

Revision 11

### Pilot Licences and Ratings—Flight Instructor Ratings

1 December 2021

#### General

Civil Aviation Authority (CAA) advisory circulars (ACs) contain information about standards, practices, and procedures that the Director has found to be an **acceptable means of compliance** with the associated rules and legislation.

Consideration will be given to other methods of compliance that may be presented to the Director. When new standards, practices, or procedures are found to be acceptable they will be added to the appropriate AC.

#### Purpose

This AC describes an acceptable means of compliance with requirements for flight time experience and with the examination syllabus content, to assist applicant(s), to meet the requirements of Civil Aviation Rules, Part 61 *Pilot Licences and Ratings*.

#### Related Rules

This AC relates specifically to Part 61 *Pilot Licences and Ratings* Subpart G.

#### Change Notice

Revision 11 reflects Part 61 Amendment 18. As part of this amendment, rule 61.303(e)(3) was updated to cover eligibility requirements for a category A flight instructor. Previously, to be eligible for a category A flight instructor rating for an aeroplane, a person had to hold a current instrument rating. As the instrument rating does not form part of the category A flight test, it does not have to be current.

On page 16 of this AC, *Category A Flight Instructor Rating—Aeroplane, Rule 61.303(e)*, ‘a current instrument rating’ has been replaced by ‘an instrument rating’. ~~10 adds guidance on rule 61.305 Privileges and limitations specific to Category E flight instructor rating.~~

#### Cancellation Notice

This AC cancels AC61-18 Revision 10 dated 10 April 2019 ~~3 August 2016~~.

#### Version History

This revision history log contains a record of revision(s) made to this AC.

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<b>AC Revision No.</b>	<b>Effective Date</b>	<b>Summary of Changes</b>
AC61-1.18	6 October 1998	Initial issue of this AC.
AC61-1.18 Rev.1	5 December 2005	Clarified the Category C flight instructor rating cross country experience requirement.
AC61-1.18 Rev.2	11 May 2006	Introduced changes related to the reissue of Part 61 and updating of flight instructor rating requirements in general.
AC61-1.18 Rev. 3	12 April 2007	Introduced changes to the instructional techniques course required for initial instructor ratings.
AC61-1.18 Rev. 4	2 May 2007	Made minor editorial amendments and deleted some extra text with regards to Category C helicopter flight instructor ratings.
AC61-18 Rev. 5	21 May 2007	Re-numbered this AC from AC61-1.18 to AC61-18 as part of a project to standardise the numbering of all ACs.
AC61-18 Rev. 6	1 August 2008	Detailed the minimum experience to conduct helicopter mountain flying instruction.
AC61-18 Rev. 7	28 May 2013	<ul style="list-style-type: none"> <li>• Amended the experience requirements for the Category E flight instructor Rating to comply with the wording of rule 61.303(a)(3).</li> <li>• Updated and clarified details relating to the approved instructional technique course.</li> <li>• Clarified the term ‘satisfactorily completed’.</li> <li>• Clarified the flight instructor night experience and instrument time.</li> </ul>

AC Revision No.	Effective Date	Summary of Changes
AC61-18 Rev. 8	20 April 2016	<ul style="list-style-type: none"> <li>• Clarified the requirement for the aircraft pre-flight inspection to be carried out to at least the CPL standard.</li> <li>• Required a Category C instructor candidate to have at least one-hour dual revision with a Category A flight instructor prior to the issue flight test.</li> <li>• Formalised the requirement for a responsible flight instructor to be present at the candidate's flight test debrief.</li> <li>• Expanded on acceptable practice in the event of an instructor rating issue demonstration being assessed as 'not yet competent'.</li> </ul>
AC61-1.18 Rev. 9	3 August 2016	Clarified the privileges and limitations of Category D flight instructor rating.
AC61-18 Rev. 10	10 April 2019	<p>Made minor editorial changes to the language proficiency assessment:</p> <ul style="list-style-type: none"> <li>• Change notice was updated</li> <li>• Version history was inserted</li> <li>• The numbering system was revised</li> <li>• A new sub-heading 3.1 was added, and</li> <li>• A new paragraph 3.1.1 was added.</li> </ul>
AC61-18 Rev 11	1 December 2021	<p>Reflects Part 61 Amendment 18. As part of this amendment, rule 61.303(e)(3) was updated to cover eligibility requirements for a category A flight instructor. Previously, to be eligible for a category A flight instructor rating, a person had to hold a current instrument rating. As the instrument rating does not form part of the category A flight test, it does not have to be current.</p> <p>On page 16, <i>Category A Flight Instructor Rating—Aeroplane, Rule 61.303(e)</i>, 'a current instrument rating' has been replaced by 'an instrument rating'</p>

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## 1.General

### 1.1 Information specifically for Category D applicants

1.1.1 Category D flight instructors operate in various flight training roles across industry as illustrated below.

**Table 1: Flight Training Model**

Initial Flight Training (IFT)	Overlap between IFT & OFT	Operational Flight Training (OFT)
A, B & C Cat instructors	Instrument training & type ratings (A, B, C & D Category instructors)	A, B, D plus (AI, OI, et al)
ab initio      PPL      CPL	Airline/Commercial	ATPL

Initial flight training (IFT): Training, both theoretical and practical, to fly safely within the aircrafts flight envelope and meet the competency requirements of the appropriate *Flight Test Standards Guide*.

- (a) Operational flight training (OFT): Training, both theoretical and practical, to operate an aircraft safely on commercial operations in accordance with the competency requirements defined in an operator's crew member training program.
- (b) Overlap between IFT and OFT: Instrument flight training and aircraft type ratings.

1.1.2 **Part 61 Category D Flight Instructor Rating.** Detailed in Part 61. Qualification based on role experience; successful completion of an instructional techniques course (ITC); and demonstration of instructional competence. Once gained the Category D instructor rating is non-terminating and portable. Category D privileges under Part 61 are limited to instrument flight instruction (not basic instrument flying to satisfy the PPL and CPL syllabus) and type ratings (not for initial multi-engine conversion but for subsequent multi-engine conversions).

1.1.3 **Part 121/125 Pilot Instructor.** Both Civil Aviation Rules, Parts 121 Air Operations – Large Aeroplanes and 125 Air Operations – Medium Aeroplanes use the terms **airline instructor** (AI) referred to in Part 61; **pilot instructor** (PI); **line supervisory pilot** (LSP); and, **simulator instructor** (SI). There is no such thing as an airline instructor rating in Part 61 and the other three positions are role descriptions not instructor ratings. However, certificated Part 121/125 organisations have a structured and regularly audited operational flight training system under Parts 121 and 125 Subparts H *Crew Member Requirements*, I *Training* and J *Crew Member Competency Requirements*, which fully support their check and training system. A LSP must be either a Category D instructor rating or an AI appointed by the certificated Part 121/125 organisation. The AI, PI and LSP are not portable as they are organisation specific.

1.1.4 **Part 135 Instructor.** Part 135 Air Operations – Helicopters and Small Aeroplanes has a similar structure to certificated Parts 121 and 125 organisations which outlines the operational flight training required under Subparts H, I and J which support their check and training system. However, the instructor qualification requirements under rule 135.567 are not as stringent as Parts 121/125 and list only Categories A, B or D flight instructor ratings, supported by P in C operations and initial/recurrent training requirements. Part 135 operators should have an established operational flight crew training program within which the Categories A, B or D flight instructor may operate as an operational instructor.

## 2.Rule 61.303 Eligibility Requirements

### 2.1 Flight Experience

2.1.1 Appendix 1 of this AC details the types of flight experience that is acceptable to the Director to meet the minimum experience requirements referred to in rule 61.303 for the various categories of flight instructor rating.

### 2.2 Approved Instructional Technique Course (Categories E, D and C)

2.2.1 Rules 61.303(a)(7) (b)(7) and (c)(6) require an applicant for a Category D, E or C flight instructor rating to have satisfactorily completed an approved course in the practice and theory of flight instruction. This course is to be completed **before** the commencement of, or integrated with, the instructor flight training course. It is not acceptable for this course to be completed at the end of the dual flight instructor training. A course covering the syllabus detailed in Appendix II of this AC is considered to be an approved course provided it is conducted by either:

- (a) an approved person with appropriate teaching experience, operating under a Part 141 aviation training organisation certificate where the certificate authorises the holder to conduct that training; or
- (b) an approved person with appropriate teaching experience operating under a Part 119 air operator certificate, within a Part 121, 125 or 135 organisation, where the certificate authorises the holder to conduct that training.

