



ADVISORY CIRCULAR

AC 61-07 v1.0

Flight instructor training

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Advisory circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.

Advisory circulars should always be read in conjunction with the relevant regulations.

Audience

This Advisory Circular (AC) applies to:

- flight training operators and flight instructors who conduct training for the grant of flight instructor ratings and endorsements
- pilots who undergo training for flight instructor ratings and endorsements
- flight examiners who conduct flight tests for flight instructor ratings and endorsements
- pilots and operators who conduct flight training.

Purpose

This AC provides guidance on the training that must be completed and requirements that must be met for a pilot to be granted a flight instructor rating and training endorsement. It also provides guidance to flight training operators on the conduct of that training.

For further information

For further information on this AC, contact CASA's Flight Crew Licensing Standards (fcl_standards@casa.gov.au or telephone 131 757).

Status

This version of the AC is approved by the Manager, Flight Standards.

Version	Date	Details
v1.0	April 2022	Initial release. Replaces CAAP 5.14-2(0).

Unless specified otherwise, all subregulations, regulations, Divisions, Subparts and Parts referenced in this AC are references to the *Civil Aviation Safety Regulations 1998 (CASR)*.

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1 Reference material

1.1 Acronyms

The acronyms and abbreviations used in this AC are listed in the table below.

Acronym	Description
AC	advisory circular
AOC	air operator's certificate
CASA	Civil Aviation Safety Authority
CAR	<i>Civil Aviation Regulations 1988</i>
CASR	<i>Civil Aviation Safety Regulations 1998</i>
FAA	Federal Aviation Administration of the USA
FCL	flight crew licensing
FIR	flight instructor rating
FIRC	instructor rating - common (unit code)
FITC	flight instructor training course
KDR	knowledge deficiency report
MOS	Manual of Standards
NOTAM	notice to airmen
PIRC	instructor rating (examination code)

1.2 Definitions

Terms that have specific meaning within this AC are defined in the table below. Where definitions from the Regulations have been reproduced for ease of reference, these are identified by 'grey shading'. Should there be a discrepancy between a definition given in this AC and the Regulations, the definition in the Regulations prevails.

Term	Definition
airmanship	The consistent use of good judgement and well-developed skills to accomplish flight objectives (International Civil Aviation Organization definition).
competency	A combination of skills, knowledge and behaviours required to perform a task to the prescribed standard
competency standards	Competency standards are determined to meet the skill needs and focus on what is expected of a competent individual in the workplace. The Part 61 MOS defines the competency standards for flight crew licences, ratings and endorsements.
formative assessment	Formative assessment monitors learning progress during instruction and provides continuous feedback to both trainee and instructor concerning learning success and failures.

Term	Definition
instructor (trainer)	An FIR instructor tasked with conducting a component of the flight instructor training course (FITC).
lesson plan	A detailed description of the course of instruction for an individual lesson.
Standard 1	Achieves competency to the standard required for the grant of the authorisation.
Standard 2	Is able to achieve competency to the standard required for the grant of the authorisation on the majority of occasions.
Standard 3	Has received training in the element, however is not able to consistently demonstrate competency to the standard required for the grant of the authorisation.
summative assessment	A summative assessment is conducted at the end of a course of training and determines if the instructional objectives (competency standards) have been achieved.
supervisor	A flight instructor appointed by the head of operations to be responsible for and tasked with the day-to-day management of the flight instructor training course.
syllabus	A syllabus is defined as a document within a flight training operator's operations manual or exposition which provides the structure and content of the operator's flight instructor training course (including training endorsement courses).
threat and error management	An operational concept applied to the conduct of a flight that is more than the traditional role of airmanship as it provides for a structured and pro-active approach for pilots to use in identifying and managing threats and errors that may affect the safety of the flight.
trainee (trainee instructor)	A person receiving the training for grant of a flight instructor rating and/or a training endorsement.
training record	A record of training for an individual lesson, completed during a course of training.

1.3 References

Legislations

Legislation is available on the Federal Register of Legislation <https://www.legislation.gov.au/>

Document	Title
Subpart 61.T	Pilot instructor rating
Part 141	Recreational, private and commercial pilot flight training, other than certain integrated training courses
Part 142	Integrated and multi-crew pilot flight training, contracted recurrent training and contracted checking
Part 61 MOS	Part 61 Manual of Standards

Advisory material

CASA's Advisory Circulars (AC) are available at <http://www.casa.gov.au/AC>

CASA's Civil Aviation Advisory Publications are available at <http://www.casa.gov.au/CAAP>

Document	Title
AC 61-08	Teaching and Assessing non-Technical Skills for Single-Pilot Operations
AC 61-09	Competency Based Training and Assessment in the Aviation Environment
CASA Flight Crew Licensing (FCL) Manual	https://www.casa.gov.au/search-centre/manuals-and-handbooks/flight-crew-licensing-manual
CASA Flight Instructor Manual (Helicopters)	https://www.casa.gov.au/search-centre/manuals-and-handbooks/flight-instructor-manual-helicopter
CASA Flight Instructor Manual (Aeroplanes)	https://www.casa.gov.au/search-centre/manuals-and-handbooks/flight-instructor-manual-aeroplane
FAA-H-8083-9A	Aviation Instructors Handbook
NZCAA	Flight Instructor Guide
CASA Website - Pilot Instructor Rating Examination	Pilot Instructor Rating Common (PIRC) - https://www.casa.gov.au/licences-and-certificates/pilots/pilot-and-flight-crew-exams/pilot-exams/pilot-instructor-rating-exam-pirc
CASA Flight Examiner Handbook	https://www.casa.gov.au/search-centre/manuals-and-handbooks/flight-examiner-handbook

1.4 Forms

CASA's forms are available at <https://www.casa.gov.au/search-centre/forms-and-templates>

Form number	Title
61-1509	Pilot Instructor Rating Flight Test Report
61-2AE	Addition of an endorsement to an existing operational rating
61-2I	Notification of Issue of CASR Part 61 Operational Rating

2 Introduction

- 2.1.1 This AC provides guidance on flight instructor rating training and addresses the grant of flight instructor ratings. It also provides guidance on the training requirements for training endorsements. The document will be of interest to the applicant for a flight instructor rating or a training endorsement, flight training operators who conduct training for flight instructor ratings and training endorsements, and flight instructor rating (FIR) instructors who will deliver the training.
- 2.1.2 The document consists of chapters and supporting annexes. Each chapter addresses a particular aspect of the rating, training for the rating or training for a training endorsement. A brief description of each chapter is given below.

