD0044 Solve problems in multiple path circuits</p>
UEERL0004 Disconnect - reconnect electrical equipment connected to low voltage (LV) installation wiring	UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
UEEHA0025 Install explosion-protected equipment and associated apparatus and wiring systems	<p>UEEHA0022 Determine the explosion-protection requirements to meet a specified classified hazardous area</p> <p>UEEHA0004 Enter a classified hazardous area to undertake work related to electrical equipment</p>
UEEIC0023 Install instrumentation and control cabling and tubing	<p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p>

<p>UEEIC0046 Troubleshoot process control systems</p>	<p>UEECD0043 Solve problems in direct current circuits</p> <p>UEEIC0043 Solve problems in temperature measurement components and systems</p> <p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEEIC0029 Set up and adjust PID control loops</p> <p>UEEIC0030 Set up and adjust advanced PID process control loops</p> <p>UEECD0046 Solve problems in single path circuits</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0041 Solve problems in pressure measurement components and systems</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p> <p>UEEIC0039 Solve problems in flow measurement components and systems</p> <p>UEEIC0038 Solve problems in density/level measurement components and systems</p> <p>UEECD0044 Solve problems in multiple path circuits</p>
<p>UEEEEC0060 Repairs basic electronic apparatus faults by replacement of components</p>	<p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0019 Fabricate, assemble and dismantle utilities industry components</p>

UEEIC0013 Develop, enter and verify discrete control programs for programmable controllers	UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
UEEIC0039 Solve problems in flow measurement components and systems	<p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0041 Solve problems in pressure measurement components and systems</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p>
UEEIC0043 Solve problems in temperature measurement components and systems	<p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p>
UEEIC0033 Set up gas analysis measuring and control instruments	<p>UEECD0043 Solve problems in direct current circuits</p> <p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0046 Solve problems in single path circuits</p>

	<p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p> <p>UEECD0044 Solve problems in multiple path circuits</p>
UEEHA0026 Maintain equipment associated with hazardous areas	<p>UEEHA0022 Determine the explosion-protection requirements to meet a specified classified hazardous area</p> <p>UEEHA0004 Enter a classified hazardous area to undertake work related to electrical equipment</p>
UEEIC0045 Troubleshoot medical equipment control systems	UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
UEECD0020 Fix and secure electrotechnology equipment	UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
UEEIC0029 Set up and adjust PID control loops	<p>UEECD0043 Solve problems in direct current circuits</p> <p>UEEIC0043 Solve problems in temperature measurement components and systems</p> <p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p>

	<p>UEEIC0041 Solve problems in pressure measurement components and systems</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p> <p>UEEIC0039 Solve problems in flow measurement components and systems</p> <p>UEEIC0038 Solve problems in density/level measurement components and systems</p>
UEEIC0004 Calibrate, adjust and test measuring instruments	<p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p>
UEECD0019 Fabricate, assemble and dismantle utilities industry components	UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
UEEHA0022 Determine the explosion-protection requirements to meet a specified classified hazardous area	UEEHA0004 Enter a classified hazardous area to undertake work related to electrical equipment
UEECD0050 Use and maintain the integrity of a portable gas detection device	UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEEEEC0069 Troubleshoot digital sub-systems	<p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEEEEC0060 Repairs basic electronic apparatus faults by replacement of components</p>
UEEIC0021 Find and rectify faults in process final control elements	<p>UEEIC0022 Install instrumentation and control apparatus and associated equipment</p> <p>UEEIC0023 Install instrumentation and control cabling and tubing</p> <p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p>
UEECD0016 Document and apply measures to control WHS risks associated with electrotechnology work	<p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p>
UEEIC0041 Solve problems in pressure measurement components and systems	<p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p>

<p>UEEIC0037 Set up weighting measuring and control instruments</p>	<p>UEECD0043 Solve problems in direct current circuits</p> <p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0046 Solve problems in single path circuits</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p> <p>UEECD0044 Solve problems in multiple path circuits</p>
<p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p>	<p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p>
<p>UEEIC0035 Set up scientific analysis measuring and control instruments</p>	<p>UEECD0043 Solve problems in direct current circuits</p> <p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0046 Solve problems in single path circuits</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p>

	UEECD0044 Solve problems in multiple path circuits
UEEIC0022 Install instrumentation and control apparatus and associated equipment	<p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p>
UEEIC0038 Solve problems in density/level measurement components and systems	<p>UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>UEEIC0041 Solve problems in pressure measurement components and systems</p> <p>UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals</p>

Qualification Mapping Information

Current Code and Title	Previous Code and Title	Comments	Equivalence
UEE31225 Certificate III in Instrumentation and Control	UEE31220 Certificate III in Instrumentation and Control	This qualification replaces and is equivalent to UEE31220 Certificate III in	Equivalent

		Instrumentation and Control	
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Links

Companion volumes, including implementation guides, are found in TGA -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>