Introduction to Air Traffic Management

DATES
In-house German or English

A safe and efficient Air Traffic Management (ATM) is essential to face the challenge of the increasing demand and complexity of air traffic. ATM is a very dynamic changing field regarding new techniques, innovative procedures and legal situation. The national air navigation service provider represents a key role in the current ATM-system to provide safety and efficiency to all aviation stakeholders.

The training outlines the basic technical systems (communication, navigation and surveillance) used by an air navigation service provider, all relevant organizations within the field of ATM and the general legislative framework (e.g. ICAO, EASA, EUROCONTROL).

Furthermore, the training enables the attendees to understand ATC procedures and operations (e.g. radar separation, low visibility operations) as well as the interrelation of the components of Air Traffic Service (e.g. flight plan data processing) and the variety of ATC systems (e.g. flow management) In addition current and upcoming developments in Air Traffic Management (SESAR, Next Gen, Performance Based Navigation, Sectorless Control, Remote Tower) are going to be presented.

This 3-day course addresses people working in various fields of aviation, such as airlines, aerodrome operators or authorities dealing directly or indirectly with ATM.
Course Content

Overview of the organizations involved in ATC
- International: ICAO, EASA and EUROCONTROL
- National Air Navigation Service Providers (ANSP) and regulators

Introduction to the international aviation legislation
- ICAO Annex 11 - Air Traffic Services
- ICAO Doc 4444 PANS-ATM

Air Traffic Services
- Air Traffic Flow Management and Network Operations (Europe)
- Flight Information Service
- Aeronautical Information Service
- Air Traffic Control

Structure and organisation of the airspace
- Airspace Classes
- Sectorization
- Restricted airspaces
- Instrument flight procedures

Surveillance and Communication systems
- Primary and secondary radar
- Automatic Dependent Surveillance-Broadcast
- Multilateration
- Air-Ground communication (RTF, SATCOM, ACARS, CPDLC)

Navigation systems
- Radio navigation systems (NDB, VOR, DME, ILS)
- Area Navigation (IRS/INS, GNSS)
- Differential GNSS (GBAS/SBAS)

Air Traffic Control Procedures
- Rules of the air
- Separation procedures (IFR/VFR)
- Procedure design
- Air traffic control systems
- Assistance systems (AMAN, DMAN, PSS)

Future development of air traffic management system
- SESAR, NextGen
- Performance Based Navigation
- Single European Sky
- Remote Tower
- A-CDM
- Point-Merge