2.2 Chapter 3: Flight instructor authorisations

- 2.2.1 Provides an introduction to the flight instructor rating, sets out the regulatory basis for the rating and summarises the requirements for the grant of the rating and training endorsements. Provides guidance regarding the recommended experience levels for the training endorsement applicants.

2.3 Chapter 4: The flight training operator

- 2.3.1 Includes a brief description of the operator certification and approval required to conduct flight instructor training, and describes the role of the head of operations (HOO) and course supervisors in the conduct of the training.

2.4 Chapter 5: Training courses

- 2.4.1 Provides an overview of the structure and content of training courses for the grant of a flight instructor rating and training endorsement.

2.5 Chapter 6: Syllabus development

- 2.5.1 Includes guidance in relation to the development of flight instructor training syllabuses and supporting documentation.

2.6 Chapter 7: Training records and progress management

- 2.6.1 Provides general advice on the management of the flight instructor rating applicant (trainee) and training records.

2.7 Chapter 8: Assessment and recommendation for flight test

- 2.7.1 Provides considerations regarding the assessment of a trainee's competency and the recommendation for flight test.

2.8 Chapter 9: Course quality review and continuous improvement

- 2.8.1 Provides considerations allowed for maintaining and or improving training standards.

2.8.2 The annexes listed below provide further guidance for use during the development of syllabuses and training delivery:

2.9 Annexes

- Annex 1-0: Course notes for the instructor rating - common principles and methods of instruction
- Annex 2-1: Long briefing guidance material
- Annex 2-2: Pre-flight briefing and air exercise guidance material
- Annex 3-0 General tutorials
- Annex 4-0 Sample training endorsement syllabuses
- Annex 5-0: Syllabus templates

3 Flight instructor authorisations

3.1 Introduction

- 3.1.1 A flight instructor has a safety-critical role in aviation. The quality of flight instructor training is therefore pivotal to maintaining the highest standards of aviation safety.
- 3.1.2 A flight instructor who holds the appropriate authorisations can conduct training for pilot licences, ratings (except for flight examiner ratings) and endorsements (except flight examiner endorsements). The training may be delivered in either an aircraft or a flight simulation training device.
- 3.1.3 A flight instructor must hold a flight instructor rating with at least one training endorsement. To exercise the privileges of most training endorsements, a flight instructor must be engaged by a Part 141 or 142 operator that is authorised to conduct the training. Flight training that is for the grant of design feature and flight activity endorsements may be conducted independently of a Part 141 or 142 operator.
- 3.1.4 Provided they hold the appropriate authorisations, a flight instructor may also:
- conduct multi-crew cooperation training
 - conduct differences training for variants of types of aircraft
 - conduct training for general pilot competency
 - conduct flight reviews
 - assess knowledge deficiency report items
 - approve someone to fly solo
 - approve someone to fly an aircraft whilst receiving training for a pilot licence, rating or endorsement
 - grant design feature, flight activity and recreational pilot licence endorsements.
- 3.1.5 A limitation on the exercise of the privileges of a flight instructor rating is the requirement to have a valid instructor proficiency check. Exercising the privileges of a training endorsement does not require completion of an instructor proficiency check which covers that particular training endorsement; the proficiency check is about instructional capability.
- 3.1.6 However, before exercising the privileges of a training endorsement, it is the responsibility of the instructor and the operator (where applicable) to ensure that the instructor is competent to deliver the training permitted by the particular training endorsement. If required, refresher training should be undertaken by the instructor in order to regain competency prior to exercising the privileges of the training endorsement.
- 3.1.7 Flight instructors are also subject to Part 141 operator standardisation and proficiency checks and Part 142 internal training and checking requirements.

3.2 Regulatory basis for flight instructor authorisations

- 3.2.1 Subpart 61.T contains legislation that governs pilot instructor ratings and endorsements. There are four divisions in this Subpart:
- 61.T.1 - Privileges and requirements for grant of flight instructor ratings

- 61.T.2 - Privileges and requirements for grant of simulator instructor ratings
- 61.T.3 - Obligations of pilot instructors
- 61.T.4 - Privileges and requirements for grant of training endorsements.

The information and guidance in this AC relate to flight instructor ratings and training endorsements.

- 3.2.2 The legislation in Subpart 61.T is supported by the Part 61 Manual of Standards (MOS), which contains the units of competency, knowledge requirements and flight test and proficiency check requirements for the flight instructor rating.
- 3.2.3 Section T of Schedule 1 of the Part 61 MOS prescribes the units of competency and units of knowledge in which a person must be trained and assessed as competent for the grant of a flight instructor rating and training endorsements.
- 3.2.4 The units containing practical flight competency standards are described in Schedule 2 to the Part 61 MOS.
- 3.2.5 The following units are specified in the MOS and are required, where applicable, for the flight instructor rating and training endorsements¹:
- FIR4 Conduct aeronautical knowledge training and flight training²
 - FIR7 Conduct flight review (applicable only to those training endorsements where the flight instructor is authorised to conduct flight reviews)
 - FIR9 Multi-crew co-operation training
 - FIR-TE1 Grade 1 training endorsement
 - FIR-TE2 Grade 2 training endorsement
 - FIR-TE3 Grade 3 training endorsement
 - FIR-TE4 Multi-crew pilot training endorsement
 - FIR-TE5 Type rating training endorsement
 - FIR-TE6 Class rating training endorsement
 - FIR-TE7 Design feature training endorsement
 - FIR-TE8 Instrument rating training endorsement
 - FIR-TE9 Night VFR rating training endorsement
 - FIR-TE10 Night vision imaging system rating training endorsement
 - FIR-TE11 Low-level rating training endorsement
 - FIR-TE12 Aerial application rating (day) training endorsement
 - FIR-TE13 Aerial application rating (night) training endorsement
 - FIR-TE14 Instructor rating training endorsement
 - FIR-TE15 Multi-engine aeroplane class rating instructor training endorsement
 - FIR-TE16 Sling operations training endorsement
 - FIR-TE17 Winch and rappelling operations training endorsement
 - FIR-TE18 Spinning training endorsement
 - FIR-TE19 Aerobatics training endorsement
 - FIR-TE 20 Formation (aeroplane) training endorsement
 - FIR-TE 21 Formation (helicopter) training endorsement
 - FIR-TE22 Formation aerobatics training endorsement

¹ Units FIR1, 2, and 3 were included in the initial version of the Part 61 MOS

² Units FIR4 replaced units FIR1,2 and 3, and the FIR-TE'xx' units were added to the Part 61 MOS in 2021. 'xx' refers to the item number of the applicable training endorsement in table 61.1235.