*NOTE: Approved means in writing by the Director and this approval is gained by a review of the presenter's qualifications, intended course material and course attendance by a CAA examiner.*

2.2.2 **Course Duration:** The instructional technique course consists of four days (24 hours class contact time) as detailed in Appendix II of this AC which may be split into two modules (providing both modules are conducted within the same 30 day period).

2.2.3 **Course Certification:** This course is to be successfully completed and certified accordingly by the course presenter in the pilot logbook. This certification remains valid for 12 months from the date of course completion. Successful completion of this course requires as a minimum for logbook certification—

- (a) full attendance
- (b) active participation in the course
- (c) interaction with the presenter and other participants
- (d) demonstrated improvement in instructional technique over the four-day course.

2.2.4 **Approved Courses:** For information on approved courses see the CAA website: <http://www.caa.govt.nz/>.

### 2.3 Oral Examination

2.3.1 Rules 61.303(b)(6), 61.303(c)(7)(iv), 61.303(d)(7)(iv) and 61.303(e)(6)(iv) require Categories D, C, B and A flight instructor applicants to pass an oral examination in the practice and theory of flight instruction. This examination is conducted by the flight examiner who conducts the initial flight test and requires the candidate to exhibit competent instructional techniques during the pre-flight briefing, the aircraft pre-flight inspection, in-flight instruction, post-flight critique and oral examination.

## 2.4 Dual Flight Instruction (Category C)

2.4.1 **Rule 61.303(c)(8)** requires an applicant for the issue of a Category C flight instructor rating to have at least 25 hours dual flight instructor training or approved equivalent.

2.4.2 Where an applicant already holds a New Zealand Category C, B or A flight instructor rating (for example in aeroplanes), and wishes to later qualify for a Category C flight instructor rating in helicopters, an instructor training course of at least 10 hours dual flight instructor training in helicopters would be acceptable as an approved equivalent.

2.4.3 The same also applies for an applicant who holds a New Zealand Category C, B, or A flight instructor rating (helicopter) who wishes to qualify for a Category C flight instructor (aeroplane).

2.4.4 The dual flight instructor training is to be given by the holder of an appropriate and current New Zealand Categories A or B flight instructor rating.

2.4.5 The 25-hour course must cover the techniques of basic flight instruction and may not include instructor training for aerobatics, spinning, night, or for multi-engine aircraft. It is recommended that this 25 hour course of training includes at least one revision of the candidate's competence (briefing, flight instruction, debrief and principles of flight) by a Category A flight instructor within one month of the scheduled issue flight test date.

## 2.5 Flight Instruction Demonstration

2.5.1 **Rule 61.303** also requires an applicant for a flight instructor rating to demonstrate to the Director, in the appropriate category of aircraft, the ability to give flight instruction in all normal and emergency manoeuvres, by passing an oral examination and flight test that are acceptable to the Director. The oral examination and flight test acceptable to the Director are based on the syllabuses detailed in Appendices III and IV of this AC and conducted in accordance with the *CAA Flight Instructor Rating Flight Test Standards Guide*.

2.5.2 In the case of a demonstration after which the applicant is deemed 'not yet competent' for Categories C, B or A, acceptable practice may be to carry out a minimum of one hour dual remedial training with a Category A flight instructor prior to any retest. The flight examiner will advise if this remedial training is required.

### **3. Rule 61.305 Privileges and Limitations**

#### **3.1 Category E**

**3.1.1** Category E flight instructors conducting operational competency assessments in accordance with rules 61.707, 61.717, 61.727 and/or 61.737 may log the flight time as pilot-in-command.

#### **3.2 Limitations (Categories D, C and B)**

**3.2.1** **Rule 61.305** prohibits an instructor from giving flight instruction at night, in spinning, aerobatics or in a multi-engine aircraft unless competence in that activity has been demonstrated to an appropriately authorised flight examiner.

#### **3.3 Multi-Engine Privileges (Category D)**

**3.3.1** **Rule 61.305(d)(2)** permits the holder of a Category D flight instructor rating to conduct type ratings in aircraft for which they hold an aircraft type rating. In order to conduct type ratings for multi-engine aircraft, the Category D flight instructor must have demonstrated competence in multi-engine conversion instruction to a flight examiner and have logbook certification from a flight examiner [rule 61.305(g)]. A Category D flight instructor rating issue demonstration conducted in a multi-engine aircraft meets the requirement for both single and multi-engine type rating conversion privileges.

**3.3.2** Category D flight instructors may not conduct multi engine training for the issue of the initial multi engine type, only conversion training, (i.e. the licence holder must be already type rated on a multi engine type).

#### **3.4 Supervision of Category C**

**3.4.1** **Rule 61.305(h)** requires the holder of a Category C flight instructor rating to be under the supervision of the holder of a Category B or A flight instructor rating. The supervision by the Categories B or A flight instructor should include the following:

- (a) Accepting supervisory responsibility by signing a certificate (detailed below).
- (b) On a regular basis both monitoring pre-flight briefings given by the Category C flight instructor to students and flying with the students.
- (c) Overseeing, advising, helping, and guiding the Category C flight instructor.
- (d) If not satisfied with the Category C flight instructor's briefings or flight instructional standards, reporting such deficiencies to the Category C flight instructor, their CFI and where appropriate, to the Director.
- (e) In accordance with rule 61.305(j), for at least the first 6 months and for at least the first 100 hours of instructional flying, directly supervising the Category C flight instructor by being on the same airfield, at the time that any instructional flight commences, being directly responsible for authorising such flights and for the flight instruction actions of the flight instructor who is under supervision.
- (f) Category C flight instructors who have completed the period of direct supervision are still required to be supervised by the holder of a Category A or B flight instructor rating in accordance with rule 61.305(h). The above detail in (a) to (d) inclusive is still applicable; however, the requirement for every instructional flight undertaken by the Category C

instructor to be directly supervised does not apply. This is often referred to as indirect supervision. It is not acceptable for this supervision to be carried out from a remote location. This means that the supervising instructor must be based in the same area as the Category C flight instructor. For example: for a Category C instructor operating in Christchurch, the supervising instructor must be based in the Christchurch area.

- 3.4.2 In meeting the requirements of rules 61.305(h) and 61.305(j), the following wording, which may be entered in the holder's pilot logbook in the form of a stick-on label or a rubber stamp, may be used—

*I hereby certify that, in accordance with Civil Aviation Rule 61.305(h)  
Category C flight instructor.....is under my supervision, and for at  
least the first 6 consecutive months and for at least the first 100 hours of instructional flying, is  
under my direct supervision.*

*Signed ..... Date ..... Instructor Category ..... Licence number .....*

## 4. Rule 61.307 Currency Requirements

### 4.1 Competency Demonstration (Categories A, B and C)

4.1.1 **Rule 61.307(a)** requires a Category E flight instructor to comply with the currency requirements of the Grade 1 agricultural rating prescribed in rule 61.707.

4.1.2 **Rules 61.307(d) and 61.307(e)** provide that a flight instructor must not give flight instruction unless they have demonstrated competence in accordance with the appropriate flight instructor flight test syllabus within prescribed periods.

4.1.3 Annual competency demonstrations for **Categories B and C** instructors are conducted by a flight examiner operating under a Part 141 organisation certificate where the certificate authorises the holder to conduct flight instructor competency demonstrations.

4.1.4 **Category A** flight instructor biennial instructor competency demonstrations are conducted by CAA flight examiners.

4.1.5 The demonstrations of continued competence required under rules 61.307(d) and 61.307(e) are conducted in accordance with the appropriate *Flight Test Standards Guide*.

### 4.2 Use of Lower Privileges (Categories A and B)

4.2.1 **Rule 61.307(h)** provides for Category A or B flight instructors who do not meet the requirements for their rating, but who meet the requirements for a lower category rating to exercise the privileges of that lower category of flight instructor rating.

4.2.2 For example, if a Category A flight instructor elects to exercise Category B privileges, a successful demonstration of competency to a flight examiner at the lower level would entitle the holder to exercise Category B privileges. The flight examiner concerned should clearly annotate the appropriate detail in the instructor's pilot logbook.

