



**Network Manager**  
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# EUROCONTROL Specification

**EUROCONTROL Specifications for the ATCO Common Core Content  
Initial Training**

**Annex 4: Approach Control Procedural Rating - APP**

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Specification for the ATCO  
Common Core Content  
Initial Training**

**Annex 4  
Approach Control Procedural Rating  
APP**

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## EXECUTIVE SUMMARY

Annex 4 of the EUROCONTROL Specification for the ATCO Common Core Content Initial Training V2.0 details the training objectives for the **Rating ATC training: Approach Control Procedural**.

For training organisations providing ATCO training to meet the requirements laid down in the **Commission Regulation (EU) 2015/340 laying down technical requirements and administrative procedures relating to air traffic controllers' licences and certificates**, and the acceptable means of compliance (AMCs) associated with the regulation, this syllabus does not change any of the content in the regulation, but rather provides a document that combines the relevant elements into a familiar user format. For European organisations not required to comply with EU legislation, it provides an **Approach Control Procedural Rating training syllabus** that retains references to ICAO documentation.

Rating training is defined *as theoretical and practical training designed to impart knowledge and practical skills related to a specific rating and, if applicable, rating endorsement*.

The composition and topics were chosen based on the **Commission Regulation (EU) 2015/340** Annex I — Rating training (Reference: Annex I — Part ATCO Subpart D, Section 2, ATCO.D.010(a)(2)(iii)) and ICAO Annex 1 requirements for an Air Traffic Control licence. The structure of the syllabus reflects a logical grouping of objectives into coherent subjects.

The order of subjects and objectives is neither intended to convey a pedagogical sequence nor to indicate a relative level of importance. No recommendation is made in this area. When teaching the objectives, it is envisaged that different training methodologies will be used.

Prior to developing or updating the **APP Rating training course**, training providers must be familiar with the information contained in the EUROCONTROL Specification for the ATCO Common Core Content Initial Training V2.0, particularly Section 6 (How to use this document) which contains, amongst other items, the fundamental principles that are applied to the Specification.

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## SUBJECT 1: INTRODUCTION TO THE COURSE

The subject objective is:

Learners shall know and understand the training programme that they will follow and learn how to obtain the appropriate information.

### TOPIC INTR 1 - COURSE MANAGEMENT

#### Subtopic INTR 1.1 - Course introduction

APP INTR 1.1.1	Explain the aims and main objectives of the course.	2		ALL
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#### Subtopic INTR 1.2 - Course administration

APP INTR 1.2.1	State course administration.	1		ALL
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#### Subtopic INTR 1.3 - Study material and training documentation

APP INTR 1.3.1	Use appropriate documentation and their sources for course studies.	3	<i>Optional content: training documentation, library, CBT library, web, learning management server</i>	ALL
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APP INTR 1.3.2	Integrate appropriate information into course studies.	4	<b>Training documentation</b> <i>Optional content: supplementary information, library</i>	ALL
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### TOPIC INTR 2 - INTRODUCTION TO THE ATC TRAINING COURSE

#### Subtopic INTR 2.1 - Course content and organisation

APP INTR 2.1.1	State the different training methods applied in the course.	1	<b>Theoretical training, practical training, self-study, types of training events</b>	ALL
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APP INTR 2.1.2	State the subjects of the course and their purpose.	1		ALL
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APP INTR 2.1.3	Describe the organisation of theoretical training.	2	<i>Optional content: course programme</i>	ALL
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APP INTR 2.1.4	Describe the organisation of practical training.	2	<i>Optional content: PTP, simulation, briefing, debriefing, course programme</i>	ALL
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**Subtopic INTR 2.2 - Training ethos**

APP INTR 2.2.1	Recognise the feedback mechanisms available.	1	Training progress, assessment, briefing, debriefing, learner/instructor feedback, instructor/instructor feedback	ALL
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**Subtopic INTR 2.3 - Assessment process**

APP INTR 2.3.1	Describe the assessment process.	2		ALL
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## SUBJECT 2: AVIATION LAW

The subject objective is:

Learners shall know, understand and apply the Rules of the Air and the Regulations regarding reporting, airspace and appreciate the Licensing and Competence principles.

### TOPIC LAW 1 - ATCO LICENSING/CERTIFICATE OF COMPETENCE

#### Subtopic LAW 1.1 - Privileges and conditions

APP LAW 1.1.1	Appreciate the conditions which shall be met to issue an Approach Control Procedural rating	3	Regulation (EU) 2015/340 on ATCO Licensing ICAO Annex 1 <i>Optional content: National documents</i>	APP
APP LAW 1.1.2	Explain how to maintain and update professional knowledge and skills to retain competence in the operational environment.	2		ALL
APP LAW 1.1.3	Explain the conditions for suspension/revocation of ATCO licence.	2	Regulation (EU) 2015/340 on ATCO Licensing ICAO Annex 1	ALL

### TOPIC LAW 2 - RULES AND REGULATIONS

#### Subtopic LAW 2.1 - Reports

APP LAW 2.1.1	List the standard forms for reports.	1	Air traffic incident report <i>Optional content: routine air reports, breach of regulations, watch/log book, records</i>	ALL
APP LAW 2.1.2	Describe the functions of, and processes for, reporting.	2	Reporting culture, air traffic incident report <i>Optional content: breach of regulations, watch/log book, records, voluntary reporting, ESARR 2</i>	ALL
APP LAW 2.1.3	Use forms for reporting.	3	Regulation (EU) No 376/2014, air traffic incident reporting form(s) ICAO Doc 4444 Appendix 4, air traffic incident reporting form(s) <i>Optional content: routine air reports, breach of regulations, watch/log book, records</i>	ALL

**Subtopic LAW 2.2 - Airspace**

APP LAW 2.2.1	Appreciate classes and structure of airspace and their relevance to Approach Control Procedural rating operations.	3		APP
APP LAW 2.2.2	Provide planning, coordination and control actions appropriate to the airspace classification and structure.	4	<i>Optional content: Regulation (EU) No 923/2012, ICAO Annex 2, ICAO Annex 11, international requirements, civil requirements, military requirements, areas of responsibility, sectorization, national requirements</i>	ALL
APP LAW 2.2.3	Appreciate responsibility for terrain clearance.	3		ALL

