Australian Government

# UEECD0049 Use advanced computational processes to provide solutions to energy sector engineering problems

**Release: 1**

# UEECD0049 Use advanced computational processes to provide solutions to energy sector engineering problems

## Modification History

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 use advanced computational processes to provide solutions to energy sector engineering problems.

It includes providing solutions to energy sector engineering problems, applying problem-solving techniques, using a range of advanced mathematical processes, providing solutions to problems and completing documentation.

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

UEECD0039 Provide solutions to basic engineering computational problems

## 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 Provide solutions to engineering problems** | **1.1** Work health and safety (WHS)/occupational health and safety (OHS) processes and workplace procedures for a given work area are identified, obtained and applied |

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|---|---|---|
| | **1.2** | Scope of problems are obtained from documentation and/or work instruction to solve problems |
| | **1.3** | Problems are documented and/or provided in diagrammatic form and appropriate methods identified to resolve them |
| | **1.4** | Constants and variables to problems are obtained from measured values and/or problem documentation |
| | **1.5** | Alternative methods for resolving problems are reviewed and, as required, discussed with relevant person/s |
| | **1.6** | Problems are resolved using mathematical processes in accordance with workplace procedures |
| **2 Complete work and documentation** | **2.1** | Justification for solutions used to solve engineering problems is documented in work records in accordance with workplace procedures and relevant industry standards |
| | **2.2** | Work completion is documented and relevant person/s notified 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 UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Engineering diagnosis development and work functions must include at least the following:

- working safety
- applying problem-solving techniques
- using a range of advanced mathematical processes
- provision of electrical/electronic engineering problems solutions
- solutions justification

# Unit Mapping Information

This unit replaces and is equivalent to UEENEEE127A Use advanced computational processes to provide solutions to energy sector engineering problems.

# Links

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