



Australian Government

Assessment Requirements for UEEEC0014

Design signal-conditioning sub-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 and performance criteria on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements
- constructing signal-conditioning sub-systems prototype
- dealing with unplanned situations in accordance with workplace procedures
- developing outlines of alternative designs
- developing the design within the safety and functional requirements, and budget constraints
- documenting and presenting design effectively
- negotiating design alteration requests
- planning to design signal-conditioning sub-systems
- reading and interpreting design brief.

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:

- comparator circuits (open loop, limited swing and hysteresis) using operational amplifiers
- design brief specifications and work requirements
- differential amplifiers of suitable characteristics
- feedback control systems basics
- operational amplifier circuits
- principles of signal conditioning
- relevant industry standards, regulations, codes of practice and WHS/OHS legislated requirements
- relevant job safety assessments or risk mitigation processes
- relevant manufacturer specifications
- relevant workplace documentation
- relevant workplace policies and procedures
- sensors and transducers.

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 and equipment currently used in industry
- resources that reflect current industry practices in relation to designing signal-conditioning sub-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>