**TOPIC LAW 3 - ATC SAFETY MANAGEMENT****Subtopic LAW 3.1 - Feedback process**

APP LAW 3.1.1	State the importance of controller contribution to the feedback process.	1	<i>Optional content: voluntary reporting</i>	ALL
APP LAW 3.1.2	Describe how reported occurrences are analysed.	2	<i>Optional content: ESARR 2, local procedures</i>	ALL
APP LAW 3.1.3	Name the means used to disseminate recommendations.	1	<i>Optional content: safety letters, safety boards web pages</i>	ALL
APP LAW 3.1.4	Appreciate the 'Just Culture' concept.	3	<b>Benefits, prerequisites, constraints</b> <i>Optional content: EAM 2 GUI 6, GAIN Report</i>	ALL

**Subtopic LAW 3.2 - Safety Investigation**

APP LAW 3.2.1	Describe role and mission of Safety Investigation in the improvement of safety.	2		ALL
APP LAW 3.2.2	Define working methods of Safety Investigation.	1		ALL

## SUBJECT 3: AIR TRAFFIC MANAGEMENT

The subject objective is:

Learners shall manage air traffic to ensure safe, orderly and expeditious services.

### TOPIC ATM 1 - PROVISION OF SERVICES

#### Subtopic ATM 1.1 - Air traffic control (ATC) service

APP ATM 1.1.1	Appreciate own area of responsibility.	3		APP ACP APS ACS
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APP ATM 1.1.2	Provide approach control service.	4	Regulation (EU) No 923/2012, ICAO Annex 11, ICAO Doc 7030, ICAO Doc 4444, operation manuals ICAO Annex 11, ICAO Doc 7030, ICAO Doc 4444, operation manuals	APP APS
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#### Subtopic ATM 1.2 - Flight information service (FIS)

APP ATM 1.2.1	Provide FIS.	4	ICAO Doc 4444  <i>Optional content: national documents</i>	ALL
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APP ATM 1.2.2	Issue appropriate information concerning the location of conflicting traffic.	3	ICAO Doc 4444, traffic information, essential traffic information	APP ACP APS ACS
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APP ATM 1.2.3	Appreciate the use of ATIS for the provision of flight information service by approach controller.	3		APP APS
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#### Subtopic ATM 1.3 - Alerting service (ALRS)

APP ATM 1.3.1	Provide ALRS.	4	ICAO Doc 4444  <i>Optional content: national documents</i>	ALL
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APP ATM 1.3.2	Respond to distress and urgency messages and signals.	3	Regulation (EU) No 923/2012, ICAO Annex 10, ICAO Doc 4444 ICAO Annex 10, ICAO Doc 4444 <i>Optional content: EUROCONTROL Guidelines for Controller Training in the Handling of Unusual/Emergency Situations</i>	ALL
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**Subtopic ATM 1.4 - ATS system capacity and air traffic flow management**

APP ATM 1.4.1	Appreciate principles of ATS system capacity and air traffic flow management.	3	<i>Optional content: EUROCONTROL ATFCM Users Manual, FABs, FUA, free flight, etc.</i>	APP ACP APS ACS
APP ATM 1.4.2	Apply flow management procedures in the provision of ATC.	3	<i>Optional content: EUROCONTROL ATFCM Users Manual</i>	APP ACP APS ACS
APP ATM 1.4.3	Organise traffic flows and patterns to take account of airspace boundaries.	4	<i>Optional content: civil and military, controlled, uncontrolled, advisory, restricted, danger, prohibited, special rules, sector boundaries, national boundaries, FIR boundaries, delegated airspace, transfer of control, transfer of communications, en-route, off-route</i>	APP ACP APS ACS
APP ATM 1.4.4	Organise traffic flows and patterns to take account of areas of responsibility.	4	<i>Optional content: EUROCONTROL ATFCM Users Manual</i>	APP ACP APS ACS
APP ATM 1.4.5	Inform supervisor of situation.	3	<i>Optional content: abnormal situations, decrease in sector capacity, limitations on systems and equipment, changes in workload/capacity, unusual meteorological conditions, relevant information like: reported ground-based incidents, forest fire, smoke, oil pollution</i>	APP ACP APS ACS

**Subtopic ATM 1.5 - Airspace management (ASM)**

APP ATM 1.5.1	Appreciate the principles and means of ASM.	3	Regulation (EC) No 551/2004, Regulation (EC) 2150/2005, Regulation (EC) No 730/2006 EUROCONTROL ASM HBK - Airspace Management Handbook for the application of FUA <i>Optional content: FABs, EUROCONTROL Specification for the application of FUA, TSAs, CDRs, CBAs</i>	APP ACP APS ACS
APP ATM 1.5.2	Organise traffic to take account of ASM.	4	<i>Optional content: CDR, TSA, TRA, CBA, real-time activation, deactivation or reallocation of airspace</i>	APP ACP

## TOPIC ATM 2 - COMMUNICATION

### Subtopic ATM 2.1 - Effective communication

APP ATM 2.1.1	Use approved phraseology.	3	ICAO Doc 4444	ALL
			<i>Optional content: ICAO Doc 9432 RTF manual, standard words and phrases as contained in ICAO Annex 10 Vol. 2</i>	
APP ATM 2.1.2	Ensure effective communication.	4	Communication techniques, readback/verification of readback	ALL

## TOPIC ATM 3 - ATC CLEARANCES AND ATC INSTRUCTIONS

### Subtopic ATM 3.1 - ATC clearances

APP ATM 3.1.1	Issue appropriate ATC clearances.	3	ICAO Doc 4444	ALL
			<i>Optional content: national documents</i>	
APP ATM 3.1.2	Integrate appropriate ATC clearances in control service.	4		ALL
APP ATM 3.1.3	Ensure the agreed course of action is carried out.	4		ALL

