



TCAR OPS OM-D WORKSHOP

Overview of Flight Crew Training Programmes

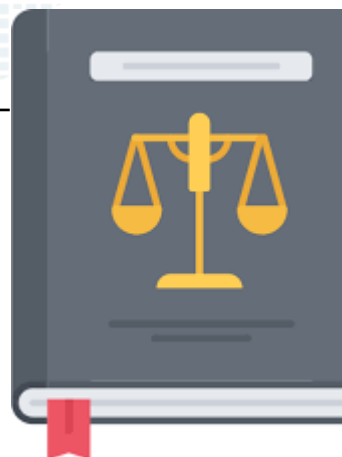
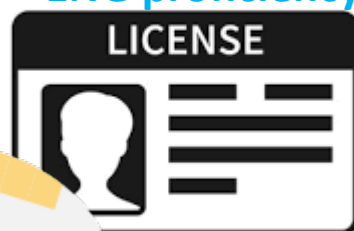
Flight Operations Standards Department

How to become a **Flight Crew** under TCARs (CAT)

PEL Domain

TR ←
Instructor
Examiner
FSTD certificate

Validity of Licence
MED Certificate
ENG proficiency



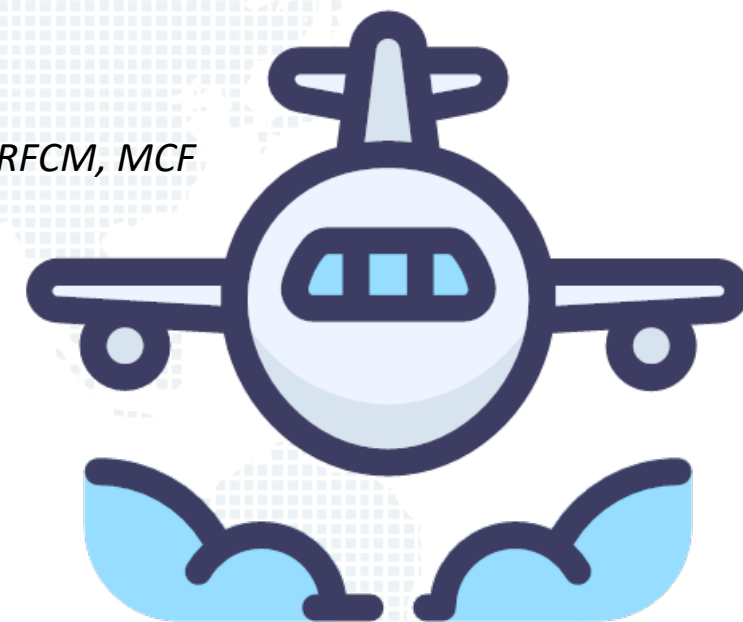
Valid of Training & Checking programmes (OPS Domain)


> OCC, CC [GND, ESETC, FT, LIFUS, ZFTT, UPRT, CRM, DG, SEC, FMT]
S/MFF [Dif/Fam]
SPA (if any)
RTC
OPC/LPC, Line Check
Special privilege: RHS, IFRFCM, MCF



Recent Experience

FCL 060
Route Area Aerodrome





MODULE: 1.1

Standardised **Name** of Training and Checking



Introduction: *Acronym*

- ❖ **OCC**: Operator Conversion Course;
- ❖ **RTC**: Recurrent Training & Checking;
- ❖ **CC**: Commander Course;
- ❖ **S/MFF**: Single/Mixed Fleet Flying;
- ❖ **IRFCM**: In-flight Relief of Flight Crew Member;
- ❖ **LTC**: Line Training Captain/Commander;
- ❖ **RAA**: Route, Area and Aerodrome familiarisation;
- ❖ **ATQP/EBT**

Essential Modules (elements) incorporated in FC Training

OCC Module:

