**Instructor rating**

**Aerial application (night) rating training endorsement**

#### Version 1.0

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Revision history

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# Syllabus Notes

## Overview of training course

The holder of an aerial application rating (night) training endorsement is authorised to conduct flight training for a night aerial application endorsement in an aircraft of the specified category

The aerial application (night) training endorsement is item 13 of table 61.1235 of CASR Part 61. For the purposes of this document, TE means training endorsement.

A course of training for the aerial application rating (night) TE provides training and guidance to the applicant on conducting the activities mentioned above as well as ensuring that the applicant has the requisite knowledge and skills.

An applicant for an aerial application rating (night TE is required to demonstrate competency conducting instruction in a flight test conducted by a fight examiner to the standards in the Part 61 Manual of Standards (MOS). These standards are prescribed in the following units that are found in Schedule 2 of the Part 61MOS:

* + - NTS1 – Non-technical skills 1
    - NTS2 – Non-technical skills 2
    - FIR4 – Conduct aeronautical knowledge training and flight training
    - FIR-TE13– aerial application rating (night) training endorsement

The applicant must also demonstrate extensive knowledge of the units of competency published in the Part 61 MOS for the issue of a night aerial application endorsement – refer to subpart 61T of CASR.

The ground and flight training summary for FIR TE13 aerial application rating (night) training endorsement, assumes the applicant already holds a flight instructor rating with an aerial application rating (day) training endorsement.

The suite of FIR tutorials detailed in the annexes to AC 61-07 may be useful for revision purposes even though this training is not for the initial issue of an instructor rating.

A training record must be completed for all ground and flight training undertaken by the applicant for the aerial application rating (night) training endorsement.

A course completion certificate must be issued to the applicant by the operator when the training has been successfully completed.

The following notes provide guidance to operators on conducting training for an aerial application rating (night) training endorsement. Training in these topics should adequately prepare an applicant for the flight test for the aerial application rating (night) training endorsement. It is not exhaustive and operators may choose to include additional lessons in their syllabus.

The focus of every lesson in the syllabus is flight instructor training and should use the operator’s applicable ground or airborne training events as a blueprint for the training.

All flying for the applicant should be in the instructor control seat.

Appropriate fault analysis and intervention/recovery techniques should be included in flight training.

## Course content

* + - Aeronautical knowledge review
    - Ground training
    - Flight training (including post-flight debriefing and administration)

### Aeronautical Knowledge - Review

#### Lessons TE13-1 and TE13-2

* + - Review the applicant’s knowledge of the structure, content and context of the Part 61 licence and rating standards as they apply to training for an aerial application rating or endorsement
    - Review the applicant’s underpinning knowledge described in units of competency for aerial application (day) rating and night endorsement AAGR and AAGA and AAGH, LL-A or LL-H and AA1 or AA2 as applicable and NVR1, NVR2 and AA6.

### Ground Training

#### Lessons TE12-3 to TE12-5

* + - Provide an overview of the privileges, limitations and obligations of the training endorsement
    - Provide guidance on the administration requirements, including use the correct documentation, relating to the issue of an endorsement
    - Review the principles of competency-based training and assessment
    - Provide guidance on preparing lesson plans and pre-flight briefs for night aerial application endorsement training

### Flight Training

#### Lesson TE13-6 – Instructor control seat familiarisation

* + - Experience shows trainee instructors require recent and competent handling skills in the instructor control seat before they are introduced to learning new skills associated with airborne instructional technique (AIT). This is best achieved during isolated training in the instructor control seat without the complication of AIT learning. One flight has been included in the training course; operators may assess an applicant as requiring more than this one flight on a case by case basis.
    - The flight should include briefings and flight covering aircraft basic, advanced and emergency handling from the instructor control seat with focus on manoeuvres relevant to the aerial application (night) training endorsement with particular emphasis on night circuit training and recognition and recovery from undesired aircraft state during night application operations.

