



Australian Government

Assessment Requirements for UEEEC0001 Analyse the performance of wireless-based electronic communication systems

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:

- analysing wireless-based electronic system performance
- applying sustainable energy principles and practices
- dealing with unplanned situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- determining effective strategies for analysing wireless-based electronic system performance
- determining wireless-based electronic systems performance issues
- documenting analysis details of all findings, calculations and assumptions
- documenting justification of actions to be implemented in accordance with professional standards
- evaluating results of wireless-based electronic communication system analysis
- implementing relevant work health and safety (WHS)/occupational health and safety (WHS/OHS) requirements, workplace procedures and practices, including the use of risk control measures
- obtaining wireless-based electronic systems performance parameters, specifications and performance requirements appropriate to each situation.

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:

- fundamentals of wireless security, including:
 - access points
 - antennas
 - application design and site survey preparation
 - bridges
 - emerging technologies
 - network interface cards (NICs)

- security
- troubleshooting, management, monitoring and diagnostics
- wireless topologies
- networking fundamentals, including:
 - encoding networking signals
 - how information is carried
 - internet services
 - local area network (LAN) architectures
 - network signal propagation
 - networking protocols and the open systems interconnection (OSI) model
 - signal distortion, including attenuation, reflection, noise, dispersion, jitter, latency and collisions, and bit error rate
 - transmission control protocol (TCP)/internet protocol (IP)
 - types of networks, network components and hardware
- relevant industry standards, codes of practice and regulations of Australian Communications and Media Authority (ACMA)
- relevant risk mitigation processes
- relevant manufacturer specifications
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures
- wireless-based electronic communications system performance, principles and practices
- wireless networks infrastructure, including network configurations and wireless network security.

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 suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated suitable 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 simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry

- resources that reflect current industry practices in relation to analysing the performance of wireless-based electronic systems
- 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>