



Australian Government

MEA60318 Advanced Diploma of Aviation Non-Destructive Testing

Release: 1

MEA60318 Advanced Diploma of Aviation Non-Destructive Testing

Modification History

Release 1. Supersedes and equivalent to MEA60315 Advanced Diploma of Aviation Non-Destructive Testing. Unit codes updated.

Qualification Description

This qualification applies to individuals who perform aircraft and aircraft component non-destructive testing (NDT), develop NDT techniques and provide training in NDT in accordance with *AS 3669-2006 Non-destructive testing – Qualification and approval of personnel – Aerospace* at Level 3. The qualification also meets the regulatory requirements of the Civil Aviation Safety Authority (CASA) and of the Australian Defence Force (ADF).

The requirement for the awarding of MEA60318 Advanced Diploma of Aviation Non-Destructive Testing is demonstrated competency in listed units of competency under the conditions set out below. It consists of core units and electives chosen from Electives Group A.

Core units include:

- preliminary common and technical stream units for individuals who do not have a Certificate IV in Aeroskills or the Diploma of Aeroskills (Non-Destructive Testing)
- mandatory units consisting of:
 - common and technical stream units that relate to the aviation maintenance environment
 - technical stream and imported units relating to the NDT work environment
 - imported units that specifically cover the competencies required to perform each relevant NDT technique to the standard specified in *AS 3669-2006 Non-destructive testing – Qualification and approval of personnel – Aerospace* for Level 2 and 3 personnel
 - imported units that cover competencies in the development, delivery and assessment of training.

Elective Group A units consisting of:

- common units specific to either CASA or ADF regulatory requirements
- technical stream and imported units that are applicable to various areas of employment in the NDT field at *AS 3669-2006 Non-destructive testing – Qualification and approval of personnel – Aerospace* Level 3

Individuals who have a Certificate IV in Aeroskills and/or the Diploma of Aeroskills (Non-Destructive Testing) will already have a significant number of credits towards this qualification.

The qualification also provides credits towards the MEA60218 Advanced Diploma of Aviation Maintenance Management (Mechanical).

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 MEA60318 Advanced Diploma of Aviation Non-Destructive Testing, competency must be demonstrated in **thirty-nine (39)** to **forty-eight (48)** units, depending on the entry level.

Core units of competency

Individuals who do not have at least a Certificate IV in Aeroskills must complete the following **nine (9)** preliminary units.

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

| Unit code | Unit title | Prerequisites |
|-----------|---|--------------------------|
| MEA341 | Apply basic aircraft design characteristics | MEA154, MEA107 MEA158 |
| MEA342 | Apply basic aircraft power plant design characteristics | MEA154, MEA107 MEA158 |
| MEA399 | Lay out and set up aircraft systems | MEA154 |

Individuals who have at least a Certificate IV in Aeroskills and those who have completed the preliminary units must complete the following **thirty-five (35)** core units.

| Unit code | Unit title | Prerequisites |
|-----------|--|--|
| MEA116 | Apply work health and safety procedures at supervisor level in aviation maintenance | |
| MEA120 | Manage an aviation maintenance quality system | |
| MEA134 | Establish, maintain and evaluate the organisation's work health and safety system | |
| 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 | |
| MEA162 | Write aviation technical publications | |
| MEA163 | Perform aviation technical publication management activities | |
| MEA261 | Use electronic test equipment | MEA154, MEA155 MEA156, MEA107 MEA157, MEA158 |
| MEA296 | Use electrical test equipment in aviation maintenance activities | MEA154, MEA155 MEA156, MEA107 MEA157, MEA158 |
| MEA424 | Evaluate aircraft non-destructive tests | MEA158, MEA153 MEM13013B MEM16010A |

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|-----------|---|---|
| | | MEM24002B MEM24004B MEM24006B MEM24008B MEM24010B MEM24012C |
| MEA705 | Apply basic scientific principles and techniques in aeronautical engineering situations | MEM23004A |
| MEA708 | Select and test aeronautical engineering materials | |
| MEM09002B | Interpret technical drawing | |
| MEM09003B | Prepare basic engineering drawing | MEM09002B |
| MEM12003B | Perform precision mechanical measurement | MEM12023A (see Note 1) |
| MEM13013B | Work safely with ionising radiation | |
| MEM15017B | Use and maintain reference standards | MEM11011B MEM12003B MEM12004B (see Note 2) MEM12005B MEM12023A (see Note 1) MEM18001C (see Note 1) MEM18002B (see Note 1) |
| MEM16010A | Write reports | MEM14005A (see Note 4) |
| MEM23004A | Apply technical mathematics | |

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|-----------|-------------------------------------|---|
| MEM24002B | Perform penetrant testing | MEM18001C (see Note 1) MEM24012C |
| MEM24004B | Perform magnetic particle testing | MEM18001C (see Note 1) MEM24012C |
| MEM24006B | Perform eddy current testing | MEM18001C (see Note 1) MEM24012C |
| MEM24008B | Perform ultrasonic testing | MEM18001C (see Note 1) MEM24012C |
| MEM24010B | Perform radiographic testing | MEM13013B MEM18001C (see Note 1) MEM24012C |
| MEM24011B | Establish non-destructive tests | MEM13013B MEM16010A (see Note 3) MEM18001C (see Note 1) MEM24002B MEM24004B MEM24006B MEM24008B MEM24010B MEM24012C |
| MEM24012C | Apply metallurgy principles | |
| MEM30007A | Select common engineering materials | |

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|-----------|--|--|
| MEM30012A | Apply mathematical techniques in a manufacturing, engineering or related environment | |
| MSMENV672 | Develop workplace policy and procedures for environmental sustainability | |
| TAEASS401 | Plan assessment activities and processes | |
| TAEASS402 | Assess competence | |
| TAEASS403 | Participate in assessment validation | |
| TAEASS502 | Design and develop assessment tools | |
| TAEDEL402 | Plan, organise and facilitate learning in the workplace | |

Notes

1. MEA158 is equivalent to the following three units combined MEM12023A, MEM18001C and MEM18002B
2. MEA296 and MEA261 are together equivalent to MEM12004B
3. MEA162 is equivalent to MEM16010A
4. MEA155 is equivalent to MEM14005A

Electives units of competency

Group A

Complete **four (4)** units chosen in accordance with the unit selection guidelines in column 4.

| Unit code | Unit title | Prerequisites | Unit selection guidelines |
|-----------|---|------------------------------|--------------------------------------|
| MEA112 | Plan and implement civil aircraft maintenance activities | All relevant technical units | Mandatory for CASA regulatory system |
| MEA113 | Supervise civil aircraft maintenance activities and manage human resources in the | All relevant technical units | Mandatory for CASA regulatory |

| Unit code | Unit title | Prerequisites | Unit selection guidelines |
|-----------|--|------------------------|-------------------------------------|
| | workplace | | system |
| MEA123 | Manage aviation maintenance work environment policy and practices | | |
| MEA140 | Supervise aviation maintenance teams and perform maintenance quality inspections | | Mandatory for ADF regulatory system |
| MEM09009C | Create 2D drawings using computer aided design system | MEM09002B MEM16008A | |
| MEM15010B | Perform laboratory procedures | | |
| MEM16002C | Conduct formal interviews and negotiations | | |
| MEM16008A | Interact with computing technology | | |
| TAEDS401 | Design and develop learning programs | | |

Qualification Mapping Information

Release 1. Supersedes and equivalent to MEA60315 Advanced Diploma of Aviation Non-Destructive Testing.

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>