#### Lessons TE13-7 to TE13-9

* + - Long brief demonstration and read back.
      * Before demonstrating a long brief, the instructor should take time to explain the context of the lesson to the applicant. Discuss the actual lesson plan for the long brief, where it fits into the night aerial application endorsement syllabus and any training aids that will be used.
      * The instructor demonstration of the long brief must include the performance criteria and applicable underpinning knowledge from relevant units.
      * Encourage the applicant to take notes but also participate as the student pilot would do.
      * On completion of the demonstration, summarise the stages of the lesson and allow for questions from the applicant.
      * The applicant read back should be conducted after they have had the opportunity to prepare and practice. The training instructor should role play a student pilot during the read back.
      * On completion of the read back, the training instructor must de-brief the applicant on their performance against the performance criteria.
      * Where the applicant has not achieved the required standard, the performance criteria must be covered during an additional long brief lesson.
      * The number of long briefs should reflect the lessons in the operator training syllabus for the night aerial application endorsement. After the first demonstration, the applicant should be able to prepare and read back additional briefings as required by the operator syllabus.
    - Pre-flight briefing demonstration and read back.
      * Before demonstrating a pre-flight brief, the training instructor should take time to explain the context of the lesson to the applicant. Discuss the actual content of the pre-flight brief, and any training aids that will be used.
      * On completion of the demonstration, summarise the structure and delivery method of the pre-flight brief and allow for questions from the applicant.
      * The applicant read back should be conducted after they have had the opportunity to prepare. The training instructor should role play a student pilot during the read back. The read back should be followed by a de-brief from the training instructor against the performance criteria. The pre-flight brief should introduce reference to elements/performance criteria from unit AA6, as appropriate to the stage of training/lesson and NTS1 and NTS2 where applicable.
      * This pre-flight brief demonstration and read back should be for the first lesson of the operator syllabus for the night aerial application endorsement.

#### Lessons TE13-10 to TE13-12

* + - Before demonstrating the in-flight lessons, the training instructor should explain the sequence of the training elements and provide insight into appropriate delivery techniques. The in-flight demonstrations should be broken into logical elements with each demonstration followed by an opportunity to read back by the applicant. On completion of the in-flight lessons, the training instructor should debrief the applicant against the performance criteria.
    - The aim of the lessons is to demonstrate to the applicant airborne instructional technique whilst conducting night aerial application operations. Emphasis should be put on how to use applicable airborne instructional technique in the night aerial application environment.
    - Elements covered should include aircraft equipment and serviceability, determination of airstrip or HLS suitability for night operations and take-off and landing at night from an airstrip or HLS remote from ground lighting
    - Lesson TE13-11 should allow applicant consolidation of the basic instruction techniques for night circuits at low level.
    - The training instructor should introduce common errors in lesson TE13-12 to enable the applicant to recognise student errors, analyse the root cause and deliver remedial training.
    - The blueprint for the lesson should come from the operators training syllabus.

#### Lessons TE13-13 and TE13-14

* + - The TE13-13 should consist of part demonstration and part read back of navigation techniques and procedures for night transit to and from treatment area. Once at the treatment area, the training instructor should introduce techniques for training night application operations and introduce common trainee errors and remedial training.
    - Lesson TE13-14 should allow the applicant to consolidate their navigation and treatment area instructional techniques and manage student errors and recover undesired aircraft states. On return to the airstrip or HLS, further circuit training consolidation should be undertaken.

The applicant for the aerial application rating (night) training endorsement should demonstrate flying techniques and procedures to the standard, prescribed in Appendix 8 of the Part 61 MOS, at all times during flight training sessions and be cognisant of the elements specified in units NTS1 and NTS2.

# Guidance for all training courses

This training course covers the relevant aeronautical knowledge, practical flight skills and underpinning knowledge units and elements that are prescribed in the Part 61 MOS.

Each training course should be tailored to the needs of the applicant, taking into account the applicant’s entry level competencies and knowledge and any previous training.

Appropriate recognition of prior learning and current skills should be applied to the content of the training and documented accurately in the training records.

The training course has the following components:

* ground and flight training summary
* planning matrix
* progress and achievement record
* lesson plans and training record (combined)
* course completion certificate.

### Ground and flight training summary

The summary table lists each training session with a reference, its description and the allocated time.

The summary table includes sufficient flight training to meet the requirements that would otherwise be required for the grant of the rating and endorsement in accordance with Part 61. It is a template and can be adjusted according to the entry level of the applicant and the training he or she needs to undertake to satisfy the prescribed competency standards in Schedule 2 of the Part 61 MOS.

### Planning matrix

The planning matrix sets out the order in which the units and elements of training are presented as well as the anticipated performance standards for each lesson. It is a model plan and can be adjusted according to the needs of the applicant at the time the training is being conducted.

### Achievement record

The achievement record is a record of the applicant achieving the practical flight standards prescribed for the rating and endorsement. The record should be progressively completed when the applicant has satisfactorily demonstrated competency for the unit and element on at least two occasions.

Applicants must achieve competency at performance standard 1 in each element of each unit in this achievement record. The performance criteria for the elements are prescribed in Schedule 2 of the Part 61 MOS.

The applicant may demonstrate competency using a combination of training course assessments and assessments of current competency achieved through prior training and operational experience.

