**Instructor rating**

**Multi-crew pilot 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 multi-crew pilot training endorsement on an instructor rating is authorised to conduct the following activities;

* + - Conduct flight training for the multi-crew pilot licence
    - Conduct flight training for an air transport pilot licence
    - Conduct training in multi-crew cooperation

A course of training for a multi-crew pilot training endorsement must provide training and guidance to the applicant on the conduct of each of these privileges as well as ensuring that the applicant has the requisite knowledge and skills to effectively deliver the training for the specified aircraft category which the instructor is authorised to fly.

Typically the training and assessment of competency will be conducted using a Flight Simulation Training Device (FSTD) and the applicant for the training endorsement will be eligible for the grant of a simulator instructor rating and the multi-crew pilot training endorsement.

An applicant for a multi-crew pilot 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 61 MOS and are identified below

* + - NTS1 – Non-technical skills 1
    - NTS2 – Non-technical skills 2
    - FIR4 – Conduct aeronautical knowledge training and flight training
    - FIR-TE4 – Multi-crew pilot training endorsement
    - FIR9 – Multi-crew training endorsement

The ground and flight training summary for FIR TE4 multi-crew pilot training endorsement, assumes the applicant already holds a flight instructor rating with at least one other training endorsement. Where an applicant is conducting training in a particular type of aircraft or an FSTD representing a particular aircraft type, they should also hold the type rating training endorsement for the particular type. When training is conducted as part of MPL, CASA recommends the instructor also hold an instrument rating training endorsement where students have advanced beyond the initial phase of an MPL training course. An operator should identify the qualifications required for an instructor to conduct each lesson of an MPL course to be approved by CASA.

If the applicant does not hold an 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 the suite of FIR tutorials detailed in the AC as they apply.

Reference to the FIR tutorials may be useful for revision purposes even if this training is not for an initial rating.

The following syllabus notes should be read and cross referenced to the ground and flight training summary for FIR TE4 multi-crew pilot training endorsement.

A training record must be completed for all ground and flight training undertaken by the applicant for the multi-crew pilot training endorsement.

A course completion certificate must be issued to the applicant by the operator when the training has been successfully completed. Due to the specific nature of this endorsement and its use with specific types (single pilot, multi-crew) the course completion certificate should clearly specify what training has been completed.

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.

Flying for the applicant should be in the instructor control seat where the endorsement is to be added to a flight instructor rating (not a simulator instructor rating – CASR 61.T.2).

Appropriate fault analysis and intervention/recovery techniques should be included in the flight training to ensure the aircraft is operated within a safety margin of the certified flight envelope at all times.

The following notes provide guidance to operators on conducting training for a multi-crew pilot training endorsement. Training in these topics should adequately prepare an applicant for the flight test. It is not exhaustive and operators may choose to include additional topics in their syllabus.

If the training is for the initial issue of a flight instructor rating, extensive additional long brief demonstrations and read backs will be required to progress the applicant to a competent standard. This will also apply to demonstration and read back of the in-flight lessons.

Dependent on the complexity of the aircraft type, the operator must consider additional ground and flight training events to adequately cover the requirements of FIR-TE4.

Where the applicant has no experience in delivering training in a flight simulation training device, the operator must ensure that the applicant is familiar with all aspects of its operation. This is best achieved during isolated training in the instructor control seat without the complication of instructional technique learning. Operators should provide a course of training in FSTD training techniques utilising the features of the device in addition to the training for the MPL training endorsement.

The training should include briefings and flight covering aircraft basic, advanced and emergency handling from the instructor control seat with focus on manoeuvres and procedures relevant to MPL/ATPL/MCC training. There should be some emphasis on recognition and recovery from undesired aircraft state. The instructor must be able to determine when the training activity is no longer within the valid training envelope to mitigate the risks of negative training.

Scenario based training is an effective method of training in non-technical skills. Instructors may utilise role-play techniques to maximise the training effectiveness. Students should be given the opportunity to recognise and evaluate different level of simulated student performance during the later stages of training.

This sample syllabus is generic and considered the minimum requirement.

### Course Content

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

#### Aeronautical Knowledge - Review

##### Lessons TE4-1 and TE4-2

* + - Review the applicant’s knowledge of the structure, content and context of the Part 61 licence and MOS standards as they apply to training for MPL, ATPL (category specific).
    - Review unit MCO and the applicant’s underpinning knowledge described in units of competency for TR-MEA, TR-MEH, TR-SEH as applicable to the specific aircraft type and CIR, IAP2 and IAP3 for MPL and ATPL(A).