- NTS1 Non-technical skills 1
 - NTS2 Non-technical skills 2
- 3.2.6 Units FIR1, 2 and 3 in schedule 2 were developed as generic standards to be contextualised for the applicable training endorsement. The units would be applied by the operator for the course of training relevant to each training endorsement associated with an instructor rating.
- 3.2.7 For simplicity, FIR4 condenses, combines and replaces the competency standards originally specified in FIR1, FIR2 and FIR3.
- 3.2.8 As well as FIR4, separate units have been developed for each training endorsement. These endorsement specific units are labelled according to the item number in table 61.1235. For example, unit FIR-TE1 contains the competency standards for the grade 1 training endorsement, and unit FIR-TE18 contains the spinning training endorsement competency standards.
- 3.2.9 Schedule 1 of the MOS has also been amended to incorporate the new FIR units.
- 3.2.10 Unit of knowledge FIRC prescribes the aeronautical knowledge required for the flight instructor rating and is contained in Schedule 3 of the Part 61 MOS.
- 3.2.11 Table 1 summarises the various functions of each of the schedules to the Part 61 MOS and their applicability to training and testing.

Table 1: Functions of the schedules to the Part 61 MOS

MOS Schedule	Schedule title	Training	CASA exams	Flight tests, proficiency checks, flight reviews
Schedule 1	Directory of units of competency and units of knowledge	Directs the training organisation to the required competency and aeronautical knowledge standards for each Part 61 authorisation		
Schedule 2	Competency Standards	Prescribes the practical and knowledge standards to be incorporated into the syllabus for each particular authorisation		
Schedule 3	Aeronautical Knowledge Standards			
Schedule 4	Aeronautical Examinations		Specifies the aeronautical knowledge examination requirements	
Schedule 5	Flight Test Standards			Defines the flight testing, proficiency checking and flight review requirements for assessment of each authorisation
Schedule 6	Proficiency Check Standards			
Schedule 7	Flight Review			

MOS Schedule	Schedule title	Training	CASA exams	Flight tests, proficiency checks, flight reviews
	Standards			
Schedule 8	Flight Tolerances & English Proficiency Scales			
Schedule 9	CPL(H) training requirements for CASR 61.615(1B)(b)	105 hr Modular training requirements		

3.3 Requirements for the grant of a flight instructor rating

3.3.1 A flight instructor rating may be granted to a person who:

- holds any of the following:
 - o a private pilot licence (PPL)
 - o a commercial pilot licence (CPL)
 - or
 - o an air transport pilot licence (ATPL)
- holds a class 1 or class 2 medical (at the time of the aircraft flight test)
- meets the following educational requirements:
 - o holds a tertiary qualification in education
 - or
 - o holds a Certificate IV in Training and Assessment
 - or
 - o has completed an approved PMI course
- has:
 - o specified aeronautical experience³
 - o passed the instructor rating aeronautical knowledge examination
 - o completed a course of training for the rating and at least one training endorsement
 - o passed a flight test for the rating and at least one training endorsement.

3.3.2 For a rating to be granted, the applicant must also meet the requirements for the grant of at least one training endorsement. Therefore, in a practical sense, the course of training for the grant of an instructor rating incorporates the training required for the applicant's first training endorsement.

3.4 Requirements for the grant of training endorsements

3.4.1 A training endorsement allows an instructor to train a person for a specific pilot authorisation. Kinds of training endorsements and the activities authorised by each are set out in columns 1 and 2 of table 61.1235. Training endorsements are categorised into three parts:

- Part 1 - training for licences and aircraft ratings

³ See Subpart 61.T. Regulation 61.1185

- Part 2 - training for operational ratings
- Part 3 - training for flight activity and low-level endorsements.

3.4.2 Table 61.1235 also sets out the qualifications and aeronautical experience requirements which must be met for the grant of each training endorsement. An applicant must meet the following requirements:

- meet the prerequisite requirements for the endorsement in column 3 of table 61.1235
- undertake a course of training
- pass the flight test or assessment for the issue of the endorsement.

3.4.3 The holder of a training endorsement can exercise the privileges authorised, subject to any general or specific limitations mentioned in other regulations. Refer to regulation 61.1175 for limitations on the exercise of training endorsements.

3.4.4 For certain training endorsements there are no pre-requisite operational experience requirements. However, CASA strongly recommends that an applicant for a training endorsement have experience in conducting the activity applicable to the particular training endorsement. Having this operational experience offers the following benefits to the trainee flight instructor:

- allows the instructor training to focus on how to teach the particular activity, rather than having to (re)train in the core skill of the activity
- provides practical exposure to the operational environment for which the trainee flight instructor will deliver training, which may include more varied conditions than offered in their own training environment
- allows the knowledge and skillset to be consolidated before being required to deliver training in that activity
- significantly reduces instructor workload because they are able to fly an operation as second nature, whilst delivering training
- provides exposure to contingencies that may not have been experienced during their own training.

3.5 Overseas authorisations, Australian Defence Force qualifications and instructional experience in recreational aircraft

3.5.1 Overseas instructor ratings

3.5.1.1 The requirements for recognition of an overseas rating, for the purposes of granting a rating and endorsements, are detailed in regulation 61.275(3) and summarised below:

- if the applicant holds or has held an overseas instructor rating — CASA must verify, in writing with the overseas authority, the validity of the rating
- CASA must be satisfied the overseas rating is at least equivalent to the Australian instructor rating
- an approved person (HOO or nominated person) working under a Part 141 or 142 operator must certify that the person is competent in accordance with the Part 61 MOS requirements for the instructor rating

- the applicant must have passed the instructor rating aeronautical knowledge examination (PIRC)
- the applicant must have the required aeronautical experience for the issue of an instructor rating and associated endorsements
- the applicant must have passed the flight test for the instructor rating and applicable training endorsements.

