



**Australian Government**

**UEECD0004 Apply material science to  
solving electrotechnology engineering  
problems**

**Release: 1**

# UEECD0004 Apply material science to solving electrotechnology 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 apply material science to solving electrotechnology engineering problems.

It includes identifying and solving electrotechnology engineering problems using material science. It also includes applying knowledge of materials science and documenting justification for solutions.

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

## Pre-requisite Unit

Not applicable

## Competency Field

Cross Discipline

## Unit Sector

Electrotechnology

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

#### 1 Identify electrotechnology problem/s

### PERFORMANCE CRITERIA

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

**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

**1.2** WHS/OHS risk control work preparation measures and

- workplace procedures are followed
- 1.3 Scope of electrotechnology problem and material for the environment are obtained and applied from documentation and/or work supervisor
  - 1.4 Tools, equipment and testing devices required for work are obtained and checked for correct operation and safety
- 2 Apply material science to developing solutions**
- 2.1 WHS/OHS risk control work measures and workplace procedures are followed
  - 2.2 Tests and measurements are undertaken in accordance with WHS/OHS requirements and workplace procedures
  - 2.3 Tests, measurements and results are used to identify material science solutions to electrotechnology problems
  - 2.4 Effects on environments, materials and health risks are considered in resolving electrotechnology problems
  - 2.5 Unplanned situations are dealt with in accordance with WHS/OHS and approval of relevant person/s
- 3 Report solution/s**
- 3.1 Proposed solutions to electrotechnology problems are documented with justification for the solutions
  - 3.2 Identified health risks exposed by a material and/or application is documented in workplace report
  - 3.3 Proposed solution report is forwarded to relevant person/s 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.

Applying material science from the workplace • electrotechnology problems

must include:

## **Unit Mapping Information**

This unit replaces and is equivalent to UEENEEE081A Apply material science to solving electrotechnology engineering problems.

## **Links**

Companion Volume implementation guides are found in VETNet - -

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