#### Ground Training

##### Lessons TE4-3 to TE4-5

* + - These are lessons on the general topics detailed below
      * Provide an overview of the privileges, limitations and obligations of the training endorsement
      * Review the administrative procedures and documents required for grant of a multi-crew pilot licence and ATPL including operator and CASA process
      * Review the principles of competency-based training and assessment as applied to multi- crew pilot and ATPL training using the units and elements applicable to the grant of the licence
      * Preparing lesson plans and pre-flight brief for MCO, MPL and ATPL training lessons as applicable
      * The instructor is to ensure that the applicant is capable of integrating technical and non- technical skills into a training program and understands how to assess a trainee’s performance within a complex environment. The development of real-time scenarios and how to manage them in the training environment, whether in an aircraft or flight simulator, must be addressed in the training.
      * In relation to MCC training, the instructor should introduce the concept of essential and enabling skills to the applicant to assist them in delivering the training and assessing a trainees performance during the lessons.

#### Flight Training

##### Lessons TE4-6 to TE4-7 Multi-crew pilot and ATPL

* + - The blueprint for these briefings will be the operator’s syllabus however the applicant must receive training in how to develop briefings on various topics including context, structure, logical presentation and use of training aids.
    - Only two long briefing sessions have been included in this sample course to give indication of duration. An operator training endorsement course should reflect their own MPL/ATPL course structure with additional long briefs interspersed at the appropriate place in the syllabus.
      * Demonstration of a selected long brief from the operators approved syllabus of training for the MPL or ATPL
      * Read back of selected long brief from the operators approved syllabus of training for the MPL or ATPL
      * The applicant should develop long briefs for other lessons in the MPL or ATPL course and be provided opportunity to read them back throughout the training course. If the applicant is unable to develop a particular brief without assistance, the instructor should provide further guidance.
      * Where the operator has an approved course, the applicant should be provided the opportunity to deliver briefings from the course. If the applicant is unable to develop a particular brief without assistance, the instructor should provide further guidance including a demonstration and the applicant provided another opportunity to deliver the brief.

##### Lessons TE4-8 to TE4-9 Multi-crew cooperation

* + - The blueprint for these briefings will be the operator’s syllabus however the applicant must receive training in how to develop briefings on various topics including context, structure, logical presentation and use of training aids.
    - Only two briefing sessions have been included in this sample course to give indication of duration. An operators MPL training endorsement syllabus should reflect their own MCC syllabus structure with additional sessions interspersed into with the practical sessions.
    - Demonstration of a selected briefing session from the operators approved multi-crew cooperation syllabus of training.
    - Read back of selected briefing session from the operators approved multi-crew cooperation syllabus of training
    - The applicant should develop briefings for other lessons in the MCC course and be provided opportunity to read them back throughout the training course. If the applicant is unable to develop a particular brief without assistance, the instructor should provide further guidance.
    - Where the operator has an MCC approved course, the applicant should be provided the opportunity to deliver briefings from the course. If the applicant is unable to develop a particular brief without assistance, the instructor should provide further guidance including a demonstration and the applicant provided another opportunity to deliver the brief.

##### Lessons TE4-10 to TE4-11 MPL and ATPL

* + - The instructor should introduce scenario based training and the application of real-time scenarios in a simple lesson that has no introduced errors or abnormal operations. Emphasis should be on showing the applicant how to set the scene, move between facilitation and instruction, engaging with the crews and responding to their needs and the importance of briefing the crew on the objectives of the lesson and the roles and expectation of the crew during the session.
    - The instructor should include where and how to provide demonstrations and the importance of focused and to the point patter and explanations.
    - The instructor should guide the instructor on debriefing techniques in a multi-crew training session including (but not limited to) achieving consensus on the outcome of the session, integration of the technical and non-technical skills, identifies and able to provide accurate feedback on errors and faults whilst maintaining a positive learning experience for the trainees.
    - The sample course assumes the training is conducted in a flight simulation training device (FSTD). The applicant must demonstrate competency in operating the device to establish specific training scenarios and manage the functionality of the device for abnormal and emergency operations, both real and simulated.
    - Where the training is conducted in an aircraft, the instructor must ensure the applicant is capable of operating the aircraft in a multi-crew environment to the standards specified for the hold of an ATPL and type rating on the particular aircraft. In additional, the trainee must demonstrate their ability to recognise and recover from an undesired aircraft state and manage emergency and abnormal situations in the training environment.
    - The sample syllabus provides for two lessons for the MPL/ATPL however the operator MPL training endorsement course should include sufficient additional training sessions for the applicant to consolidate their learning and demonstrate competency in the applicable elements in FIR-TE4.4, FIR-TE4.5 and FIR-TE4.6.
      * Demonstration flight for selected lesson from the MPL/ATPL syllabus including pre-flight briefing.
      * Read back flight for the selected lesson including pre-flight briefing.