### Subtopic ATM 3.2 - ATC instructions

APP ATM 3.2.1	Issue appropriate ATC instructions.	3	ICAO Doc 4444	ALL
			<i>Optional content: national documents</i>	
APP ATM 3.2.2	Integrate appropriate ATC instructions in control service.	4		ALL
APP ATM 3.2.3	Ensure the agreed course of action is carried out.	4		ALL

**TOPIC ATM 4 - COORDINATION****Subtopic ATM 4.1 - Necessity for coordination**

APP ATM 4.1.1	Identify the need for coordination.	3		ALL
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**Subtopic ATM 4.2 - Tools and methods for coordination**

APP ATM 4.2.1	Use the available tools for coordination.	3	<i>Optional content: electronic transfer of flight data, telephone, interphone, intercom, direct speech, radiotelephone (RTF), local agreements, automated system coordination</i>	ALL
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**Subtopic ATM 4.3 - Coordination procedures**

APP ATM 4.3.1	Initiate appropriate coordination.	3	Delegation/transfer of responsibility for air-ground communications and separation, transfer of control, etc. ICAO Doc 4444	ALL
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*Optional content: release point*

APP ATM 4.3.2	Analyse effect of coordination requested by an adjacent position/unit.	4	<i>Optional content: delegation/transfer of responsibility for air-ground communications and separation, release point, transfer of control, etc.</i>	ALL
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APP ATM 4.3.3	Select, after negotiation, an appropriate course of action.	5		ALL
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APP ATM 4.3.4	Ensure the agreed course of action is carried out.	4		ALL
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APP ATM 4.3.5	Coordinate in the provision of FIS.	4	ICAO Doc 4444	ALL
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APP ATM 4.3.6	Coordinate in the provision of ALRS.	4	ICAO Doc 4444	ALL
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## TOPIC ATM 5 - ALTIMETRY AND LEVEL ALLOCATION

### Subtopic ATM 5.1 - Altimetry

APP ATM 5.1.1	Allocate levels according to altimetry data.	4	ICAO Doc 8168, ICAO Doc 4444	ALL
APP ATM 5.1.2	Ensure separation according to altimetry data.	4	<i>Optional content: transition level, transition altitude, transition layer, height, flight level, altitude, vertical distance to airspace boundaries</i>	ALL

### Subtopic ATM 5.2 - Terrain clearance

APP ATM 5.2.1	Provide planning, coordination and control actions appropriate to the rules for minimum safe levels and terrain clearance.	4	<i>Optional content: terrain clearance dimensions, minimum safe altitudes, transition level, minimum flight level, minimum sector altitude</i>	APP ACP
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## TOPIC ATM 6 - SEPARATIONS

### Subtopic ATM 6.1 - Vertical separation

APP ATM 6.1.1	Provide standard vertical separation.	4	ICAO Doc 4444, ICAO Doc 7030, level allocation, during climb/descent, rate of climb/descent, holding pattern	APP APS
APP ATM 6.1.2	Provide increased vertical separation.	4	ICAO Doc 4444, ICAO Doc 7030 <i>Optional content: level allocation, during climb/descent, rate of climb/descent</i>	APP ACP APS ACS
APP ATM 6.1.3	Appreciate the application of vertical emergency separation.	3	ICAO Doc 4444, ICAO Doc 7030	APP ACP APS ACS

### Subtopic ATM 6.2 - Horizontal separation

APP ATM 6.2.1	Provide longitudinal separation.	4	Based on time, based on distance (DME and/or GNSS, RNAV)	APP
APP ATM 6.2.2	Provide lateral separation.	4	ICAO Doc 4444, ICAO Doc 7030, holding	APP ACP
APP ATM 6.2.3	Provide track separation.	4		ACP APP
APP ATM 6.2.4	Provide geographical separation.	4	Visual, using navigation aids, area navigation	ACP APP

**Subtopic ATM 6.3 - Delegation of separation**

APP ATM 6.3.1	Delegate separation to pilots in the case of aircraft executing successive visual approaches.	4		APP APS
APP ATM 6.3.2	Appreciate the conditions which must be met when delegating separation to pilots to fly maintaining own separation while in VMC.	3	ICAO Doc 4444	APP APS

**TOPIC ATM 7 - AIRBORNE COLLISION AVOIDANCE SYSTEMS AND GROUND-BASED SAFETY NETS****Subtopic ATM 7.1 - Airborne collision avoidance systems**

APP ATM 7.1.1	Differentiate between ACAS advisory thresholds and separation standards applicable in the approach control environment.	2	ICAO Doc 9863 <i>Optional content: EUROCONTROL TCAS web page</i>	APP APS
APP ATM 7.1.2	Describe the controller responsibility during and following an ACAS RA reported by pilot.	2	ICAO Doc 4444	ALL
APP ATM 7.1.3	Respond to pilot notification of actions based on airborne systems warnings.	3	ACAS, TAWS <i>Optional content: EUROCONTROL ACAS web page</i>	ALL

**TOPIC ATM 8 - DATA DISPLAY****Subtopic ATM 8.1 - Data management**

APP ATM 8.1.1	Update the data display to accurately reflect the traffic situation.	3	<i>Optional content: information displayed, strip marking procedures, electronic information data displays, actions based on traffic display information, calculation of EETs</i>	ALL
APP ATM 8.1.2	Analyse pertinent data on data displays.	4		ALL
APP ATM 8.1.3	Organise pertinent data on data displays.	4		ALL
APP ATM 8.1.4	Obtain flight plan information.	3	CPL, FPL, supplementary information <i>Optional content: RPL, AFIL, etc.</i>	ALL
APP ATM 8.1.5	Use flight plan information.	3		ALL