- **GTC (Ground Training & checking)**
- **CRM (Crew Resources Management);**
- **FMT (Fatigue Management Training);**
- **UPRT (Upset Prevention and Recovery);**
- **ESETC (emergency and safety equipment training & checking)**
- **FT (Flight training & Checking)**
- **LPC/OPC (Licence /Operator Proficiency Check);**
- **LIFUS (Line Flying Under Supervision);**
- **LC (Line Check);**
- **RHS (either seat operations);**
- **Etc. (SMS, psychoactive substance, support programme).**

A Brief Details of Primary and Checking Programmes

Operator Conversion Course Training (OCC): [ORO.FC.120 & 220]

“TCAR OPS conversion course is not equivalent to conversion (transition) training programme in FCTP B.E.2559”

When OCC is required for Flight Crew?

- Initial TR;
- Change of operator;
- Change TR in the same operator.

NOTE1: TR may be combined with OCC.

NOTE2: If base training conducted by AOC, this programme shall be documented in OM-D of AOC



A Brief Details of Primary and Checking Programmes

Ground Training & Checking (GTC): [ORO.FC.120 & 220]

GROUND TRAINING AND CHECKING: GTC

Type of training	OCC	
	Operator change Initial*	Change type
Systems and Procedures Course: AMC1 ORO FC.220 (a)(1)(i) and (b)		
➢ Aircraft systems	/ (1)	/ (1)
➢ Normal (including operational), Abnormal and Emergency procedures	/	/
SPA (PBN, MNPS, RVSM, ETOPS, LVO, EFB) if applicable		
➢ PBN RNP AR APCH AMC1 SPA.PBN.105(b)	/	/
➢ MNPS	/	/ (2)
➢ RVSM	/	/ (2)
➢ LVO	/	/
➢ ETOPS	/	/ (2)
➢ EFB	/	/ (2)
➢ RRLD	/	/ (2)
➢ Steep Approach CAT.POLA.245 ; CAT.POLA.345	/	/ (2)
➢ Short landing CAT.POLA.250 ; CAT.POLA.350	/	/ (2)
Flight Path Management (MAN or AUT) during Unreliable Airspeed indication and other failures at high ALT in aeroplanes with MAX CRZ ALT > FL300		
➢ Elements as specified in Table AMC1 ORO FC.120&130	/	/
UPRT		
➢ AMC1 ORO FC.220&230	/	/
Emergency and Safety Equipment Training and Checking (ESETC)		
➢ First-aid in general	/	/
➢ First-aid as relevant to the ACFT type of operation and crew complement	/	/
➢ Aero-medical topics	/	/ (2)
➢ Smoke	/	/
➢ Actual Fire Fighting	/	/
➢ Operational procedures of security, rescue and emergency services	/	/
➢ Survival Training	/	/ (2)
➢ Ditching procedures and actual use of corresponding equipment	/	/
➢ Wet-drill Training (Piscine)	/	/
➢ Location/use of Emer/Safety equipment and associated procedures/drills	/	/
➢ PAX handling for OPS where no cabin crew is required	/	/
➢ Discipline and responsibilities for OPS where no CC is required	/	/
➢ PAX briefing/safety demonstrations, for OPS where no CC is required	/	/
CRM Training		
• Elements as specified in Table 1 AMC1 ORO FC.115 Column 1	/	/
• Elements as specified in Table 1 AMC1 ORO FC.115 Column 2	/	/
• Elements as specified in Table 1 AMC1 ORO FC.115 Column 3	/	/
DG Training AMC1 SPA.DG.105(a) and ORO.GEN.110(i)	/	/ (2)
Fatigue Management Training FMT ORO.FTL.250	/	/ (2)
SMS Training		
➢ Training and Communication on Safety AMC1 ORO.GEN.200(a)(4)	/	/
➢ Compliance monitoring AMC1 ORO.GEN.200(a)(6)(e)(3)	/	/
Security Training AMC1 ORO.GEN.110(a)	/	/ (2)
EWIS EASA AMC 20-22	/ (3)	/ (3)
Psychoactive substances and endangering safety CAT.GEN.MPA.170(b), CAT.GEN.MPA.175	/	/
Global Reporting Format (GRF) AMC1 CAT.OP.MPA.303 & CAT.OP.MPA.311	/	/ (2)
Ground checking AMC1 ORO.FC.220 (b)(2)	/	/

