



Australian Government

UEECD0064 Interpret, produce and modify electrotechnology drawings

Release: 1

UEECD0064 Interpret, produce and modify electrotechnology drawings

Modification History

Release 1. This is the first release of this unit of competency in the Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to interpret, produce and modify electrotechnology drawings.

It includes interpreting circuit, wiring and mechanical diagrams, equipment and cable/connection schedules and manuals; producing and modifying a range of electrical drawings; and using computer drawing packages to produce and modify drawings.

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 Interpret electrical drawings and diagrams

PERFORMANCE CRITERIA

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

- 1.1** Type of drawings and diagrams is determined from the nature of work to be undertaken
- 1.2** Relevant drawings, diagrams, site plans and cable/connection schedules or manuals required for the

work to be undertaken are determined and obtained

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| | 1.3 | Drawings, diagrams and cable/connection schedules are interpreted using drawing layouts, conventions and symbols |
| | 1.4 | Information is extracted from drawings and diagrams for application to the work to be undertaken |
| | 1.5 | Technical data of system components is interpreted |
| 2 Produce electrical drawings | 2.1 | Drawing conventions are applied in neat and legible freehand drawings to convey information and ideas relevant to the work to be undertaken |
| | 2.2 | Correct drawing/diagram type is produced in accordance with job requirements |
| | 2.3 | Technical data of system components to determine parameters is included in drawings |
| | 2.4 | Drawings are checked for accuracy and compliance with requirements |
| | 2.5 | Completed drawings are submitted to relevant person for review |
| 3 Modify electrical drawings | 3.1 | Drawing conventions are used to modify drawings in accordance with requirements |
| | 3.2 | Technical data of system components is modified in drawings |
| | 3.3 | Modified drawings are checked for accuracy and compliance with requirements |
| | 3.4 | Modified drawings are submitted to relevant person for review |
| 4 Use computer drawing packages | 4.1 | Relevant computer drawing package software is used to produce drawings based on industry standard protocols |
| | 4.2 | Relevant computer drawing package software is used to modify drawings based on industry standard protocols |
| | 4.3 | Drawings are checked for accuracy and compliance with requirements |
| | 4.4 | Completed drawings are stored in accordance with requirements |

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 Electrotechnology Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This is a new unit.

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 UEECD0064 Interpret, produce and modify electrotechnology drawings

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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 and performance criteria on at least two separate occasions and include:

- extracting information from drawings and diagrams
- interpreting drawings, diagrams and plans to determine the location of electrical/communication/audio accessories, appliances and cable runs
- using drawings, diagrams, cable/connection schedules, industry standards and codes of practice used in electrotechnology work
- interpreting drawings, diagrams, cable/connection schedules and manuals correctly
- using correct conventions in freehand drawings
- sketching and marking up basic circuit diagrams
- using drawings, diagrams, schedules and manuals to convey information and ideas and obtain job information
- producing the following:
 - circuit diagram
 - single line diagram
 - termination drawing
 - loop drawing
 - wiring diagram
 - block diagram
- marking up an existing printed drawing
- using a computer drawing package to:
 - produce a drawing
 - modify a drawing
- checking drawings for accuracy and compliance with job specifications.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- architectural and building construction drawings and diagrams, including:

- different types of drawings
- relevant information included in drawings and diagrams
- Australian standard symbols
- building types and their construction
- typical cable routes through buildings, structures, and premises
- circuit diagrams, including:
 - purpose of circuit diagrams in the electrotechnology industry
 - conventions used in and the features of circuit diagrams
 - common symbols used in circuit diagrams
- electrical drawings, including:
 - types of electrical drawings: block, circuit, wiring and ladder diagrams
 - purpose and application of block, circuit, wiring and ladder diagrams
 - Australian standard symbols used to represent components on electrical diagrams
 - identification of cable type, origin and route from a cable schedule
 - developing a cable schedule for a given installation
- wiring diagrams, including:
 - purpose of wiring diagrams in the electrotechnology industry
 - conventions used in and the features of wiring diagrams
 - common symbols used in wiring diagrams.
- computer drawing packages including:
 - features and capability
 - file management
 - symbols
 - drawing layout
 - commands
 - viewing and printing options.

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 workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated 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 other simulations
- relevant and appropriate materials, tools, software and equipment used in industry
- applicable documentation, including drawings, diagrams, specifications, codes of practice and operation manuals.

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