

FLIGHT DISPATCHER COURSE AB INITIO

Syllabus



WAMOS
AIR

AB INITIO FLIGHT DISPATCHER COURSE

Scope:

This programme is aimed at anyone who wishes to complete their initial training to become a Flight Dispatcher, allowing them to develop their career within this area of the aviation industry.

Objectives:

The aim of the course is to provide an appropriate level of knowledge in line with the duties of a Flight Dispatcher in accordance with ICAO Annex I - Personal Licensing. Chapter 4.6.- Duties of flight operations officer/flight dispatcher.

Duration:

The course consists of a total duration of 400 hours, broken down into:

- Theoretical training: 360 hours, including exams.
- Practical flight dispatch training: 40 hours, including exams.

In addition to the duration indicated above, there will be a flight dispatch exercise carried out in a real-world environment. The dispatch will be analysed with the flight crew and the corresponding flight will be carried out.

Requisitos del candidato:

El candidato debe satisfacer los siguientes requisitos para ser aceptado en el curso:

- Edad mínima 18 años.
- Nacionalidad o permiso de residencia que le permita vivir en España.
- No contar con antecedentes penales.
- Bachillerato o estudios de formación profesional de grado medio. Preferiblemente poseer el título de grado en gestión aeronáutica.
- Superar prueba de inglés eliminatoria.

Candidate Requirements:

The candidate must meet the following requirements to be accepted on the course:

- Minimum age of 18.
- Spanish nationality or residence permit that allows you to live in Spain.
- No criminal record.
- High school diploma/A-levels or intermediate vocational training. Preferably a degree in aviation management.
- Successful completion of English language test.

Requirements of the Instructor:

The course will be taught by Wamos Air staff members, with extensive experience and qualifications in flight dispatch, operations engineering, as well as pilots with the Wamos Air fleet.

Contents

Theoretical part

1. Module 1:

1.1 Operator introduction (2 hours)

- What is a dispatcher?
- Motives and purpose of the course
- Induction to Wamos Air
- Aviation vocabulary and acronyms

1.2 Rules, regulations and aviation law (12 hours)

- Conventions and International Organisations (ICAO) or ICAO Annexes
 - o Doc 8168
 - o Doc 7030
 - o Doc 007
- Supranational Authorities - EASA
 - o Regulation (EU) No 965/2012 AIR-OPS
 - o Regulation (EU) No 923/2012 SERA
- National Authority; functions and structure or Aviation Act
 - o Aviation Safety Law
 - o Public part of the National Civil Aviation Security Programme.
- Organisation of airspace and features
 - o Classes of air spaces. (UIR, FIR, CTR, TMA, ATZ, airways)
 - o Air Traffic Control
 - o Airport facilities

1.3 Operational security management system (6 hours)

- Normative development
- Reporting system
- Operational security management system (SMS)

1.4 Human factors (4 hours)

- Basic concepts
- Error
- Human behaviour
- Reason's model
- SHELL concept
- TEM Model
- Decision-making process
- Automation

Module 1 exam lasting 1 hour.

2. Module 2:

2.1 Aircraft documentation (4 hours)

- AFM; description and use
- FCOM; description and use
- QRH; description and use
- Planning Manual/Features of the aircraft
- MEL; description and use
- CDL; description and use
- Aircraft Certificates

2.2 General aircraft knowledge (20 hours)

- Structure of aircraft, design and limitations
- Propeller engines; design, operation and limitations
- Jet engines; design, operation and limitations
- General aircraft systems and utilisation of MEL/CDL or electrical system
 - o Pneumatic system
 - o Hydraulic system
 - o Fuel system
 - o Flight control system
 - o Pressurisation system and air conditioning
 - o Fire extinguishing system
 - o Navigation system
 - o Flight guidance system/auto flight
 - o Communications system
 - o Oxygen system
 - o Antifreeze system
 - o Landing gear system
 - o Emergency equipment
 - o APU

Module 2 exam lasting 1 hour.

3. Module 3:

3.1 Meteorology (30 hours)

- ISA (International Standard Atmosphere)
- Temperature and density
- Pressure and altimetry
- Winds
- Humidity, temperature and precipitation
- Stability
- Clouds
- Air masses and fronts
- Mountain wave and turbulence

- Icing
- Storms
- General atmospheric circulation
- 3.2 Reports and weather forecasts in text form (10 hours)
 - Obtaining reports and forecasts
 - METAR - SPECI
 - TAF
 - SIGMET
 - GAMET / AIRMET
 - Winds and temperature at altitude
 - SNOWTAM
 - ASHTAM
- 3.3 Reports and weather forecasts in image form (5 hours)
 - Obtaining reports and forecasts
 - Significant weather charts
 - Wind charts and temperature at altitude
 - Volcanic ash alerts

Module 3 exam lasting 1 hour

4. Module 4:

- 4.1 Principles of flight (24 hours)
 - Fluids; density and compressibility.
 - Altitude pressure and density
 - Mach number
 - Bernoulli's Principle
 - Speeds (IAS, CAS, EAS, TAS, NM and GS)
 - Total and static temperature
 - Viscosity
 - Magnus Effect.
 - Laminar and turbulent boundary layer
 - Aerodynamic forces
 - Lift and Drag
 - Relationship between speed and angle of attack
 - Wing planform; centre of pressure
 - Drag: induced and parasitic
 - Wake turbulence
 - Loss
 - High-lift devices
 - Maximum and minimum speeds
 - Gust-maneuvre diagram
 - Stability

