

Higher National Unit Specification

General information for centres

Unit title: Aviation Legislation

Unit code: DR04 34

Unit purpose: This Unit is designed to allow candidates to acquire a knowledge and understanding of the legislation requirements of the civil aviation industry. In particular the Unit deals with the legislation requirements of aircraft maintenance and how it applies to aircraft engineers. The Unit will also provide the knowledge element requirement to meet EASA IR Part 66 aircraft maintenance license (module 10) Aviation Legislation.

On completion of the Unit the candidate should be able to:

- 1 Explain the regulatory framework of the aviation authority and the requirements of the authority regarding certifying maintenance staff.
- 2 Explain the legislation requirements of an approved maintenance organisation and commercial air transport organisations.
- 3 Explain the legislation requirements for aircraft certification and IR Part-M.
- 4 Explain National and International legislation requirements for aircraft servicing and operation.

Credit points and level: 1 HN Credit at SCQF level 7: (8 SCQF credit points at SCQF level 7*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Recommended prior knowledge and skills: Access to this Unit will be at the discretion of the centre, as the Unit has no mandatory prerequisites.

Core skills: There may be opportunities to gather evidence towards Core Skills in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Assessment: This Unit is assessed by a single assessment event based upon a case study or workplace scenario. The assessment is to be on a sampling basis covering all of the individual Outcomes and be composed of a number of appropriate structured short answer, restricted response questions, each of approximately 75 words. The assessment for this Unit is to be carried under supervised, controlled conditions.

General information for centres (cont)

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In order to achieve this Unit, candidates are required to pass both assessments by presenting sufficient evidence that they have met the minimum evidence requirements, giving satisfactory response to the sample questions.

The assessment instruments used should follow the general guidelines offered by the Scottish Qualification Authority (SQA) assessment model and an integrative approach to assessment is encouraged.

Accurate records should be made of the assessment instruments used showing how evidence is generated for each assessment, giving marking schemes and/or checklists, etc. Records of candidates' achievements should be kept. These records will be available for external verification.

Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, knowledge and/or skills, and evidence requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Acceptable performance in this Unit will be the satisfactory achievement of the standard set out in this part of the specification. All sections of the statement of standards are mandatory and cannot be altered without reference to the SQA.

Since the Outcomes for this Unit are assessed on a sampling basis, the whole of the contents listed in the knowledge and/or skill sections must be taught and available for assessment. Candidates will be to see the case study or work based scenario that they will be assessed upon before the assessment event but should not know in advance the items on which they will be assessed and different case studies/ scenarios or items should be sampled on each assessment occasion.

Assessment events for this Unit are to be carried out under closed book supervised conditions and any notes made by the candidates during assessment should be handed in at the end.

The evidence requirements and assessment guidelines for the assessments of this Unit are given at the end of the statements of standards.

Outcome 1

Explain the regulatory framework of the aviation authority and the requirements of the authority regarding certifying maintenance staff

Knowledge and/or skills

- ◆ Roles of International Civil Aviation Organisation (ICAO), European Aviation Safety Agency (EASA) and other Aviation Authorities
- ◆ IR Part 145, Part 66, Part 147 and Part M
- ◆ Maintenance Certification Staff

Outcome 2

Explain the legislation requirements of an approved maintenance organisation and commercial air transport organisations

Higher National Unit specification: statement of standards (cont)

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Knowledge and/or skills

- ◆ Approved Maintenance Organisations
- ◆ Commercial Air Transportation
- ◆ Air operators certification and responsibilities
- ◆ Aircraft marking and documentation

Outcome 3

Explain the legislation requirements for aircraft certification and IR Part-M

Knowledge and/or skills

- ◆ Aircraft certification and supplemental type certification
- ◆ Aircraft design/production approval
- ◆ Certificate of airworthiness and registration
- ◆ Noise certificate and weight schedule
- ◆ Radio station licence approval
- ◆ IR-Part-M continuous airworthiness

Outcome 4

Explain National and International legislation requirements for aircraft servicing and operation

Knowledge and/or skills

- ◆ Maintenance programmes and inspections
- ◆ Master, minimum equipment and dispatch deviation lists
- ◆ Airworthiness directives, service and manufactures bulletins
- ◆ Modifications and repairs
- ◆ Maintenance documents and manuals
- ◆ Test flights, ETOPS and dispatch requirements
- ◆ All weather operations

Evidence Requirements for the Unit

Evidence for this Unit will be generated through sampling of the knowledge and/or skills requirement of the individual Outcomes by a single assessments event based upon a case study or workplace scenario.

