Australian Government

MEA60518 Advanced Diploma of Avionic Engineering

Release: 1

MEA60518 Advanced Diploma of Avionic Engineering

Modification History

Release 1. Supersedes and equivalent to MEA60515 Advanced Diploma of Avionic 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 the Australian Defence Force (ADF) regulatory environments in the fields of avionic 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-three (43) units of which twenty-eight (28) 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 MEA60518 Advanced Diploma of Avionic Engineering, competency must be demonstrated in a total of **thirty-two (32)** or **thirty-four (34)** units of competency, consisting of:

- **twenty-eight (28)** core units
- **four (4)** or **six (6)** elective units from Group A chosen in accordance with the unit selection guidelines.

Core units of competency

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

Unit code	Unit title	Prerequisites
	manuals and specifications	
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	
MEA201	Remove and install miscellaneous aircraft electrical hardware/components	MEA154, MEA155 MEA156, MEA107 MEA157, MEA158
MEA246	Fabricate and/or repair aircraft electrical hardware or parts	MEA201, MEA296
MEA261	Use electronic test equipment	MEA154, MEA155 MEA156, MEA107 MEA157, MEA158
MEA262	Modify/repair aircraft component single layer printed circuit boards	MEA296, MEA261
MEA296	Use electrical test equipment in aviation maintenance activities	MEA154, MEA155 MEA156, MEA107 MEA157, MEA158

Unit code	Unit title	Prerequisites
MEA702	Produce aeronautical engineering related graphics	MEA162 MEM30007A MEM300012A
MEA704	Apply avionic modelling for computer-aided engineering	MEA702
MEA706	Apply basic scientific principles and techniques in avionic engineering situations	MEM23004A
MEA708	Select and test avionic engineering materials	
MEA711	Apply avionic analogue design techniques	MEA702, MEA708 MEA714, MEA725
MEA712	Apply avionic digital design techniques	MEA702, MEA708 MEA714, MEA725
MEA714	Integrate avionic fundamentals into an engineering task	MEA706, and MEM23004A, Plus MEM23007A OR MEA726
MEA725	Apply advanced scientific principles and techniques in avionic engineering situations	MEA706, MEA727
MEA727	Apply calculus in avionic engineering situations	MEM23004A
MEM23004A	Apply technical mathematics	
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 **four (4)** of the elective Advanced Diploma/Diploma common and paraprofessional engineering units listed below. Where applicable, units should be selected using the guidance in column 4. In addition, take the **two (2)** additional units as indicated if either the Diploma of Avionic Engineering or the Certificate IV in Aeroskills (Avionics) is not held.

Unit code	Unit title	Prerequisites	Unit selection guidance
MEA127	Provide technical advice in the maintenance and management of aircraft and aeronautical product	MEA705 and MEA707 OR MEA706 and MEA708	Applicable to the CASA regulatory environment
MEA128	Provide engineering advice in the modification, maintenance and management of aircraft systems	MEA705 and MEA707 OR MEA706 and MEA708	Applicable to the ADF regulatory environment
MEA129	Investigate technical aspects of aviation occurrences		Applicable to the ADF regulatory environment
MEA163	Perform aviation technical publication management activities		
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
MEA270	Lay out avionic systems	MEA154, MEA107, MEA158	Must be taken if Certificate IV in Aeroskills (Avionics) or the Diploma of Avionic Engineering is not held

Unit code	Unit title	Prerequisites	Unit selection guidance
MEA271	Lay out avionic flight management systems	MEA154, MEA107, MEA158, MEA270	Must be taken if Certificate IV in Aeroskills (Avionics) or the Diploma of Avionic Engineering is not held
MEA716	Evaluate avionic analogue systems	MEA711, MEA727	
MEA717	Evaluate avionic digital systems	MEA712, MEA727	
MEA719	Evaluate aircraft electrical systems	MEA726	
MEA726	Apply aircraft electrical system design techniques	MEA702, MEA706, MEA708, MEA714, MEA725	
MEA729	Apply configuration management procedures in airworthiness engineering management	MEA135, MEA163	
MEA730	Apply systems engineering procedures to airworthiness engineering design project management	MEA135, MEA162	
MEM22013A	Coordinate engineering projects		

Qualification Mapping Information

Release 1. Supersedes and equivalent to MEA60515 Advanced Diploma of Avionic 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