*First OCC of a CAT pilot

(1) Not applicable if covered by the TR

(2) If applicable due to the change in type of holding

(3) If applicable

A Brief Details of Primary and Checking Programmes

Fatigue Management Training (FMT): [ORO.FTL.250]

AMC1 ORO.FTL.250 - Fatigue management training

TRAINING SYLLABUS FATIGUE MANAGEMENT TRAINING

The training syllabus should contain the following:

- (a) applicable regulatory requirements for flight, duty and rest;
 - (b) the basics of fatigue including sleep fundamentals and the effects of disturbing the circadian rhythms;
 - (c) the causes of fatigue, including medical conditions that may lead to fatigue;
 - (d) the effect of fatigue on performance;
-
- (e) fatigue countermeasures;
 - (f) the influence of lifestyle, including nutrition, exercise, and family life, on fatigue;
 - (g) familiarity with sleep disorders and their possible treatments;
 - (h) where applicable, the effects of long range operations and heavy short range schedules on individuals;
 - (i) the effect of operating through and within multiple time zones; and
 - (j) the crew member responsibility for ensuring adequate rest and fitness for flight duty.

A Brief Details of Primary and Checking Programmes

Specific Upset Prevention and Recovery (UPRT) & FPM:[ORO.FC.120 &220]

FPM is required for all airplane with max cruise alt > FL300. UPRT require for all CAT operator operates with CMPA.

***Cross reference matrix** will help to resolve the duplication of training.*

UPRT consist of (theoretical + practical):

- ❖ *Prevention training: SRB + MAN (FSTD)*
- ❖ *Recovery training: MAN (FFS)*

NOTE: UPRT is normally element of OCC, RTC, RHS

Emergency and Safety Equipment Training & Check

ESETC: should be a **combined training** program for FC/CC. For the Initial OCC, trainees are required to undergo general first-aid & water landing.

	Operator change		Change type
	Initial*		
Emergency and Safety Equipment Training and Checking (ESETC)			
➤ First-aid in general	/		/
➤ First-aid as relevant to the ACFT type of operation and crew complement			/
➤ Aero-medical topics			/ (2)
➤ Smoke			/
➤ Actual Fire Fighting			/
➤ Operational procedures of security, rescue and emergency services			/
➤ Survival Training			/ (2)
➤ Ditching procedures and actual use of corresponding equipment			/
➤ Wet-drill Training			/
➤ Location/use of Emer/Safety equipment and associated procedures/drills			/
➤ PAX handling for OPS where no cabin crew is required			/

A Brief Details of Primary and Checking Programmes

Flight Training (FT): [ORO.FC.220]

*“To ensure that Flight Crew familiar with the **operational procedure** of the AOC”*

- *FSTD/Aircraft;*
- *TR and OCC (flight training) shall be identical, when TR is combined with OCC.*

 **Note:** *example (training relevant to the scope of authorization of AOC, SPA)*

A Brief Details of Primary and Checking Programmes

Line Flying under Supervision (LIFUS): [OCC, CC, AWOs, ETOPs, EFB, FCL.060]

*“LIFUS is mandatory for some training programmes, **IOE** no longer exists under new regulation”*

When LIFUS is required for Flight Crew?

- OCC training
- Commander Course;
- SPA (e.g. AWOs, ETOPs, EFB);
- other special cases (e.g. exceedance of recency, before resume to line ops, etc.)



NOTE1: LIFUS is not mandatory in Difference Training Programme as per FCTP B.E.2559

A Brief Details of Primary and Checking Programmes

Crew Resource Management Training (CRM): [ORO.FC.115, 215]

“CRM training in TCAR OPS is aligning with CBTA approach, CRM (non-tech skill) assessment is mandatory in practical training (e.g. OPC, LC)”

What FC training programmes should include of CRM?

