



Australian Government

Assessment Requirements for UEECS0012 Design embedded controller control 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:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - using risk control measures
- constructing and testing prototype devices and circuits
- dealing with unplanned situations in accordance with problem-solving techniques and workplace procedures
- designing and developing embedded systems
- developing alternative designs
- developing the design within safety, functional and budget requirements
- documenting and presenting design
- negotiating design alteration requests
- obtaining approval for embedded systems design
- obtaining approval for final design
- preparing to design and develop embedded systems.

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:

- relevant manufacturer specifications
- relevant materials, tools, equipment and testing devices and components
- relevant microprocessor assembly language and high-level language programming, including:
 - complex data types and structures
 - central processing unit (CPU) architecture
 - documentation
 - interfacing high-level languages to assembler

- interrupt service routines
- modular programming
- processor and system support
- relevant problem-solving techniques
- relevant job safety assessments or risk mitigation processes
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace instructions, 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, tools, facilities and equipment currently used in industry
- resources that reflect current industry practices in relation to designing embedded controller 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>