4.2.3 Should the instructor in this example subsequently wish to re-instate Category A privileges, it would be necessary to successfully demonstrate to the Director (CAA examiner), competence at the higher level.

4.2.4 This provision does not include Categories D and E flight instructor ratings. These are separate ratings, not lower categories, and as such the holder of a Category A, B or C flight instructor rating who is not current may not exercise the privileges associated with Category D or E flight instructor ratings as a matter of right. In order to be eligible for the issue of a Category D flight instructor rating, such persons must either meet the currency requirements of their Categories A, B, or C flight instructor rating before applying to the Director (CAA), or failing that, undertake a Category D or E issue flight test (as applicable).

## Appendix I—Flight Instructor Rating Flight Experience Requirements

*Note: The term ‘appropriate category of aircraft’ as used in this AC means an aeroplane or helicopter as applicable.*

### **Category E Flight Instructor Rating—Aeroplane or Helicopter**

**Flight experience:** As per rule 61.303(a)(3)

### **Category D Flight Instructor Rating—Aeroplane or Helicopter**

#### **Rules 61.303(b)**

**Flight experience:** At least 700 hours which is to include at least the minimum specific flight time requirements as follows—

**Pilot-in-command:** 500 hours in the appropriate category of aircraft.

**To give conversion instruction at night:** 30 hours pilot-in-command time by night in the appropriate category of aircraft by night. Prior to giving conversion instruction at night, candidates are required to demonstrate instructional and flying competence in night flight to a flight examiner.

**To give conversion instruction in multi-engine aeroplanes:** 50 hours in multi-engine aeroplanes, including 25 hours as pilot-in-command. Prior to giving conversion instruction in multi-engine aeroplanes, candidates are required to demonstrate instructional and flying competence in a multi-engine aeroplane to a flight examiner.

**To give conversion instruction in multi-engine helicopters:** 25 hours in multi-engine helicopters, including 10 hours as pilot-in-command. Prior to giving instruction in multi-engine helicopters, candidates are required to demonstrate instructional and flying competence in a multi-engine helicopter to a flight examiner.

**To give conversion instruction in cross-country navigation under IFR:** Hold an instrument rating current to single pilot standard in the appropriate category of aircraft and have at least 50 hours experience as pilot-in-command on cross country IFR operations. Prior to giving instruction in cross-country navigation under IFR, candidates are required to demonstrate instructional and flying competence in cross-country navigation under IFR to a flight examiner.

**Category C Flight Instructor Rating—Aeroplane****Rule 61.303(c)**

**Flight experience:** At least 200 hours in aeroplanes, which is to include at least the minimum specific flight experience requirements as follows.

**Pilot-in-command:** 150 hours in aeroplanes.

**Instrument:** 15 hours instrument time including at least 10 hours instrument flight time in aeroplanes which itself includes at least 5 hours dual instrument instruction. A maximum of 5 hours instrument time may be completed in an approved aeroplane synthetic flight trainer in accordance with rule 61.33.

**Spin recovery:** A minimum of 1-hour dual instruction in spin recovery and to have been certified competent in this exercise by an appropriately qualified Categories A or B flight instructor.

**Cross-country:** 40 hours cross-country flight time as pilot-in-command of aeroplanes, this experience is to include 1 flight of at least 300 nautical miles in an aeroplane during which at least 2 full-stop landings have been made at intermediate points en-route.

**To instruct at night:** 10 hours night flight time in aeroplanes including at least 5 hours as pilot-in-command by night. Prior to giving night flight instruction, candidates are required to demonstrate instructional and flying competence in night flight to a flight examiner.

**To instruct in multi-engine aeroplanes:** 50 hours in multi-engine aeroplanes, including at least 25 hours as pilot-in-command in multi-engine aeroplanes. Prior to giving instruction in multi-engine aeroplanes, candidates are required to demonstrate instructional and flying competence in a multi-engine aeroplane to a flight examiner.

**To instruct in spinning:** Prior to giving instruction in spinning candidates are required to demonstrate instructional and flying competence in spinning and recovery to a flight examiner.

**To instruct in aerobatics:** Prior to giving instruction in aerobatics, candidates are required to demonstrate instructional and flying competence in at least the three basic aerobatic manoeuvres; loop, barrel roll and stall turn to a flight examiner.

**To instruct in cross-country navigation under IFR:** Hold an instrument rating current to single pilot standard in aeroplanes and have at least 50 hours experience as pilot-in-command on cross country IFR operations. Prior to giving instruction in cross-country navigation under IFR attainment of this experience requirement must be certified in the holder's logbook by a flight examiner.

**Category C Flight Instructor Rating—Helicopter****Rule 61.303(c)**

**Flight experience:** At least 200 hours in helicopters, which is to include at least the minimum specific flight experience requirements as follows.

**Pilot-in-command:** 150 hours in helicopters.

**Instrument:** 7 hours instrument time including at least 5 hours dual instrument instruction in helicopters. A maximum of 5 hours instrument time may be completed in an approved helicopter synthetic flight trainer in accordance with rule 61.33 or in aeroplanes. Instrument time may only be done in aeroplanes if the applicant holds at least a New Zealand PPL(A).

**Cross-country:** 40 hours cross-country flight time as pilot-in-command, up to 20 hours of which may be done in aeroplanes with the remaining 20 hours in helicopters. This experience is to include 1 flight of at least 300 nautical miles in a helicopter during which at least 2 full-stop landings have been made at intermediate points en-route.

**Mountainous terrain:** 10 hours pilot-in-command in helicopters in mountainous terrain.

**Sling loads:** 10 hours pilot-in-command in helicopters carrying sling loads.

**To instruct at night:** 10 hours night flight time in helicopters including at least 5 hours as pilot-in-command by night. Prior to giving night flight instruction, candidates are required to demonstrate instructional and flying competence in night flight to a flight examiner.

**To instruct in multi-engine helicopters:** 25 hours in multi-engine helicopters, including at least 10 hours as pilot-in-command in multi-engine helicopters. Prior to giving instruction in multi-engine helicopters, candidates are required to demonstrate instructional and flying competence in a multi-engine helicopter to a flight examiner.

**To instruct in helicopters in VFR cross-country navigation by night:** 20 hours as pilot-in-command in helicopters on VFR cross-country navigation flights by night.

**To instruct in cross-country navigation under IFR:** Hold an instrument rating current to single pilot standard in helicopters and have at least 50 hours experience as pilot-in-command on cross country IFR operations. Prior to giving instruction in cross-country navigation under IFR, attainment of this experience requirement must be certified in the holder's logbook by a flight examiner.

**Category B Flight Instructor Rating—Aeroplane****Rule 61.303(d)**

**Flight experience:** At least 500 hours in aeroplanes, which is to include at least the minimum specific flight experience requirements as follows.

**Pilot-in-command:** 450 hours in aeroplanes.

**Flight instruction:** 250 hours instructional experience teaching PPL or CPL flight training exercises, at least 150 hours of which is to be in aeroplanes.

**Instrument:** 20 hours instrument time including 15 hours instrument flight time in aeroplanes which itself includes 5 hours dual instrument instruction. A maximum of 5 hours instrument time may be completed in an approved aeroplane synthetic flight trainer in accordance with rule 61.33.

**Spin recovery.** A minimum of 1-hour dual instruction in spin recovery and to have been certified competent in this exercise by a Category A or B flight instructor. This is not necessary for persons who have already met the requirement for New Zealand Category C flight instructor rating issue.

**Cross-country instruction:** 30 hours cross-country flight instructing time in aeroplanes.

**To instruct at night:**

Flight experience: 25 hours night flight time in aeroplanes, including—

Pilot-in-command: 20 hours by night in aeroplanes

Instructing experience: 15 hours night flight instruction in aeroplanes.

Candidates who already hold Category C flight instructor night instructional privileges are required to have their pilot logbook assessed and have Category B flight instructor night instructional privileges endorsed by a GA flight examiner prior to exercising Category B flight instructor privileges at night.

Candidates who do not hold Category C flight instructor night instructional privileges are required to demonstrate instructional and flying competence in night flight to a flight examiner prior to giving night flight instruction.

**To instruct in multi-engine aeroplanes:** 50 hours in multi-engine aeroplanes, including 25 hours as pilot-in-command in multi-engine aeroplanes. Prior to giving instruction in multi-engine aeroplanes, candidates are required to demonstrate instructional and flying competence in a multi-engine aeroplane to a flight examiner.

