



Australian Government

Assessment Requirements for UEEDV0005 Install and maintain cabling for multiple access to telecommunication services

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:
 - applying safe working practices
 - using risk control measures
- accessing and interpreting telecommunication systems diagrams
- planning cable route within building constraints
- checking tools, equipment and testing devices for correct operation and safety
- laying and connecting cables for multiple access to telecommunication services, including:
 - terminating cabling at both distributor and outlet locations and at least one more than 50 pair and one up to 20 pair copper cable and one 4 pair cable
 - installing and terminatinng two jumperable distributor with a capacity of 100 pair or greater
 - allowing excess cable to terminate
 - labelling outlet ends in accordance with industry standards
 - securing cables in accordance with industry standards
 - reading and interpreting drawings related to cable layouts, outlet location, cable coding system, identifiers and distributor locations
 - installing and termination a network termination device (NTD)
- determining earthing requirements and earthing conductors within resistance limitations
- segregating and protecting telecommunications reference conductors (TRC)/communications earth systems (CES)/protectice earth (PE) wires against damage
- installing surge suppression devices
- completing documentation in accordance with industry standards and telecommunications carrier requirements
- terminating and testing cables
- commissioning a telecommunications cabling system.

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:

- customer interfaces, devices and system distribution
- installation and termination requirements, including:
 - Australian Communications and Media Authority (ACMA) regulations and requirements
 - technical standards
 - relevant manufacturer specifications
 - compliance with current Australian Standards, including AS/CA S009 Installation requirements for customer cabling (Wiring Rules)
- Cabling Provider Rules, including:
 - cabling registrars, auditors and inspectors
 - mandatory and voluntary requirements for cabling work
 - registration
- general installation requirements, including:
 - Cabling Provider Rules requirements
 - earth potential rise
 - catenary cabling systems
 - optical fibre and coaxial cabling systems
 - conduits
- cable distribution devices, including:
 - cable distribution devices
 - clearances
 - general requirement
- network boundaries, including:
 - terminations
 - hazards
 - regulations
- indoor cabling, including:
 - general requirements for indoor cabling
 - required minimum clearances
 - damp situations
 - cables in lift and hoist shafts
- underground cabling, including:
 - requirements for underground cabling
 - minimum depth cover
 - protection of underground cabling
 - segregation from other services

- aerial cabling, including:
 - requirements for aerial cabling
 - minimum clearances
 - segregation requirements
- earthing protection, including:
 - earthing requirements
 - function of earthing
 - TRC/CES/PE purposes
 - TRC/CES earthing installation tests
 - earthing systems
 - earthing of equipment
 - equipotential bonding
- surge suppression and system purpose, types and operation
- miscellaneous regulations, including:
 - cabling in heritage buildings
 - cabling in public places
 - cabling in hazardous areas
- cable identification, including:
 - plans and drawing
 - labelling
 - documentation
- telecommunication cable types including:
 - construction
 - transmission characteristics
 - applications
- cable installation, including:
 - hazards
 - cable damage prevention
 - cable dispensers
 - cable enclosures
 - types
 - fixing
 - regulations
 - distribution boxes and back mounts
- techniques for general cable installation, including:
 - correct cable length for termination
 - cable identification and labelling
 - unique label outlet ends of cable match identifier
 - cable damage prevention
 - fixing of cables to support systems

- maintaining ground clearance and hazardous clearances
- techniques to terminate and test, including:
 - removal of cable sheath
 - install terminating modules
 - terminate conductors
 - termination boundaries
- earthing concepts, including:
 - earthing cable shield
 - testing
 - earth of metallic barriers
 - purpose of earth testing instruments
 - earth potential rise
 - earthing test procedures
 - interpretation of results
- cable shielding and interference, including:
 - electromagnetic interference (EMI)/radio frequency interference (RFI) principles
 - sources
 - reduction techniques
 - earthing cable shields
 - interference segregation
- end-to-end testing, including:
 - pair termination integrity
 - cable pairs labelling
 - surge suppression devices
- hazards, including:
 - electronic components and circuits
 - printed circuit boards
 - physical
 - static discharge
 - chemical.

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
- two jumperable distributor with a capacity of 100 pair or greater
- a cable in excess of 20 pair, a cable of 20 pair or less and a 4 pair
- 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>