**Instructor rating**

**Night vision imaging system 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 a night vision imaging system training endorsement on a flight instructor rating is authorised to conduct the following activities;

* + - Conduct flight training for a night vision imaging system rating or night vision imaging system endorsement (CASR 61.1175(1))

A course of training for the night vision imaging system rating training endorsement must provide training and guidance to the applicant on the conduct of these activities as well as ensuring that the applicant has the requisite knowledge and skills.

An applicant for a night vision imaging system rating training endorsement is required to undertake a flight test with a flight examiner demonstrating instructional competency to the standards in the Part 61 Manual of Standards (MOS). These standards can be found in schedule 2 of the Part 61MOS and are identified below

* + - NTS1 – Non-technical skills 1
    - NTS2 – Non-technical skills 2
    - FIR4 – Conduct aeronautical knowledge training and flight training
    - FIR-TE10 – Night vision imaging system rating 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 vision imaging system rating and associated endorsements.

The ground and flight training summary for FIR TE10 Night vision imaging rating training endorsement, assumes the applicant already holds a flight instructor rating with at least one other training endorsement.

However, if this is the first training endorsement to be granted on a flight instructor rating, the applicant will require extensive additional ground and flight training to prepare them for airborne instructional activities. Any additional training is outside the scope of this sample syllabus and reference should be made to AC 61-07 for training material that cover topics related to an initial flight instructor rating. These will include instruction addressing the content of unit FIRC preparatory to undertaking the FIR examination and the suite of FIR tutorials detailed in the annexes to AC 61-07. Reference to the FIR tutorials may be useful for revision purposes even if this training is not for an initial flight instructor rating.

A training record must be completed for all ground and flight training undertaken by the applicant for the night vision imaging system rating 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 a night vision imaging system rating training endorsement. Training in these topics should adequately prepare an applicant for the flight test for the night vision imaging system 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 uses 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 TE10-1 and TE10-2

* + - 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 a night vision imaging system rating or endorsement
    - Review the applicant’s underpinning knowledge described in units of competency for a night vision imaging system rating and endorsements

### Ground Training

#### Lessons TE10-3 to TE10-5

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

### Flight Training

#### Lesson TE10-6 – Instructor control seat familiarisation

* + - The trainee instructor must be competent flying the aircraft from the instructor control seat whilst using NVIS. A base level of competence needs to be achieved before they are introduced to airborne instructional techniques (AIT) required when delivering training for a night vision imaging system rating. This is best achieved during isolated training without the complication of learning to deliver training. One flight has been included in the course summary; operators may assess an applicant as requiring more than this on a case by case basis.
    - The instructor control seat familiarisation must emphasis the differences in terms of the NVIS systems and general cockpit ergonomics for the type when operating from the instructor seat and should include the following practices:
      * Circuit operations;
      * Conduct NVIS area operation;
      * Unlit HLS operations;
      * Non-normal and emergency procedures (aircraft type specific);
      * NVIS equipment non-normal and emergency procedures;
      * Inadvertent entry into IMC and an instrument approach (holder of Grade 1 NVIS endorsement).

#### Lessons TE10-7 to TE10-10

* + - The trainee instructor is to receive familiarisation of the approved ground theory training course used by the operator. The subject areas are detailed in CAO 82.6 and the NVIS unit. This will include the demonstration of at least 1 long brief and the read back of at least 2 long briefs from within the theory course. If this training endorsement is for the award of an initial flight instructor rating, then all long briefs will be demonstrated and read back.
    - 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 trainee instructor. Discuss the actual lesson plan for the long brief, where it fits into the NVIS rating 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 trainee instructor 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 trainee instructor.
      * The trainee read back should be conducted after they have had the opportunity to prepare and practice. The instructor should role play a student pilot during the read back.
      * On completion of the read back, the instructor must de-brief the trainee instructor on their performance against the performance criteria.
      * Where the trainee has not achieved the required standard, the performance criteria must be covered during an additional long brief lesson.
    - Pre-flight briefing demonstration and read back.
      * Before demonstrating a pre-flight brief, the instructor should take time to explain the context of the lesson to the trainee instructor. 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 trainee instructor.
      * The trainee read back should be conducted after they have had the opportunity to prepare. The instructor should role play a student pilot during the read back. The read back should be followed by a de-brief from the instructor against the performance criteria.
      * The pre-flight brief should introduce reference to elements/performance criteria from units C1 through C5, as appropriate to the stage of training/lesson and NTS1 and NTS2 where applicable.
      * Before demonstrating the in-flight lessons, the 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 instructor should debrief the applicant against the performance criteria being cognisant that this may the first time the applicant has delivered a lesson on NVIS operations.
    - NVIS circuit operations demonstration and read back.
    - NVIS HLS operations.
      * The aim of the lesson is to demonstrate to the applicant airborne instructional technique whilst operating using NVIS in the circuit area and HLS operations. Emphasis should be put

on how to use the NVIS to conduct the particular operation or sequence. The blueprint for the lesson should come from the operator’s training syllabus.

* + - NVIS HLS operations read back.
    - NVIS Navigation and area operations demonstration.
      * Consolidate airborne instructional technique using NVIS during HLS operations and demonstrate application of airborne instructional technique during navigation and area operations whilst operating using NVIS. Emphasis should be put on how to use the NVIS to conduct the particular operation or sequence. The blueprint for the lesson should come from the operator’s training syllabus.
    - NVIS Navigation and area operations read back.
    - NVIS Emergency sequences demonstration and read back.
      * Consolidate airborne instructional technique using NVIS during navigation and area operations and demonstrate and read back NVIS emergencies. Emphasis should be put on how to use the NVIS to conduct the particular operation or sequence. The blueprint for the lesson should come from the operator’s training syllabus.