**TOPIC ATM 9 - OPERATIONAL ENVIRONMENT (SIMULATED)**

**Subtopic ATM 9.1 - Integrity of the operational environment**

APP ATM 9.1.1	Obtain information concerning the operational environment.	3	<i>Optional content: briefing, notices, local orders, verification of information</i>	ALL
APP ATM 9.1.2	Ensure the integrity of the operational environment.	4	<i>Optional content: integrity of displays, verification of the information provided by displays, etc.</i>	APP ACP APS ACS

**Subtopic ATM 9.2 - Verification of the currency of operational procedures**

APP ATM 9.2.1	Check all relevant documentation before managing traffic.	3	<i>Optional content: briefing, LOAs, NOTAM, AICs</i>	ALL
APP ATM 9.2.2	Manage traffic in accordance with procedural changes.	4		APP ACP APS ACS

**Subtopic ATM 9.3 - Handover-takeover**

APP ATM 9.3.1	Transfer information to the relieving controller.	3		ALL
APP ATM 9.3.2	Obtain information from the controller handing over.	3		ALL

**TOPIC ATM 10 - PROVISION OF CONTROL SERVICE**

**Subtopic ATM 10.1 - Responsibility and processing of information**

APP ATM 10.1.1	Describe the division of responsibility between air traffic control units.	2	ICAO Doc 4444	ALL
APP ATM 10.1.2	Describe the responsibility in regard to military traffic.	2	ICAO Doc 4444  <i>Optional content: ICAO Doc 9554</i>	ALL
APP ATM 10.1.3	Describe the responsibility in regard to unmanned free balloons.	2	ICAO Doc 4444	APP ACP APS ACS
APP ATM 10.1.4	Obtain operational information.	3	ICAO Doc 4444, local operation manuals	APP ACP APS ACS

<b>Subtopic ATM 10.1 - Responsibility and processing of information</b>				
APP ATM 10.1.5	Interpret operational information.	5		APP ACP APS ACS
APP ATM 10.1.6	Organise forwarding of operational information.	4	<i>Optional content: including the use of backup procedures</i>	APP ACP APS ACS
APP ATM 10.1.7	Integrate operational information into control decisions.	4		APP ACP APS ACS
APP ATM 10.1.8	Appreciate the influence of operational requirements.	3	<i>Optional content: military flying, calibration flights, aerial photography</i>	ALL
<b>Subtopic ATM 10.2 - Approach control</b>				
APP ATM 10.2.1	Explain the responsibility for the provision of an approach procedural control service.	2	ICAO Doc 4444, ICAO Annex 11, local operation manuals	APP
APP ATM 10.2.2	Provide planning, coordination and control actions appropriate to the VFR, SVFR and IFR in VMC and IMC.	4	Regulation (EU) No 923/2012, ICAO Annex 11, ICAO Doc 4444 ICAO Annex 2, ICAO Annex 11, ICAO Doc 4444	APP APS
<b>Subtopic ATM 10.3 - Traffic management process</b>				
APP ATM 10.3.1	Ensure that situational awareness is maintained.	4	Information gathering, traffic projection	APP ACP
APP ATM 10.3.2	Detect conflicts in time for appropriate resolution.	4		ALL
APP ATM 10.3.3	Identify potential solutions to achieve a safe and effective traffic flow.	3		APP ACP APS ACS
APP ATM 10.3.4	Evaluate possible outcomes of different planning and control actions.	5		APP ACP APS ACS
APP ATM 10.3.5	Select an appropriate plan in time to achieve safe and effective traffic flow.	5		APP ACP APS ACS
APP ATM 10.3.6	Ensure an adequate priority of actions.	4		ALL

**Subtopic ATM 10.3 - Traffic management process**

APP ATM 10.3.7	Execute selected plan in a timely manner.	3		APP ACP APS ACS
APP ATM 10.3.8	Ensure a safe and efficient outcome is achieved.	4	Traffic monitoring, adaptability and follow up	ALL

**Subtopic ATM 10.4 - Handling traffic**

APP ATM 10.4.1	Manage arrivals, departures and overflights.	4		APP ACP APS ACS
APP ATM 10.4.2	Balance the workload against personal capacity.	5	<i>Optional content: re-routing, re-planning, prioritising solutions, denying requests, delegating responsibility for separation</i>	APP ACP APS ACS
APP ATM 10.4.3	Manage traffic on different types of approaches.	4	Precision, non-precision, visual	APP APS
APP ATM 10.4.4	Initiate missed approach.	3	ICAO Doc 4444	APP APS
APP ATM 10.4.5	Integrate aircraft on missed approach into the traffic situation.	4		APP APS

**TOPIC ATM 11 - HOLDING****Subtopic ATM 11.1 - General holding procedures**

APP ATM 11.1.1	Apply holding procedures.	3	ICAO Doc 4444, holding instructions, allocation of holding levels, onward clearance times	APP ACP APS ACS
APP ATM 11.1.2	Appreciate the factors affecting holding patterns.	3	Effect of speed, effect of level used, effect of navigation aid in use, turbulence, aircraft type	APP ACP APS ACS

**Subtopic ATM 11.2 - Approaching aircraft**

APP ATM 11.2.1	Calculate Expected Approach Times (EATs) and Expected Onward Clearance times.	3		APP APS
APP ATM 11.2.2	Organise the traffic landing sequence in a holding pattern.	4	<i>Optional content: company preference, aircraft performance, aircraft approach capability, ILS categories, flow control management</i>	APP APS

## SUBJECT 4: METEOROLOGY

The subject objective is:

Learners shall acquire, decode and make proper use of meteorological information relevant to the provision of ATS.

