



**Australian Government**

# **UEECD0060 Write specifications for electrotechnology engineering projects**

**Release: 1**

# UEECD0060 Write specifications for electrotechnology engineering projects

## 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 write specifications for electrotechnology engineering projects.

It includes preparing and writing specifications for electrotechnology engineering projects. It also includes obtaining approval of final specification.

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 Prepare engineering specification requirements**

### 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** Engineering techniques for specification writing are reviewed and implemented in accordance with

|          |                                         |                                                                                                                                                      |
|----------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                         | workplace procedures                                                                                                                                 |
|          | <b>1.3</b>                              | Scope of the engineering specification is identified using a formal evaluation/survey process                                                        |
|          | <b>1.4</b>                              | Related works impacting on the specification are determined from relevant documentation, site visits and/or discussion with relevant person/s        |
| <b>2</b> | <b>Write engineering specification</b>  |                                                                                                                                                      |
|          | <b>2.1</b>                              | Engineering specification scenarios/requirements are developed in consultation with relevant person/s in accordance with relevant industry standards |
|          | <b>2.2</b>                              | Engineering specification is developed in collaboration with relevant design professionals and contractors involved in the project                   |
|          | <b>2.3</b>                              | Relevant person/s required for the project is identified and roles specified in the specification                                                    |
|          | <b>2.4</b>                              | Engineering specification is reviewed with inputs and adjusted to rectify any anomalies                                                              |
|          | <b>2.5</b>                              | Engineering specification is developed in accordance with workplace procedures                                                                       |
| <b>3</b> | <b>Obtain approval of specification</b> |                                                                                                                                                      |
|          | <b>3.1</b>                              | Engineering specification is presented and discussed with relevant person/s                                                                          |
|          | <b>3.2</b>                              | Alterations to the engineering specification are negotiated with relevant person/s in accordance with workplace procedures                           |
|          | <b>3.3</b>                              | Specification is finalised and approval obtained from relevant person/s                                                                              |

## 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.

Developing specifications must include at least one medium-sized electrotechnology engineering project with the following attributes:

- safety requirements met
- client expectations established
- cost-effective solutions pursued and assured
- design and technical requirements documentation

## Unit Mapping Information

This unit replaces and is equivalent to UEENEEE084A Write specifications for electrotechnology engineering projects.

## Links

Companion Volume implementation guides are found in VETNet - -

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

# Assessment Requirements for UEECD0060 Write specifications for electrotechnology engineering projects

## Modification History

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## 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 one occasion and include:

- establishing the scope and parameters of the specification
- determining the impact of other related works
- developing the specification incorporating scenarios and all requirements
- identifying competencies required for the specification
- writing specifications
- negotiating alterations to the proposed specification successfully
- obtaining approval of the final specification
- dealing with unplanned events
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including using risk control measures
- identifying roles in specification
- preparing specification requirements
- using a formal evaluation/survey process.

## 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:

- electrotechnology engineering specification development and writing, including:
  - engineering specifications encompassing:
    - purpose and nature of specification
    - performance-based specifications
    - prescriptive specifications
    - acceptable evidence of compliance
    - additional service required with the supply of equipment
  - dealing with suppliers and manufacturers encompassing:
    - documenting specification

- customer/client relations encompassing:
  - importance of customer/client relations
  - interpersonal skills that enhance customer/client relationships
  - dispute resolution
  - customer/client relations strategies
- basic computer functions encompassing:
  - starting up
  - selecting application
  - entering information
  - saving
  - printing
- research skills encompassing:
  - terminology - terminology used in a research workplace and terminology used in research-specific literature
  - theory – why conduct research - the history of research, past research successes, past research failures, research protocols and research practices
  - the research environment - the research work environment; standard research practices; industrial, legal, ethical, political and market environment considerations; legislation and regulation; and contractual obligations of all parties
  - planning to conduct research - concept development and/or research brief analysis; research objectives; research deliverables; research project plan; literature reviews; methodology development, including experimental design, technology selection and information management system selection
  - clients - identifying client viewpoints and stake in project; identifying client requirements and parameters; determining research budgets, timelines, milestones and quality attributes with clients
  - research, development and commercialisation - research and development goals versus commercialisation goals and realities; research and development to inspire a commercialisation process
- relevant design professional/s and contractor/s
- relevant engineering techniques
- relevant evaluation/survey processes
- relevant industry standards
- relevant manufacturer specifications
- relevant job safety assessments or risk mitigation processes
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace 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 writing specifications for electrotechnology engineering projects
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

## Links

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