- *OCC training (including initial CRM);*
- *Commander Course;*
- *RTC;*
- *UPRT;*
- *OPC, LC (assessment of non-tech skill).*

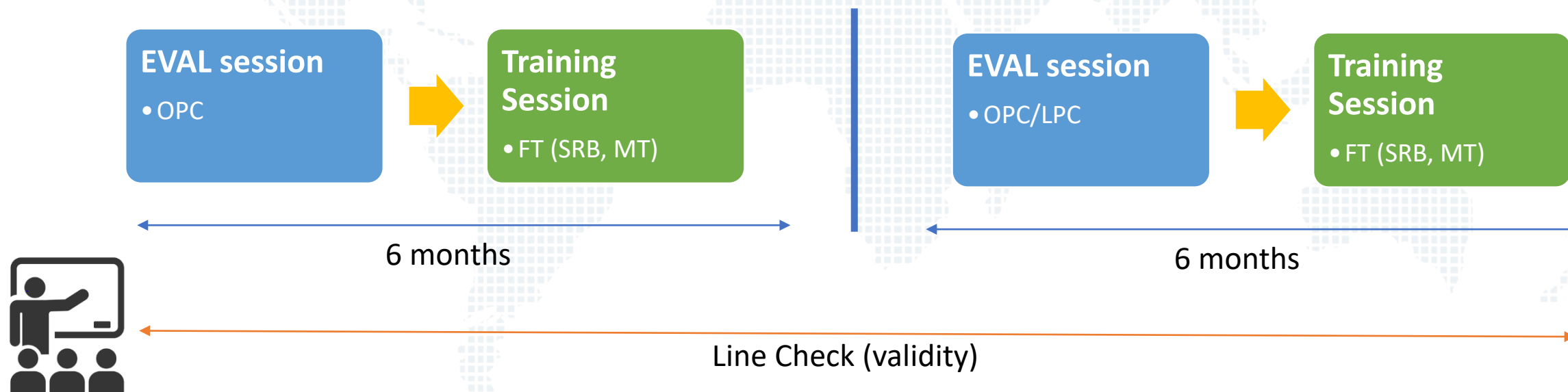


A Brief Details of Primary and Checking Programmes

Recurrent Training and Checking (RTC): [ORO.FC.130, 230]

*“**Annual** GND, FT training and periodic **check** is required.*

Recommendation for scheduling FTC scheme:



A Brief Details of Primary and Checking Programmes

Commander Course (CC): [ORO.FC.205]

“CC requires when first promote as commander (PIC) in MPO”

What are required in CC?

- *Ground Training (e.g. Role & responsibility, decision making, FMT, use of MEL);*
- *Flight Training (e.g. LOFT, AWOs, RNP AR APCH);*
- *OPC;*
- *LIFUS;*
- *Line Check (including Route & Aerodrome competency).*



A Brief Details of Primary and Checking Programmes

Difference or Familiarisation Training: [ORO.FC.205]

*“OSD-FC has detailed the level of difference (A,B,C,D) for **training / checking / currency**” MDR & ODR table need to be used for establishing this programmes. [not limited to change of variant or class, change of equipment or procedure also needed this programme.]*

Airbus	A330	- 300 series - 200 series - 200 F - 200 MRTT FAF STC - 900 series - 800 series	A330/350	X	X	MP	X	OSD FC A330 MRTT FAF STC A330/350 Operational Suitability Data (OSD) Flight Crew.
	A330	- 700L						
	A350	- 900 series -1000 series						

A Brief Details of Primary and Checking Programmes

Line Training Captain (LTC) Line Checker (LCC): [ORO.FC.146, 235]

“The nomination of these personnel is responsibility of operator, the lists of LTC, LC shall be notified to CAAT.”