The instructor conducting the training and assessments must certify that competency has been achieved by entering the details in achievement record entering their ARN, signature and the date when the applicant achieved the required competency performance standard.

### Lesson plans and training record

A lesson plan is provided for each lesson listed in the planning matrix. Each lesson plan details the aeronautical knowledge topics and relevant underpinning knowledge topics that should be covered. The lesson plans include a breakdown of the estimated time required for the long briefing and pre-flight briefing, where applicable.

The resources described in the lesson plan can be modified with suitable equivalent resources.

The underpinning knowledge topics are taken from the relevant sections of the units of competency.

The practical flight training section details the units and elements covered by the lesson that are prescribed in Schedule 2 of the Part 61 MOS. The relevant general instructor units are FIR1, 2 and 3; however, these have been consolidated into a new draft unit FIR4 that is attached at Appendix A along with unit FIR-TE13 at Appendix B. FIR-TE13 is the unit for the aerial application (night) training endorsement. The underpinning knowledge topics are also taken from this draft unit. Reference is also made to applicable units in Schedule 2 of the Part 61 MOS.

The lesson comments and outcomes section of the lesson plan and training record should record the performance of the applicant in the particular lesson. Where the applicant has not achieved the standard in any or all of the elements, particular note must be made of the elements or performance criteria where the applicant requires further or remedial training. Additionally, the instructor trainer must clearly indicate that the applicant can proceed to the next lesson sequence.

### Course completion certificate

A sample course completion certificate is included.

# Ground and flight training summary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LESSON NUMBER** | **MOS REF** | **LESSON DESCRIPTION** | **GROUND HOURS** | **DUAL HOURS** | **TOTAL PROG FLIGHT TIME** |
| **For Initial issue of Flight instructor Rating (if required)** | | | | | |
|  |  | FIRC - Principles and Methods of Instruction and Legislation | 12.0 |  |  |
|  |  | Short Theory Lessons (Aviation based - refer to course notes) | 12.0 |  |  |
| **Aeronautical Knowledge - Review** | | |  |  |  |
| TE13-1 | FIR-TE13.1 | Review - Part 61 & Part 61 MOS for night aerial application rating & night aerial application proficiency check | 1.0 |  |  |
| TE13-2 | FIR-TE13.3 | Review – Units AAGR, AA6, AAGA and AAGH as applicable and underpinning knowledge required for units NVR1 and NVR2 | 3.0 |  |  |
| **Ground Training** | | |  |  |  |
| TE13-3 | Part 61T & FIR- TE13 | Briefing - Privileges and limitations of the night aerial application rating training endorsement.  Administration procedures and responsibilities including issue of endorsements | 1.0 |  |  |
| TE13-4 | FIR-TE13.1 | Review – Knowledge of competency based training as applied to night aerial application rating training | 1.5 |  |  |
| TE13-5 | FIR-TE13.4 | Briefing/Discussion – Preparing a lesson plan and pre-flight brief for a night aerial application rating training lesson | 1.5 |  |  |
| **Flight Training** | | |  |  |  |
| TE13-6 | FIR-TE13 | Conduct aircraft basic, advanced and emergency handling from instructor control seat | 1.0 | 1.5 | 1.5 |
| TE13-7 | FIR-TE13.2; FIR- TE13.3; AA6 | Night aerial application operation - helicopter or aeroplane (as applicable) – Long Brief - Demonstration | 2.0 |  |  |
| TE13-8 | FIR-TE13.2; FIR- TE13.3; AA6 | Night aerial application operation aeroplane or Helicopter (as applicable) – Long Brief – Read back | 2.0 |  |  |
| TE13-9 | FIR-TE13.2; FIR- TE13.3; FIR- TE13.5; AA6 | Night aerial application operations - helicopter or aeroplane (as applicable) – Pre-flight brief – Demonstration and Read back | 1.0 |  |  |
| TE13-10 | FIR-TE13.2; FIR- TE13.5; FIR- TE13.6; FIR- TE13.7; AA6 | Elements AA6.1 to AA6.5 – pre-flight brief and airborne lesson - Demonstration | 1.0 | 1.0 | 2.5 |
| TE13-11 | FIR-TE13.2; FIR- TE13.5; FIR- TE13.6; FIR- TE13.7; AA6 | Elements AA6.1 to AA6.5 – pre-flight brief and airborne lesson - Read back | 1.0 | 1.0 | 3.5 |
| TE13-12 | FIR-TE13.2; FIR- TE13.5; FIR- TE13.6; FIR- TE13.7; AA6 | Elements AA6.1 to AA6.5 – pre-flight brief and airborne lesson - Read back | 1.0 | 1.0 | 4.5 |
| TE13-13 | FIR-TE13.2; FIR- | Elements AA6.6 to AA6.7 – pre-flight brief and | 1.0 | 1.5 | 6.0 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LESSON NUMBER** | **MOS REF** | **LESSON DESCRIPTION** | **GROUND HOURS** | **DUAL HOURS** | **TOTAL PROG FLIGHT TIME** |
|  | TE13.5; FIR- TE13.6; FIR- TE13.7; AA6 | airborne lesson - Demonstration and Read back |  |  |  |
| TE13-14 | FIR-TE13.2; FIR- TE13.5; FIR- TE13.6; FIR- TE13.7; AA6 | Elements AA6.7 to AA6.7 – pre-flight brief and airborne lesson - Demonstration and Read back | 1.0 | 1.5 | 7.5 |
|  |  | **Flight Test** | **4.0** | **1.5** | **9.0** |

