

TRTO MANUAL TYPE RATING A320 FAMILY



GENERAL OVERVIEW

1.1 OBJECTIVES

The objectives of this Airbus A319/320/321 Type Rating course are to train cockpit crews to:

- ◆ operate the aeroplane within its limitations;
- ◆ complete all manoeuvres smoothly and accurately;
- ◆ exercise good judgement and airmanship;
- ◆ apply aeronautical knowledge;
- ◆ maintain control of the aeroplane at all times in such a manner that the successful outcome of a procedure or manoeuvre is never in doubt;
- ◆ understand and apply crew co-ordination and incapacitation procedures, if applicable;
- ◆ communicate effectively with the other crew members, if applicable.

Completion of the syllabus in this TRTO Training Manual ensures compliance with JAR-FCL 1. The training exercises have been determined with reference to the learning objectives and the requirements mentioned in JAR-FCL 1.240, Appendix 1 and 2 to JAR-FCL 1.240 & 1.295, IEM-FCL 1.240 (b)(1) & 1.261(c)(2) and AMC-FCL 1.261(a). Training exercises are addressed in a systematic order and repeated where needed. Instrument approaches will be exercised down to CAT I limits. For approaches and landings down to the certified visibility limits a low visibility training module is available.

Zero Flight Time (ZFT) is also an option for this course provided all requirements mentioned in JAR-FCL 1.261(c)(2) are met.

The course has been designed to also comply with the objectives of MCC training, as specified in JAR-FCL 1.261(d). Two MCC modules are available to combine MCC training with the initial type rating course – refer to 1.2 – Course elements.

1.2 COURSE ELEMENTS

The following course elements are available:

- ◆ Aeroplane Systems (CBT)
- ◆ Performance
- ◆ FMGS and ECAM Practical Training
- ◆ SOPs and Manoeuvres – Explanation
- ◆ Fixed Base Simulator Training
- ◆ Flight Simulator Training
- ◆ Low Visibility Procedures Training (optional)
- ◆ Licensing Skill Test
- ◆ Aeroplane Training (Optional)

1.3 PREREQUISITES

All trainees requiring a JAR-FCL compliant type rating shall meet the following prerequisites:

prerequisites	first type rating	additional type rating
At least 100 hrs as pilot in command of aeroplanes	X	
Valid ATPL or Valid theoretical ATPL with a valid CPL	X	X
Multi engine - instrument rating	X	X
MCC Certificate (see NOTE below)	X	
Adequate fluency in reading, speaking and understanding of the English language	X	X

*NOTE: MCC training can be integrated into the type rating course.
Trainees holding a valid helicopter MCC certificate + over 100 hrs ME helicopter pilot experience or have more than 500 hrs ME helicopter experience meet the MCC requirement.*

Head of Training checks whether the above prerequisites are met.

1.4 GROUND TRAINING

The Ground Training part consists of the following course elements:

1.4.1 AEROPLANE SYSTEMS

This course element is covered by computer based training, supported by a qualified instructor. It complies with the requirements of theoretical knowledge instruction mentioned in AMC FCL 1.261(a) and covers system's description and description of operational procedures. The CBT course contains approximately 40 hours of instruction; duration 9 days. A cockpit mock-up is available for familiarisation with the cockpit lay-out and the locations of the controls and indicators.

NOTE: An instructor is available for support during all CBT lessons.

1.4.2 PERFORMANCE

This part of the theoretical knowledge instruction is covered by means of stand-up classroom instruction. It comprises explanation of tables and charts used for performance calculations as well as exercises.

The duration of this element is 0,5 day.

1.4.3 FMGS AND ECAM PRACTICAL TRAINING

This course element is included to enhance the trainee's understanding and skill concerning the FMS. It is covered by part task training method.

The duration of this element is 2 days.

1.4.4 SOPS AND MANOEUVRES – EXPLANATION

In preparation of the practical training a course element is included which explains the standard operating procedures to be applied. In principle these are the SOPs in use at FSC –TRAINING, however customer SOPs can also be applied, if so requested. The duration of this element is 1 day.