##### Lessons TE4-13 to TE4-14 Multi-crew cooperation

* + - These training sessions address the practical training in multi-crew cooperation and would be undertaken in a flight simulation training device (FSTD).
    - The sample syllabus provides for two lessons in MCC however the operator MPL training endorsement course should include sufficient additional training sessions for the applicant to consolidate their learning and demonstrate competency in the applicable elements in FIR- TE4.4, FIR-TE4.5 and FIR-TE4.6.
    - The focus of the training should be the use of scenario based training to develop effective non- technical skills in a multi-crew environment and include:
      * Identification of training requirement
      * Developing and using practical and realistic operational flight scenarios
      * Linking MCC training with technical operational training and standard operating procedures where applicable
      * Clarification of roles and training objectives
      * Clear communication, role play external personnel such as ground crew and air traffic services
      * Delay intervention to give students opportunity to recognise and re-enforce the effect of errors committed in training.
      * Facilitating trainee learning, creating a conducive learning environment – manage trainee workload and trainee stress
      * Managing trainee errors and facilitating problem solving and decision making
      * Ensuring training objectives are met
      * Methods of monitoring and assessing trainee performance including obtaining and using feedback from trainees, tracking the training session, taking notes and records
      * Appropriate de-briefing that re-inforce MCC techniques

The applicant for the multi-crew pilot training endorsement should demonstrate flying techniques and procedures to CPL standard, prescribed in Appendix 8 of the Part 61 MOS, at all times during 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 Appendix A along with unit FIR-TE4 at Appendix B. FIR-TE4 is the unit for the multi-crew pilot 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** |
| **Aeronautical Knowledge - Review** | | | | | |
| TE4-1 | FIR-TE4.1 | Review - Part 61 & Part 61 MOS for MPL and ATPL licences and standards for MCC. | 1.5 |  |  |
| TE4-2 | FIR-TE4.1; FIR- TE4.3 | Review – Aeronautical knowledge for MPL, ATPL and MCC to the standard required for issue of an ATPL. Review underpinning knowledge required for unit MCO | 3.0 |  |  |
| **Ground Training** | | |  |  |  |
| TE4-3 | Part 61T & FIR- TE4 FIR4.6(b) | Briefing - Privileges and limitations of the multi-crew training endorsement. Administration procedures and responsibilities | 1.0 |  |  |
| TE4-4 | FIR-TE4.1 | Review – Knowledge of competency based training as applied to ATPL and MPL training | 1.0 |  |  |
| TE4-5 | FIR4.1; FIR4.3; FIR-TE4.4 | Briefing/Discussion - Preparing lesson plans and pre- flight briefs for multi-crew and MCO training sessions | 2.0 |  |  |
| **Practical Training** | | |  |  |  |
| TE4-6 | FIR-TE5.2; FIR- TE5.3; FIR4.1; FIR4.2; 61 MOS  units | MPL or ATPL – Long Brief – Demonstration. Requirement for long brief on selected topic detailed in FIR-TE4.3 | 1.5 |  |  |
| TE4-7 | FIR-TE4.2; FIR- TE4.3; FIR4.1; FIR4.2; 61 MOS  units | MPL or ATPL – Long Brief – Give back. Requirement for long brief on selected topic detailed in FIR-TE4.3 | 1.5 |  |  |
| TE4-8 | FIR-TE4.2; FIR- TE4.3; FIR4.1; FIR4.2; 61 MOS  units | MCO – Long Brief – Demonstration. Requirement for long brief on selected topic detailed in FIR-TE4.3 | 2.0 |  |  |
| TE4-9 | FIR-TE4.2; FIR- TE4.3; FIR4.1; FIR4.2; 61 MOS  units | MCO – Long Brief – Give back. Requirement for long brief on selected topic detailed in FIR-TE4.3 | 2.0 |  |  |
| TE4-10 | FIR-TE4.2; FIR- TE4.4; FIR- TE4.5; FIR- TE4.6; FIR- TE4.7; FIR- TE4.8; FIR4.3; FIR4.4; FIR4.5;  61 MOS units | MPL or ATPL – conduct flight training for selected elements of competency detailed in the applicable units for MPL or ATPL and referenced in FIR-TE4.4 Pre-flight brief and Demonstration. | 1.0 | 1.5 | 1.5 |
| TE4-11 | FIR-TE4.2; FIR- TE4.4; FIR- TE4.5; FIR- TE4.6; FIR- TE4.7; FIR- TE4.8; FIR4.3; FIR4.4; FIR4.5;  61 MOS units | MPL or ATPL – conduct flight training for selected elements of competency detailed in the applicable units for MPL or ATPL and referenced in FIR-TE4.4 Give back | 1.0 | 1.5 | 3.0 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LESSON NUMBER** | **MOS REF** | **LESSON DESCRIPTION** | **GROUND HOURS** | **DUAL HOURS** | **TOTAL PROG FLIGHT TIME** |
| TE4-12 | FIR-TE4.2; FIR- TE4.4; FIR- TE4.5; FIR- TE4.6; FIR- TE4.7; FIR- TE4.8; FIR4.3; FIR4.4; FIR4.5; FIR9; 61 MOS  unit MCO | MCC – conduct flight training for elements of competency detailed in the unit MCO and referenced in FIR-TE4.4 Pre-flight brief and Demonstration. | 1.5 | 2.0 | 5.0 |
| TE4-13 | FIR-TE4.2; FIR- TE4.4; FIR- TE4.5; FIR- TE4.6; FIR- TE4.7; FIR- TE4.8; FIR4.3; FIR4.4; FIR4.5; FIR9; 61 MOS  unit MCO | MCC – conduct flight training for elements of competency detailed in the unit MCO and referenced in FIR-TE4.4 Give back | 1.5 | 2.0 | 7.0 |
|  |  | **Flight Test** | **4.0** | **2.0** | **9.0\*** |