### TOPIC MET 1 - METEOROLOGICAL PHENOMENA

#### Subtopic MET 1.1 - Meteorological phenomena

APP MET 1.1.1	Appreciate the impact of adverse weather.	3	Thunderstorms, icing, clear air turbulence (CAT), turbulence, microburst, wind shear, severe mountain waves, line squalls, volcanic ash	APP APS
APP MET 1.1.2	Integrate data about meteorological phenomena into provision of ATS.	4	Clearances, instructions and transmitted information  <i>Optional content: relevant meteorological phenomena</i>	ALL
APP MET 1.1.3	Use techniques to avoid adverse weather when necessary/possible.	3	Re-routing, level change, etc.	APP ACP APS ACS

### TOPIC MET 2 - SOURCES OF METEOROLOGICAL DATA

#### Subtopic MET 2.1 - Sources of meteorological information

APP MET 2.1.1	Obtain meteorological information	3	METAR, TAF, SIGMET, AIRMET  <i>Optional content: AIREP/AIREP Special</i>	APP ACP APS ACS
APP MET 2.1.2	Relay meteorological information.	3	ICAO Doc 4444  <i>Optional content: flight information centre, adjacent ATS unit</i>	ALL

## SUBJECT 5: NAVIGATION

The subject objective is:

Learners shall analyse all navigational aspects in order to organise the traffic.

### TOPIC NAV 1 - MAPS AND AERONAUTICAL CHARTS

#### Subtopic NAV 1.1 - Maps and charts

APP NAV 1.1.1	Decode symbols and information displayed on aeronautical maps and charts.	3	Instrument approach charts, SID charts, aerodrome charts, visual approach charts  <i>Optional content: military maps and charts</i>	ADI APP APS
APP NAV 1.1.2	Use relevant maps and charts.	3		APP ACP APS ACS

### TOPIC NAV 2 - INSTRUMENT NAVIGATION

#### Subtopic NAV 2.1 - Navigational systems

APP NAV 2.1.1	Manage traffic in case of change in the operational status of navigational systems.	4	<i>Optional content: limitations, status of ground-based and satellite-based systems</i>	APP ACP APS ACS
APP NAV 2.1.2	Appreciate the effect of precision, limitations and change of the operational status of navigational systems.	3	<i>Optional content: limitations, status, degraded procedures</i>	ALL

#### Subtopic NAV 2.2 - Stabilised approach

APP NAV 2.2.1	Describe the concept of stabilised approach.	2	ICAO Doc 8168  <i>Optional content: SKYbrary, Regulation (EC) No 1899/2006</i>	ADV ADI APP APS
APP NAV 2.2.2	Appreciate the effect of late change of runway-in-use or type of approach for landing aircraft.	3		APP APS
APP NAV 2.2.3	Appreciate controller actions that may contribute to unstabilised approach.	3	Delayed descent	APP

**Subtopic NAV 2.3 - Instrument departures and arrivals**

APP NAV 2.3.1	Characterise SIDs.	2		ADI APP APS
APP NAV 2.3.2	Describe the types and phases of instrument approach procedures.	2		APP APS
APP NAV 2.3.3	Describe the relevant minima applicable for a precision/ non-precision and visual approach.	2		ADI APP APS

**Subtopic NAV 2.4 - Navigational assistance**

APP NAV 2.4.1	Evaluate the necessary information to be provided to pilots in need of navigational assistance.	5	<i>Optional content: nearest most suitable aerodrome, track, heading, distance, aerodrome information, any other navigational assistance relevant at the time</i>	APP ACP APS ACS
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**Subtopic NAV 2.5 - Satellite-based systems**

APP NAV 2.5.1	State the different applications of satellite-based systems relevant for approach operations.	1	<i>Optional content: NPA, APV-baro VNAV, APV, LPV, precision approach, ICAO Doc 8168 Vol.2</i>	APP APS
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**Subtopic NAV 2.6 - PBN applications**

APP NAV 2.6.1	State the navigation applications used in approach and terminal environments.	1	Approach-RNP APCH/ RNP AR APCH; Terminal-RNAV-1 (≈P-RNAV)	APP APS
			<i>Optional content: A-RNP, EU PBN Implementing Rule, ICAO Doc 9613</i>	
APP NAV 2.6.2	Explain the principles and designation of navigation specifications in use.	2	<i>Optional content: performance, functionality, sensors, aircrew and controller requirements</i>	APP ACP APS ACS
APP NAV 2.6.3	State future PBN developments.	1	A-RNP, APV	ADI APP ACP APS ACS
			<i>Optional content: RNP 3D, RNP 4D</i>	



## SUBJECT 6: AIRCRAFT

The subject objective is:

Learners shall assess and integrate aircraft performance in the provision of ATS.

### TOPIC ACFT 1 - AIRCRAFT INSTRUMENTS

#### Subtopic ACFT 1.1 - Aircraft instruments

APP ACFT 1.1.1	Integrate information from aircraft instruments provided by the pilot in the provision of ATS.	4		ALL
APP ACFT 1.1.2	Explain the operation of aircraft radio equipment.	2	<i>Optional content: radios (number of), emergency radios</i>	ALL

### TOPIC ACFT 2 - AIRCRAFT CATEGORIES

#### Subtopic ACFT 2.1 - Wake turbulence

APP ACFT 2.1.1	Explain the wake turbulence effect and associated hazards to the succeeding aircraft.	2		ALL
APP ACFT 2.1.2	Appreciate the techniques used to prevent hazards associated with wake turbulence on succeeding aircraft.	3		ALL

#### Subtopic ACFT 2.2 - Application of ICAO approach categories

APP ACFT 2.2.1	Describe the use of ICAO approach categories.	2	ICAO Doc 8168	ADI APP APS
APP ACFT 2.2.2	Appreciate the effect of ICAO approach categories on the traffic organisation.	3		ADI APP APS

## TOPIC ACFT 3 - FACTORS AFFECTING AIRCRAFT PERFORMANCE

### Subtopic ACFT 3.1 - Climb factors

APP ACFT 3.1.1	Integrate the influence of factors affecting aircraft during climb.	4	<i>Optional content: speed, mass, air density, cabin pressurisation, wind and temperature</i>	APP ACP APS ACS
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APP ACFT 3.1.2	Appreciate the influence of factors affecting aircraft on take-off.	3	<i>Optional content: runway conditions, runway slope, aerodrome elevation, wind, temperature, aircraft configuration, airframe contamination and aircraft mass</i>	APP APS
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### Subtopic ACFT 3.2 - Cruise factors

