



Australian Government

Assessment Requirements for UEEEC0063

Solve fundamental electronic communications system problems

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

- applying fundamental knowledge of communication system characteristics, components and transmission media to resolving system problems
- applying measured values in verifying system operation and determining any corrective actions required
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, workplace procedures and practices, including using risk control measures
- applying sustainable energy principles and practices
- dealing with unplanned events/situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- providing written justification for solutions used
- solving predictable system problems
- using logical and methodical approaches to solving system problems
- using test equipment to measure communication system parameters and modulated signal characteristics.

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:

- analogue and digital modulation applications
- communications system principles
- notion and application of the decibel ratio (dB)
- optical communications system elements and transmission media characteristics
- principles of amplitude based (AM), frequency based (FM) and phase based (PM) modulation
- radio spectrum fundamentals, including signal and noise considerations
- radio frequency (RF) communications system elements and basic antenna principles
- relevant manufacturer specifications

- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedure
- safety considerations for optical and RF communications systems.

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 suitable 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 simulations
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment (PPE) currently used in industry
- resources that reflect current industry practices in relation to solving fundamental problems in electronic communications 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>