



**Australian Government**

# **UEECD0016 Document and apply measures to control WHS risks associated with electrotechnology work**

**Release: 2**

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## **Modification History**

Release 2. This minor update is the second release of this unit of competency in the UEE Electrotechnology Training Package.

Duplicate content removed from Knowledge Evidence.

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

## **Application**

This unit involves the skills and knowledge required to identify, document and apply work health and safety (WHS)/occupational health and safety (OHS) hazard and risk control measures associated with electrotechnology work.

It includes identifying workplace hazards, assigning levels of risk, developing control measures to eliminate and/or mitigate risks, reviewing risk control measures and maintaining documentation of hazards, risk control measures and their application in accordance with compliance procedures.

This unit addresses information, processes and techniques for the application of WHS/OHS, specific to working in the electrotechnology sector and is essential for workers without managerial or supervisory responsibilities.

Typically, this unit will relate to the type of job being undertaken, electrical conditions, energy levels, radiation levels, toxic substances, airborne particles, pressure discharge, explosive atmosphere, worksite location, general worksite conditions, specific work location, moving parts, tools and equipment, workers competence and/or capacity and/or personal effects.

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

## **Pre-requisite Unit**

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

## **Competency Field**

Cross Discipline

## Unit Sector

Electrotechnology

## Elements and Performance Criteria

### ELEMENTS

### PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

#### **1 Identify and document hazards and risks associated with electrotechnology work**

- 1.1** Hazards are identified and documented by undertaking a job analysis and worksite inspection in consultation with relevant person/s and in accordance with workplace procedures
- 1.2** Risks associated with identified hazards are assessed in consultation with relevant person/s, taking into account existing control measures and documented in accordance with workplace procedures

#### **2 Assign levels of risk and develop and document control measures**

- 2.1** Level of risk is assessed and prioritised for each identified hazard in consultation with relevant/s persons and in accordance with regulations and WHS/OHS workplace compliance procedures
- 2.2** Control measures for identified hazards are determined by applying the hierarchy of control and activities to eliminate and/or mitigate the risk
- 2.3** Level of risk is re-assessed to confirm the required control measures reduce the risk level to as low as reasonably practicable
- 2.4** Hazards risk level and control measures are agreed to in consultation with relevant stakeholders and documented in accordance with workplace procedures

#### **3 Monitor, review and document risk control measures**

- 3.1** Documented control measures are recorded in workplace risk register and made available for reference by relevant person/s
- 3.2** Control measures are reviewed and modified, as required, in consultation with relevant person/s in accordance with workplace procedures
- 3.3** Document and apply measures to control WHS/OHS risks associated with electrotechnology work

- 3.4 Changes and updates are made to relevant documentation, risk register as additional hazards are identified
- 3.5 Documentation of hazards, risks control measures and their application are filed in accordance with workplace procedures

## Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

## Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Documenting and applying WHS risks must be demonstrated in relation to electrotechnology installation, testing, inspection, fault finding, maintenance or development work functions and include the following:

- relevant WHS/OHS legislation, regulations and codes of practice related to devices and systems and hazards present in residential, commercial and industrial workplaces
- accepted industry work procedures and the specific safety procedures and work instructions for a particular workplace or organisation

## Unit Mapping Information

This unit replaces and is equivalent to UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work.

## Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

# **Assessment Requirements for UEECD0016 Document and apply measures to control WHS risks associated with electrotechnology work**

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## **Performance Evidence**

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- applying measures to control work health and safety (WHS)/occupational health and safety (OHS) risks, including:
  - identifying hazards by job analysis and/or work-site inspection
  - documenting hazards
  - determining risks associated with identified hazards
  - determining the degree of risk in consultation with relevant person/s and in accordance with workplace requirements and documenting the level of risk
  - working with a group to identify effective hazard control measures
  - working with a group to modify and/or develop safe work methods
  - utilising the hierarchy of control to develop reasonably practicable control measures to eliminate or control risk
  - reassessing the level of risk and documenting the reassessed level of risk
  - documenting control measures
  - updating worksite risk register
  - monitoring, reviewing relevant control measure documentation to ensure control measures remain valid
  - reviewing job-specific and/or worksite processes to ensure control measures remain valid
  - identifying job-specific and/or worksite changes and modifying hazard, risk and control measure documentation
  - following workplace requirements for filing control measure documentation
  - identifying practical control measures for dealing with the hazards on a construction worksite
  - identifying practical control measures for dealing with the hazards of low voltage (LV)

equipment

- identifying practical control measures for dealing with the hazards of high voltage (HV).

## Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- risk management and assessment of risks, including:
  - principle and purpose of risk management
  - processes for conducting a risk assessment
  - hazard identification by job analysis and work-site inspection
  - recording hazards and assessing risk
- recognising and assigning a level of risk, including:
  - high (potential to kill or permanent disability)
  - medium (potential to cause an injury or illness of a permanent nature)
  - low (potential to cause a minor injury requiring first aid but no permanent disability)
  - the likelihood of an incident happening
  - risk level matrix
- identifying control measures to eliminate or control risk, including:
  - hierarchy of control measures
  - what constitutes a reasonably practicable control measure
  - monitoring and reviewing processes to ensure control measures remain valid
- control measure documentation, including:
  - job safety analysis (JSAs)
  - safe work method statements (SWMS)
  - risk registers
  - relevant industry standards
- construction site hazards, risks and control measures, including:
  - manual and mechanical handling
  - noise, dusts, gases and chemicals
  - working at heights
  - working in confined spaces
  - harmful airborne contaminants: fibres of thermal insulation, fibrous cement materials, asbestos, silica and other fibres in insulation materials
  - harmful devices: laser equipped devices, gas torches and welding equipment
  - harmful materials: gases including refrigerants, industrial cleaning agents, fibres of optical cable, thermal insulation, glues and other setting agents
- hazards, risks and control measures associated with HV, including:
  - control measures used for dealing with the hazards of HV

- parts of an electrical system and equipment where HV is likely
- the terms ‘touch voltage’, ‘step voltage’, ‘induced voltage’, ‘stored energy’ and ‘creepage’ as they relate to the hazards of HV
- Australian and New Zealand Standards (AS/NZS) requirements for safety services and issues related to HV installations
- consultation and the requirement for the use of authorised personnel for undertaking isolations, maintenance and reporting of faults (including permit requirements)
- hazards, risks and control measures associated with LV equipment, including:
  - risks in modifying electrical installations, fault finding, maintenance and repair
  - control measures before, while and after working on electrical installations, circuits and equipment
  - isolation and tagging-off procedures
  - risks, restrictions and control measures for working live
  - alternate supplies
- hazards associated with extra-low voltage (ELV), LV and high currents, including:
  - arrangement of power distribution and circuits in electrical installations
  - parts of an electrical system and equipment that operate at LV and ELV, and, where high currents are likely
- hazards, risks and control measures associated with disconnecting and reconnecting electrical equipment, including:
  - isolation and tagging-off procedures
  - alternate supplies (back-up supply and changeover switches).

## Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

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.

Resources for assessment must include access to:

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

## Links

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