



Australian Government

Department of Education, Employment and Workplace Relations

UEENEEE012B Manage electrotechnology projects

Release: 2

UEENEEE012B Manage electrotechnology projects

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This unit covers the management of electrotechnology projects involving design, modifications, installation and or maintenance of systems and equipment. It encompasses management of safety, budget, variations, personnel, resources and critical path timelines and necessary progress and completion documentation.

Application of the Unit

Application of the Unit 2)

This unit is intended for competency development entry-level employment based programs incorporated in approved contracts of training. It is intended to apply to any formal recognition for this standard at the aligned AQF 5 level or higher.

Licensing/Regulatory Information

License to practice 3)

The skills and knowledge described in this unit do not require a license to practice in the workplace. However, practice in this unit is subject to regulations directly related to occupational health and safety and where applicable contracts of training such as apprenticeships.

Pre-Requisites

Prerequisite Unit(s) 4)

Competencies 4.1)

There are no prerequisite competencies for this unit.

Literacy and numeracy skills 4.2)

Participants are best equipped to achieve competency in this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 'Literacy and Numeracy'

Reading 5 Writing 5 Numeracy 5

Employability Skills Information

Employability Skills 5)

This unit contains Employability Skills

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.

Elements and Performance Criteria Pre-Content

6) Elements describe the essential outcomes of a unit of competency

Performance criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Establish the scope of the electrotechnology project.	1.1 OHS processes and procedures for a given work area are identified, obtained and understood.
	1.2 Project deliverables and budget are established from project planning and other relevant documentation and from discussions with appropriate person(s).
	1.3 Measurable outcomes are identified to evaluate the electrotechnology project on completion from project planning and other relevant documentation.
	1.4 Plant, materials and skills needed to meet project outcomes are established from project planning and other relevant documentation.
	1.5 Processes and procedures are developed for managing contract variations from discussions with appropriate person(s) and in accordance with contractual agreement.
2 Manage and implement the electrotechnology project.	2.1 OHS policies, procedures and programs are implemented and monitored.
	2.2 Achievement of electrotechnology project outcomes is delegated to appropriately competent persons involved in the project.
	2.3 Risk events are identified and project strategies implemented to ensure that outcomes are achieved to standard of quality specified in the contract and to safety standards required by organisation's policy.
	2.4 Procurement processes and procedures are monitored to ensure on-time supply of plant and materials and in accordance with organisation policy.
	2.5 Verification of the project technical design, modification, installation, and/or maintenance of system and equipment parameters is frequently made against specifications and established procedures.

ELEMENT	PERFORMANCE CRITERIA
3 Complete electrotechnology project.	2.6 Project is progress is monitored against schedule, quality requirements and budget.
	2.7 Conflict issues at the work site and between stakeholders, clients and regulators are identified and managed in accordance with organisation's policy.
	2.8 Variations are managed in accordance with agreed processes and in accordance with the contract.
	2.9 Project records are maintained and progress reports written and forwarded to all appropriate person(s).
	3.1 Project outcomes are reviewed against original plan, implemented risk strategies, contract variations, safety record and budget.
	3.2 Project completion acceptance is sought from appropriate person(s) and hand-over documented in accordance with organisation policy.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

8) This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of safe working practices and managing electrotechnology projects.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

KS01-EE012B

Electro project management

Evidence shall show an understanding of project management concepts and customer/client relations to an extent indicated by the following aspects:

T1 Defining project parameters

Note:

Examples may include: Project scope; Project stakeholders and clients; Project phases and the relationship between phases; Time requirements and limitations; Resource requirements and limitations; Quality requirements and limitations.

T2 Time management

Note:

Examples may include: time management concepts; standard practices for ensuring a project runs to time and the like.

T3 Financial management

Note.

Examples may include: Financial management concepts; Standard practices for managing project finances; Project budgets; Costs, variations and estimations; Invoicing against project phases/deliverables; Acquittals and the like.

T4 Quality management

Note.

Examples may include: Quality management concepts; Standard practices for managing quality within a project.

T5 Human Resource management

Note.

Examples may include: human resource management concepts; standard practices for managing personnel within a project

REQUIRED SKILLS AND KNOWLEDGE

T6 Communication management

Note.

Examples may include: Communication management concepts; Standard practices for managing communication within a project and the like.

T7 Risk management and contingencies

Note.