In generating the evidence required for this Unit, candidates will need to respond to a set number of sampled questions based upon a case study or workplace scenario by structured short answer, restricted response questions. The sampling basis for assessment is to be six, one from each of the knowledge and/or skills requirements of Outcomes 1 and 2 and two from each of the knowledge and/or skills requirements of Outcomes 3 and 4.

Higher National Unit specification: statement of standards (cont)

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All assessment must be carried out under closed book supervised conditions and the candidates' response to each question should be of approximately 75 words. Assessment events should last for two and a half hours and in order to gain an assessment pass, candidates must submit sufficient evidence that they have met the minimum evidence requirements by giving satisfactory responses to the sample questions.

For the assessment, a candidate's response can be judged satisfactory if the evidence generated shows that depending upon the sampled questions, the candidate can explain the:

- ◆ role of the International Civil Aviation Authority
- ◆ role of EASA and its member states
- ◆ relationship between the EASA implementing regulation Part 145, Part 66, part 147 and Part M
- ◆ relationship between ICAO and other Aviation Authorities
- ◆ legislation requirements of IR Part 66 (aircraft maintenance licensing)
- ◆ legislation requirements of IR Part 145 (aircraft maintenance organisations)
- ◆ legislation requirements of JAR-OPS for commercial air transportation
- ◆ responsibility of air operators and their certification
- ◆ requirements for aircraft marking and documentation
- ◆ general rules for aircraft certification
- ◆ rules for type certification and supplemental type certification
- ◆ rules for design/production approval
- ◆ regulations for issuing a certificate of airworthiness and registration
- ◆ regulations concerning noise certification and weight schedule
- ◆ regulations regarding radio station licence and approval
- ◆ requirements of IR-Part-M (continuous airworthiness)
- ◆ requirements of National and International maintenance programmes checks and inspections
- ◆ master, minimum equipment and dispatch deviation lists
- ◆ required action needed to airworthiness directives, service bulletins and manufacturers service information leaflets
- ◆ explain the legislation requirements regarding modifications and repairs
- ◆ identify and explain the requirements of maintenance documents and manuals
- ◆ rules regarding test flights, ETOPS and maintenance and dispatch requirements
- ◆ regulations regarding all weather operations

Assessment guidelines for the Unit

The assessment of this Unit should be carried out by a single assessment event covering all the individual Outcomes of the Unit. The assessment is to be based upon a case study or workplace scenario which the candidates should have access too a week before entering the assessment. Since candidates will not know the sampled questions asked during assessments the candidates may bring into the assessment any notes they have made on the study or scenario, but these must be handed in at the end along with any other notes made during the examination. The assessment event should be carried out under supervised control conditions and last two and a half hours. Sampled questions used to elicit candidates' evidence should take the form of structured, restricted response questions.

Higher National Unit specification: statement of standards (cont)

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The assessment instruments used for assessing this Unit should follow the general guidelines offered by the Scottish Qualification Authority (SQA) assessment model. Each centre should make a model answer as a marking guide for each sampled question asked and candidates awarded marks for key points and presentation of answers.

Candidates can supplement written answer with sketches and diagrams to clarify points and be allowed to use scientific calculators to carry out any calculation.

For candidates who do not achieve the minimum evidence requirement for each assessment, centres may allow candidates to re-sit the assessments at an appropriate time using different sampled questions based upon the same or another case study.

Administrative Information

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Higher National Unit specification: support notes

Unit title: Aviation Legislation

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This is an optional Unit devised for the principals and technology section of the HNC/HND Aircraft Engineering Group Award. The Unit is intended to give candidates an in-depth knowledge of the aviation legislation requirements of the civil aviation industry. In particular the Unit deals with the legislation requirements of aircraft maintenance and how it applies to aircraft engineer.

