



Australian Government

UEECD0022 Identify building techniques, methods and materials used in energy sector work activities

Release: 1

UEECD0022 Identify building techniques, methods and materials used in energy sector work activities

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 identify building techniques, methods and materials used in energy sector work activities.

It includes preparing, identifying and confirming building techniques, methods and materials used. It also includes types of fixing devices, segregation requirements, fixing structures, walls and floor structures, lifting techniques and other related building materials.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

Competency Field

Cross Discipline

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to identify building techniques, methods and materials

PERFORMANCE CRITERIA

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

- 1.1** Instructions for identifying building techniques, methods and materials used in electrotechnology work are obtained and clarified
- 1.2** Work health and safety (WHS)/occupational health and

- safety (OHS) requirements and workplace procedures are identified and applied
- 1.3 Tools, equipment and personal protective equipment (PPE) required for work are obtained in accordance with workplace procedures and checked for correct operation and safety
 - 1.4 Identification of building techniques, methods and materials is coordinated with relevant person/s
 - 1.5 Resources and materials needed for work are confirmed, scheduled and obtained in accordance with workplace procedures
 - 1.6 Schedule for identifying building techniques methods and materials used, including practices for working safely, is confirmed in accordance with instructions and requirements
- 2 Identify building techniques, methods and materials**
- 2.1 Hazards are identified, risks assessed and control measures implemented
 - 2.2 Schedule to identify building techniques, methods and materials used is followed to ensure work is completed in an agreed time to a quality standard and with a minimum of waste
 - 2.3 Unplanned events are responded to in accordance with workplace procedures and approval of relevant person/s
 - 2.4 Ongoing checks of work quality are undertaken in accordance with instructions and requirements
- 3 Confirm building techniques, methods and materials used**
- 3.1 Final checks are made to confirm building techniques, methods and materials used conform with work instructions and job requirements
 - 3.2 Work completion is documented and relevant person/s notified in accordance with workplace procedures
 - 3.3 Tools, equipment, surplus resources and materials are cleaned, checked and returned to storage in accordance with workplace procedures
 - 3.4 Sustainable energy practices are followed and work area is cleaned and made safe

3.5 Relevant documents and records are updated in accordance with workplace procedures

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.

Unit Mapping Information

This unit replaces and is equivalent to UEENEEE147A Identify building techniques, methods and materials used in energy sector work activities.

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 UEECD0022 Identify building techniques, methods and materials used in energy sector work activities

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 and performance criteria on at least one occasion and include:

- understanding work instructions
- obtaining and checking tools and equipment
- following work schedules
- returning tools and surplus resources as required
- updating work records
- dealing with unplanned events
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including the use of risk control measures
- applying sustainable energy principles and practices
- confirming building techniques, methods and materials used
- identifying building techniques, methods and materials.

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:

- energy sector science and materials, including:
 - trade calculations encompassing:
 - mathematical techniques
 - relevant calculations
 - linear measurement, areas, volumes and ratios
 - engineering mechanics encompassing:
 - base physical International System of Units (SI), their applications in engineering calculations in relation to physical quantities and associated formulae
 - mass, velocity, acceleration, force, weight, density and angles
 - energy/work/power
 - moments/torque

- centre of gravity
- mechanical advantage
- levers
- pulley blocks
- efficiency
- friction
- vectors
- resolution of forces
- forces in strung conductors
- forces on poles and towers
- determination of sag
- pressure/stress
- elementary fluid mechanics
- engineering materials encompassing:
 - classification
 - ferrous and non-ferrous metals
 - steels and alloys
 - properties
 - tensile strength
 - temperature and expansion in metals
 - stress and strain
 - ductility
 - applications
 - corrosion
 - galvanic corrosion
 - hardwoods and soft woods
- relevant manufacturer specifications
- relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures
- sustainable energy principles and practices.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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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.

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