3.5.2 Bilateral agreements

- 3.5.2.1 The requirements for grant of a rating under a bilateral agreement are prescribed in regulation 61.280. Further information is provided in CASA's Flight Crew Licensing Manual.
- 3.5.2.2 Under the Trans-Tasman Mutual Recognition Act (TTMRA) CASA may grant a flight instructor rating and associated training endorsement for the holder of an equivalent instructor authorisation and commercial pilot licence issued by the New Zealand National Aviation Authority.

3.5.3 Australian Defence Force instructor qualifications

- 3.5.3.1 The requirements for recognition of an Australian Defence Force (ADF) qualification are detailed in regulation 61.285 and summarised below:
- CASA must be satisfied that the ADF qualification is at least equivalent to the civil instructor rating for which the application is applying
 - the applicant must have the required aeronautical experience necessary for the grant of the rating and relevant training endorsement(s)
 - an application must be made to CASA which includes all the required documents and certifications
 - the applicant must pass the flight test for the grant of the instructor rating and applicable training endorsements.
- 3.5.3.2 CASA does not recognise the qualifications issued by the defence force of a foreign state.

3.5.4 Recreational aviation instructional experience

- 3.5.4.1 Instructional experience accrued by the holder of a recreational aviation instructor certificate is not formally recognised by CASA, and therefore cannot be credited towards the minimum aeronautical experience requirements which must be met for the grant of a training endorsement.

- 3.5.4.2 Part 141 or 142 operators should prescribe a process for assessing the competency of a prospective trainee who holds an instructor certificate issued by a recreational aviation organisation. The process should specify the assessment procedure and the maximum recognition of aeronautical instructional experience that will be considered—CASA recommends that this does not exceed 10 hours credit on the operator's approved course. Credits towards an approved course should be considered only for applicants for a grade 3 training endorsement.

4 The flight training operator

4.1 Operator certification and approval

- 4.1.1 An operator wishing to conduct flight instructor training must hold a Part 141 certificate, a 142 certificate or an approval under regulation 141.035 from CASA authorising such training.
- 4.1.2 To obtain such certification or approval, the operator must provide to CASA a detailed syllabus of training (for both theoretical and airborne training). The syllabus must be consistent with the principles of competency-based training for an instructor rating and the training endorsements for which they propose to provide training.
- 4.1.3 Each syllabus must include all the elements in the competency units prescribed for an instructor rating and the training endorsements for which the operator intends to provide training.

4.2 Head of operations

- 4.2.1 The head of operations (HOO's) responsibilities are specified in regulations 141.130 or 142.190, as applicable to the particular operator. These responsibilities apply to the conduct of flight instructor training.
- 4.2.2 CASA recommends that the HOO establish initial assessment procedures to ensure potential trainee flight instructors meet the legislative requirements and have the aeronautical knowledge and aircraft manipulative skills required to enable successful commencement of their training.
- 4.2.3 For conducting instructor training, the responsibilities of the HOO include, but are not limited to:
- setting and maintaining the operator's standards for the training
 - ensuring that all training for a flight instructor rating and training endorsements follows the principles of competency-based training in a systematic manner
 - effectively supervising the instructors involved in flight instructor training and ensuring they hold a valid standardisation and proficiency check for the operator
 - ensuring there is a continuous improvement program in place that encompasses:
 - o evaluation of training and flight test outcomes
 - o assessment of the continuing suitability of facilities and resources
 - o a process for auditing the training
 - o a mechanism for incorporating changes because of these processes.
- 4.2.4 Operators should note that for a Part 142 operator, some of these responsibilities will be detailed in the management systems required by that Part.
- 4.2.5 An instructor may be appointed by the HOO to have responsibility for particular training courses. Regardless of any such appointments, the HOO retains the responsibility for the safe and effective management of the operator's authorised training.

4.3 Course supervisors

- 4.3.1 Parts 141 and 142 make provision for an operator to appoint a person to be responsible for particular authorised flight training. The person(s) nominated to occupy such positions must be specifically mentioned in the operations manual or exposition.⁴
- 4.3.2 A nominated course supervisor would be responsible for the overall management of the course, including organising and monitoring the training program, checking the progress and supervision of trainees, updating course content, providing operational reports and day-to-day operational management.
- 4.3.3 The operator must describe—in their operations manual or exposition—the procedures to be followed by the course supervisor to ensure the effective management of the training, including the supervision of instructors and trainees.
- 4.3.4 The legislation also supports the course supervisor being authorised to make the certification that a trainee meets the requirements to undertake a flight test.⁵ The operations manual or exposition must therefore include a description of the process whereby the trainee instructor's eligibility to attempt the flight test would be determined.

⁴ As required by regulations 141.260 and 142.340 respectively.

⁵ Regulation 61.235.

5 Training courses

5.1 Introduction

- 5.1.1 A flight instructor must hold a flight instructor rating and at least one training endorsement. Consequently, there are two training requirements:
- for the grant of the instructor rating; and
 - for each training endorsement.
- 5.1.2 Parts 141 and 142 require flight training operators to provide a training plan and syllabus of training for the flight instructor rating and training endorsements for which they will deliver training. An overview of the recommended course structure is provided in figure 1 below, and information to assist operators when developing course syllabuses is provided in Chapter 6.

5.2 Course structure

- 5.2.1 Figure 1 provides an overview of the recommended structure for a flight instructor rating and training endorsement course.
- 5.2.2 *The flight instructor rating* section of the diagram sets out the suggested training to be undertaken by flight instructor rating trainees. These training components are undertaken prior to commencing and set the foundation for the training endorsement course components.
- 5.2.3 The *training endorsement* section of the diagram sets out the training for a training endorsement, applicable to either a first or subsequent training endorsement. The basic structure is applicable to all training endorsement courses; however, the detail varies with the complexity of the endorsement itself.

