



**Australian Government**

# **MEA60418 Advanced Diploma of Aeronautical Engineering**

**Release: 1**

# MEA60418 Advanced Diploma of Aeronautical Engineering

## Modification History

Release 1. Supersedes and equivalent to MEA60415 Advanced Diploma of Aeronautical Engineering. Unit codes updated.

## Qualification Description

This qualification applies to individuals employed in senior paraprofessional engineering and in managerial positions in both the Civil Aviation Safety Authority (CASA) and Australian Defence Force (ADF) regulatory environments in the fields of aeronautical engineering and engineering management. It should also be noted that many of the positions applicable to this qualification also have airworthiness regulatory requirements regarding prior aviation experience.

There are a total of forty-four (44) units of which twenty-four (24) are core units and the remainder are electives from which units must be chosen in accordance with the selection guidance provided.

This qualification applies to workplaces that operate under the airworthiness regulatory systems of the ADF and CASA. Any regulatory/licensing requirements associated with any MEA units of competency must be met.

## Entry Requirements

Not applicable.

## Packaging Rules

To be awarded the MEA60415 Advanced Diploma of Aeronautical Engineering, competency must be demonstrated in a total of **twenty-eight (28)** or **thirty-one (31)** units of competency, consisting of:

- **twenty-four (24)** core units
- either **four (4)** or **seven (7)** elective units chosen from Group A.

### Core units of competency

Unit code	Unit title	Prerequisites
MEA107	Interpret and use aviation maintenance industry manuals and specifications	

Unit code	Unit title	Prerequisites
MEA135	Use computers in aviation maintenance-related integrated logistic support activities	
MEA142	Manage self in the aviation maintenance environment	
MEA153	Communicate aviation technical and maintenance management knowledge	
MEA154	Apply work health and safety practices in aviation maintenance	
MEA155	Plan and organise aviation maintenance work activities	MEA154
MEA156	Apply quality standards during aviation maintenance activities	MEA154, MEA107
MEA157	Complete aviation maintenance industry documentation	
MEA158	Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance	
MEA162	Write aviation technical publications	
MEA296	Use electrical test equipment in aviation maintenance activities	MEA154, MEA155 MEA156, MEA107 MEA157, MEA158
MEA327	Fabricate and/or repair aircraft mechanical components or parts	MEA154, MEA155 MEA156, MEA107 MEA157, MEA158
MEA701	Produce aeronautical engineering related graphics	MEA162 MEM30007A MEM30012A
MEA703	Apply aeronautical modelling for computer-aided engineering	MEA701
MEA705	Apply basic scientific principles and techniques in aeronautical engineering situations	MEM23004A
MEA707	Select and test aeronautical engineering materials	

Unit code	Unit title	Prerequisites
MEA709	Apply aeronautical structure design techniques	MEA701, MEA703 MEA705, MEA707 MEM23004A MEM23007A
MEA710	Apply aeronautical system design techniques	MEA701, MEA703 MEA705 MEM23004A
MEA713	Integrate aeronautical fundamentals into an engineering task	MEA705 MEM23004A MEM23007A
MEM23004A	Apply technical mathematics	
MEM23007A	Apply calculus to engineering tasks	MEM23004A
MEM30007A	Select common engineering materials	
MEM30012A	Apply mathematical techniques in a manufacturing engineering or related environment	
MSMENV672	Develop workplace policy and procedures for environmental sustainability	

### Elective units of competency

#### Group A

- Take either **four (4)** or, where either the Diploma of Aeronautical Engineering or the Certificate IV in Aeroskills (Mechanical) is not held, **seven (7)** of the elective units listed below. Units should be selected, where applicable, using the guidance in column 4.

Unit code	Unit title	Prerequisites	Unit selection guidance
MEA127	Provide technical advice in the maintenance and management of aircraft and aeronautical product	MEA705 MEA707	Applicable to the CASA regulatory environment
MEA128	Provide engineering advice in	MEA705, MEA707	Applicable to the

Unit code	Unit title	Prerequisites	Unit selection guidance
	the modification, maintenance and management of aircraft systems		ADF regulatory environment
MEA129	Investigate technical aspects of aviation occurrences		Applicable to the ADF regulatory environment
MEA143	Develop and manage maintenance error management programs		Applicable to the CASA regulatory environment
MEA164	Perform airworthiness management and maintenance program tasks		Applicable to the CASA regulatory environment
MEA399	Lay out and set up aircraft systems	MEA154	Must be taken if Certificate IV in Aeroskills (Mechanical) or Diploma of Aeronautical Engineering is not held
MEA341	Apply basic aircraft design characteristics	MEA154, MEA107 MEA158	Must be taken if Certificate IV in Aeroskills (Mechanical) or Diploma of Aeronautical Engineering is not held
MEA342	Apply basic aircraft power plant design characteristics	MEA154, MEA107 MEA158	Must be taken if Certificate IV in Aeroskills (Mechanical) or Diploma of Aeronautical Engineering is not held
MEA715	Evaluate aeroplane flight control systems	MEA710 MEM23004A	Choose in accordance with

Unit code	Unit title	Prerequisites	Unit selection guidance
		MEM23007A	employment field
MEA718	Evaluate rotorcraft flight control systems	MEA710 MEM23004A MEM23007A	Choose in accordance with employment field
MEA720	Evaluate aircraft gas turbine engine power plants	MEA710 MEM23004A MEM23007A	Choose in accordance with employment field
MEA721	Evaluate aircraft hydro-mechanical systems	MEA710 MEM23004A MEM23007A	Choose in accordance with employment field
MEA722	Evaluate aircraft piston engine power plants	MEA710, MEM23004A MEM23007A	Choose in accordance with employment field
MEA723	Evaluate aircraft pneumatic systems	MEA710 MEM23004A MEM23007A	Choose in accordance with employment field
MEA724	Evaluate aircraft structure	MEA709 MEM234019A MEM234022A	Choose in accordance with employment field
MEA729	Apply configuration management procedures in airworthiness engineering management	MEA135, MEA163	Choose in accordance with employment field
MEA730	Apply systems engineering procedures to airworthiness engineering design project management	MEA135, MEA162	Choose in accordance with employment field
MEA731	Perform aircraft weight control activities		
MEM22013A	Coordinate engineering projects		

<b>Unit code</b>	<b>Unit title</b>	<b>Prerequisites</b>	<b>Unit selection guidance</b>
MEM234019A	Apply finite element analysis in engineering design		Required if MEA724 is taken
MEM234022A	Apply advanced calculus to technology problems		Required if MEA724 is taken

## Qualification Mapping Information

Release 1. Supersedes and equivalent to MEA60415 Advanced Diploma of Aeronautical Engineering.

## Links

Companion Volume implementation guides are found in VETNet -  
<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?docId=ce216c9c-04d5-4b3b-9bcf-4e81d0950371&n=Aeroskills%20Training%20Package>