



Australian Government

Assessment Requirements for UEECD0019 Fabricate, assemble and dismantle utilities industry components

Release: 1

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Modification History

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

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 relevant work health and safety (WHS)/occupational health and safety (OHS) requirements
- applying sustainable energy work practices to reduce waste when marking out
- complying with relevant electrical regulations and legislations
- consulting with work supervisor
- correctly marking, tagging and storing components during dismantling
- dealing with unplanned events in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- drawing freehand mechanical components showing all information needed for its manufacture/fabrication
- fabricating, dismantling, assembling utilities industry components, including:
 - applying safety procedures when using holding and cutting tools
 - cutting a thread on metallic components
 - demonstrating safe use of a bench drill
 - dismantling electrical, electronic, instrumentation or refrigeration/air conditioning piece of equipment using correct procedures
 - assembling electrical, electronic, instrumentation or refrigeration/air conditioning piece of equipment using correct procedures
 - drilling metallic and non-metallic components
 - fabricating components using sheet metal and fabrication tools
- following manufacturer guides and instructions
- following work instructions
- holding and cutting materials accurately
- interpreting and completing workplace documentation
- interpreting mechanical drawings/diagrams and instructions used in the electrotechnology industry
- joining components using correct method and equipment
- laying out a drawing of mechanical components using engineering drawing convention

- marking out, cut, bend, drill and join sheet metal
- measuring, calculating and marking out a project accurately in accordance with workplace procedures
- selecting and using portable power tools correctly and safely
- selecting and using relevant hand tools correctly and safely
- tapping and threading metallic and/or non-metallic components
- using vernier calipers and micrometers to measure components
- maintaining a clean worksite and equipment
- modifying metal enclosures
- demonstrating safe drilling practices
- modifying plastic enclosures
- performing quality checks
- planning for dismantling, assembling and fabrication work.

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:

- mechanical drawing interpretation and sketching, including:
 - industry drawing standards of mechanical components
 - abbreviations and symbols used in drawing of mechanical components
 - interpretation of mechanical drawings commonly used in the electrotechnology industry (orthogonal projection, third angle - detail and assembly drawings, and pictorial views)
 - laying out a drawing of mechanical components using engineering drawing convention
 - freehand drawings of mechanical components showing all information needed for its manufacture/fabrication
- workshop planning and materials, including:
 - methods used to work safely in an industrial work environment
 - typical non-electrical hazards in the workplace
 - control measures for dealing with hazards identified
 - type of metallic and non-metallic materials used in the electrotechnology industry and application of the common materials
 - planning process
- measuring and marking out, including:
 - reasons for measuring and marking out
 - sustainable energy work practices related to reducing waste when marking out
- holding and cutting materials, including:
 - procedures for using a range of tools for cutting, shaping, and finishing metallic and non-metallic materials
 - safety procedures when using holding and cutting tools

- drills and drilling, including:
 - types of drills used in the electrotechnology industry
 - drilling metallic and non-metallic components
 - safe use of a bench drill
- tapping and threading including type and size of commonly used threads used in electrotechnology work
- general hand tools used in electrotechnology work
- joining techniques, including:
 - machine screws
 - welding, brazing or soldering techniques
- portable power tools in electrotechnology work, including:
 - applications of portable power tools
 - using portable power tools
 - fabricating components using power tools
 - requirements for testing and tagging cord connected electrical equipment
- compressed gas operated tools in electrotechnology work
- sheet metal work, including:
 - types of sheet metal materials used in the electrotechnology work
 - names and applications of the types of fabrication materials
 - techniques used in fabricating sheet metal, including cutting, bending, drilling/punching, joining and cutting mitres
 - marking out, cutting, bending, drilling and/or cutting and/or punching holes, joining and cutting mitred joints using sheet metal
 - sustainable energy work practices to reducing waste when fabricating using sheet metal
- low tolerance measurement, including:
 - tolerance
 - techniques in using vernier callipers and micrometers
- dismantling and assembly techniques, including procedures for ensuring the safe treatment of dismantled components
- relevant tools for specific tasks, including:
 - tapping and threading
 - general hand tools used in electrotechnology work
 - joining
 - portable electric power tools
 - dismantling and assembly techniques
 - measuring and marking out
 - holding and cutting metallic and non-metallic materials
 - sheet metal work

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

Companion Volume implementation guides are found in VETNet - -

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