



Australian Government

**Assessment Requirements for UEECD0004
Apply material science to solving
electrotechnology engineering problems**

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 and performance criteria on at least two separate occasions and include:

- applying material science to developing solutions to electrotechnology problems
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including
 - using risk control measures
- considering environment and health risks in resolving electrotechnology problems
- dealing with unplanned situations in accordance with WHS/OHS and approval from relevant person/s
- documenting proposed solutions and justification
- obtaining the scope of electrotechnology problem and materials to be used
- obtaining tools, equipment and testing devices
- interpreting results to identify material science solutions to electrotechnology problems
- using testing devices
- using test and measurement results to identify material science solutions.

Knowledge Evidence

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

- problem-solving techniques
- relevant classification, nature and physical properties of materials used in electrotechnology
- relevant environment and health issues
- relevant job safety assessments or risk mitigation processes
- relevant manufacturer specifications and operating instructions
- relevant material processing and manufacturing
- relevant material science
- relevant tests and measurement
- relevant tools, equipment and testing devices
- relevant WHS/OHS legislated requirements

- relevant workplace documentation, including
 - solution report
- relevant workplace instruction, policies and procedures.

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 suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated suitable 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 simulations
- relevant and appropriate materials, tools, facilities and equipment currently used in industry
- resources that reflect current industry practices in relation to material science in electrotechnology
- 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>