



Australian Government

**MEAENG0001 Apply basic scientific
principles and techniques in aeronautical
engineering situations**

Release: 1

MEAENG0001 Apply basic scientific principles and techniques in aeronautical engineering situations

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 MEA705 Apply basic scientific principles and techniques in aeronautical engineering situations.

Application

This unit describes the skills and knowledge required to identify and apply basic aeronautical scientific principles and techniques to aeronautical engineering situations. This includes identifying the range of aeronautical scientific principles and techniques, selecting aeronautical principles and techniques for applications, applying aeronautical 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 aeronautical applications or to those working within the engineering department of an aircraft maintenance organisation.

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

Aeronautical 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	1.1 Research and report on the basic scientific principles relating to aeronautical engineering from appropriate sources of information and examination of applications

techniques	1.2 Identify the basic aeronautical techniques and associated technologies, software and hardware required to implement scientific principles relating to aeronautical engineering situations
2. Select aeronautical scientific principles and techniques	2.1 Select the relevant basic aeronautical scientific techniques and principles for aeronautical engineering situations 2.2 Select the associated technologies, software and hardware for particular aeronautical engineering situations
3. Apply the basic aeronautical scientific principles and techniques	3.1 Apply the basic aeronautical 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 aeronautical 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 aeronautical 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 MEA705 Apply basic scientific principles and techniques in aeronautical 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>