



**Australian Government**

# **UEECS0027 Provide programming solution for computer systems engineering problems**

**Release: 1**

# UEECS0027 Provide programming solution for computer systems 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 provide programming solutions for computer systems engineering problems.

It includes identifying and developing programming solutions and documenting development activities.

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

## Pre-requisite Unit

Not applicable

## Competency Field

Computer Systems

## Unit Sector

Electrotechnology

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

#### **1 Prepare to identify computer systems engineering problem**

### 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 understood
- 1.2** WHS/OHS risk control measures and workplace procedures are followed in preparation for the work

- 1.3** Scope of engineering programming problem is determined from performance specifications and/or documentation and in consultation with relevant person/s
  - 1.4** Activities are planned in accordance with workplace procedures for timelines in consultation with others involved
  - 1.5** Software development tools are selected based on programming requirements and performance specification
  - 1.6** Activities are implemented to ensure programming is carried out in accordance with workplace procedures
- 2 Develop programming solutions**
  - 2.1** WHS/OHS risk control measures and workplace procedures for carrying out the work are followed
  - 2.2** Demonstrated structured programming functions and features are applied to provide a programming solution
  - 2.3** Code in programs are analysed and modifications and/or corrections are made to rectify engineering programming problem
  - 2.4** Key features of the programming language are applied to develop and test solutions
  - 2.5** Unplanned issues/problems are analysed and effective solutions identified in accordance with workplace procedures
  - 2.6** Quality of work is monitored in accordance with workplace procedures and/or relevant industry standards
- 3 Test and document the programming solutions**
  - 3.1** Test methods are developed to analyse code in accordance with relevant programming language and workplace procedures
  - 3.2** Problems and errors in program are rectified in accordance with program performance requirements and relevant industry standards
  - 3.3** Intermediate and final documentation are completed and relevant person/s notified in accordance with relevant industry standards and 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.

## Unit Mapping Information

This unit replaces and is equivalent to UEENEED151A Provide programming solution for computer systems engineering problems.

## Links

Companion Volume implementation guides are found in VETNet - -

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