The Unit will also provide the knowledge element requirement to meet EASA IR Part 66 aircraft maintenance license (module 10) Aviation Legislation, so it would be possible for candidates to sit an additional multi-choice examination in an EASA 147 organisation to gain an exemption to the EASA aircraft engineering licensing requirements.

Content/Context corresponding to Outcomes

- 1 The regulatory framework of the aviation industry and the roles of the International Civil Aviation Authority, EASA and its member states along with the relationship between EASA and other aviation authorities. EASA implementing regulations (IR) parts 145, 66, 147 and M and the legal requirements necessary under IR Part 66 for aircraft maintenance engineers to work on and certify an aircraft.
- 2 The requirements needed by an organisation to carry out maintenance on an aircraft under IR Part 145 approved maintenance organisations. The regulation requirements of JAR-OPS for commercial air transportation such as: air operator's certificates, operators responsibility documentation that have to be carried in the aircraft and aircraft marking.
- 3 General rules for aircraft certification such as EACS 23/25/27/29 and specific rules concerning type and supplemental type aircraft certification. Aircraft documentation such as: certificate of airworthiness, certificate of registration, noise certificate, weight schedule and radio station licence and approval along with the requirements under IR Part 21 for design/ production organisation approval.
- 4 National and International requirements for maintenance programmes, maintenance checks and inspections. The requirements of aircraft Master and minimum equipment lists along with dispatch deviation lists. Notices issued by authorities such as: Airworthiness directives, service bulletins and manufacturers service information leaflets. The legal requirements of modification and repair instructions along with the requirements for maintenance documentation, manuals and part catalogues. Legislation requirement both national and international for continuing airworthiness, flight tests, ETOPS, dispatch requirements and all weather operations.

Higher National Unit specification: support notes

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Guidance on the delivery and assessment of this Unit

This Unit is designed to provide candidates with professional knowledge and skills for the specific occupational area of aircraft engineering. It is logical to deliver this Unit sequentially by Outcome, with a mixture of assignments, exercises and case studies. Having access to relevant publications is recommended and course work and assignment reports must be the work of individuals.

Assessment of this Unit is to be carried out by centres using the assessment instruments they consider most appropriate, although assessment instruments used should follow the general guidelines offered by the Scottish Qualification Authority (SQA). All assessments should be carried out under controlled condition and candidates should not be allowed to bring in textbooks or handouts but should be permitted to bring in prepared material from the case study although this should be handed in at the end of the assessment.

Opportunities for developing Core Skills

There are no opportunities to develop Core Skills in this Unit.

Open learning

The Unit would be suitable for open and distance learning. The mode of delivery would be the same as other distance-learning Units by a range of self-study and tutor based assignments. Candidates would need to attend an approved study centre to sit the assessment events.

Candidates with additional support needs

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on the SQA website **www.sqa.org.uk**.

General information for candidates

Unit title: Aviation Legislation

This Unit is designed to enable you to acquire a knowledge and understanding of the legislation requirements of the civil aviation industry. In particular the Unit will look at the legislation requirements of aircraft maintenance and how it applies to aircraft engineers. The Unit is intended for candidates who are interested in aircraft engineering and is offered as an optional Unit in the HNC/HND Aircraft Engineering Group Award.

The Unit may be of particular interest to candidates who are interested in pursuing a career in aircraft maintenance engineering as it covers the knowledge requirements for module 10 (Aviation Legislation) of EASA IR part 66 aircraft licensing requirements for both mechanical and avionics engineers.

The Unit has four main areas, each area covered by a separate Outcome. The four main areas the Unit covers are:

- 1 The regulatory framework of the aviation authority and the requirements of the authority regarding certifying maintenance staff.
- 2 The legislation requirements of an approved maintenance organisation and commercial air transport organisations.
- 3 The legislation requirements for aircraft certification and IR Part-M.
- 4 National and International legislation requirements for aircraft servicing and operation.

Assessment of the Unit will be by a single assessment examination based upon a case study or workplace scenario covering the topics covered in the individual Outcomes.

The examination for this Unit is carried out under closed book condition. You will be permitted to study the case study or work based scenario beforehand and bring any relevant prepared material into the assessment but not any textbooks or handouts. All prepared material must be handed in at the end of the assessment event.