



Australian Government

Assessment Requirements for UEEEC0017 Develop engineering solutions to analogue electronic problems

Release: 1

Assessment Requirements for UEEEC0017 Develop engineering solutions to analogue electronic 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 risk identification, assessment, reporting and control requirements
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including the use of risk control measures
- coordinating work with relevant person/s
- dealing effectively with unplanned events
- determining the extent of the analogue electronic problem
- identifying effective strategies for solution development and implementation
- obtaining analogue electronic parameters, specifications and performance requirements appropriate to each problem
- recording implementation instructions for solutions, including risk controls
- reporting justification for solutions implemented in accordance with professional standards
- testing solutions to analogue electronic 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:

- active filters
- advanced power amplifiers
- amplifiers with given piecewise linear transfer characteristics
- classes of power amplifiers and typical maximum efficiencies for each class
- comparator circuits (open loop, limited swing and hysteresis) using operational amplifiers
- differential amplifiers using discrete components (transistors) to meet system objective
- operation and building of precision half-wave and full-wave rectifiers
- operation of each class and type of power amplifier circuit
- operational amplifier circuits
- oscillators

- relevant job safety assessments or risk mitigation processes
- relevant manufacturer specifications
- relevant standards, codes and regulations
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures
- single-stage analogue electronics.

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, equipment and personal protective equipment (PPE) currently used in industry
- resources that reflect current industry practices in relation to developing solutions to analogue electronic 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>