



Australian Government

UEECD0054 Write specifications for electronics and communications engineering projects

Release: 1

UEECD0054 Write specifications for electronics and communications 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 electronics and communications engineering projects.

It includes preparing specification to meet client expectations, consulting with relevant person/s and/or information sources and documenting design with approval of relevant person/s.

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 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) requirements and workplace procedures for a given work area are identified, obtained and applied
- 1.2** Techniques for specification writing are reviewed and

- applied in accordance with workplace procedures
- 1.3** Scope of the specification is determined using formal evaluation/survey processes
 - 1.4** Criteria from related works impacting specification are determined from relevant documentation, site visits and/or discussions with relevant person/s
- 2 Write specification**
- 2.1** Specification is developed with scenarios/requirements in consultation with relevant person/s in accordance with relevant industry standards
 - 2.2** Specification is developed in collaboration with relevant design professionals and contractors involved in the project
 - 2.3** Relevant person/s required for the project is identified and roles specified in accordance with specification scope
 - 2.4** Specification is reviewed in accordance with specification scope inputs and adjusted to rectify anomalies
 - 2.5** Specification is developed in accordance with workplace procedures
- 3 Obtain approval of specification**
- 3.1** Specification is presented and discussed with relevant person/s
 - 3.2** Alterations to the specification resulting from discussions are negotiated with relevant person/s in accordance with workplace procedures
 - 3.3** 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 a specification for medium-sized electronics and communications engineering project must include at least one of the following attributes:

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

Unit Mapping Information

This unit replaces and is equivalent to UEENEEE072B Write specifications for electronics and communications 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 UEECD0054 Write specifications for electronics and communications engineering projects

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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 (WHS/OHS) requirements, including using risk control measures
- developing specification in accordance with workplace procedures
- preparing specification requirements
- reviewing specifications in accordance with specification scope inputs and adjusting to rectify anomalies.

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:

- electronics and communications engineering specification development and writing, including:
 - electronics and communications 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

- 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 - 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, and research and development to inspire a commercialisation process
- relevant industry and workplace documentation
- relevant manufacturer specifications
- relevant job safety assessments or risk mitigation processes
- relevant WHS/OHS legislated requirements
- 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 electronics and communications engineering projects
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

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