- ❖ *FCTP B.E. 2559 & AOCR never require these persons to complete specific course before commencing assigned duty. However ORO.FC does mandate.*
- ❖ *Flexible provision also provided for newcomer (LCC-specific OCC)*



A Brief Details of Primary and Checking Programmes

Route, Area and Aerodrome (Fam training): [ORO.FC.105]

“This programme is related to the **complexity** of **routes areas and aerodromes**. The training program will be established based on **performance-based training**, which is continuous and dynamic, to address TEM.”

NOTE: All FC (CAT) require to attain this programme.

Training Methodology will be:

- Self-learning / briefing;
- Program instruction;
- FSTD.

Aerodrome Category	Require briefing
A	All commander/Flight crew are qualified to operate into category A aerodrome after line release check and will be valid 12 months.
B	<p>Prior to operating to a category B aerodrome (planned destination or required alternate), the commander shall:</p> <ul style="list-style-type: none"> – Be briefed or self-brief by studying the relevant OM-C and LIDO Route Manual. <p>The self-brief should at least cover:</p> <ul style="list-style-type: none"> – Route Manual ADR pages for general airport information; – STAR/SID/Approach charts relevant for the flight – Performance limitations using relevant performance tool; – OM-C briefing if applicable, the briefing complies with any requirements stipulated by the authority responsible for the aerodrome.
C	<p>Prior to operating into category C aerodrome (planned destination or required alternate), the commander shall:</p> <ul style="list-style-type: none"> – Be briefed or self-brief as per category B aerodrome; and – Visit the aerodrome as an observer and/or undertake instruction in a suitable FSTD. <p>The observer should occupy an observer's seat where installed. If an observer's seat is not available and cannot be installed, the pilot-in-command/ commander may occupy a pilot seat to conduct the aerodrome visit with a suitably qualified commander nominated by the category C aerodrome operator; and</p> <ul style="list-style-type: none"> – comply with any requirements stipulated by the authority responsible for the aerodrome.



A Brief Details of Primary and Checking Programmes

In-Flight Relief Pilot/Co-pilot: [ORO.FC.A.201, ORO.FC.235]

In-Flight relief operations can be conducted only above **FL200**, no rest period credits are granted in RP (FDP based on rest Facility onboard) . There are 2 functions that will be relief during cruise phase:

- ❖ *Cruise Relief CPT: see qualification in ORO.FC.A. 201 (a);*
- ❖ *Cruise Relief Co-pilot: related to **FCL.720.A (c)**.*

LHS			RHS		
Functions		Specific requirements	Functions		Specific requirements
F/O	Relief CPT, PM	ORO. FC.105 ORO.FC. A.201 (a) ORO. FC.235 (e) and (f)	F/O	PF	
CPT	PIC, PF		CPT	PM	ORO. FC. A.201 (b) (1) and adapted training if judged necessary by the Operator

A Brief Details of Primary and Checking Programmes

Operate in either pilot's seat (RHS): [ORO.FC.235]

RHS qualification: Commander who are assigned to operate in either pilot's seat (co-pilot duties, conduct training or checking) required to completed this program.

RHS consist of:

- Initial; and
- Recurrent

NOTE: validity period is 12 months.