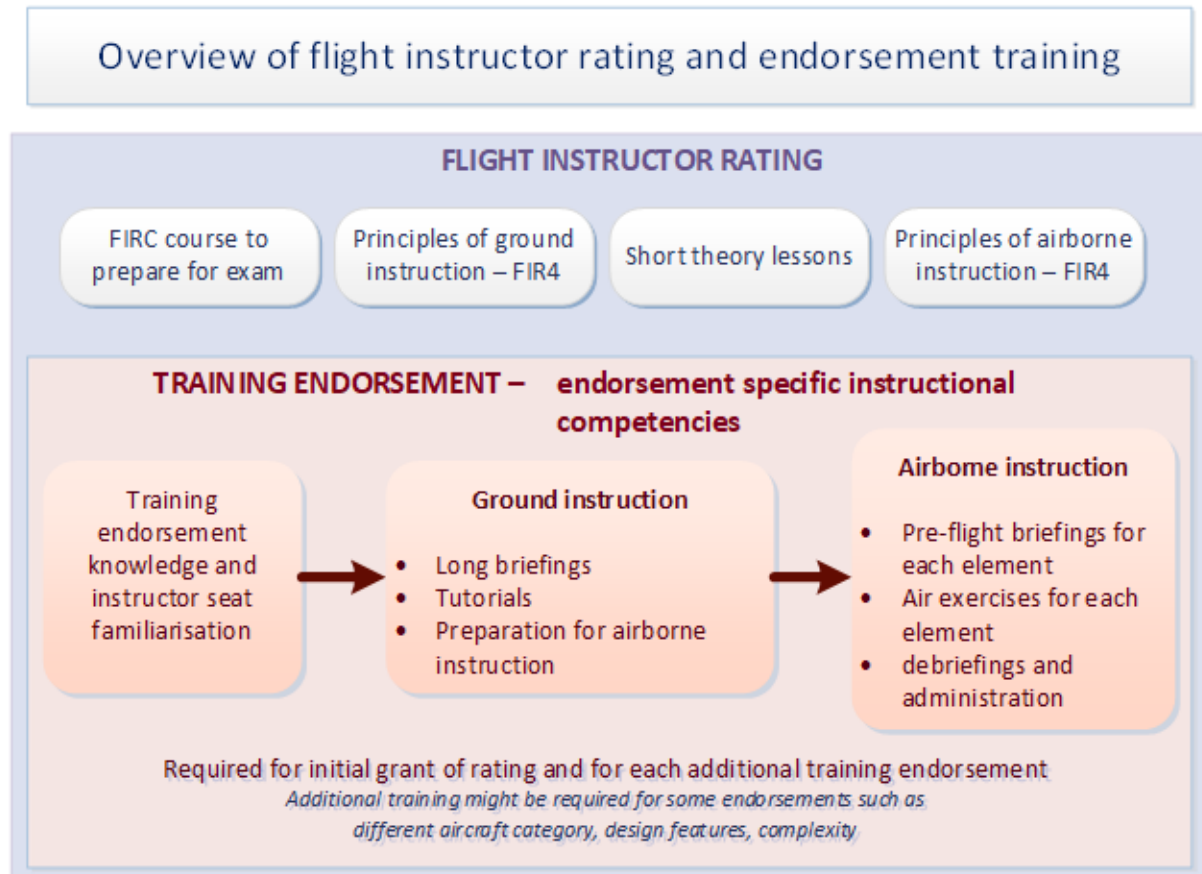


Figure 1: Overview of flight instructor training

5.3 Training for the grant of a flight instructor rating

- 5.3.1 Training for the grant of an instructor rating includes the training for the grant of at least one training endorsement.
- 5.3.2 The flight instructor rating course provides the fundamental knowledge of flight instruction upon which all subsequent training (for training endorsements) is based. It also prepares the trainee for the instructor rating aeronautical knowledge examination (PIRC) which assesses the aeronautical knowledge standards set out in the FIRC unit. In accordance with accepted educational process and to avoid trainee disadvantage which may impede the learning process, CASA recommends that a trainee completes the FIRC training before they begin training for a training endorsement.
- 5.3.3 Training for the instructor rating must address each of the knowledge requirements in unit FIRC (see Schedule 3 of the Part 61 MOS). The unit is based around principles and methods of instruction (PMI) and legislation as it applies to an instructor rating.
- 5.3.4 If a trainee already meets the educational requirements—by holding either a Certificate IV in workplace training and assessment or a tertiary qualification in education—they are not required to undertake a PMI course. However, these alternative qualification pathways will most likely not completely prepare the trainee for the instructor rating examination. Operators should be aware that the examination is aviation-focused and

will include questions which assess the trainee's knowledge of flight instructor legislation. Operators should therefore consider offering a 'bridging' course to help these trainees to prepare for the examination.

5.3.5 Instructor rating aeronautical knowledge examination

- 5.3.5.1 The instructor rating aeronautical examination (PIRC) is set by CASA to assess the knowledge required by the unit FIRC. Operators should establish a method by which a trainee's readiness to sit the examination may be determined.
- 5.3.5.2 The instructor rating examination is a 2-hour multi-choice examination with a pass standard of 75%. The examination has been updated to reflect the latest version of the *FAA Instructor's Handbook* (recommended text) and the FIRC unit.
- 5.3.5.3 Operators may be approved under regulation 61.040 to set and conduct the PIRC examination.

5.4 Training for the grant of a training endorsement

- 5.4.1 The training provided for a training endorsement must address each of the units of competency prescribed for that particular endorsement. The table of required units can be found in Schedule 1 of the Part 61 MOS.
- 5.4.2 Detailed guidance on the syllabus of training for a training endorsement is provided in Chapter 6.

5.4.3 Flight instructor rating and training endorsement flight test

- 5.4.3.1 At the completion of training, a flight test, consisting of a ground and flight component, is conducted to assess the knowledge, skills and attitudes required for the grant of a flight instructor rating and associated training endorsement(s).
- 5.4.3.2 Further information regarding the flight test is provided in Chapter 8.

6 Syllabus development

6.1 Introduction

6.1.1 The training for a flight instructor rating and training endorsements must be conducted in a systematic manner using competency-based training principles. Syllabuses must therefore cover, for both training and assessment, each of the standards prescribed by the Part 61 MOS for the rating and particular training endorsements.

6.2 Flight instructor rating syllabus

6.2.1 CASA's suggested flight instructor rating course structure includes training to address the FIRC unit of knowledge content, which is required in preparation for the instructor rating aeronautical knowledge examination.

6.2.2 The flight instructor rating course should be complementary to, and provide the foundation for, the first training endorsement for which the trainee will apply. Additional components are therefore recommended for the rating syllabus:

- a component addressing the principles of competency-based training and assessment, and of ground and airborne instruction
- a practical component
 - o the short theory lesson concept
 - o flying from the instructor seat
 - o hand-over - take-over procedures
 - o how to demonstrate, direct, monitor and intervene for best student progress
 - o situations which require instructor intervention for safety.