- Shock waves and transonic flight

Module 4 exam lasting 1 hour

5. Module 5:

5.1 Performance calculation (24 hours)

- Definition and importance of performance in flight planning
- Take-off performance, balanced field
- Climb performance
- Cruising performance; driftdown, emergency descent
- Landing performance. Landing limitations
- Performance calculation systems
- Performance limited maximum operating mass calculation
- Performance-based planning procedures

Module 5 exam lasting 1 hour

6. Module 6:

6.1 Load and trim (15 hours)

- Centre of gravity; definition
- Aircraft mass and use of AHM 560
- Limits of mass and centre of gravity of the aircraft
- Effect of fuel
- Payload distribution (passenger and cargo (LIR)
- Aircraft load and trim calculations
- Load and trim sheet, manual and mechanised
- Calculations of last-minute changes, limits and procedure
- Influence of load and flight characteristics

6.2 Operator documentation (6 hours)

- Air Operator Certificate
- Operations Specifications
- Operations Manual Parts A, B, C, D
- Dispatch Manual

Module 6 exam lasting 1 hour.

7. Module 7:

7.1 Navigation and radio navigation system (30 hours)

- General navigation
- Navigation basics
- Cartography
- Cartographic documentation. Jeppesen Cartography
- Conventional navigation systems; radio navigation system

- PBN Navigation
- Inertial navigation systems
- GNSS
- Use of radar
- SIDs / STARs
- Lighting systems and aeronautical visual aids
- Approach systems

7.2 Communications (5 hours)

- General - radio spectrum
- Radiotelephony - Phonetic Alphabet
- Communication systems; VHF, HF, satellite communication (SATCOM)
- Data link
- Use of communications in different airspaces or on specified routes
- CPDLC and ADS-C
- ADS-B
- AFTN communications; SITA

7.3 Specific Approvals (8 hours)

- MNPS - NAT HLA
- RVSM
- LVO
- PBN
- CPDLC/FANS (Datalink)

7.4 NOTAMs (5 hours)

- Obtaining NOTAMs
- Applicable codes.
- Interpretation and validity of NOTAMs Module 7 exam lasting 2 hours

8. Module 8:

8.1 Flight planning (22 hours)

- Fuel policies; standard, RCF and PDP
- Fuel consumption calculations and flight autonomy
- Tankering
- Determining operating masses and maximum masses. Limitations
- Minimum altitudes; MSA, MORA, MEA
- Altitude corrections and obstacle clearance
- Flight path design and categorisation
- Selecting speeds and cruising altitudes. Limitations
- Use of suitable airports; rules, requirements, facilities, procedures and minimum usage (2D, 3D approaches)
- Procedures for selecting alternative airports for take-off. Regulations and Requirements
- Procedures for selecting alternative airports en route. Regulations and Requirements

- Procedures for selecting alternative destination airports. Regulations and Requirements

Partial exam, modules 1 to 8, lasting 3 hours

9. Module 9:

9.1 Operational dispatch procedures (24 hours)

- Types of commercial operation and their implications (Wet lease, dry lease, charter, full charter, regular, positional, ferry...)
- Obtaining aviation documentation; cartography, weather information, use of AIP, ICAO documentation...
- Deferred list (DDL) and use of MEL and CDL
- Prohibited, restricted, dangerous areas and CZIB
- Obtaining flight tracking information; flight tracking systems
- Preparation and analysis procedures for flight dispatch
- Flight dispatching
- Procedures for aircraft accidents and incidents and emergency procedures
- Procedures for ERP activation

Module 9 exam lasting 1 hour

10. Module 10:

10.1 Preparation and submission of flight plans required by air traffic services (24 hours)

- ICAO flight plan; definition and use
- Fields in the ATS flight plan; format and codes
- Specific codes for specific approvals
- Presentation of the ATS flight plan; timeframes and agencies
- Flow regulators (CFMU). Restrictions
- Slot management
- Overflying and landing permission

Module 10 exam lasting 1 hour

11. Module 11:

11.1 Preparation of operational flight plans (24 hours)

- Basic principles of computerised flight planning systems
- Setting up a flight planning system database.
- Description and use of the system to create operational flight plans
- Amendment of operational flight plans. Limitations
- Obtaining dispatch documentation; meteorology, DG, NOTAMs...
- Sending dispatches

Module 11 exam lasting 1 hour.

12. Module 12:

12.1 Flight watch (12 hours)

- Movements
- Contingencies and operational management
- Communications systems with the aircraft (SATCOM, ACARS)
- Dealing with in-flight requests from the crew
- Updating information during the flight
- Flight watch regulation
- Flight watch systems
- Alarms and actions

12.2 Security (4 hours)

- General security knowledge
- Procedures relating to unlawful interference and aircraft sabotage and their implications in ERP

12.3 Dangerous Goods (9 hours)

- Category 10 Dangerous Goods: or General Criteria
 - o Transport limitations
 - o List of Dangerous Goods
 - o Tagging and labelling
 - o Recognising undeclared dangerous goods
 - o Emergency procedures
 - o Storage and loading procedures
 - o Pilot notification
 - o Provisions for passengers and crew
 - o Verification
- Specific operational procedures for the transport of cargo and dangerous goods

12.4 ETOPS dispatch (8 hours)

- Overview of ETOPS operations
- Aspects related to the operation of aircraft type
- Routes and aerodromes
- Meteorology
- ETOPS dispatch procedures
- ETOPS Manual

Final theory exam lasting 5 hours



Fase práctica

- Realización de prácticas de despacho de vuelos
- Examen final de prácticas con una duración de 5 horas

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