APP ACFT 3.2.1	Integrate the influence of factors affecting aircraft during cruise.	4	<b>Level, cruising speed, wind, mass, cabin pressurisation</b>	APP ACP APS ACS
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### Subtopic ACFT 3.3 - Descent and initial approach factors

APP ACFT 3.3.1	Integrate the influence of factors affecting aircraft during descent.	4	<i>Optional content: wind, speed, rate of descent, aircraft configuration, cabin pressurisation</i>	APP APS
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### Subtopic ACFT 3.4 - Final approach and landing factors

APP ACFT 3.4.1	Integrate the influence of factors affecting aircraft during final approach and landing.	4	<i>Optional content: wind, aircraft configuration, mass, meteorological conditions, runway conditions, runway slope, aerodrome elevation</i>	APP APS
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### Subtopic ACFT 3.5 - Economic factors

APP ACFT 3.5.1	Integrate consideration of economic factors affecting aircraft.	4	<i>Optional content: routing, level, speed, rate of climb and rate of descent, approach profile</i>	APP APS
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APP ACFT 3.5.2	Use continuous climb techniques where applicable.	3		APP ACP APS ACS
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APP ACFT 3.5.3	Use direct routing where applicable.	3		APP ACP APS ACS
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### Subtopic ACFT 3.6 - Environmental factors

APP ACFT 3.6.1	Appreciate the performance restrictions due to environmental constraints.	3	<i>Optional content: fuel dumping, noise abatement procedures, minimum flight levels, bird hazard, continuous descent operations</i>	APP APS
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## TOPIC ACFT 4 - AIRCRAFT DATA

### Subtopic ACFT 4.1 - Performance data

APP ACFT 4.1.1	Integrate the average performance data of a representative sample of aircraft which will be encountered in the operational/working environment into the provision of a control service.	4	Performance data under a representative variety of circumstances	APP ACP APS ACS
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## SUBJECT 7: HUMAN FACTORS

The subject objective is:

Learners shall recognise the necessity to constantly extend their knowledge and analyse factors which affect personal and team performance.

### TOPIC HUM 1 - PSYCHOLOGICAL FACTORS

#### Subtopic HUM 1.1 - Cognitive

APP HUM 1.1.1	Describe the human information processing model.	2	Attention, perception, memory, situational awareness, decision making, response	ALL
APP HUM 1.1.2	Describe the factors which influence human information processing.	2	Confidence, stress, learning, knowledge, experience, fatigue, alcohol/drugs, distraction, interpersonal relations	ALL
APP HUM 1.1.3	Monitor the effect of human information processing factors on decision making.	3	<i>Optional content: workload, stress, interpersonal relations, distraction, confidence</i>	ALL

### TOPIC HUM 2 - MEDICAL AND PHYSIOLOGICAL FACTORS

#### Subtopic HUM 2.1 - Fatigue

APP HUM 2.1.1	State factors that cause fatigue.	1	Shift work  <i>Optional content: night shifts and rosters</i>	ALL
APP HUM 2.1.2	Describe the onset of fatigue.	2	<i>Optional content: lack of concentration, listlessness, irritability, frustration, ICAO Circular 241 – AN/145 Human factors in Air Traffic Control</i>	ALL
APP HUM 2.1.3	Recognise the onset of fatigue in self.	1	<i>Optional content: ICAO Circular 241 – AN/145 Human factors in Air Traffic Control</i>	ALL
APP HUM 2.1.4	Recognise the onset of fatigue in others.	1		ALL
APP HUM 2.1.5	Describe appropriate action when recognising fatigue.	2		ALL

**Subtopic HUM 2.2 - Fitness**

APP HUM 2.2.1	Recognise signs of lack of personal fitness.	1		ALL
APP HUM 2.2.2	Describe actions when aware of a lack of personal fitness.	2		ALL

**TOPIC HUM 3 - SOCIAL AND ORGANISATIONAL FACTORS****Subtopic HUM 3.1 - Team resource management (TRM)**

APP HUM 3.1.1	State the relevance of TRM.	1	<i>Optional content: TRM course, EUROCONTROL Guidelines for the development of TRM training</i>	ALL
APP HUM 3.1.2	State the content of the TRM concept.	1	<i>Optional content: team work, human error, team roles, stress, decision making, communication, situational awareness</i>	ALL

**Subtopic HUM 3.2 - Teamwork and team roles**

APP HUM 3.2.1	Identify reasons for conflict.	3		ALL
APP HUM 3.2.2	Describe actions to prevent human conflicts.	2	<i>Optional content: TRM team roles</i>	ALL
APP HUM 3.2.3	Describe strategies to cope with human conflicts.	2	<i>Optional content: in your team, in the simulator</i>	ALL

**Subtopic HUM 3.3 - Responsible behaviour**

APP HUM 3.3.1	Consider the factors which influence responsible behaviour.	2	<i>Optional content: situation, team, personal situation and judgement, instance of justification, moral motivation, personality</i>	ALL
APP HUM 3.3.2	Apply responsible judgement.	3	Case study and discussion about a dilemma situation	ALL

**TOPIC HUM 4 - STRESS****Subtopic HUM 4.1 - Stress**

APP HUM 4.1.1	Recognise the effects of stress on performance.	1	Stress and its symptoms in self and in others	ALL
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**Subtopic HUM 4.2 - Stress management**

APP HUM 4.2.1	Act to reduce stress.	3	The effect of personality in coping with stress, the benefits of active stress management	ALL
APP HUM 4.2.2	Respond to stressful situation by offering, asking or accepting assistance.	3	<i>Optional content: the benefits of offering, accepting and asking for help in stressful situations</i>	ALL
APP HUM 4.2.3	Recognise the effect of shocking and stressful events.	1	Self and others, abnormal situations, CISM	ALL
APP HUM 4.2.4	Consider the benefits of Critical Incident Stress Management (CISM).	2		ALL
APP HUM 4.2.5	Explain procedures used following an incident/accident.	2	<i>Optional content: CISM, counselling, human element</i>	ALL

