

FIELD ENGINEERING AND TECHNOLOGY**Review of *Aeronautical Engineering* unit standards**

Subfield	Domain	Id
Aeronautical Engineering	Aeronautical Armament	4047
	Aeronautical Engineering - Core	3894-3897, 5428
	Aeronautical Machining	4028, 4034
	Aeronautical Storekeeping	15885-15889
	Aircraft Furnishings and Equipment	4006
	Aircraft Mechanical Maintenance	3921, 7243, 7244
	Aircraft Mechanical Repair and Overhaul	7242
	Aircraft Painting	4012
	Aircraft Powerplant Maintenance	3410, 3413
	Aircraft Servicing	3901, 3903, 3906, 3907, 3910, 3916, 3923
	Aircraft Structures	4074, 4075, 4078
	Helicopter Maintenance	4060, 4062-4064

The Aviation, Tourism and Travel Training Organisation has completed the review of the unit standards listed above that were registered in June 1995, May 1996, May 1999, August 1999, and October 2000. Feedback received from the assessment and moderation process indicated that a review was necessary.

Date new versions published

April 2006

Planned review date

December 2011

Summary of review and consultation process

This review is the first stage of several to review all of the unit standards within the Aeronautical Engineering subfield.

During 2003, the Aviation, Tourism and Travel Training Organisation carried out a review of a large number of unit standards in conjunction with a consultative group that represented a number of large and small aeronautical engineering companies, several training providers and legislative bodies. Drafts of the new and reviewed unit standards developed were circulated through this group and to wider industry for feedback and consultation, which required several further drafts to be developed to accommodate the needs of as many stakeholders as possible.

Following some extensive delays during the consultation and evaluation process, a subcommittee of the original consultative group was formed in April 2005 to work through the issues that had been raised. This subcommittee evaluated the changes made by the original group and determined that a number of the unit standards required further consultation and these have been removed for further development during a later stage of the Aeronautical Engineering Review. The Aeronautical Engineering Advisory Group has endorsed the remaining unit standards that make up this review.

Main changes resulting from the review

The review process has resulted in the following changes to the unit standards.

- Unit standard 3910 was replaced by 20633 and 20634
- Unit standard 3916 was replaced by 20629 and 20630
- Unit standard 3923 was replaced by 20631 and 20632
- The credit value of unit standards 4063, 4064, 4074, 4078 and 7244 have been amended to more accurately reflect the content and amount of time taken to assess them
- The level of unit standards 3894 and 3896 have been changed
- Prerequisites in the entry information of unit standards 3896 have had unit standard 2824 replaced by Unit 21911, *Demonstrate knowledge of safety on engineering worksites* and Unit 21912, *Apply safe working practices on an engineering worksite*.
- A new element has been added to unit standard 15888 and the title has been amended to reflect this
- The titles of unit standards 3410, 3413, 3901, 3903, 3906, 4028, 4062, 4074, 4075, 5428, 7244 and 15888 have been amended
- Amendments have been made to elements, performance criteria, range statements and special notes.

Unit standards categorised as category C expire at the end of December 2007.

Impact on existing provider accreditations

Current Accreditation for			Accreditation extended to		
Nature of accreditation	Classification or Id	Level	Nature of accreditation	Classification or Id	Level
Standard	3910	3	Standard	20633, 20634	3

Impact on Accreditation and Moderation Action Plan (AMAP)

AMAP 0028 has been updated to reflect the changes made to the standards.

Impact on existing qualifications

Qualifications that contain the reviewed standards or classifications are tabled below.

Affected	The qualification lists a reviewed classification (domain or subfield) in an elective set The qualification lists a standard that has changes to level or credits The qualification lists a C or D category standard
Not materially affected	The qualification lists a standard that has a new title The qualification lists a standard that has a new classification

In the following tables, qualifications that contain unit standards and classifications in both categories are identified are identified in the *Affected* table, with the items that generated the *Affected* status in **bold**.

The following Aviation, Tourism and Travel Training Organisation qualifications are affected by the outcome of this review and will be reviewed in 2006 following the completion of the review of the unit standards in the Aeronautical Engineering subfield.

Qualification title	Classification or standard in the qualification
National Certificate in Aircraft Servicing [Ref: 0171]	3894, 3896 , 3901, 3903, 3910, 3916, 3923 , 5428
National Certificate in Aeronautical Engineering (Support) with strands in Aeronautical Composites, Aeronautical Machining, Aeronautical Non Destructive Testing, Aircraft Furnishings and Equipment, Aircraft Mechanical, Aircraft Painting, Aircraft Powerplant, Aircraft Structures, Armament, Avionics, Metal Surface Finishing, and Rotorcraft [Ref: 0191]	3894, 3896 , 5428
National Certificate in Aeronautical Engineering with strands in Aeronautical Non Destructive Testing, Armament, Avionics, Aircraft Mechanical, Aircraft Powerplant, Rotorcraft, and Aircraft Structures [Ref: 0192]	3894, 3896 , 5428
National Certificate in Aeronautical Engineering (Related Technology) [Ref: 0381]	3894, 3896, 4074, 4078 , 5428, 7244
National Certificate in Aeronautical Storekeeping [Ref: 0618]	15888
National Certificate in Aeronautical Engineering (Aircraft Manufacture) [Ref: 0742]	3894, 3896 , 3901, 3903, 4028, 4074, 4078

Summary of main changes to standards' Ids, classification, titles, levels, and credits

The following summary shows the changes made to the standards as a result of the review. All changes are in **bold**.