**To instruct in spinning.** Prior to giving instruction in spinning and recovery, candidates are required to demonstrate instructional and flying competence in spinning to a flight examiner.

**To instruct in aerobatics.** Prior to giving instruction in aerobatics, candidates are required to demonstrate instructional and flying competence in at least the three basic aerobatic manoeuvres; loop, barrel roll and stall turn to a flight examiner.

**To instruct in cross-country navigation under IFR.** Hold an instrument rating current to single pilot standard in aeroplanes and have at least 50 hours experience as pilot-in-

command on cross country IFR operations. Prior to giving instruction in cross-country navigation under IFR, attainment of this experience requirement must be certified in the holder's logbook by a flight examiner.

## **Category B Flight Instructor Rating—Helicopter**

### **Rule 61.303(d)**

**Flight experience:** At least 500 hours in helicopters, which is to include at least the minimum specific flight experience requirements as follows.

**Pilot-in-command:** 450 hours in helicopters.

**Flight instruction:** 250 hours instructional experience on PPL or CPL flight training exercises, at least 150 hours of which is to be in helicopters.

**Instrument:** 15 hours instrument time which is to include at least 10 hours instrument flight time in helicopters which itself includes 5 hours under dual instrument instruction. A maximum of 5 hours instrument time may be accumulated in an approved helicopter synthetic flight trainer or in aeroplanes in accordance with rule 61.33. Instrument time may only be done in aeroplanes if the applicant holds at least a New Zealand PPL(A).

**Cross-country instruction:** 30 hours cross-country flight instruction, of which up to 10 hours may have been completed in aeroplanes.

**Mountainous terrain:** 20 hours pilot-in-command flight time in helicopters operating in mountainous terrain.

**Sling loads:** 20 hours pilot-in-command flight time in helicopters carrying sling loads.

### **To instruct at night—**

Flight experience: 25 hours night flight time in helicopters, including—

Pilot-in-command: 20 hours by night which may include up to 15 hours in aeroplanes.

Instructing experience: 15 hours night flight instructing which may include up to 5 hours night flight instructing in aeroplanes.

Candidates who already hold Category C flight instructor night instructional privileges are required to have their pilot logbook assessed and have Category B flight instructor night instructional privileges endorsed by a GA flight examiner prior to exercising Category B privileges at night.

Candidates who do not hold Category C flight instructor night instructional privileges are required to demonstrate instructional and flying competence in night flight to a flight examiner prior to giving night flight instruction.

**To instruct in multi-engine helicopters:** 25 hours in multi-engine helicopters, including 10 hours as pilot-in-command in multi-engine helicopters. Prior to giving instruction in multi-engine helicopters, candidates are required to demonstrate instructional and flying competence in a multi-engine helicopter to a flight examiner.

**To instruct in helicopters in VFR cross-country navigation by night:** 20 hours VFR cross-country navigation experience by night as pilot-in-command in helicopters.

**To instruct in cross-country navigation under IFR:** Hold an instrument rating current to single pilot standard in helicopters and have at least 50 hours experience as pilot-in-command on cross country IFR operations. Prior to giving instruction in cross-country navigation under IFR, attainment of this experience requirement must be certified in the holder's logbook by a flight examiner.

## **Category A Flight Instructor Rating—Aeroplane**

### **Rule 61.303(e)**

**Flight experience:** At least 1250 hours in aeroplanes. This time is to include at least the minimum specific flight experience requirements as follows.

**Pilot-in-command:** 1000 hours in aeroplanes.

**Instrument:** Applicants must hold **an a-current** instrument rating (aeroplane).

**Flight instruction:** 750 hours instructional time, at least 500 hours of which is to be in aeroplanes.

**Night flight:** 50 hours in aeroplanes including at least 40 hours as pilot-in-command in aeroplanes by night.

**Night instruction:** 30 hours flight instructional time by night in aeroplanes.

**Cross country instruction:** 100 hours cross-country flight instruction time in aeroplanes.

**To instruct in multi-engine aeroplanes:** 50 hours in multi-engine aeroplanes, including at least 25 hours as pilot-in-command in multi-engine aeroplanes. Prior to giving instruction in multi-engine aeroplanes, candidates are required to demonstrate instructional and flying competence in a multi-engine aeroplane to a flight examiner.

**To instruct in cross-country navigation under IFR.** Hold an instrument rating current to single pilot standard in aeroplanes and have at least 50 hours experience as pilot-in-command on cross country IFR operations. Prior to giving instruction in cross-country navigation under IFR, attainment of this experience requirement must be certified in the holder's logbook by a flight examiner.

**Category A Flight Instructor Rating—Helicopter****Rule 61.303(e)**

**Flight experience:** At least 1250 hours in helicopters, which is to include at least the minimum flight experience requirements as follows:

**Pilot-in-command:** 1000 hours in helicopters.

**Instrument:** 40 hours including—

20 hours instrument flight time in helicopters of which at least 10 hours are dual instrument instruction in helicopters.

Up to 5 hours of the dual instrument instruction requirement may be completed in an approved helicopter synthetic flight trainer in accordance with rule 61.33.

**Flight instruction:** 750 hours, at least 500 hours of which is to be in helicopters.

**Night flight:** 50 hours in helicopters including 40 hours as pilot-in-command in helicopters by night, up to 30 hours of which may have been completed as pilot-in command in aeroplanes by night.

**Night instruction:** 30 hours night flight instructional time of which at least 15 hours may have been completed in aeroplanes.

**Cross country instruction:** 50 hours cross-country flight instruction time of which up to 15 hours may have been completed in aeroplanes.

**Night cross country:** 20 hours night VFR cross-country navigation as pilot-in-command in helicopters by night.

**Mountainous terrain:** 30 hours as pilot-in-command in helicopters operating in mountainous terrain.

**Sling loads:** 30 hours as pilot-in-command in helicopters carrying sling loads.

**To instruct in multi-engine helicopters:** 25 hours in multi-engine helicopters, including 10 hours as pilot-in-command in multi-engine helicopters. Prior to giving instruction in multi-engine helicopters, candidates are required to demonstrate instructional and flying competence in a multi-engine helicopter to a flight examiner.

**To instruct in cross-country navigation under IFR.** Hold an instrument rating current to single pilot standard in helicopters and have at least 50 hours experience as pilot-in-command on cross country IFR operations. Prior to giving instruction in cross-country navigation under IFR, attainment of this experience requirement must be certified in the holder's logbook by a flight examiner.

## **Helicopter Mountain Flight Instruction**

The following minimum flight experience is required by Categories A, B or C flight instructors before they conduct helicopter mountain flight instruction.

### **To conduct helicopter mountainous terrain awareness instruction as required in AC AC61-3**

250 hours experience in helicopters, of which 10 hours is as pilot-in-command of a helicopter in a mountainous environment.

50 hours flight instructional experience in helicopters conducting PPL or CPL flight training exercises.

### **To conduct helicopter basic mountain flying training instruction as required in AC AC61-5**

500 hours experience in helicopters, of which 30 hours is as pilot-in-command of a helicopter in a mountainous environment.

250 hours flight instructional experience in helicopters conducting PPL or CPL flight training exercises.

### **To conduct helicopter advanced mountain flying training instruction**

700 hours flight experience in helicopters, of which 150 hours is as pilot-in-command of a helicopter in a mountainous environment.

300 hours flight instructional experience in helicopters.

***NOTE:** Advanced mountain flying training is any training conducted beyond that required either for mountainous terrain awareness training required by AC AC61-3 or basic mountain flying instruction required by AC AC61-5.*

### **Category C Flight Instructor**

Before conducting any helicopter mountain flight instruction, a Category C flight instructor, in addition to the above flight experience requirements, must have—

- completed the direct supervision period required by rule 61.305(j)
- approval to conduct mountainous terrain awareness training or basic/advanced mountain flying training as appropriate from the person's supervising instructor.

## Appendix II—Instructional Technique Course Syllabus

### Subject 62—The Practice and Theory of Flight Instruction

#### Introduction

It must be stressed that application of the principles and strategies in this syllabus should be applied with the aviation context clearly in mind whatever the training venue i.e. classroom, briefing room, aircraft, simulator, etc. The particular emphasis is not just the ‘what’ but the ‘how’ of instructing; the practical reality of tuition, briefing, instruction, and debriefing in the aviation environment.