6.2.3 Unit of knowledge - instructor rating - common (unit code)

6.2.3.1 The aeronautical knowledge unit instructor rating - common (unit code) (FIRC) includes two elements, which each provide several topics and specific content to be addressed during instructor rating training and therefore included in the syllabus:

- Flight rules:
 - o legislation
- Principles and methods of instruction:
 - o principles of learning
 - o principles of instruction
 - o lesson planning and delivery
 - o principles of questioning.

6.2.3.2 The FIRC unit should be taught using the FAA-H-8083-9A *Aviation Instructors Handbook* as the principal reference text.

6.2.3.3 There are a number of additional references which will supplement learning and provide additional understanding of the theories of motivation. The trainee is expected to have some knowledge of:

- *Hierarchy of Needs*, Abraham Maslow
- *'X & Y' Theory*, Douglas McGregor

- '2-Factor' Theory, Frederick Herzberg.

6.2.3.4 A suitable management book on motivation should provide sufficient information on all three theories. The *FAA Instructors Handbook* is mainly focused on Maslow's theories however it does reference McGregor's theory.

6.2.3.5 CASA recommends that the syllabus allow approximately 15 classroom hours to address all elements of the FIRC unit.

6.2.4 Principles of ground and airborne instruction

6.2.4.1 In addition to the aeronautical knowledge standards contained in unit FIRC, and to assist in the development of both ground and airborne instructional technique, CASA recommends that the training course for the grant of an instructor rating include:

- the principles contained in unit FIR4 *Conduct aeronautical knowledge training and flight training* to introduce the aviation focus for the application of PMI
- units NTS1 and NTS2 *Non-technical skills* to be introduced in the context of:
 - o how to appropriately incorporate the elements from these units into lesson planning and delivery for both ground and airborne training
 - o how the trainee instructor is to develop their own NTS skills while providing training

6.2.5 Short theory lessons

6.2.5.1 CASA recommends that the training course for the grant of an instructor rating include short theory lessons to be delivered by the trainee instructor.

6.2.5.2 The concept of the short theory lesson is to provide a low-threat / high repetition practice environment with a focus on basic lesson delivery principles.

6.2.5.3 If utilised correctly, this component of the course would benefit the trainee by:

- providing an opportunity to apply knowledge of the principles and methods of instruction in a practical scenario, thereby aiding the development of basic lesson delivery techniques
- assisting in the consolidation of the trainee's own theoretical knowledge
- supporting the development and delivery of long briefings which will be required during subsequent training for a training endorsement.

6.2.5.4 CASA recommends that the short theory lessons be about 20 minutes in duration. They should cover aeronautical knowledge relevant to the first training endorsement the trainee will undertake, thereby providing material for inclusion in the long briefings to be delivered by the trainee during the training endorsement course. Content should be drawn from the units of knowledge prescribed by Schedule 3 of the Part 61 MOS for the activities authorised by the training endorsement.

6.2.5.5 The lessons should be kept simple and focus on development of basic lesson delivery skills, reinforced by repetition, to provide the trainee with a higher level of confidence and skill prior to commencing the training endorsement course.

6.2.6 Annexed course notes - principles and methods of instruction

- 6.2.6.1 Annex 1-0 to this AC provides course support notes and a knowledge assessment tool to assist in the development of the flight instructor rating syllabus and the delivery of training.

6.3 Training endorsement syllabus

- 6.3.1 There are several stages in the development of a training endorsement syllabus:

- **review:** identify the performance criteria and the basis for the syllabus content
- **design:** prepare the ground and flight training summary
- **develop:** develop a planning matrix and a detailed lesson plan and training record for each training session.

6.3.2 Review stage

- 6.3.2.1 The syllabus developer should firstly refer to the MOS units⁶ required for the particular training endorsement. The developer should also identify other MOS units relevant to the training endorsement and consider how they will be incorporated into the syllabus.

- 6.3.2.2 The operator's syllabus of training for the qualification (i.e. RPL, PPL, CPL or operational rating/endorsement) is the blueprint for the technical content and should be reviewed for additional reference.

- 6.3.2.3 When undertaking the review, the developer should note the range of variables listed for each unit and consider how they may affect the training course and syllabus content.

6.3.3 Design stage

- 6.3.3.1 The output of the design stage will be a *ground and flight training summary*. The summary should provide a list of individual training sessions to be delivered during the course.

- 6.3.3.2 There are several types of training sessions that will be included in most syllabuses:

- instructor-led tutorials (not assessed)
- long briefings
- pre-flight briefings
- in-flight lessons.

Ground and flight training summary

- 6.3.3.3 The ground and flight training summary, provides the course outline. It should also include reference to the MOS units applicable to each training session, a brief description for each session and, for both ground and in-flight training, a proposed duration. The duration may be either the actual length of the lesson when presented to a student or the instructor training session duration for that particular lesson. An operator may elect to apply either method to suit their program presentation.

- 6.3.3.4 The developer should sequence the training sessions to reflect the complexity of the lesson—from basic, advanced through to abnormal/emergency sequences—rather than

⁶ Schedule 2 to the Part 61 MOS.

presenting the training in an operational order. For example, it would be inappropriate to present 'effect of controls' as the first lesson in a grade 3 training endorsement training course prior to 'right hand seat familiarisation', a foundation skill, or 'straight and level', a simpler briefing and airborne exercise.

- 6.3.3.5 Assessment activities should be planned and included in the syllabus at appropriate points to ensure that trainee progress is monitored—for continuous improvement and so any remedial training can be accommodated. The assessment activities should be indicated in the ground and flight training summary.

