



Australian Government

Assessment Requirements for UEECD0015 Develop engineering solutions to photonic system problems

Release: 1

Assessment Requirements for UEECD0015 Develop engineering solutions to photonic system problems

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
 - using risk control measures
- dealing with unplanned events in accordance with problem-solving techniques and workplace procedures
- determining photonic system problems
- developing engineering solutions for photonic system problems
- documenting instruction for implementation of solutions
- documenting justification of solutions implemented
- forming strategies for solution development and implementation
- implement engineering solutions for photonic system problems
- obtaining photonic system parameters, specifications and performance requirements
- preparing to develop engineering solution for photonic system problems
- testing and solving photonic system problems.

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:

- problem-solving techniques
- relevant development and implementation strategies
- relevant industry standards
- relevant manufacturer specifications
- relevant photonic principles and applications, including:
 - components for wavelength-division multiplexing (WDM) systems
 - concepts of optical transmission

- environmental advantages and impacts of optical technology
- geometric optics
- introduction to photonic components
- operating principles of optical couplers and their characteristics
- operational principles of key photonic devices
- photonic components and component technologies
- photonic components and their roles in photonic devices
- relevant job safety assessments or risk mitigation processes
- relevant testing techniques
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace instruction, quality, policies and procedures.

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, facilities, tools and equipment currently used in industry
- resources that reflect current industry practices in relation to developing engineering solutions to photonic system problems
- 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>