Examples may include: risk management concepts; standard practices for managing risk within a project; Internal risks; External risks; Risk minimisation; Risk removal; Contingencies and the like.

T8 Procurement management

Note.

Examples may include: procurement management concepts; standard practices for managing procurement and the like.

9 Physical Resource management

Note.

Examples may include: Types of physical resource, including; Equipment, Technology, Information, Facilities; Physical resource management concepts; Standard practices for managing physical resources

T10 Contracts

Note.

Examples may include: Understanding project contracts; Standard practices for working to contract specifications; Contract format; Contract content; Legal obligations of contract parties; Accompanying documentation including; Contract Schedules and the like.

T11 Performance assessment and continuous improvement

Note.

Examples may include: standard performance assessment practices; standard continuous improvement practices and the like

T12 Engineering ethics principles

T13 Importance of customer/client relations encompassing:

- Interpersonal skills that enhance customer/client
- Dispute resolution
- Customer/client relations strategies

Evidence Guide

EVIDENCE GUIDE

9) The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

The Evidence Guide forms an integral part of this unit. It must be used in conjunction with all parts of the unit and performed in accordance with the Assessment Guidelines of this Training Package.

Overview of Assessment

9.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the industry-preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accordance with industry and regulatory policy.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Sources of evidence need to be 'rich' in nature to minimise error in judgment.

Activities associated with normal everyday work have a bearing on the decision as to how much and how detailed the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practised. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included for Assessors in the Assessment Guidelines of this Training Package.

Critical aspects of 9.2)

EVIDENCE GUIDE

evidence required to demonstrate competency in this unit

Before the critical aspects of evidence are considered all prerequisites must be met.

Evidence for competence in this unit shall be considered holistically. Each element and associated performance criteria shall be demonstrated on at least two occasions in accordance with the 'Assessment Guidelines - UEE07'. Evidence shall also comprise:

- A representative body of work performance demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
 - Implement Occupational Health and Safety workplace procedures and practices, including the use of risk control measures as specified in the performance criteria and range statement
 - Apply sustainable energy principles and practices as specified in the performance criteria and range statement
 - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit. It may be required by some jurisdictions that RTOs provide a percentile graded result for the purpose of regulatory or licensing requirements.
 - Demonstrate an appropriate level of skills enabling employment
 - Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
 - Manage electrotechnology projects as described in 8) and including:
 - A Establishing the scope of the project accurately.
 - B Ascertaining the input of a project.
 - C Developing effective management processes.
 - D Managing resources and variations effectively.
 - E Resolving conflicts.
 - F Adopting risk management strategies.

EVIDENCE GUIDE

- G Maintaining records and submitting progress reports.
- H Meeting project outcomes.
- I Dealing with unplanned events by drawing on essential knowledge and skills to provide appropriate solutions incorporated in a holistic assessment with the above listed items.

Note:

Successful completion of relevant vendor training may be used to contribute to evidence on which competency is deemed. In these cases the alignment of outcomes of vendor training with performance criteria and critical aspects of evidence shall be clearly identified.

**Context of and
specific resources
for assessment**

9.3)

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed in this unit.

These should be used in the formal learning/assessment environment.

Note:

Where simulation is considered a suitable strategy for assessment, conditions for assessment must be authentic and as far as possible reproduce and replicate the workplace and be consistent with the approved industry simulation policy.

The resources used for assessment should reflect current industry practices in relation to managing electrotechnology projects.

EVIDENCE GUIDE**Method of
assessment****9.4)**

This unit shall be assessed by methods given in Volume 1, Part 3 'Assessment Guidelines'.

Note:

Competent performance with inherent safe working practices is expected in the Industry to which this unit applies. This requires that the specified essential knowledge and associated skills are assessed in a structured environment which is primarily intended for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and skills described in this unit.

**Concurrent
assessment and
relationship with
other units****9.5)**

There are no concurrent assessment recommendations for this unit.

Range Statement

RANGE STATEMENT

10) This relates to the unit as a whole providing the range of contexts and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

This unit shall be demonstrated in managing an electrotechnology project in relation to a program or an individual project involving design, modifications, installation and or maintenance of systems and equipment having the following attributes:

- management of safety
- budget
- variations
- personnel
- resources and critical path timelines
- necessary progress
- completion documentation

Generic terms used throughout this Vocational Standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms that apply are given in Volume 2, Part 2.1.

Unit Sector(s)

Not Applicable

Competency Field

Competency Field **11)**

Electrotechnology