Considerations

- 6.3.3.6 While a trainee may have extensive experience in a particular kind of operation, it can sometimes be quite different and challenging for them to conduct that operation from the instructor seat. An aircraft handling sequence lesson with the trainee in the instructor control seat has been included in all sample syllabuses attached to this AC. CASA recommends that this sequence be conducted prior to commencement of the instructor training.
- 6.3.3.7 It is suggested that the aircraft handling sequence be approximately 1.5 hours and cover basic, advanced and emergency sequences pertinent to the proposed training endorsement be undertaken, with the trainee in the instructor control seat. This would be very beneficial to both the instructor and the trainee, providing them with an opportunity to address any skill shortcomings that may arise.
- 6.3.3.8 Instructor-led tutorials are a non-assessable tool which can provide valuable learning background for the trainee. Their purpose is to assist trainees who are undergoing training for the grant of an instructor rating and training endorsement, by providing them with the underpinning knowledge necessary for the delivery of ground and airborne training. They extend the theory learned in PMI to practical application in ground and flight training scenarios.
- 6.3.3.9 Tutorials may also be utilised as refresher lessons for instructors undertaking training for the grant of additional training endorsements, or to provide extended learning in a particular context during the endorsement course.
- 6.3.3.10 Long briefing, pre-flight briefing and in-flight sessions may be delivered either via a demonstration by the FIR instructor, or a read back/give back by the trainee instructor. Where a trainee is under training for their first training endorsement, the syllabus should include a higher proportion of demonstrated ground and in-flight training sessions. As the training progresses, or if the trainee already holds a flight instructor rating, the emphasis will be on more read backs by the trainee instructor.
- 6.3.3.11 The developer should take into account trainee preparation time between the instructor demonstration and trainee read back. This will influence the sequence of training sessions and course duration (elapsed time). The trainee should be given time to undertake research and apply their own initiative in the preparation and presentation of each briefing.
- 6.3.3.12 When deciding the course duration, the developer should allow additional time to cover personal factors — such as fatigue and training overload—and for poor weather and resource availability.

6.3.4 Development stage

6.3.4.1 The development stage uses the ground and flight training summary to develop a *planning matrix* and a detailed *lesson plan and training record* for each training session.

Planning matrix

6.3.4.2 The planning matrix is the next step in creating the syllabus. From the matrix, individual lessons are then developed. It is imperative that the planning matrix accurately reflects the intended lesson content. Accuracy and consideration at this step will make the development of the lesson plans very straight forward.

6.3.5 The completed planning matrix should include each training session, along with the corresponding elements and performance criteria contained in the MOS unit for the particular training endorsement. Where an element is referenced, the associated performance criteria should be included in the planning matrix

6.3.5.1 The developer will need to review the MOS elements being covered in each training session and apply a performance standard against each of the performance criteria included in that session.

Note: Not all performance criteria will be applicable in every training session. For example, in a long brief the applicable elements may only be *plan training* (FIR4.1) and *conduct aeronautical knowledge training* (FIR4.2), so only the criteria contained in those elements would be considered in setting a performance standard.

6.3.5.2 The competencies in FIR4 are the core instructor skills that will be honed to performance standard 1 (i.e. the standard of competency required for qualification) through the training course. However, in the context of a particular training endorsement, it is not always the case that the trainee will achieve a consistent or improving standard when applying an existing skill to a new and more complex lesson. The performance standard specified in the planning matrix represents the proposed progress under the training plan and should reflect the likely variability in trainee performance, considering the complexity of the training session. For example, at the completion of the basic phase of the grade 3 training endorsement (aeroplane), the common standard may be level 2; however, the first delivery of the next complex briefing (e.g. stalling) may be set to a level 3 standard. These performance standards then provide a benchmark against which a trainee's actual progress may be monitored and recorded.

6.3.5.3 Assessment of competency against each performance criteria must be planned on at least two separate occasions, to enable a trainee to demonstrate competency prior to flight test recommendation.

Lesson plan and training record

6.3.5.4 CASA's syllabus templates include a combined lesson plan and training record format. This format is the most efficient and effective means of providing detailed lesson plans and associated training records, as it removes the duplication that would necessarily result from having the lesson plan and training records as separate documents.

6.3.5.5 The lesson plan and training record need only include the elements and performance criteria which:

- are relevant to the particular lesson

- have a corresponding performance standard indicated on the planning matrix.
- 6.3.5.6 In addition to the elements and performance criteria, a lesson plan and training record should also contain:
- a **lesson overview**, which provides the high-level lesson content
 - **training notes**, which are intended as guidance for the instructor and elaborate on the structure of the lesson, as well as providing salient points or actions that will enhance the content.
- 6.3.5.7 The developer should consult the operator's applicable syllabus (the blueprint) for any technical content in the training notes that need to be included.
- 6.3.5.8 Where the long brief includes an instructor demonstration and trainee read back, they may be included on the same lesson plan and training record.

6.3.6 Annexed development tools, sample syllabuses and templates

Briefing and air exercise lesson plan development tools

- 6.3.6.1 Annexes 2-1 and 2-2 to this AC provide guidance and a tool for use during the development of:
- a long briefing
 - a pre-flight briefing
 - an air exercise.

General tutorials

- 6.3.6.2 Sample tutorials are provided in Annex 3-0 to this AC. Ten tutorials, contained in eight files, cover the following subjects:
- developing a long brief
 - principles & methods of airborne instruction
 - plan airborne lesson and prepare a pre-flight brief
 - fault analysis and correction
 - report writing and record completion
 - intervention and recovery techniques
 - student solo considerations
 - helicopter hazardous flight conditions.

Sample syllabuses

- 6.3.6.3 Sample syllabuses for flight instructor training endorsements are provided in annex 4-0 to this AC. The individual training endorsement packages include a ground and flight training summary, supporting syllabus notes, general guidance for all courses, progress and achievement records, completion certificate and the applicable MOS units.
- 6.3.6.4 Additionally, for the grade 3 aeroplane, grade 3 helicopter and night VFR training endorsements, the package contains a planning matrix, lesson plan and student record for each lesson in the sample syllabus.
- 6.3.6.5 The sample syllabuses provide one example of how the Part 61 MOS standards may be incorporated into a syllabus format. Operators may choose to use the sample syllabus

documentation by customising them to meet their own requirements. Operator specific information such as standard operating procedures, techniques and instructions for achieving the required outcomes may be included.

Syllabus templates

6.3.6.6 Annex 5-0 to this AC provides templates that an operator may use when developing their instructor training course. The annex contains:

- a ground and flight training summary
- a planning matrix
- lesson plan and training record forms for:
 - o a long brief
 - o a pre-flight brief
 - o a pre-flight brief & in-flight lesson
 - o a tutorial
- a trainee progress record
- a trainee achievement record
- a course completion certificate.

6.3.6.7 The templates for each of the lesson plan and training record forms are similar, with the differences being in the titles and inclusions for recording flight time and briefing times.

6.3.6.8 Operators may choose to use the syllabus templates as provided or modify them to suit their own requirements. CASA recommends that these templates be considered as at least a starting point for syllabus development.