Key to review category

- A** Dates changed, but no other changes are made - the new version of the standard carries the same Id and a new version number
- B** Changes made, but the overall outcome remains the same - the new version of the standard carries the same Id and a new version number
- C** Major changes that necessitate the registration of a replacement standard with a new Id
- D** Standard will expire and not be replaced

Subfield Aeronautical Engineering
Domain Aeronautical Armament

Id	Title	Level	Credit	Review Category
4047	Transport explosive ordnance	4	8	B

Domain Aeronautical Engineering - Core

Id	Title	Level	Credit	Review Category
3894	Use aeronautical industry publications and documentation	2 3	6	B
3895	Apply aeronautical engineering maintenance practices	3	20	B
3896	Select, use, and maintain aeronautical engineering tools and equipment	2 3	10	B
3897	Apply avionic trade practices and locate defects	3	10	B
5428	Demonstrate understanding of aircraft construction and maintenance practices Demonstrate knowledge of aircraft construction and maintenance practices	2	14	B

Domain Aeronautical Machining

Id	Title	Level	Credit	Review Category
4028	Repair and/or fabricate aeronautical components using grinding machines Repair and/or fabricate aeronautical components using precision grinding machines	4	15	B
4034	Repair and/or fabricate aeronautical components using turning machines	4	15	B

Domain Aeronautical Storekeeping

Id	Title	Level	Credit	Review Category
15885	Receive aviation parts and/or materials from suppliers	3	10	B
15886	Dispatch aviation parts and/or materials	3	6	B
15887	Store and pick aviation parts and/or materials	3	10	B
15888	Carry out special handling and storage procedures for aviation parts and/or materials Carry out special handling, storage and disposal procedures for aviation parts and/or materials	3	10	B
15889	Purchase aviation parts and/or materials and/or services	3	10	B

Domain Aircraft Furnishings and Equipment

Id	Title	Level	Credit	Review Category
4006	Maintain and/or repair parachutes and associated equipment	4	15	B

Domain Aircraft Mechanical Maintenance

Id	Title	Level	Credit	Review Category
3921	Maintain aircraft landing gear systems	4	12	B
7243	Demonstrate knowledge of aircraft mechanical system maintenance practices	3	12	B
7244	Demonstrate knowledge of electrical applications to aircraft mechanical systems Demonstrate knowledge of electrical and electronic applications to aircraft mechanical systems	3	10 11	B

Domain Aircraft Mechanical Repair and Overhaul

Id	Title	Level	Credit	Review Category
7242	Demonstrate knowledge of aircraft mechanical component repair and overhaul practices	3	8	B

Domain Aircraft Painting

Id	Title	Level	Credit	Review Category
4012	Apply aeronautical decals	3	2	B

Domain Aircraft Powerplant Maintenance

Id	Title	Level	Credit	Review Category
3410	Maintain aircraft reciprocating power plants Maintain aircraft reciprocating powerplants	4	20	B
3413	Maintain aircraft gas turbine power plants Maintain aircraft gas turbine powerplants	4	20	B

Domain Aircraft Servicing

Id	Domain	Title	Level	Credit	Review Category
3901	Aircraft Servicing	Clean an aircraft exterior Clean aircraft exterior surfaces	3	2	B
3903	Aircraft servicing	Clean an aircraft interior Clean aircraft interiors	3	2	B
3906	Aircraft Servicing	Service fixed winged aircraft Service fixed wing aircraft	3	4	B
3907	Aircraft Servicing	Carry out aircraft ground handling	3	4	B
3910	Aircraft Servicing	Refuel and defuel aircraft	3	2	C
20633 and 20634	Aircraft Mechanical Maintenance Aircraft Servicing	Defuel aircraft	3	2	
		Refuel aircraft	3	2	
3916	Aircraft Servicing	Replenish aircraft water and waste systems	3	2	C
20629 and 20630	Aircraft Servicing Aircraft Servicing	Replenish aircraft potable water systems	3	1	
	Aircraft Servicing	Service aircraft toilet systems	3	2	
3923	Aircraft Servicing	Lift, trestle or shore, and lower an aircraft	3	4	C
20631 and 20632	Aircraft Servicing Aircraft Servicing	Lift and lower an aircraft	3	2	
	Aircraft Mechanical Maintenance	Trestle or shore an aircraft	3	2	

Domain Aircraft Structures

Id	Title	Level	Credit	Review Category
4074	Visually inspect aircraft structures Visually inspect aircraft metal and composite structures	4	4 5	B

Id	Title	Level	Credit	Review Category
4075	Repair and/or modify aircraft metal structures Repair and/or modify aircraft metal structure	4	15	B
4078	Assemble aircraft metal components using fasteners	4	10 12	B

Domain Helicopter Maintenance

Id	Title	Level	Credit	Review Category
4060	Maintain helicopter rescue winches	4	8	B
4062	Service rotary winged aircraft Service a helicopter	3	4	B
4063	Track and dynamically balance helicopter main rotors	4	4 8	B
4064	Track and dynamically balance helicopter tail rotors	4	2 6	B