1.4.5 THEORY EXAMINATION

The theory examination is a supervised, closed book written test containing 100 multiple choice questions, covering all main subjects in the syllabus. The pass mark is 75% in each of the main subjects. The duration of the examination is 4 hours, including review.

1.5 FLIGHT TRAINING

NOTE: Access to the flight simulator training is only granted provided ground training has been successfully completed.

1.5.1 FIXED BASE SIMULATOR (FBS) OR FLIGHT TRAINING DEVICE (FTD) TRAINING

This element of the flight training is intended to familiarise the trainee with the controls and indicators in the simulated cockpit and acquire the necessary understanding and skill to enter the flight simulator training. As this training is done in a simulated cockpit environment, it allows exercising multi-crew aspects in all phases and circumstances. Duration of this element is 3 sessions of 4 hours each.

1.5.2 FLIGHT SIMULATOR TRAINING

The flight simulator training covers all procedures and manoeuvres which have to be completed in a fully dynamic flight environment. The duration is 8 sessions of 4 hours each. In preparation of each session a 1,5 hours briefing will be conducted. At the end of each session a de-briefing is conducted, including a session review and a preparation for the next session.

1.5.3 LICENSING SKILL TEST

Trainees are not proposed to take a skill test unless they have demonstrated to the instructor the required knowledge and skill to pass it. FSC-TRAINING will provide to the examiner the trainee records folder, the completed application form and a skill test form for each candidate. The type rating application to the authority needs to be done by the trainees.

1.6 OPTIONS

1.6.1 LOW VISIBILITY PROCEDURES TRAINING

This optional module consists of approximately 3 hours of CBT and one 4-hours flight simulator training session. The CBT explains the regulations and use of equipment and procedures. The flight simulator training covers take-off and landing operations down to the certified minimum visibility limits.

1.6.2 ZERO FLIGHT TRAINING (ZFT)

Provided the requirements for ZFT according to JAR-FCL have been complied with, this optional flight simulator training sessions covers extra take-offs, circuits and landings required to apply for the type rating without performing any training on the aeroplane.

1.6.3 AEROPLANE TRAINING

If so desired by the customer aeroplane training can be optionally included in this type rating course. As a part of this course element a complete walk around check of the aeroplane is done with the instructor.

For trainees with more than 500 hours MPA experience 4 landings are mandatory, of which at least 1 is a full stop landing. In all other cases the trainee has to perform 6 landings, at least 1 of which is a full stop landing.

The duration depends on the positioning flight and return flight.

1.7 GRADING

The trainee records folder is issued at the start of the training and will be used to record classroom attendance and report progress during the practical training.

NOTE: The complete contents of the trainee records folder is listed in section 3 of this Training Manual.

Flight Simulator session #2 serve as a “gate”, which means progress at the end of this session is analysed by the instructor and release to the next phase of the flight simulator training is based on it. If progress appears insufficient remedial training will be proposed by the instructor at this time.

NOTE: When this training is done for customers a copy of the completed training folder will be sent to the customer’s Chief Pilot or other point of contact as desired.

1.8 CERTIFICATES

A certificate of completion can be issued by FSC for completion of any part of the type rating course. This will certify that the subject part of the training has been completed in compliance with the approved syllabus.

NOTE: The certificate merely states what part of the course has been completed. Only when a formal examination or test was successfully done in accordance with JAR-FCL requirements will the certificate indicate “successful completion”.

1.9 DOCUMENTATION – OPERATIONAL STANDARDS

All documents necessary to complete this type rating course are available at the training center. However in case a customer wishes trainees to be trained in accordance with the operator’s operational standards and manuals, such manuals and possible other relevant documents, e.g. checklists, take-off data cards, runway analysis tables, etc. must be in possession of FSC-TRAINING and a familiarization training for FSC-TRAINING instructors must be arranged. In some cases it may be advantages for FSC-TRAINING instructors to observe one or more stretches on the customer’s routes.

1.10 GENERIC COURSE SCHEDULE

The generic course schedule shown below represents a type rating course without any optional course elements.

NOTE: The schedule in this chapter shows throughput time i.e. including days not scheduled. In actual practice these days not scheduled could occur at slightly different positions due to availability of resources and/or course start dates relative to weekends or holidays.