This syllabus is for the guidance of course presenters and should form the basis for developing a course. This document is syllabus content and not intended as course content. The syllabus sequence is not intended to dictate course sequence.

#### Course concept

The course, as a prerequisite for Categories D and C initial instructor rating issue flight test consists of 4 days (24 hours class contact time), which may be split into two modules, both conducted within the same 30 day period, and should present the syllabus material assuming no previous teaching/instructing experience exists and seek to provide the candidate with knowledge, attitudes, skills and techniques to aid them in instructing within the aviation environment.

The instructional technique course is to be completed before the commencement of, or integrated with, the instructor flight training course.

#### Syllabus

##### Learning Theory: How People Learn

- ▶ Define learning.
- ▶ Describe the following three dimensions (domains) of learning—
  - cognitive (knowledge)
  - psychomotor (skill)
  - affective (attitudes)
- ▶ Explain Bloom’s Taxonomy of intellectual performance.
- ▶ Describe how the human brain processes information.
- ▶ Explain the processes and limitations of human memory.
- ▶ Describe the relative value of each of the senses in the learning process.
- ▶ Explain perception.
- ▶ Describe the limitations of human perception.
- ▶ Describe the application of the following styles of learning—
  - visual

- aural/auditory
  - read/write
  - kinaesthetic
- Explain the meaning and application of the following principles (laws) of learning—
- readiness (relevance)
  - exercise (repetition)
  - effect
  - primacy
  - intensity
  - recency
  - belonging
  - reinforcement
  - feedback
- Explain the role of motivation, both extrinsic and intrinsic, in the learning process.
- Describe barriers to effective learning and ways of overcoming these barriers, including—
- physical
  - intellectual
  - emotional
  - administrative
- Explain the effect of stress on the learning process.
- Describe the following three phases (stages) in the learning of a skill (motor programme)—
- the knowledge (cognitive) phase
  - the acquisition (associative) phase
  - the automatic phase
- Describe the learning plateau in skill development.
- Explain how attitudes are learnt.

### **Teaching Methods**

- Describe the characteristics of the following teaching methods—

- lecture
  - theory lesson
  - guided discussion (tutorial)
  - pre-exercise briefing
  - practical skill lesson
  - post-exercise de-briefing
  - programmed instruction
  - facilitation
- ▶ Explain the strengths and weaknesses of each of the teaching methods listed above.
- ▶ Explain the importance of creating an effective learning environment.

### Aims and Objectives

- ▶ Define an instructional (behavioural/specific) objective.
- ▶ Differentiate between lesson aims and instructional objectives.
- ▶ State the purpose of lesson aims.
- ▶ State the purpose of instructional objectives.
- ▶ Describe the advantages of instructional objectives.
- ▶ Explain the following three characteristics of an instructional objective—
  - a statement of performance
  - a statement of standards
  - a statement of conditions
- ▶ Write an instructional objective.

### The Lesson

- ▶ Describe the major sections of a lesson model.
- ▶ Explain the purpose of an introduction.
- ▶ Explain the purpose of the lesson body.
- ▶ Explain the purpose of a lesson consolidation/conclusion.
- ▶ State the steps in planning a lesson.
- ▶ Write a plan for a lesson delivered during the course.

## **Programme Planning**

- ▶ Explain the relevance of prior learning and background.
- ▶ Explain the purpose and methods of completing a needs assessment.
- ▶ Describe the principles of planning and managing training programmes.
- ▶ Describe the influence of differing aviation goals on the structure and delivery of various training courses.

## **Communication**

- ▶ Explain a basic model of communication.
- ▶ Describe barriers to communication in instruction and ways of overcoming these barriers, including those associated with gender, culture and English as a second language.
- ▶ Describe techniques for effective verbal communication.
- ▶ Describe techniques for effective listening.
- ▶ State the approximate proportion of communication that is body language.
- ▶ Describe body language factors that are important in instruction.
- ▶ Demonstrate effective verbal, non-verbal and listening skills when instructing.

## **Questioning Techniques**

- ▶ Explain the purpose of using questioning in instruction.
- ▶ Describe techniques for framing questions.
- ▶ Identify faults in questioning techniques.
- ▶ Apply effective questioning in an instructional situation.

## **Training Aids**

- ▶ Explain how and why training aids benefit the learning process.
- ▶ Describe the types of training aids available to an instructor.
- ▶ Describe the characteristics of effective training aids.
- ▶ Explain the principles of planning for the use of training aids.
- ▶ Explain the principles for the construction/development of training aids.
- ▶ Explain the techniques for using the following training aids effectively—
  - power point
  - overhead projectors and transparencies
  - magnetic/whiteboards

- models
  - cutaways
  - videos/DVDs/film clips/slides
  - synthetic flight training devices
  - manuals/handouts/textbooks
  - wall flip charts/posters
- ▶ Construct/develop and use training aids effectively during the course.

### **Briefing/De-Briefing**

- ▶ Explain the purpose and techniques of a briefing, including those of a formal ground briefing (long briefing) and those of a pre-brief prior to airborne training.
- ▶ Explain the purpose and techniques of a de-brief.
- ▶ Discuss the concept and ability to be critically reflective.
- ▶ Consider the elements of an appropriate briefing/debriefing environment including potential distractions.
- ▶ Demonstrate effective briefing and debriefing in an instructional situation.

### **Application of Instruction in the Cockpit**

- ▶ Describe instruction principles and practices relevant to 'between briefing room and cockpit'.
- ▶ Explain the management of the cockpit while instructing, including workload and instructing without compromising pilot in command responsibilities.
- ▶ Describe the components of a model of airborne instruction.
- ▶ Discuss the monitoring of student performance.
- ▶ Describe intervention principles and techniques.
- ▶ Describe the principles of managing lesson time, lesson objectives, student performance and cost.

### **Trainee/Student**

- ▶ Identify characteristics particular to aviation students.
- ▶ Describe the characteristics of adult learners.
- ▶ Explain the importance of recognising differing personality traits and strategies for effectively managing these.
- ▶ Discuss preferred learning styles, including own preferred style.

### The Instructor

- ▶ Explain the role and responsibilities of the instructor including as facilitator, mentor, and assessor.
- ▶ Identify the characteristics of a good trainer including what makes an instructor credible.
- ▶ Discuss the avoidable traits and behaviours.
- ▶ Identify stresses in the role of instruction and techniques for managing them.
- ▶ Outline the professional duties and obligations of an aviation instructor.
- ▶ Outline the ethics applicable to aviation instructing.
- ▶ Explain the importance of self-assessment as an instructor.

### Assessment of Learning

- ▶ Explain the purpose of assessing student learning.
- ▶ Describe the following three broad functions of assessment—
  - diagnostic
  - achievement
  - predictive
- ▶ Differentiate between assessment and evaluation.
- ▶ Describe the various types of assessment used in aviation learning.
- ▶ Describe the following elements for effective assessment in the practical environment—
  - validity
  - reliability
  - objectivity
  - differentiation
  - comprehensiveness
- ▶ Explain the function and importance of feedback in the assessment process.
- ▶ Describe and contrast criterion referenced and normative referenced assessment.
- ▶ Describe and contrast objective and subjective assessment.
- ▶ Discuss the construction of the following types of objective assessment—
  - multi-choice items
  - true/false items
  - matching items

- completion/open ended questions
- ▶ Describe the following problems associated with subjective assessment—
  - differing standards
  - the halo effect
  - logical error
  - central tendency error
- ▶ Explain ‘competency based standards’.
- ▶ Describe the following means of improving practical assessment—
  - checklists
  - numerical scales
  - descriptive scales
  - behaviourally anchored numerical scales (e.g. Flight Test Standards Guides)
- ▶ Describe the requirements for and principles of documenting records of training.
- ▶ Assess the performance of course participants in their demonstration of instructional techniques.

**Threat and Error Management**

- ▶ Describe threat management as it pertains to flight instruction, including means of:
  - recognising threats
  - avoiding
  - mitigating the effects of threats
- ▶ Identify methods for detecting, avoiding and mitigating error during flight instruction.