**TOPIC HUM 5 - HUMAN ERROR****Subtopic HUM 5.1 - Human error**

APP HUM 5.1.1	Explain the relationship between error and safety.	2	Number and combination of errors, proactive versus reactive approach to discovery of error	ALL
			<i>Optional content: ICAO Circular 314 – AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	
APP HUM 5.1.2	Differentiate between the types of error.	2	Slips, lapses, mistakes	ALL
			<i>Optional content: Circular 314 – AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	
APP HUM 5.1.3	Describe error-prone conditions.	2		ALL
			<i>Optional content: increase in traffic, changes in procedures, complexities of systems or traffic, weather, unusual occurrences</i>	

**Subtopic HUM 5.1 - Human error**

APP HUM 5.1.4	Collect examples of different error types, their causes and consequences in ATC.	3	<i>Optional content: ICAO Circular 314 – AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	ALL
APP HUM 5.1.5	Explain how to detect errors to compensate for them.	2	<b>STCA, MSAW, individual and collective strategy</b>  <i>Optional content: ICAO Circular 314 – AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	ALL
APP HUM 5.1.6	Execute corrective actions.	3	<b>Error compensation</b>  <i>Optional content: ICAO Circular 314 – AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	ALL
APP HUM 5.1.7	Explain the importance of error management.	2	<i>Optional content: prevention of incidents, safety improvement, revision of procedures and/or working practises</i>	ALL
APP HUM 5.1.8	Describe the impact on an ATCO following an occurrence/incident.	2	<i>Optional content: reporting, SMS, investigation, CISM</i>	ALL

**Subtopic HUM 5.2 - Violation of rules**

APP HUM 5.2.1	Explain the causes and dangers of violation of rules becoming accepted as a practice.	2	<i>Optional content: ICAO Circular 314 – AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	ALL
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**TOPIC HUM 6 - COLLABORATIVE WORK****Subtopic HUM 6.1 - Communication**

APP HUM 6.1.1	Use communication effectively in ATC.	3		ALL
APP HUM 6.1.2	Analyse examples of pilot and controller communication for effectiveness.	4		ALL

**Subtopic HUM 6.2 - Collaborative work within the same area of responsibility**

APP HUM 6.2.1	List communication means between controllers in charge of the same area of responsibility (sector or tower).	1	<i>Optional content: electronic, written, verbal and non-verbal communication</i>	ALL
APP HUM 6.2.2	Explain consequences of the use of communication means on effectiveness.	2	<i>Optional content: strips legibility and encoding, labels designation, feedback</i>	ALL
APP HUM 6.2.3	List possible actions to provide a safe position handover.	1	<i>Optional content: rigour, preparation, overlap time</i>	ALL
APP HUM 6.2.4	Explain consequences of a missed position handover process.	2		ALL

**Subtopic HUM 6.3 - Collaborative work between different areas of responsibility**

APP HUM 6.3.1	List factors and means for an effective coordination between sectors and/or tower positions.	1	<i>Optional content: other sectors constraints, electronic coordination tools</i>	ALL
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**Subtopic HUM 6.4 - Controller/pilot cooperation**

APP HUM 6.4.1	Describe parameters affecting controller/pilot cooperation.	2	<i>Optional content: workload, mutual knowledge, controller vs pilot mental picture</i>	ALL
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## SUBJECT 8: EQUIPMENT AND SYSTEMS

The subject objective is:

Learners shall integrate knowledge and understanding of the basic working principles of equipment and systems and comply with the equipment and system degradation procedures in the provision of ATS.

### TOPIC EQPS 1 - VOICE COMMUNICATIONS

#### Subtopic EQPS 1.1 - Radio communications

APP EQPS 1.1.1	Operate two-way communication equipment.	3	Transmit/receive switches, procedures	ALL
			<i>Optional content: frequency selection, standby equipment</i>	
APP EQPS 1.1.2	Identify indications of operational status of radio equipment.	3		ALL
			<i>Optional content: indicator lights, serviceability displays, selector/frequency displays</i>	
APP EQPS 1.1.3	Consider radio range.	2		APP ACP APS ACS
			<i>Optional content: transfer to another frequency, apparent radio failure, failure to establish radio contact, frequency protection range</i>	

#### Subtopic EQPS 1.2 - Other voice communications

APP EQPS 1.2.1	Operate landline communications.	3		ALL
			<i>Optional content: telephone, interphone and intercom equipment</i>	

### TOPIC EQPS 2 - AUTOMATION IN ATS

#### Subtopic EQPS 2.1 - Aeronautical fixed telecommunication network (AFTN)

APP EQPS 2.1.1	Decode AFTN messages.	3		ALL
			<i>Optional content: movement and control messages, NOTAM, SNOWTAM, BIRDTAM, etc.</i>	

#### Subtopic EQPS 2.2 - Automatic data interchange

APP EQPS 2.2.1	Use automatic data transfer equipment where available.	3		APP ACP
			<i>Optional content: automated information and coordination, OLDI</i>	

## TOPIC EQPS 3 - CONTROLLER WORKING POSITION

### Subtopic EQPS 3.1 - Operation and monitoring of equipment

APP EQPS 3.1.1	Monitor the technical integrity of the controller working position.	3	Notification procedures, responsibilities	ALL
APP EQPS 3.1.2	Operate the equipment of the controller working position.	3	<i>Optional content: situation displays, flight progress board, flight data display, radio, telephone, maps and charts, strip-printer, clock, information systems, UDF/VDF</i>	ALL
APP EQPS 3.1.3	Operate available equipment in abnormal and emergency situations.	3		ALL

### Subtopic EQPS 3.2 - Situation displays and information systems

APP EQPS 3.2.1	Use situation displays.	3		ALL
APP EQPS 3.2.2	Check availability of information material.	3		ALL
APP EQPS 3.2.3	Obtain information from equipment.	3		APP ACP APS ACS

