



Australian Government

MEAENG0002 Apply basic scientific principles and techniques in avionic engineering situations

Release: 1

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Modification History

Release 1. Application changed. Elements and Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA706 Apply basic scientific principles and techniques in avionic engineering situations.

Application

This unit describes the skills and knowledge required to identify and apply basic avionic scientific principles and techniques to avionic engineering situations. This includes identifying the range of basic avionic scientific principles and techniques, selecting avionic principles and techniques for particular applications, applying avionic principles and techniques to engineering tasks, and quoting results appropriately.

This unit applies to members of a design and development team or similar who support the design and development of avionic applications, or to those working within a maintenance organisation engineering department.

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Civil Aviation Safety Authority (CASA) and the Defence Aviation Safety Authority (DASA).

Any other relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

MEM23004A Apply technical mathematics

Competency Field

Avionic engineering

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Research and identify the range of basic scientific principles and techniques	1.1 Research appropriate sources of information relating to avionic engineering 1.2 Examine applications and report on the basic scientific principles relating to avionic engineering

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	1.3 Identify basic avionic techniques and associated technologies, software and hardware required to implement scientific principles relating to avionic engineering situations
2. Select avionic scientific principles and techniques	2.1 Select the relevant basic avionic scientific techniques and principles for particular avionic engineering situations 2.2 Select the associated technologies, software and hardware for particular avionic engineering situations
3. Apply the basic avionic scientific principles and techniques	3.1 Apply the basic avionic scientific principles in a consistent and appropriate manner to obtain required solution 3.2 Use appropriate calculations and coherent units in the solution of engineering calculations 3.3 Use significant figures in engineering calculations 3.4 Apply the basic avionic techniques and associated technologies, software and hardware in a consistent and appropriate manner to obtain required solutions
4. Quote the results of the application of the basic avionic scientific principles and basic techniques	4.1 Quote the solution for applications involving engineering calculations in accordance with organisation style requirements 4.2 Quote the solution for applications not involving engineering calculations in accordance with organisation style requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Numeracy skills to quote solutions and use engineering calculations.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEA706 Apply basic scientific principles and techniques in avionic engineering situations.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>