## Appendix III—Flight Instructor Oral Examination Syllabus

### General

All applicants for flight instructor ratings are examined in the techniques of applied instruction as follows—

- ▶ assessment of student performance in those subjects in which ground instruction is given
- ▶ the learning process
- ▶ elements of effective teaching
- ▶ questioning technique
- ▶ student evaluation and testing
- ▶ briefing/debriefing technique
- ▶ training philosophies
- ▶ training programme development
- ▶ lesson planning
- ▶ classroom instructional techniques
- ▶ use of training aids
- ▶ analysis and correction of student errors
- ▶ human performance and limitations relevant to flight instruction
- ▶ hazards involved in simulating system failures and malfunctions in the aircraft.

### Category E Flight Instructor Ratings—Aeroplane and Helicopter

#### Oral Examination Syllabus

Some items in this syllabus are annotated as being specifically applicable to aeroplanes (A) or helicopters (H) and topdressing (application of solid material) or spraying (application of liquids) only.

Candidates are expected to demonstrate adequate knowledge in the following areas.

#### Legislation

- ▶ Civil Aviation Rules (appropriate sections of Parts 1, 61, 91, 137)
- ▶ ACs—
  - AC61-5 Commercial Pilot Licence
  - AC61-15 Agricultural Ratings
  - AC61-16 Pilot Chemical Ratings

- AC61-18 Flight Instructor Ratings
- AC61-10 Aircraft Type Ratings (single pilot certificated type competency demonstration requirements and form CAA 24061/13).
- ▶ Any other legislation relating to agricultural aviation.
- ▶ The AIPNZ and supplements.
- ▶ Knowledge of the eligibility requirements plus the privileges and limitations applicable to the Category E flight instructor rating.

### **Ground Equipment**

- ▶ knowledge of loading vehicles
- ▶ knowledge of mixing and measuring gear
- ▶ safety bars (A)
- ▶ grills (A)
- ▶ filters
- ▶ crowbars (A)
- ▶ windsock or other means of wind indication
- ▶ first aid kits
- ▶ fire extinguishers
- ▶ refuelling from drums
- ▶ chamois filters, and pumps

### **Ground Personnel**

- ▶ responsibility for briefing ground personnel
- ▶ signals for communications
- ▶ drills of vital actions in emergencies

### **Application of Material**

- ▶ inspection and knowledge of materials
- ▶ precautions and antidotes
- ▶ gloves
- ▶ breathing apparatus
- ▶ hygiene
- ▶ effects on field personnel

- ▶ protection of persons and property
- ▶ effects of wind, temperature and humidity
- ▶ flow quantities and densities
- ▶ application rates
- ▶ application techniques
- ▶ calculation of application rates
- ▶ care and storage of equipment and material
- ▶ corrosion
- ▶ disposing of containers
- ▶ decontamination of equipment

### **The Aircraft**

- ▶ flight manual and performance graphs
- ▶ agricultural overload
- ▶ emergency equipment and jettison (its use and effect)
- ▶ the fitting and use of ancillary equipment, for example seeders, spray gear, and their effect on performance, weight and balance, jettison and so on
- ▶ calibration of application equipment
- ▶ inspections and maintenance in the field
- ▶ aircraft pre-flight inspection and knowledge to at least CPL level

### **Landing Site and Operation**

- ▶ importance of briefing
- ▶ importance of landing strip inspection before landing
- ▶ obstructions
- ▶ wind indications
- ▶ overshoot
- ▶ side slope and width
- ▶ nature of surface
- ▶ ground effect
- ▶ dust
- ▶ stones

- ▶ effects of taking-off and landing into the sun especially on sloping strips
- ▶ presence of stock
- ▶ fencing
- ▶ presence of third-party risk
- ▶ effect of altitude, temperature, slope, wind, wind gradient, and turbulence
- ▶ climb out
- ▶ cross-wind take-off and landing
- ▶ techniques for landing sites
- ▶ positioning of loader and other equipment to minimise obstruction

### **Low Flying**

- ▶ reconnaissance and familiarisation with area before commencing operations
- ▶ check for obstructions (particularly wires)
- ▶ check for presence of trees (especially dead trees and deciduous trees when bare)
- ▶ observe and note sun position and shadow
- ▶ avoidance of flying up blind valleys
- ▶ care when flying into rising ground and avoidance of spatial disorientation,
- ▶ wind gradient and turbulence especially while turning
- ▶ desirable application height
- ▶ contour flying
- ▶ fuel management
- ▶ avoidance of obstacles
- ▶ avoidance of houses and schools
- ▶ protection of persons in dropping area
- ▶ susceptible crops
- ▶ stock concentrations
- ▶ catchment areas
- ▶ block boundaries

### **Planning of the Operation**

- ▶ transit from strip/helpad to sowing area (block)

- ▶ accurate identification of block boundaries
- ▶ determining most effective sowing/spraying patterns

### **Application of Material**

- ▶ sowing runs and spacing of sowing runs by use of visual references
- ▶ varying rates of application
- ▶ use of GPS
- ▶ rectification of load hang-up situations

### **Emergencies: Aeroplane**

Power failure; planning of forced landings with partial and no power.

### **Emergencies: Helicopter**

Power failure, autorotation, effect of loss of translation, RPM control, flying through rotor wash and power settling.

### **Plus for Aeroplanes only**

Effects of surface on acceleration and braking, soft or hard dirt, long and short grass, clover, dew, frost, snow, and thaw, application of aircraft performance requirements.

Blind strips and likelihood of encroachment on airstrip while loading or refuelling. Special attention to stock and ground handling.

**Category D Flight Instructor Ratings—Aeroplane and Helicopter****Oral Examination Syllabus**

Candidates are expected to demonstrate adequate knowledge in the following areas—

**Legislation**

- ▶ Civil Aviation Rules (appropriate sections of Parts 1, 61 and 91)
- ▶ ACs—
  - AC61-5 Commercial Pilot Licence
  - AC61-18 Flight Instructor Ratings:
  - AC61-17 Instrument Ratings (if applicable)
  - AC61-10 Aircraft Type Ratings (single pilot certificated type competency demonstration requirements and form CAA 24061/13 (if applicable))
- ▶ Any other legislation relating to aircraft type ratings or instrument ratings (if applicable).
- ▶ The AIPNZ and supplements.
- ▶ Eligibility requirements plus the privileges and limitations applicable to the Category D flight instructor rating.

**General**

Candidates are required to demonstrate knowledge appropriate to the privileges that are being sought, for example; type rating instruction, multi-engine conversion, night conversion instruction, IFR instruction, and waterborne aircraft instruction.

**Aircraft**

Pre-flight inspection and aircraft knowledge to at least CPL level.

**Performance and Limitations**

Candidates are required to teach practical use of charts, tables and appropriate data to determine performance, including (as applicable) take-off, climb, one engine inoperative, cruise, endurance and landing.

**Weight and Balance, Loading**

Candidates are required to teach methods of practical load distribution and the determination of the centre of gravity for take-off, landing and zero fuel weight (if applicable) using graphs or loading computers as applicable.

## **Categories C, B and A Flight Instructor Ratings—Aeroplane and Helicopter**

### **Oral Examination Syllabus**

The oral examination for a Category C, B or A flight instructor rating is conducted in accordance with the appropriate Flight Test Standards Guide.

Candidates are expected to demonstrate adequate knowledge in the following areas—

#### **Legislation**

- ▶ Civil Aviation Rules (appropriate sections of Parts 1, 61 and 91)
- ▶ ACs—
  - 61-20 Recreational Pilot Licence
  - 61-3 Private Pilot Licence
  - 61-5 Commercial Pilot Licence
  - 61-17 Instrument Ratings (if applicable)
  - 61-18 Flight Instructor Ratings
  - 61-10 Aircraft Type Ratings (single pilot certificated type competency demonstration requirements and form CAA 24061/13)
- ▶ The AIPNZ and supplements. Any other legislation relating to flight training.
- ▶ Knowledge of the eligibility requirements plus the privileges and limitations applicable to the Category A, B or C category flight instructor rating (as appropriate).

#### **Aircraft**

Pre-flight inspection and aircraft knowledge to at least CPL level.

#### **First Solo**

Oral discussion only, applicable during tests for Category B issue only.