# Progress and achievement record

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Trainee’s name** |  | | **Trainee’s ARN** |  |  |
| **Date training commenced** |  | | **Date of assessment of prior learning and current competency (if applicable)** |  |  |
| **Date of Aeronautical Knowledge Examination pass (if applicable)** | |  | **Date of Knowledge Deficiency Report assessment (if applicable)** | |  |

## Trainee progress record

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **LESSON** | **DATE** | **STD ACHIEVED?1** | **DATE2** | **\*STD ACHIEVED?** | **DATE2** | **STD ACHIEVED?1** | **FLIGHT HOURS** | **PROG HOURS** | **INSTRUCTOR ARN AND SIGNATURE** |
| TE13-1 |  |  |  |  |  |  |  |  |  |
| TE13-2 |  |  |  |  |  |  |  |  |  |
| TE13-3 |  |  |  |  |  |  |  |  |  |
| TE13-4 |  |  |  |  |  |  |  |  |  |
| TE13-5 |  |  |  |  |  |  |  |  |  |
| TE13-6 |  |  |  |  |  |  |  |  |  |
| TE13-7 |  |  |  |  |  |  |  |  |  |
| TE13-8 |  |  |  |  |  |  |  |  |  |
| TE13-9 |  |  |  |  |  |  |  |  |  |
| TE13-10 |  |  |  |  |  |  |  |  |  |
| TE13-11 |  |  |  |  |  |  |  |  |  |
| TE13-12 |  |  |  |  |  |  |  |  |  |
| TE13-13 |  |  |  |  |  |  |  |  |  |
| TE13-14 |  |  |  |  |  |  |  |  |  |

1: Indicate YES if trainee has achieved competency in accordance with the lesson plan and can progress to next lesson, indicate NO if trainee to repeat this lesson 2: Complete when trainee repeats lesson

## Trainee competency achievement record

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ELEMENT** | **DATE** | **INSTRUCTOR NAME (PRINTED)** | **INSTRUCTOR ARN** | **INSTRUCTOR’S SIGNATURE** |
| FIR-TE13.1 - Demonstrate knowledge of competency based training as applied to night aerial application endorsement training |  |  |  |  |
| FIR-TE13.2 - Demonstrate understanding of principles and Methods of instruction |  |  |  |  |
| FIR-TE13.3 - Conduct aeronautical knowledge training |  |  |  |  |
| FIR-TE13.4 - Develop briefings and plan flight training |  |  |  |  |
| FIR-TE13.5 - Conduct pre-flight briefing |  |  |  |  |
| FIR-TE13.6 - Conduct airborne training |  |  |  |  |
| FIR-TE13.7 - Complete post-flight briefing |  |  |  |  |
| FIR-TE13.8 - Complete post-training administration |  |  |  |  |

### Trainee’s confirmation

|  |  |  |  |
| --- | --- | --- | --- |
| I have received the training specified above and have been certified as competent and ready for flight test. | | | |
| **Trainee’s signature** |  | **Date** |  |

# Course completion certificate

|  |  |
| --- | --- |
| **Name of course** | Aerial application (night) rating training endorsement |
| **Training provider name** |  |
| **Training provider ARN** |  |
| **Trainee name** |  |
| **Trainee ARN** |  |
| **Date commenced training** |  |
| **Date of final assessment** |  |
| **Certification** |  |
| **Head of Operations name or approved Course Manager** |  |
| **Signature** |  |
| **Date** |  |

**Appendix A**

**Draft competency unit – FIR4**

**{Insert copy of unit from**

**Part 61 Manual of Standards Schedule 2}**

**Appendix B**

**Draft unit – Aerial application (night) training endorsement - FIR-TE13**

**{Insert copy of unit from**

**Part 61 Manual of Standards Schedule 2}**