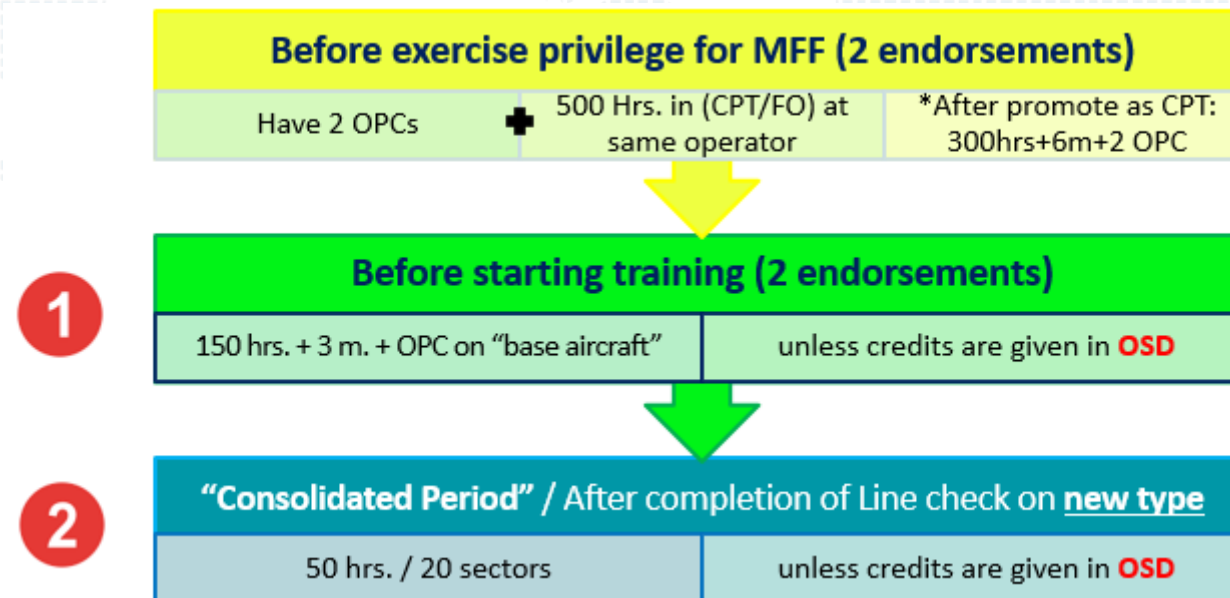
Additional maneuver are:

- Engine failure during T/O;
- OEI go-around; and
- OEI landing.
- UPRT (recovery).

A Brief Details of Primary and Checking Programmes

Single/Mixed Fleet Flying: [ORO.FC.140 & 240]

CAT operations (MPO) is limited to operate not more than 2 licence endorsement. OSD (MDR and ODR table) will play a crucial role in establishment of S/MFF programme.





MODULE: 1.2

Factors to Consider in
developing FC Training
Programmes

Factors to Consider in developing Flight Crew Training Programmes (training needs analysis)

- Applicable **Regulatory** Requirements (AIRCREW, AIROPS);
- Recommendation from **SMS**;
- Specific **Equipment** (TAWS, ACAS, ROASS, HUD, EFVS, etc.);
- **OSD** (**TASE**, ODR);
- OMs / Operational **Procedures** (e.g. De/Anti-icing, Incapacitation);
- Kinds of Operations related to **SPA** (RVSM, PBN, AWOs, ETOPs, EFB, etc.);
- Safety information Bulletins (**SIB**).

Recommendations from Operator's SMS

[AMC3 ORO.FC.220, 230]

- The operator can utilize **safety publications** from Authorities or Manufacturers relevant to their operation and aircraft type.

Examples of publications that may contain recommendations:

- The ["SIB" \(Safety Information Bulletin\)](#) issued by EASA;
 - Training recommendations issued by Manufacturers, such as [AIRBUS](#) or BOEING
 - Accident/ incidents reports issued by the national and foreign Accident Investigation Boards
- Information collected internally:
 - ASR, FDM, Statistic analysis, Feedback, Safety study, MOC...



Training related to Operational Approval

[Part-SPA]

- Extended Twin Engines Operations (**ETOPS**);
- Performance Based Navigation (**PBN**);
- NAT HLA flight (**MNPS**);
- **RVSM**;
- AWOs operations & Operational credits (**LVO** and **LVTO**),
- Dangerous Goods (**DG**) Training Programmes, Transportation of Dangerous Goods;
- Reduced Required Landing Distance (**RRLD**);
- Steep approach;
- Short landing;
- Electronic Flight Bag (**EFB**);
- SET-IMC; and
- Etc.