#### **Principles of Flight for Aeroplanes**

- ▶ mechanics

- ▶ air and airflow

- ▶ lift

- ▶ drag

- ▶ aerofoils

- ▶ propellers

- ▶ level flight

- ▶ gliding

- ▶ climbing

- ▶ turning
- ▶ stability and control
- ▶ aircraft performance

### **Principles of Flight for Helicopters**

- ▶ mechanics
- ▶ air and airflow
- ▶ air resistance
- ▶ aerofoils
- ▶ lift and drag
- ▶ thrust
- ▶ level flight
- ▶ climbing and descending
- ▶ hovering
- ▶ turning
- ▶ weight and balance
- ▶ performance
- ▶ loads and load factors
- ▶ function of the controls
- ▶ helicopter components and their functions
- ▶ introduction to the helicopter flight manual
- ▶ hazards of helicopter flight
- ▶ precautionary measures and critical conditions
- ▶ helicopter flight manoeuvres
- ▶ night operations
- ▶ operation in confined areas

### **Meteorology**

- ▶ Interpretation of meteorological forecasts and reports.
- ▶ Decision making with regards to go/no go for the operation (flight test) using the current forecasts and by observation.

## Cross-Country Navigation Techniques

Flight planning, in-flight procedures, air traffic control procedures and meteorological minima applicable to the aerodrome of the test and aerodromes within a 300 nm (A) and 200 nm (H) radius of that aerodrome, and meteorological minima for special VFR.

## **Appendix IV—Flight Instructor Rating Flight Test Syllabus**

*(Flight Test Standards Guide)*

### **Category E Flight Instructor Rating—Aeroplane and Helicopter**

Intercommunication equipment of a type acceptable to the flight examiner is to be provided for use during the flight test.

#### **Pre-Flight Briefing**

The flight test will be preceded by the candidate giving a comprehensive pre-flight briefing using appropriate aids. The briefing subject is nominated by the examiner and will be specific to agricultural operations and based on appropriate topic items from the Category E oral examination syllabus specified in Appendix III of this document and Appendix I of AC AC61-15 Agricultural Ratings.

#### **In Flight**

The flight examiner will advise the candidate prior to the flight test as to the order and format that will be followed during the flight test.

The candidate will be required to demonstrate the ability to give type conversion instruction appropriate to the aircraft type being used for the flight test and aerial topdressing, aerial spraying and/or VTA operations (as applicable) flight instruction, in a range of normal and emergency manoeuvres (as nominated by the examiner). The exercises appropriate to this are prescribed in Appendix I of AC AC61-15 Agricultural Ratings and AC61-10 Aircraft Type Ratings.

Candidates undertaking Category E flight instructor rating issue flight tests will be expected to pilot the aircraft with smoothness and accuracy.

#### **Debrief**

At the conclusion of the flight test, the candidate is to demonstrate the ability to debrief the examiner in relation to the agricultural exercises that were covered during the test.

## **Category D Flight Instructor Rating—Aeroplane and Helicopter**

Intercommunication equipment of an acceptable type is to be provided for use during the flight test.

### **Pre-Flight Briefing**

The flight test will be preceded by the candidate giving a comprehensive pre-flight briefing using appropriate aids, depending on the complexity of the aircraft, on one or several aircraft systems. The system(s) to be briefed will be nominated by the examiner and be specific to type conversion training appropriate to the aircraft that is to be used for the flight test.

If instrument rating instruction privileges are requested an additional pre-flight briefing on an instrument procedure (as nominated by the examiner) will be demonstrated.

### **In Flight**

The flight examiner will advise the candidate prior to the flight test as to the order and format that will be followed during the flight test.

The candidate will be required to demonstrate the ability to give conversion instruction in a range of normal and emergency operations (as nominated by the examiner), and where applicable, non-compulsory exercises appropriate to the instructor privileges sought. The aircraft operations appropriate to conversion instruction are listed below.

Candidates undertaking Category D flight instructor rating issue flight tests will be expected to pilot the aircraft with smoothness, accuracy and where appropriate, in accordance with the limitations detailed in the CAA Flight Test Standards Guide for CPL(A) or (H) and IR(A) or (H) if applicable.

### **Debrief**

At the conclusion of the flight test, the candidate is to demonstrate the ability to debrief the examiner in relation to the type specific conversion exercises and where applicable, the instrument procedures, that were covered during the test.

### **Flight Operations—Aeroplane**

- pre-flight inspection
- starting and run up procedures
- taxiing
- normal take-off
- cruising flight
- stalling; in various configurations both from level flight and banked attitudes
- steep turns
- circuit including departure, joining and missed approach or overshoot procedures as applicable
- approach and landing; normal, cross-wind, short field, flapless, glide, wheeled, three-point, glassy water, rough water and snow as applicable

**Emergency Manoeuvres**

- intentional engine shutdown and air start (multi-engine only)
- simulated engine failures: during take-off, after take-off, in cruise from level or turning flight
- simulated forced landings without power (single engine)
- recovery from an approach to vmca (multi-engine only)

**Flight operations—Helicopter**

- pre-flight inspection
- engine start and rotor engagement
- engine checks and run up procedures
- pre lift-off procedures
- hover manoeuvring
- normal take-off, circuit and landing
- minimum power take-off
- running take-off and landing
- towering take-off / steep approach
- limited power take-off (cushion creep and running)
- crosswind circuits
- quick stops; into wind
- hovering, upwind, downwind and crosswind
- climbing
- straight and level flight
- descending
- medium turns, climbing and descending turns
- steep turns
- confined area operations
- sloping ground take-offs and landings
- carriage of sling loads (if applicable)

**Emergency Manoeuvres**

- autorotation: straight in and 180° with power recovery into the hover

- ▶ engine failure in the hover
- ▶ emergencies and hazards such as tail rotor emergencies, dynamic rollover, ground resonance, hydraulic failure, flight control or trim failure, recovery from low rotor rpm.

### **Non Compulsory Flight Exercises**

**Night Conversion Instruction:** Night exercises appropriate to the aircraft type in which night conversion is being demonstrated.

**Multi-Engine Conversion Instruction:** Conversion instruction for the multi-engine aircraft type that is being used for the flight test.

**Instrument Flight (IFR):** The flight test shall include instrument flight instruction appropriate to the aircraft type and systems including autopilot, flight director, flight management systems and radio and navigation systems.

**Water Handling, if applicable:** Taxiing upwind, downwind and cross-wind, mooring and slipping, ramp and beach techniques, use of standard buoy, anchoring and weighing anchor.

### **Notes relating to Non-Compulsory Flight Exercises**

In addition to the standard flight exercises, Category D flight instructor rating candidates who wish to gain the additional privilege(s) of night, multi-engine or IFR instruction, are required to separately demonstrate instructional competence for these exercises.

## **Categories C, B and A Flight Instructor Ratings—Aeroplane**

Intercommunication equipment of an acceptable type is to be provided for use during all flight instructor rating issue flight tests.

All Categories C, B and A flight instructor rating issue flight tests are conducted by Aviation Services Limited (ASL) in accordance with the *CAA Flight Test Standards Guide –Flight Instructor Ratings C, B and A*.

ASL examiners conduct flight tests under the Director's delegation and will not provide a competency demonstration result unless a responsible flight instructor is present for the candidate's debrief.

### **Personal Preparation**

The candidate is to arrive in a timely manner to ensure adequate preparation for the lesson can be achieved, fit for flying and suitably attired as a professional and role model.

The candidate will present an up to date, summarised and certified pilot's logbook and a current CPL (A) (or higher) and Volumes 1 and 4 of the AIPNZ, appropriate charts and copies of the recommended flight instruction reference texts.

### **Pre-Flight Briefing**

The flight test will be preceded by the candidate presenting a comprehensive pre-flight briefing for a normal or emergency flight exercise using appropriate instructional technique and training aids. The briefing topic is nominated by the examiner and will be for one of the specific exercises laid down in this syllabus and the Flight Instructor's Guide.

Category A flight instructor rating issue flight tests require more than one pre-flight briefing.

The candidate will establish previous knowledge and an environment conducive to learning.

The candidate will demonstrate adequate knowledge of the topic through a concise briefing using correct terminology and encourage interaction to establish the student's knowledge and understanding through questioning.

### **In Flight**

The candidate will demonstrate a satisfactory level of airmanship, situational awareness and lookout as well as the ability to carry out all basic and advanced manoeuvres within CPL parameters using smooth and coordinated control movements.

