Australian Government

Assessment Requirements for UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

Release: 1

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Modification History

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

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 two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
  - identifying hazards
  - implementing and monitoring control measures
- dealing with unplanned events in accordance with workplace procedures
- extracting dimensions from drawings and diagrams
- reading and interpreting drawings, diagrams and plans to determine the location of electrical/communication/audio accessories and appliances
- using drawings, diagrams, cable/connection schedules, industry standards, codes of practice and specifications used in electrotechnology work, including:
  - giving correct information in freehand drawings
  - identifying and selecting drawings, diagrams, site plans, cable/connection schedules and manuals relevant to the work to be undertaken
  - interpreting drawings, diagrams, cable/connection schedules and manuals correctly
  - obtaining compliance standards and codes applicable to particular disciplines
  - reviewing and understanding the format of compliance standards and codes that apply to particular disciplines
  - reviewing the format and content of typical job specifications
  - using correct conventions in freehand drawings
- sketching and marking up basic circuit diagrams
- developing switching charts to identify the terminals of various types of switches
- using drawings, diagrams, schedules and manuals to:
  - connect equipment
  - convey information and ideas
  - obtain job information.

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:

- architectural drawings, including:
  - site plans, floor plans detailed drawings and standard drawings
  - architectural floor plans to determine the power and lighting or communications/audio/video layouts required in a domestic installation
  - site plans to locate the service point, consumer mains, communication services, main switchboard, distribution boards and/or builders supplies
  - standard drawing scales to determine the actual lengths represented by dimensions on an architectural drawing
  - Australian standard symbols used on floor plans to show the location of the accessories and appliances as detailed in an electrical schedule
- building construction drawings and diagrams, including:
  - building types: timber frame, brick veneer, double brick and metal frame
  - identification of different types of footings, floors, external walls, roofs and interior walls
  - typical cable routes through buildings, structures and premises
  - sequence of each constructional stage for brick, brick veneer and timber cottages
  - identification of the stages at which the electrical/communications - first and second fixing occurs in the constructional sequence
  - areas of cooperation between electrical/communications and other building trades
- 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 diagram
- electrical drawings, including:
  - types of electrical drawings: block, circuit, wiring and ladder diagrams
  - purpose and application of block, circuit, wiring diagrams and ladder diagrams
  - Australian standard symbols used to represent components on electrical diagrams
  - converting a circuit diagram to a wiring diagram
  - identification of cable type, origin and route from a cable schedule
  - developing a cable schedule for a given installation
- purpose, format and content of typical job specifications, including common templates on which job specifications are written
- regulations for undertaking electrical work, including legislative requirements for ensuring electrical or electronic equipment is safe i.e. compliance requirements of electrical installations
- scope of work covered by licensing in the electrotechnology industry (electrical licensing)
  - legislative requirements for ensuring electrical or electronic equipment is safe, including compliance requirements of electrical installations

- relevant WHS/OHS legislated requirements
- relevant workplace policies and procedures include risk mitigation process
- standards philosophy and format, including:
  - performance verses prescriptive requirements
  - purpose of technical standards and their development
  - role of Standards Australia/New Zealand, International Organisation for Standardisation (ISO) and the International Electrotechnical Commission (IEC)
  - how standards are used in compulsory and accreditation compliance schemes
  - arrangement and use of technical standards in relation to electrical and electronic work
  - how to read and apply a standard
  - standards and codes that apply to all types of electrical installations
  - standards mandated under regulation (e.g. Wiring Rules) or by an authority, deemed-to-comply standard and local service requirements (e.g. service rules)
  - codes applicable to electrical safe working practices and some aspects of the Building Code of Australia (BCA)
- 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.

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, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet - - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6