

Course Duration: **1 week (5 working days)**
40 classroom hours

EU OPS Requirements

ORO.AOC 135 (previously OPS 1.205) – Adequacy and Competency of Personnel

“An operator shall ensure that all personnel assigned to, or directly involved in, ground and flight operations are properly instructed, have demonstrated their abilities in their particular duties and are aware of their responsibilities and the relationship of such duties to the operation as a whole.”

Aviation Foundation Course by Alpha One

Description:

In 5 days of intensive training, students will gain valuable insight in typical aircraft operator's (airline) processes with focus on operational matters.

Course covers wide area of subjects and gives excellent understanding about the operational environment, interaction, duties and responsibilities of the participants in the airline operation as well as main factors affecting airline day to day operation.

Subjects covered range from aviation law, rules and regulations, operations process description, flight scheduling, crew duty and rest time regulations, introduction to aircraft performance and navigation, meteorology, communications and operational control. In short, course will open the door of the aviation world to those interested to enter into it or seek for a big picture and understanding what is happening behind the scenes in typical airline or corporate/business aircraft operations.

Who should attend?

Course is ideal entry to aviation world and excellent foundation for all other courses. It is also recommended to airline personnel not directly involved in operation, but is seeking better understanding of operational part to help them in their daily duties (sales/commercial personnel, accounting and administration, maintenance...)

Introduction

2 hours

- Introduction to air transport
- Organisation of an air carrier (airline)
- Operational process description ("flight from A to Z")

Air Law

4 hours

- General
- International bodies (ICAO, FAA, EASA, IBAC, IATA)
- Warsaw, Chicago conventions, freedoms of the air
- CAAs (Role, regulations, overflight/landing permissions, freedoms of the air)
- EU OPS
- Operations Manual (OM A, B, C, D)

Flight Scheduling

4 hours

- Feasibility of the flight
- Airport slots (coordinated airports, IATA SSIM messages, SCR, SMA)
- Airport restrictions, adequacy and suitability of aerodromes, airport categorisation
- Sector limitations
- Fuel stop considerations
- Crew duty and rest time regulations
- Airport ground handling and fuel services
- Flight Economy

Basic Aerodynamics

2 hours

- Aerodynamic laws, forces of flight
- Flight Controls

Mass and Balance

2 hours

- Importance and introduction to concept of aircraft mass and balance
- Definition of airplane masses
- DOM, payload, ZFM, TOM, LM
- Effect of airplane mass and balance on performance and safety

Aircraft Systems

2 hours

- Brief presentation of the modern transport category airplane systems and MEL

ATC and Air Traffic Management

2 hours

- ATC services (ATC, AIS/ARO, segments and units, CLR, GRD, TWR, APP/DEP, ACC)
- Airspace (airways, special use of airspace, airspace classification, flight rules)
- NOTAMs
- Air Traffic Management, ATC Slots, Capacity management
- Airports

Aircraft Performance

4 hours

- Introduction to aircraft performance
- Performance general, aircraft performance manuals and data
- Take-Off performance and limitations basics
- Landing performance and limitations basics
- Phases of flight (Climb, Cruise, Descent)

Navigation

2 hours

- Basic principles of air navigation, Earth, LAT/LON, heading/track, TAS/GS
- Radio navigation, ground and airborne equipment (NDB/ADF, VOR, DME, ILS)
- Area Navigation (RNAV, RNP)
- Navigation Charts (Airport, Terminal Enroute)
- Air Routes, Airways, Minimum Flight Altitudes (MEA, MORA, MOCA, MRA)
- Airport operating minima

Aviation Weather

4 hours

- Brief introduction to aviation weather
- Weather hazards (thunderstorms, turbulence, icing, low visibility, wind shear/microburst)
- Aviation weather reports and forecasts
 - Textual weather reports and forecasts (METAR, SPECI, TAF, SIGMET, AIRMET, PIREP)
 - Weather Charts (SWC, Winds Aloft, Volcanic Ash)
 - Official weather sources, online services, MET stations

Flight Planning

2 hours

- Route and profile planning
- Operational Flight Plan
- Advanced dispatch techniques-brief

Communications in aviation

2 hours

- Radio communications in flight dispatch environment (VHF, HF)
- SITA/AFTN networks and messaging standards
- Datalink/Air-Ground Communications
- Other communication services

**Security, Carriage of
Dangerous Goods**

3 hours

- Introduction
- Security of passenger, crew and the aircraft
- Threat levels, security measures, security data sources
- Unlawful interference (Hijacking, Bomb threat, Unlawful passenger)
- Dangerous Goods
 - classification
 - IATA DG manual
 - incidents involving DG

**Occurrence and
Emergency Procedures**

3 hours

- Introduction
- Definitions of occurrence, incident, accident
- Role of different departments in handling of emergencies, incidents and accidents

**Written and Oral
Exams**

2 hours

- Final written exam