APT Airbus Pilot Transition



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The new Airbus Pilot Transition (APT) course is an innovative approach to type rating that trains pilots using the latest interactive learning tools and has been welcomed by airline crews.

With the intensive use very early in the ground course of the Maintenance/Flight Training Device (M/FTD), the first of its kind integrating tutorial

mode in a 3D environment with high fidelity simulation software, Airbus again sets training standards for the future through:

- increased training efficiency, quality of the ground school phase
- optimised training time
- greater mobility and flexibility and
- high versatility and fidelity of the selected new training devices.

Training definition. The key elements

APT is based on the following prerequisites

CAPTAIN	FIRST OFFICER
Previous command experience	Previously qualified on JAR/FAR/CS 25
Valid and current Airline Transport Pilot License (ATPL)	Aircraft and commercial operations valid and current CPL (Commercial Pilot License) with instrument rating
Fluency in English. Able to write, read and communicate at an adequately understandable level in English language	Fluency in English. Able to write, read and communicate at an adequately understandable level in English language
200 hours experience as airline, corporate or military transport pilot	
Jet experience	≥ Jet experience
 Flight time: 1,500 hours as pilot 1,000 hours on JAR/FAR/CS 25 aircraft 	 Flight time: 500 hours as pilot 300 hours on JAR/FAR/CS, 25 aircraft 200 hours experience as airline, corporate or military transport pilot

APT has been developed by applying the following principles:

Systematic approach to instruction

Airbus training programmes are defined to achieve precise training objectives and to bring flight crew up to proficiency in the most efficient way, in a learning and time sense.

The training objectives are determined through a complete task analysis. The instructional system is approached as a whole, where the training methods, course contents and training equipment are selected for their ability to best fit the required final objectives.

Learning by doing

Practical training is progressively introduced very early in the learning process, with training on Standard Operating Procedures (SOP), crew concept and task sharing.

Computer Based Training (CBT) learning sessions start right from the beginning or the course and are combined daily with realistic hands-on sessions on Airbus's new state-of-the-art training device – The Maintenance/Flight Training Device (M/FTD)

Training to proficiency

At the end of the training programme, each crew member shall be capable of carrying out their tasks safely and efficiently, in accordance with the training objectives. Therefore, the training sequence does not permit a trainee to move up from one phase



to the next until they have acquired the skills necessary to complete the objectives of their current phase.

Rigorous definition of the trainee prerequisites

Good definition of the entry level of trainees is a success factor for training programme specification. To be effective, a training programme must start from already acquired knowledge, avoiding creating gaps never filled, or timeless repetition of well known items.



Training curriculum organisation

The training is organised around a two-step learning process – a ground phase enabling learning about systems and operational procedures and a 'handling' phase using a Full-Flight Simulator (FFS).

The ground phase is performed using CBT for system knowledge on a laptop provided to each trainee, it also includes self-paced learning on the M/FTD.

Thanks to the M/FTD, trainees become familiar with operations in the cockpit from the fifth day of training and benefit from an inter-active learning of aircraft procedures. Each crew is supported by a dedicated instructor.

In addition, the M/FTD offers the advantage of

being a transportable tool, so the ground phase can be completed at an Airbus training centre or at the operator's home base.

Course breakdown in percentage by type of training devices

Detailed curriculum

CBT in classroom is restricted to systems presentation. Self paced CBT for normal and abnormal operations to prepare the M/FTD sessions.

Use of the M/FTD during ground phase

When working on system operations, an appropriate CBT summary can be displayed on additional screens.



(1) LOFT PHASE

A LOFT (Line Oriented Flight Training) session is defined to summarise all the exercises learned throughout the course and to give the trainee experience in operating the aircraft in real time scenarios.

(2) Aircraft Base Training

According to regulation requirements and airline request, two options are provided to the customer: • either: Aircraft base training – 45 minutes per pilot, or • Zero Flight Time Training (ZFTT) – 4 hours per crew in the FFS

(3) Skill test phase

According to the JAR – FCL recommendations, the skill test syllabi have been designed in a commercial air transport environment. They consist of:

- 1st part: a real time sector with some specific events
- 2nd part: additional part to deal with the remaining items to be performed by the trainee in order to fully satisfy the JAR FCL requirement.





Training is fully integrated



No part task training and progressive introduction of:

- Flight Management System (FMS) functions,
- Systems knowledge
- Standard Operating Procedures (SOP) in normal and abnormal operations
- Crew Resource Management (CRM) including task sharing.

Mode 1 links to CBT summary modules

Mode 2

Tutorial mode

The objective of this mode 2 is to train the procedures:

- sequence of actions
- appropriate call out
- task sharing.

The Tutorial mode included in the M/FTD provides the instructor with the appropriate initialisations when a specific lesson is selected on the M/FTD instructor panel, i.e. the M/FTD is automatically initialised in the correct configuration for the lesson (time saving). The M/FTD also provides some visual materials (drawing on screen).

The tutorial mode is a major contributor to training standardisation, especially for non-Airbus instructors.



Mode 3

Standard free play simulation In mode 3 trainees can use the M/FTD in the same way and with the same level of system simulation as in a full flight simulator.

Conclusion

The first A320 APT courses were carried out at the Toulouse training centre in mid-September 2004 with crews from two recent Airbus customers.Typical remarks on the course from these customer crews were:

• The M/FTD tutorial sessions are very impressive because we can sequence the entire flight and divide the flight into phases. The instructor can teach us task sharing and the actions to be taken in different flight situations'.

• The structure of the course allowed crews to practice the procedural aspect of their learning on the M/FTD.'

The APT course dramatically enhances the quality and efficiency of flight crew training and has been welcomed by the first crews trained.

Today, all Airbus A320 crews trained in the Toulouse training centre are benefiting from the APT programme. Deployment of A320 APT training in the other Airbus and CAE training centres is scheduled for early in 2005.

APT training will be implemented in March 2005 for type rating on the Airbus A330/A340 aircraft and, later on, on the A380.



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