



Australian Government

MEA60415 Advanced Diploma of Aeronautical Engineering

Release 1

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Modification History

Release 1 - New qualification

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
MEA101	Interpret work health and safety practices in aviation maintenance	
MEA103	Plan and organise aviation maintenance work activities	MEA101, MEA105 MEA107, MEA108
MEA105	Apply quality standards applicable to aviation maintenance processes	MEA101, MEA107
MEA107	Interpret and use aviation maintenance industry manuals and specifications	
MEA108	Complete aviation maintenance industry documentation	MEA105
MEA109	Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance	MEA105, MEA108
MEA133	Communicate aviation technical and maintenance knowledge	
MEA135	Use computers in aviation maintenance-related integrated logistic support activities	
MEA137	Write aviation maintenance technical publications	MEA135
MEA142	Manage self in the aviation maintenance environment	
MEA260	Use electrical test equipment	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA327	Fabricate and/or repair aircraft mechanical components or parts	MEA101, MEA103 MEA105, MEA107

Unit code	Unit title	Prerequisites
		MEA108, MEA109
MEA701	Produce aeronautical engineering related graphics	MEA137 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	
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	
MSAENV672B	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 the modification, maintenance and management of aircraft systems	MEA705, MEA707	Applicable to the 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
MEA147	Perform airworthiness management and maintenance program tasks	MEA137	Applicable to the CASA regulatory environment
MEA340	Lay out and set up aircraft systems	MEA101, MEA107 MEA109	Must be taken if Certificate IV in Aeroskills (Mechanical) or Diploma of Aeronautical Engineering is not held
MEA341	Apply basic aircraft design characteristics	MEA101, MEA107 MEA109	Must be taken if Certificate IV in Aeroskills (Mechanical) or Diploma of Aeronautical Engineering is not held
MEA342	Apply basic aircraft power	MEA101, MEA107	Must be taken if

Unit code	Unit title	Prerequisites	Unit selection guidance
	plant design characteristics	MEA109	Certificate IV in Aeroskills (Mechanical) or Diploma of Aeronautical Engineering is not held
MEA715	Evaluate aeroplane flight control systems	MEA710 MEM23004A MEM23007A	Choose in accordance with 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, MEA138	Choose in accordance with employment field

Unit code	Unit title	Prerequisites	Unit selection guidance
MEA730	Apply systems engineering procedures to airworthiness engineering design project management	MEA135, MEA137	Choose in accordance with employment field
MEM22013A	Coordinate engineering projects		
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

No equivalent qualification

Links

MSA Training Package Implementation Guides - <http://mskills.org.au/training-packages/info/>