Training related to integration of New Equipment

[ORO.FC.125 and AMC1 ORO.FC.125]

- The introduction of new equipment or changes in interfaces (e.g., ROASS, AP/TCAS, ROPS, ROW, etc.) may necessitate for **differences** or **familiarization** training.
- Assessing the **complexity** of the change, **OSD** (Operational Suitability Data) can be valuable in identifying training requirements.
- The training program (along with suitable tools) must be documented in OM-D





MODULE: 1.3

General Approval Concepts

Training and Checking Approval Concepts

Applicability:

- Training program (commercial air transport: CAT only) require to be approved.

Scope:

- Training & Checking Programmes detailed in **ORO.FC** and **Part-SPA**

Training and Checking Approval Concepts

Definitions:

Training/Checking programme

A training and checking programme is the range of **defined courses** that outline the operator's training and checking concept **specific to its scope and activity**. A training and checking programme is **also equivalent to a syllabus**.

Examples: Operator Conversion Training, Operator Recurrent Training, Command Course

Training and Checking Approval Concepts

Syllabus

A syllabus **lists the topics** to be covered in a training and checking programme in compliance with the respective regulation and associated means of compliance (AMC).

Syllabus shall include:

- Description of training;
- Prerequisite before starting training & checking;
- Personnel required to perform training & checking;
- Mean of delivery (e.g. A/C, FSTD, class-room, CBT, VR, etc.);
- Standards performance;
- Training objective;
- Durations (time allocation);
- Reference to training /checking material
- Checking requirement.

Training and Checking Approval Concepts

Lesson plan

A lesson plan is for both, planning and execution of an individual lesson **within the theoretical knowledge instruction**. A lesson is subdivided in units/lectures to reach the defined learning objectives.

Session plan

A session plan is used during flight or FSTD training and consists of a breakdown of **flight and/or FSTD training elements**, contains details on the exercises to be conducted, individual setup and includes learning objectives.

Training and Checking Approval Concepts

“Before operating” [ORO.FC.115(a) vs. ORO.FC.215(a)]

Before operating means, before a flight crew member commences unsupervised line flying.

“Suitably qualified”

The **operator defines** the above-mentioned term for its training personnel.

Training and Checking Approval Concepts

Approval

All changes (including initial application) to the operator's training/checking **programmes** and **syllabi** as defined above will require prior approval according ORO.FC.145(c) by a first issue or revision of the OM-D.

Note: *Lesson and Session plans do not form part of the approval.*

*Adherence to approved syllabi and training/checking programmes **will be verified during training/checking inspections** with the help of available lesson/session plans. To be able to prepare training/checking inspections, these plans (if available from the operator) will be requested by CAAT upon demand*

Training and Checking Approval Concepts

Contracted training and Checking activities:

An operator intending to use the syllabus of a **third-party provider** needs, before requesting approval, verify compliance with all applicable requirements [refer also to **ORO.GEN.205**].

Training and checking personnel [GM1 ORO.GEN.205]

Contracted personnel need to be familiarized with the operator's documentation system and SOPs.

Training and Checking Approval Concepts

Crediting of previous training:

It is up to the operator to define criteria which training and checking could be credited towards certain training programmes. (e.g. Abbreviation course for LVO, EFB, further details in SPA).

Landing training outside ATO approval:

Base Training can be conducted under AOC holder. Therefor OM-D of AOC shall be included this activity and be approved by OPS/CAAT.

ORO.AOC.125 – applied to this case.



Training and Checking Approval Concepts

Use of FSTD: [ORO.FC.145]

The Use of FSTD is subject to **approval** by CAAT, and the FSTD shall **replicate** the aircraft used by the operator. Any differences between the FSTD and the aircraft shall be described and addressed through a briefing or training, as appropriate.

Operator shall establish a **system** to adequately **monitor changes** to the FSTD and to ensure that those changes do not affect the adequacy of the training programmes.