The applicant for the night imaging vision system 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 trainee, taking into account the trainee’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 trainee at the time the training is being conducted.

### Achievement record

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

Trainees 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 trainee 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-TE10 at Appendix B. FIR-TE10 is the unit for the night vision imaging system 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 trainee in the particular lesson. Where the trainee 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 trainee requires further or remedial training. Additionally, the instructor trainer must clearly indicate that the trainee 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** | | |  |  |  |
| TE10-1 | FIR-TE10.1 | Review - Part 61 & Part 61 MOS for night vision imaging system ratings & proficiency checks | 1.5 |  |  |
| TE10-2 | FIR-TE10.3 | Review – Unit NVIS and underpinning knowledge required for unit NVI | 3.0 |  |  |
| **Ground Training** | | |  |  |  |
| TE10-3 | Part 61T & FIR- TE10; FIR4.6(b) | Briefing - Privileges and limitations of the night vision imaging system rating training endorsement.  Administration procedures and responsibilities including issue of endorsements | 1.5 |  |  |
| TE10-4 | FIR-TE10.1 | Review – Knowledge of competency based training as applied to night vision imaging system rating training | 1.5 |  |  |
| TE10-5 | FIR4.1; FIR4.3; FIR-TE10.4 | Tutorial – Preparing lesson plans and pre-flight briefs for night vision imaging system rating training lessons | 1.0 |  |  |
| **Flight Training** | | |  |  |  |
| TE10-6 | FIR10.6(b) | Conduct aircraft basic, advanced and emergency handling using NVIS from instructor control seat | 1.0 | 1.5 | 1.5 |
| TE10-7 | FIR-TE10.2; FIR- TE10.3; FIR4.1; FIR4.2; NVIS; NVI; CAO 82.6 | \*Night vision imaging system operations – Long Briefs  - Demonstrations | 6.5 |  |  |
| TE10-8 | FIR-TE10.2; FIR- TE10.3; FIR4.1; FIR4.2; NVIS; NVI; CAO 82.6 | \*Night vision imaging system operations – Long Briefs  – Read backs | 6.5 |  |  |
| TE10-9 | FIR-TE10.2; FIR- TE10.5; FIR- TE10.6; FIR- TE10.7; FIR4.3; FIR4.4; FIR4.5; NVI; | NVIS circuit operations – pre-flight brief and lesson Demonstration and Read back.  NVIS HLS operations – lesson Demonstration | 1.0 | 1.5 | 3.0 |
| TE10-10 | FIR-TE10.2; FIR- TE10.5; FIR- TE10.6; FIR- TE10.7; FIR4.3; FIR4.4; FIR4.5; NVI; | NVIS HLS operations – Read back.  NVIS Navigation and area operations – pre-flight brief and lesson Demonstration | 1.0 | 1.5 | 4.5 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LESSON NUMBER** | **MOS REF** | **LESSON DESCRIPTION** | **GROUND HOURS** | **DUAL HOURS** | **TOTAL PROG FLIGHT TIME** |
|  | FIR-TE10.2; FIR- TE10.5; FIR- | NVIS Navigation and area operations – Read back. NVIS Emergency sequences – pre-flight brief and | 1.0 | 1.5 | 6.0 |
|  | TE10.6; FIR- | lesson Demonstration and Read back. |  |  |  |
| TE10-11 | TE10.7; FIR- |  |  |  |  |
|  | TE10.8; FIR4.3; |  |  |  |  |
|  | FIR4.4; FIR4.5; |  |  |  |  |
|  | NVI; |  |  |  |  |
|  |  | **Flight Test** | **4.0** | **1.5** | **7.5** |

\*The trainee instructor is to receive familiarisation of the approved ground theory training course used by the operator. The subject areas are detailed in CAO 82.6 and the NVIS unit. This will include the demonstration of at least 1 long brief and the read back of at least 2 long briefs from within the theory course. If this training endorsement is for the grant of an initial flight instructor rating, then all long briefs will be demonstrated and read back.

# 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** |
| TE10-1 |  |  |  |  |  |  |  |  |  |
| TE10-2 |  |  |  |  |  |  |  |  |  |
| TE10-3 |  |  |  |  |  |  |  |  |  |
| TE10-4 |  |  |  |  |  |  |  |  |  |
| TE10-5 |  |  |  |  |  |  |  |  |  |
| TE10-6 |  |  |  |  |  |  |  |  |  |
| TE10-7 |  |  |  |  |  |  |  |  |  |
| TE10-8 |  |  |  |  |  |  |  |  |  |
| TE10-9 |  |  |  |  |  |  |  |  |  |
| TE10-10 |  |  |  |  |  |  |  |  |  |
| TE10-11 |  |  |  |  |  |  |  |  |  |

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-TE10.1 - Demonstrate knowledge of competency based training as applied to night vision imagining system rating training |  |  |  |  |
| FIR-TE10.2 - Demonstrate understanding of principles and methods of instruction |  |  |  |  |
| FIR-TE10.3 - Conduct aeronautical knowledge training |  |  |  |  |
| FIR-TE10.4 - Develop briefings and plan flight training |  |  |  |  |
| FIR-TE10.5 - Conduct pre-flight briefing |  |  |  |  |
| FIR-TE10.6 - Conduct airborne training |  |  |  |  |
| FIR-TE10.7 - Conduct post-flight training |  |  |  |  |
| FIR-TE10.8 - 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** | Night vision imaging system 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 – Night vision imaging system training endorsement - FIR-TE10**

**{Insert copy of unit from**

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