



Australian Government

**Assessment Requirements for UEECD0049
Use advanced computational processes to
provide solutions to energy sector
engineering problems**

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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, including
 - using risk control measures
- completing work and documenting problem-solving activities
- dealing with unplanned events in accordance with problem-solving techniques and workplace procedures
- documenting justification of solutions provided
- obtaining known constants and variables
- providing computational solutions to energy sector engineering problems
- solving problems using appropriate mathematical processes
- stating problems in written and diagrammatic form.

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:

- problem-solving techniques
- relevant advanced engineering mathematics, including:
 - differential calculus
 - differential equations
 - integral calculus
 - linear algebra
 - number
 - sequences and series
 - statistics

- variables
- vectors
- relevant constants and variables
- relevant diagrammatic form
- relevant industry standards
- relevant manufacturer specifications
- relevant job safety assessments or risk mitigation processes
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- 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, facilities, tools, equipment and personal protective equipment (PPE) currently used in industry
- resources that reflect current industry practices in relation to using advanced computational processes for energy sector engineering problems
- applicable documentation, including workplace procedures, equipment specifications, regulations, relevant industry standards, 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>