



ICAO

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Manual on Air Traffic Safety Electronics Personnel Competency-based Training and Assessment

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INTERNATIONAL CIVIL AVIATION ORGANIZATION

SUBJECT 2: AIR TRAFFIC FAMILIARIZATION**TOPIC 1: AIR TRAFFIC FAMILIARIZATION****SUB-TOPIC 1.1: Air Traffic Management**

1.1.1	Define air traffic management.	1	ICAO, regional regulations.
1.1.2	Describe operational ATM functions.	2	ATFCM, ATS, ASM.
1.1.3	Describe ATM concepts and associated terminology.	2	e.g. Concepts: FUA, free flight, gate-to-gate, performance-based ATM operations (PBN, RCP), operational concepts (ICAO, SESAR, NextGen). Terminology: glossary.
1.1.4	Explain the operational importance of technical services required for ATM.	2	
1.1.5	State future developments in systems and/or ATM/ANS practices which may impact on services provided.	1	e.g. Data link, satellite-based navigation, gate-to-gate (CDM), ATC tools, continuous approach, 4D trajectory, business trajectory, SWIM, NOP, (UDPP, modes of separation), ASAS.
1.1.6	List the standard units of measurement used in aviation.	1	Speed, distance, vertical distance, time, direction, pressure, temperature.

SUB-TOPIC 1.2: Air traffic control

1.2.1	Define airspace organization.	1	ICAO Annex 11, e.g. additional regional regulations, FIR, UTA, TMA, CTR, ATS routes.
1.2.2	Describe commonly used airspace terminologies and concepts.	2	e.g. Sectorization, identification of ATS routes, restricted airspace, significant points.
1.2.3	State the general organization of aerodromes.	1	e.g. Obstacle limitation surfaces, different departure and arrival trajectories, approach and landing categories, operational status of radio navigation aids.
1.2.4	State the purpose of ATC.	1	ICAO Doc 4444.
1.2.5	State the organization of ATC services.	1	ICAO Doc 4444, e.g. area, approach, aerodrome control services.

SUB-TOPIC 1.3: Ground-based safety nets

1.3.1	Describe the purpose of ground-based safety nets.	2	e.g. STCA, MSAW, APW, runway incursion alerts.
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SUB-TOPIC 1.4: Air traffic control tools and monitoring aids

1.4.1	Explain the main characteristics and use of ATC support and monitoring tools.	2	e.g. MTCD, sequencing and metering tools (AMAN, DMAN), A-SMGCS, CLAM, RAM, CORA.
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SUB-TOPIC 1.5: Familiarization

1.5.1	Take account of ATC tasks.	2	e.g. Simulation, role play, PC, Part Task Trainer, observations in the operational environment.
1.5.2	Explain the need for good communication, coordination and cooperation between operational staff.	1	e.g. Handovers, MIL/CIV, planner/tactical, SV Tech (SMC) and SV ATCO, site visit(s) to ATC units.
1.5.3	Consider the purpose, function and role of various operational stations in respect of ATM-related operations.	2	Site visit(s) to ATC units, e.g. MET Office, e.g. Meteorological providers, remote sites, airport operations.
1.5.4	Define the phases of flight.	1	Take-off, climb, cruise, descent and initial approach, final approach and landing.
1.5.5	Recognize the cockpit environment and associated equipment, in relation to ATC.	1	Relevant pilot HMI e.g. Familiarization flight or cockpit simulator training (where practicable), antenna.
1.5.6	Define airborne collision avoidance systems.	1	ACAS, EGPWS, e.g. TCAS.