DAY	SUBJECT	METHOD/EQUIPMENT
1	AEROPLANE SYSTEMS	self study / CBT
2	AEROPLANE SYSTEMS	self study / CBT
3	AEROPLANE SYSTEMS	self study / CBT
4	AEROPLANE SYSTEMS	self study / CBT
5	AEROPLANE SYSTEMS	self study / CBT
6	DAY NOT SCHEDULED	
7	AEROPLANE SYSTEMS	self study / CBT
8	AEROPLANE SYSTEMS	self study / CBT
9	AEROPLANE SYSTEMS	self study / CBT
10	FMS/ECAM TRAINING	Instr. Led / FMS Trainer
11	FMS/ECAM TRAINING	Instr. Led / FMS Trainer
12	DAY NOT SCHEDULED	
13	PERF. / THEORETICAL KN. EXAM	Instr. Led / Classroom
14	SOPs EXPLANATION	Instr. Led / Classroom
15	FBS #1	Instr Led / Simulator
16	FBS #2	Instr. Led / Simulator
17	FBS #3	Instr. Led / Simulator
18	DAY NOT SCHEDULED	
19	FS #1	Instr. Led / Simulator
20	FS #2	Instr. Led / Simulator
21	FS #3	Instr. Led / Simulator
22	FS #4	Instr. Led / Simulator
23	DAY NOT SCHEDULED	
24	FS #5	Instr. Led / Simulator
25	FS #6	Instr. Led / Simulator
26	FS #7	Instr. Led / Simulator
27	FS #8	Instr. Led / Simulator
28	DAY NOT SCHEDULED	
29	Licencing Skill Test	Instr. Led / Simulator

1.11 FACILITIES AND EQUIPMENT

1.11.1 COMPUTER BASED TRAINING (CBT)

CBT is delivered on a laptop computer made available to each trainee for the duration of the type rating course. The CBT software can be accessed through internet. Trainees can use a workspace for self-study in FSC's building or choose another location where internet is available.

The work space consists of a normal desktop of 0,90 m x 1,80 m, insulated from the other work spaces by screens with a height of approximately 1,80 m. Headphones are used for the audio. As the CBT software is accessible through the internet, self study can also be done in another location.

1.11.2 CLASSROOMS

Stand-up instruction is done in a classroom, which contains 10 tables and chairs for trainees and an instructor station, consisting of a table and chair, connectors for a laptop PC to be connected to a beamer, a projection screen, a white board and video replay equipment. The classroom is fitted with incandescent lighting, heating, ventilation and top cooling.

1.11.3 COCKPIT MOCK-UP AND PICTURES

Trainees have free access to a cockpit mock-up for cockpit familiarisation and checklist rehearsal. In the study area wall pictures will help trainees visualise the cockpit lay-out and the location of system controls and indicators.

COCKPIT MOCK-UP	
Type:	Cockpit mock-up A320
Manufacturer:	AVSOFT
Operator:	FSC

1.11.4 FLIGHT SIMULATOR

Fixed Base as well as Flight Simulator training is done on FSC's A320 level D qualified full flight simulators. Three of these simulators are available, built to the same specification.

JAR-STD approval:	Full Flight Simulator
Type:	A320
Manufacturer:	CAE Inc.
Operator:	FSC
Approval category	D

1.11.5 AEROPLANE TRAINING (OPTIONAL)

For aeroplane training use can be made of the aeroplanes of the customer airline, if applicable. In case trainees are not yet employed by an airline FSC may arrange the aeroplane training to take place by a subcontracted operator. In such cases copies of the appropriate aeroplane documents will be retained in the FSC's archives:

- ◆ Type certificate
- ◆ Certificate of airworthiness
- ◆ Certificate of insurance (allowing for training flights)

As these aeroplanes are rented by FSC occasionally for the purpose of aeroplane training an aeroplane rental agreement shall be established between the parties thereto. A copy of such rental agreement is retained in the TRTO's archives. TRIs shall be selected for the task of providing the aeroplane training and shall be familiarised with FSC's training syllabus as well as the training records of the trainees participating in the aeroplane training at hand. FSC shall keep records of the TRI's providing the aeroplane training as well as trainee records of completion.

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