The exercise briefed is required to be taught by the candidate using appropriate instructional techniques during the flight test. In addition, the candidate will be required to demonstrate (with and without patter at the flight examiners discretion) a selection of exercises taken from the syllabus. The flight examiner will advise the order and format that will be followed prior to flight.

Category A flight instructor rating issue flight tests require more than one flight demonstration.

The candidate will communicate with adequate clarity and voice modulation in an authoritative and unambiguous manner using correct aviation terminology and style appropriate to the student whilst coordinating in-flight patter with flight demonstrations.

The candidate will explain the procedures for handing over control, demonstrate the correct placement of hands and feet on controls and encourage the student to "follow through".

The candidate will provide adequate opportunity for student practice without ‘riding’ the controls and periodically check that the student has correctly trimmed the aircraft.

The candidate will identify and diagnose typical student handling faults (as simulated by the examiner) and apply corrective action to modify the student’s handling and eliminate the fault.

The candidate will provide an adequate and constructive critique.

### **Debrief**

At the conclusion of the flight, the candidate will debrief the examiner in a timely and appropriate manner using facilities and procedures that minimise distractions.

The candidate will provide the student (examiner) with positive reinforcement and constructive criticism.

### **Pre-Flight Briefing Exercises**

- taxiing
- effects of primary controls
- effects of ancillary controls
- straight and level
- climbing and/or
- descending
- medium turns, climbing and descending turns
- basic stalling
- slow flight
- advanced stalling; in all other configurations both from level flight and banked attitudes
- circuit introduction
- circuit considerations
- engine failure after take-off
- flapless circuit
- crosswind circuit
- the standard overhead join
- vacating and joining the circuit
- radio failure
- forced landing without power – the pattern
- forced landing without power – considerations

- ▶ glide approach
- ▶ steep turns
- ▶ maximum rate turns
- ▶ wing drop stalling
- ▶ compass turns
- ▶ short-field take-off
- ▶ short-field landing
- ▶ low flying – introduction
- ▶ low flying – consolidation
- ▶ precautionary landing
- ▶ instrument flying – introduction
- ▶ instrument flying – limited panel
- ▶ instrument flying – unusual attitudes
- ▶ map reading

## **Non-Compulsory Flight Exercises**

### **Spinning Instruction**

Optional for Categories B and C flight instructor rating, compulsory for Category A flight instructor rating.

Category B or C flight instructors, who wish to gain the additional privilege of spinning instruction, are required to complete a pre-flight briefing and demonstrate instructional competence in spin entry and recovery.

A test for this privilege may not be undertaken as part of the initial issue flight test.

### **Aerobatic Instruction**

Optional for Categories B and C flight instructor, compulsory for Category A flight instructor rating.

Category B or C flight instructors, who wish to gain the additional privilege of aerobatic instruction, are required to complete a pre-flight briefing and demonstrate instructional competence in aerobatics.

Spinning instruction is a prerequisite or co requisite and instructional competency is to be demonstrated in at least the three basic aerobatic manoeuvres (loop, barrel roll and stall turn); one of which is to be taught with the other two pattered (at examiner discretion).

A test for this privilege may be combined with the requirements for spinning instruction but may not be undertaken as part of the initial issue flight test.

**Night Flying Instruction**

Optional for Categories B and C flight instructor, compulsory for Category A flight instructor rating.

Category B or C flight instructors, who wish to gain the additional privilege of night instruction, are required to complete a pre-flight briefing and demonstrate instructional competence in night flying.

A test for this privilege may not be undertaken as part of the initial issue flight test.

**Multi-Engine Instruction**

Optional for all flight instructor categories.

Categories A, B or C flight instructors who wish to gain the additional privilege to instruct in multi-engine aircraft are required to produce a syllabus of conversion training, complete a pre-flight briefing (selected from the syllabus at examiner discretion) and demonstrate instructional competence in a multi-engine aircraft for the purpose of an initial multi-engine type rating.

A test for this privilege may not be undertaken as part of the initial issue flight test.

## **Categories C, B and A flight Instructor Ratings—Helicopter**

Intercommunication equipment of an acceptable type is to be provided for use during all flight instructor rating issue flight tests.

All Categories C, B and A flight instructor rating issue flight tests will be conducted by Aviation Services Limited (ASL) in accordance with the *CAA Flight Test Standards Guide –Flight Instructor Ratings C, B and A*.

ASL examiners will not provide a competency demonstration result unless a responsible flight instructor is present for the candidate's debrief.

### **Personal Preparation**

The candidate is to arrive in a timely manner to ensure adequate preparation for the lesson can be achieved, fit for flying and suitably attired as a professional and role model.

The candidate will present an up to date, summarised and certified pilot's logbook and a current CPL (H) (or higher) and Volumes 1 and 4 of the AIPNZ, appropriate charts and copies of the recommended flight instruction reference texts.

### **Pre-Flight Briefing**

The flight test will be preceded by the candidate presenting a comprehensive pre-flight briefing for a normal or emergency flight exercise using appropriate training aids. The briefing topic is nominated by the examiner and will be for one of the specific exercises laid down in this syllabus.

Category A flight instructor rating issue flight tests require more than one pre-flight briefing.

The candidate will establish the student's previous knowledge and an environment conducive to learning.

The candidate will demonstrate adequate knowledge of the topic through a concise briefing using correct terminology and encourage interaction to establish the student's knowledge and understanding through questioning.

### **In Flight**

The candidate will demonstrate a satisfactory level of airmanship, situational awareness and lookout as well as the ability to carry out all basic and advanced manoeuvres within CPL parameters using smooth and coordinated control movements.

The exercise briefed is required to be taught by the candidate during the flight test. In addition, the candidate will be required to demonstrate (with and without patter at the flight examiner's discretion) a selection of exercises taken from the syllabus. The flight examiner will advise the order and format that will be followed prior to flight.

Category A instructor rating issue flight tests require more than one flight demonstration.

The candidate will communicate with adequate clarity and voice modulation in an authoritative and unambiguous manner using correct aviation terminology and style appropriate to the student whilst coordinating in-flight patter with flight demonstrations.

The candidate will explain the procedures for handing over control, demonstrate the correct placement of hands and feet on controls and encourage the student to "follow through".

The candidate will provide adequate opportunity for student practice without ‘riding’ the controls and periodically check that the student has correctly trimmed the aircraft (if applicable).

The candidate will identify and diagnose typical student handling faults (as simulated by the examiner) and apply corrective action to modify the student’s handling and eliminate the fault.

The candidate will provide an adequate and constructive critique.

### **Debrief**

At the conclusion of the flight, the candidate will debrief the examiner in a timely and appropriate manner using facilities and procedures that minimise distractions.

The candidate will provide the student (examiner) with positive reinforcement and constructive criticism.

### **Pre-Flight Briefing Exercises**

- ▶ effect of controls
- ▶ straight and level
- ▶ climbing and/or
- ▶ descending
- ▶ medium turns
- ▶ hovering/hover manoeuvring
- ▶ normal take-off and/or
- ▶ normal landing
- ▶ transitions
- ▶ circuits
- ▶ go-around
- ▶ joining the circuit
- ▶ autorotation
- ▶ limited power take-off and/or
- ▶ limited power landing
- ▶ zero speed landing
- ▶ running take-off
- ▶ towering take-off and/or
- ▶ steep approach
- ▶ quick stops

- ▶ slope landing and take-off
- ▶ low flying
- ▶ confined area operations
- ▶ mountainous terrain awareness
- ▶ steep turns
- ▶ magnetic compass headings
- ▶ straight-in autorotation
- ▶ 180° autorotation
- ▶ engine failure in the hover

### **Non Compulsory Flight Exercises**

#### **Night Flying Instruction**

Optional for Categories B and C flight instructor rating, compulsory for Category A flight instructor rating.

Category B or C flight instructors, who wish to gain the additional privilege of night instruction, are required to complete a pre-flight briefing and demonstrate instructional competence in night flying.

A test for this privilege may not be undertaken as part of the initial issue flight test.

#### **Multi-Engine Instruction**

Optional for all flight instructor categories.

Category A, B or C flight instructors who wish to gain the additional privilege to instruct in multi-engine aircraft are required to produce a syllabus of conversion training, complete a pre-flight briefing (selected from the syllabus at examiner discretion) and demonstrate instructional competence in a multi-engine aircraft for the purpose of an initial multi-engine type rating.

A test for this privilege may not be undertaken as part of the initial issue flight test.