\*The duration is based on two training sessions for MPL/ATPL and two for MCC and is a guide for session duration only. Refer to training notes for detailed syllabus guidance.

## 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** |
| TE4-1 |  |  |  |  |  |  |  |  |  |
| TE4-2 |  |  |  |  |  |  |  |  |  |
| TE4-3 |  |  |  |  |  |  |  |  |  |
| TE4-4 |  |  |  |  |  |  |  |  |  |
| TE4-5 |  |  |  |  |  |  |  |  |  |
| TE4-6 |  |  |  |  |  |  |  |  |  |
| TE4-7 |  |  |  |  |  |  |  |  |  |
| TE4-8 |  |  |  |  |  |  |  |  |  |
| TE4-9 |  |  |  |  |  |  |  |  |  |
| TE4-10 |  |  |  |  |  |  |  |  |  |
| TE4-11 |  |  |  |  |  |  |  |  |  |
| TE4-12 |  |  |  |  |  |  |  |  |  |
| TE4-13 |  |  |  |  |  |  |  |  |  |

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

### Training competency achievement record

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ELEMENT** | **DATE** | **INSTRUCTOR NAME (PRINTED)** | **INSTRUCTOR ARN** | **INSTRUCTOR’S SIGNATURE** |
| FIR-TE4.1 - Demonstrate knowledge of competency based training as applied to training for a multi-crew pilot licence (MPL), ATPL and training in multi-crew cooperation (MCC) |  |  |  |  |
| FIR-TE4.2 - Demonstrate understanding of principles and methods of instruction |  |  |  |  |
| FIR-TE4.3 - Conduct aeronautical knowledge training |  |  |  |  |
| FIR-TE4.4 - Develop briefings and plan flight training |  |  |  |  |
| FIR-TE4.5 - Conduct pre-flight briefing |  |  |  |  |
| FIR-TE4.6 - Conduct practical training |  |  |  |  |
| FIR-TE4.7 - Conduct post-flight briefing |  |  |  |  |
| FIR-TE4.8 - Complete post-training administrations |  |  |  |  |

**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** |  |

1. **Course completion certificate**

|  |  |
| --- | --- |
| **Name of course** | Multi-crew pilot 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 – Multi-crew pilot training endorsement - FIR-TE4**

**{Insert copy of unit from**

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