EASA
European Aviation Safety Agency



ATM/ANS
(IR + AMC/GM)

eRules

Appendix 1a – ATSEP Basic training – Shared

ATSEP UID <i>(Unique Objective Identifier)</i>	CORPUS	Tax	CONTENT
ATSEP.BAS.ATF	AIR TRAFFIC FAMILIARISATION		
ATSEP.BAS.ATF_1	AIR TRAFFIC FAMILIARISATION		
ATSEP.BAS.ATF_1.1	Air Traffic Management		
ATSEP.BAS.ATF_1.1.1	Define Air Traffic Management	1	ICAO, EU regulations
ATSEP.BAS.ATF_1.1.2	Describe operational ATM functions	2	ATFCM, ATS, ASM
ATSEP.BAS.ATF_1.1.3	Describe ATM concepts and associated terminology	2	e.g. concepts: FUA, free flight, gate-to-gate, performance-based ATM operations (PBN, RCP), operational concepts (ICAO, EUROCONTROL, SESAR)
ATSEP.BAS.ATF_1.1.4	Explain the operational importance of technical services required for ATM	2	e.g. Interoperability
ATSEP.BAS.ATF_1.1.5	State future developments in systems and/or ATM/ANS practices which may have an impact on services provided	1	e.g. data link, satellite-based navigation, gate-to-gate (CDM), ATC tools, continuous approach, 4D trajectory, business trajectory, SWIM, NOP, SESAR (UDPP, modes of separation), ASAS
ATSEP.BAS.ATF_1.1.6	List the standard units of measurement used in aviation	1	Speed, distance, vertical distance, time, direction, pressure, temperature

Appendix 1a – ATSEP Basic training – Shared

ATSEP UID (Unique Objective Identifier)	CORPUS	Tax	CONTENT
ATSEP.BAS.ATF_1.2	Air Traffic Control		
ATSEP.BAS.ATF_1.2.1	Define airspace organisation	1	ICAO Annex 11, Regulation (EU) No 923/2012 e.g. FIR, UTA, TMA, CTR, ATS routes
ATSEP.BAS.ATF_1.2.2	Describe commonly used airspace terminologies and concepts	2	e.g. sectorisation, identification of ATS routes, restricted airspace, significant points
ATSEP.BAS.ATF_1.2.3	State the general organisation of aerodromes	1	e.g. obstacle limitation surfaces, different departure and arrival trajectories, approach and landing categories, operational status of radio navigation aids
ATSEP.BAS.ATF_1.2.4	State the purpose of ATC	1	ICAO Doc 4444
ATSEP.BAS.ATF_1.2.5	State the organisation of ATC services	1	ICAO Doc 4444 e.g. area, approach, aerodrome control services
ATSEP.BAS.ATF_1.3	Ground-based Safety Nets		
ATSEP.BAS.ATF_1.3.1	Describe the purpose of ground-based safety nets	2	e.g. STCA, MSAW, APW, runway incursion alerts
ATSEP.BAS.ATF_1.4	Air Traffic Control Tools and Monitoring Aids		
ATSEP.BAS.ATF_1.4.1	Explain the main characteristics and use of ATC support and monitoring tools	2	e.g. MTCD, sequencing and metering tools (AMAN, DMAN), A-SMGCS, CLAM, RAM, CORA
ATSEP.BAS.ATF_1.5	Familiarisation		
ATSEP.BAS.ATF_1.5.1	Take account of the tasks of ATC	2	e.g. simulation, role play, PC, Part Task Trainer, observations in the operational environment
ATSEP.BAS.ATF_1.5.2	Explain the need for good communication, coordination and cooperation between operational staff	2	e.g. handovers, MIL/CIV, planner/tactical, SV Tech (SMC) and SV ATCO, site visit(s) to ATC units
ATSEP.BAS.ATF_1.5.3	Consider the purpose, function and role of various operational stations in respect of ATM-related operations	2	Site visit(s) to ATC units e.g. meteorological services providers, remote sites, airport operations
ATSEP.BAS.ATF_1.5.4	Define the phases of flight	1	Take-off, climb, cruise, descent and initial approach, final approach and landing
ATSEP.BAS.ATF_1.5.5	Recognise the cockpit environment and associated equipment, in relation to ATC	1	Relevant pilot HMI e.g. familiarisation flight or cockpit simulator training (where practicable), antenna
ATSEP.BAS.ATF_1.5.6	Define airborne collision avoidance systems	1	ACAS, EGPWS e.g. TCAS