7 Training records and trainee progress management

7.1 Process for managing trainee progress

- 7.1.1 The flight training operator's operations manual or exposition must include a description of the procedures by which the operator conducts and manages the instructor training course(s). This should include a process to determine trainee competency, record trainee progress against the course plan, and where a trainee is not progressing at the desired rate, provide clear guidance on the remedial training policy.
- 7.1.2 All flight training operators will have some form of trainee progress management and recording system in place. The system may be a simple hand-written progress sheet and associated records. Experience has shown that a simple system such as this may work for instructor training; however, the complexity of some of the training courses increases the potential for trainee progress monitoring to break down or fail.
- 7.1.3 Competency-based training, by its nature, requires a more comprehensive recording of training to ensure that the criteria for assessment are met and all required units and elements are included and assessed.
- 7.1.4 The operator should provide training to course supervisors and instructors on the standard format and content of progress records.
- 7.1.5 FIR instructors must be proficient in making appropriate assessments of trainee performance against the clearly defined knowledge and flight standards (as prescribed for each lesson, and training phase, where phases are used).
- 7.1.6 The operations manual or exposition should also provide a description of contingency procedures in case of inclement weather, course instructor availability, aircraft unavailability and under-performance by the trainee. It is unrealistic to have a definitive plan for delays brought about by these factors; however, there needs to be some authority on how the operator's resources and facilities may be accessed in these circumstances. The contingency may be as simple as the course supervisor being able to manipulate the training sequence within prescribed bounds.

7.2 Record of trainee progress

- 7.2.1.1 Training records need to be maintained for both the instructor rating and training endorsement training.
- 7.2.1.2 The sample lesson plan and training record includes details of all elements and associated performance criteria that are to be included in a particular lesson. The expected standard is prescribed and there is facility to record both ground briefing delivery and flight lesson delivery, along with comments and recommendation for progress or repeat of the lesson.

7.3 Monitoring trainee progress

- 7.3.1 In monitoring the progress of trainees, CASA recommends the HOO and/or nominated course supervisor conducts a progress check at designated points during the training.

The progress check would be a dual flight and would assess a selection of sequences covered up to that point, using the read back format.

7.3.2 There should be no expectation that the trainee will deliver a polished performance in the early stages of their training; however, the trainee should not be permitted to continue to the next phase or stage of training unless:

- they demonstrate manipulative skills to at least the licence standard required for the particular rating/training endorsement
- their performance is assessed by the HOO or course supervisor as satisfactory for the particular stage of training.

8 Assessment and recommendation for flight test

8.1 Summative assessment

8.1.1 Once a trainee has completed their training, the HOO or course supervisor should conduct a formal summative assessment exercise to ensure the trainee has met the required course completion standards. This assessment is critical to the trainee, as it will probably be the first complete summative assessment of their skills as a potential flight instructor and ability to deliver training for their particular training endorsement.

8.1.2 It is essential that the trainee is correctly assessed; the HOO or course supervisor should not recommend the trainee for a flight test unless they have demonstrated a level of performance that consistent with being able to pass the flight test on the first attempt.

8.1.3 Assessor

8.1.3.1 If a course supervisor has been appointed and had continuous involvement in the trainee's training, then the HOO should conduct the assessment unless they are also likely to be the flight test examiner.

8.1.4 Assessment considerations

8.1.4.1 The assessment should include a review of the knowledge deficiency report (KDR) from the PIRC examination. Any review and assessment should be recorded in the trainee record along with a copy of the KDR.

8.1.4.2 CASA recommends that the assessment be conducted as a simulated flight test. The assessment should follow the test format in the CASA Flight Examiner Handbook and reference the flight test standards in Schedule 5 of the Part 61 MOS. The assessment exercise should be completed in full—regardless of any intermediate fail points—to give the assessor a more complete picture of the overall standard of the trainee.

8.1.5 Record of assessment

8.1.5.1 The assessor should make an entry in the trainee's record to reflect the details and outcome of the assessment.

8.1.5.2 If the assessor formed the view that the trainee did not meet the required standard, the entry should include the recommended sequences for remedial training.

8.1.5.3 If the assessor formed the view that the trainee did meet the required standard, a course completion certificate should be issued. This certificate should be kept with the trainee's records for provision to the flight examiner. A template course completion certificate is provided in Annex 2-0.

8.2 Flight instructor rating - flight test

8.2.1 CASA's Flight Examiner Handbook documents the procedures that the flight examiner will follow during the flight test. Course supervisors, HOOs, course instructors and trainees should familiarise themselves with the sections of the handbook that describe testing of the rating and the relevant training endorsement.

8.2.2 Test considerations

8.2.2.1 The operator has a responsibility to ensure that the trainee meets all the eligibility requirements prior to undertaking the flight test. A checklist may provide a suitable mechanism to review the trainee's eligibility.

8.2.2.2 The operator is responsible for arranging the flight test. The operations manual or exposition should include a procedure that minimises the time between the trainee being assessed as ready to be tested and undertaking the test. This is particularly important if the flight training operator does not have reliable access to available flight examiners, either due to their location or the speciality of the particular training endorsement to be tested.

9 Course quality review and continuous improvement

- 9.1.1 Parts 141 and 142 require the operator to have processes documented in their operations manual or exposition to identify and address deficiencies in training outcomes. Given the cyclical nature of continuous improvement, the processes should be applied whenever a deficiency is recognised, not just on completion of training.
- 9.1.2 A Part 142 operator must have a training management system⁷ which should include processes for continuous improvement, including:
- **auditing the training:** this could be a review of the overall progression of the training course against the training plan and schedule. In any particular course, it could include review of trainee progress against the training plan and schedule, to identify any common areas of training delays
 - **promoting the continuous improvement of the training:** this may be through provision of procedures that the course supervisor can use to record issues—about course content (individual lessons and lesson sequence), facilities and resource availability and suitability—as they arise during a training course
 - **evaluating course outcomes from pre-flight test outcomes and post flight test feedback:** this could be through formal review with the HOO and/or course supervisor, course instructors and the trainees. It is vital that the operator documents a formal mechanism to receive feedback from the flight examiner; this could be either written or verbal, but should be obtained within a short period after each flight test.
- 9.1.3 The HOO and course supervisor (if applicable) should review the feedback obtained from all sources and assess the need to make changes to any aspect of the training course, such as course delivery, use of resources and functional suitability of the facilities. The operator should have procedures for managing changes introduced as a result of the review.

⁷ As required by regulation 142.250