### Subtopic EQPS 3.3 - Flight data systems

APP EQPS 3.3.1	Use the flight data information at controller working position.	3		ALL
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## TOPIC EQPS 4 - FUTURE EQUIPMENT

### Subtopic EQPS 4.1 - New developments

APP EQPS 4.1.1	Recognise future developments.	1	New advanced systems	ALL
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**TOPIC EQPS 5 - EQUIPMENT AND SYSTEMS LIMITATIONS AND DEGRADATION**

**Subtopic EQPS 5.1 - Reaction to limitations**

APP EQPS 5.1.1	Take account of the limitations of equipment and systems.	2		ALL
APP EQPS 5.1.2	Respond to technical deficiencies of the operational position.	3	Notification procedures, responsibilities	ALL

**Subtopic EQPS 5.2 - Communication equipment degradation**

APP EQPS 5.2.1	Identify that communication equipment has degraded.	3		
			<i>Optional content: ground-air and landline communications</i>	
APP EQPS 5.2.2	Apply contingency procedures in the event of communication equipment degradation.	3	Procedures for total or partial degradation of ground-air and landline communications, alternative methods of transferring data	APP ACP APS ACS

**Subtopic EQPS 5.3 - Navigational equipment degradation**

APP EQPS 5.3.1	Identify when a navigational equipment failure will affect operational ability.	3		ALL
			<i>Optional content: VOR, navigational aids</i>	
APP EQPS 5.3.2	Apply contingency procedures in the event of a navigational equipment degradation.	3		ADI APP ACP APS ACS
			<i>Optional content: vertical separation, information to aircraft, navigational assistance, seeking assistance from adjacent units</i>	

## SUBJECT 9: PROFESSIONAL ENVIRONMENT

The subject objective is:

Learners shall identify the need for close cooperation with other parties concerning ATM operations and appreciate aspects of environmental protection.

### TOPIC PEN 1 - FAMILIARISATION

#### Subtopic PEN 1.1 - Study visit to approach control unit

APP PEN 1.1.1	Appreciate the functions and provision of an operational approach control service.	3	Study visit to an approach control unit	APP APS
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### TOPIC PEN 2 - AIRSPACE USERS

#### Subtopic PEN 2.1 - Contributors to civil ATS operations

APP PEN 2.1.1	Characterise civil ATS activities in approach control unit.	2	Study visit to an approach control unit	APP APS
			<i>Optional content: familiarisation visits to TWR, ACC, AIS, RCC</i>	

APP PEN 2.1.2	Characterise other parties interfacing with ATS operations.	2		ALL
			<i>Optional content: familiarisation visits to engineering services, fire and emergency services, airline operations offices</i>	

#### Subtopic PEN 2.2 - Contributors to military ATS operations

APP PEN 2.2.1	Characterise military ATS activities.	2		ALL
			<i>Optional content: familiarisation visits to TWR, APP, ACC, AIS, RCC, Air Defence Units</i>	

### TOPIC PEN 3 - CUSTOMER RELATIONS

#### Subtopic PEN 3.1 - Provision of services and user requirements

APP PEN 3.1.1	Identify the role of ATC as a service provider.	3		ALL
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APP PEN 3.1.2	Appreciate ATS users requirements.	3		ALL
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**TOPIC PEN 4 - ENVIRONMENTAL PROTECTION**
**Subtopic PEN 4.1 - Environmental protection**

APP PEN 4.1.1	Describe the environmental constraints on aerodrome operations.	2	<i>Optional content: ICAO Circular 303 - Operational opportunities to minimise fuel use and reduce emissions</i>	ADV ADI APP APS
APP PEN 4.1.2	Explain the use of Collaborative Environmental Management (CEM) process at airports.	2		ADV ADI APP APS
APP PEN 4.1.3	Appreciate the mitigation techniques used to minimise aviation's impact on the environment.	3	<i>Optional content: continuous descent operations (CDO), noise abatement procedures, noise preferential routes, flight efficiency</i>	APP APS

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## SUBJECT 10: ABNORMAL AND EMERGENCY SITUATIONS

The subject objective is:

Learners shall develop professional attitudes to manage traffic in abnormal and emergency situations.

### TOPIC ABES 1 - ABNORMAL AND EMERGENCY SITUATIONS (ABES)

#### Subtopic ABES 1.1 - Overview of ABES

APP ABES 1.1.1	List common abnormal and emergency situations.	1	<i>Optional content: EATM Guidelines for Controller Training in the Handling of Unusual/Emergency Situations, ambulance flights, ground based safety nets alerts, airframe failure, unreliable instruments, runway incursion</i>	ALL
APP ABES 1.1.2	Identify potential or actual abnormal and emergency situations.	3		ALL
APP ABES 1.1.3	Take into account the procedures for given abnormal and emergency situations.	2	<i>Optional content: ICAO Doc 4444</i>	APP ACP APS ACS
APP ABES 1.1.4	Take into account that procedures do not exist for all abnormal and emergency situations.	2	<i>Optional content: real life examples</i>	ALL
APP ABES 1.1.5	Consider how the evolution of a situation may have an impact on safety.	2	<i>Optional content: separation, information, coordination</i>	ALL

### TOPIC ABES 2 - SKILLS IMPROVEMENT

#### Subtopic ABES 2.1 - Communication effectiveness

APP ABES 2.1.1	Ensure effective communication in all circumstances including the case where standard phraseology is not applicable.	4	Phraseology, vocabulary, readback, silence instruction	ALL
APP ABES 2.1.2	Apply change of radiotelephony call sign.	3	ICAO Doc 4444	ALL

**Subtopic ABES 2.2 - Avoidance of mental overload**

APP ABES 2.2.1	Describe actions to keep control of the situation.	2	<i>Optional content: sector splitting, holding, flow management, task delegation</i>	ALL
APP ABES 2.2.2	Organise priority of actions.	4		ALL
APP ABES 2.2.3	Ensure effective circulation of information.	4	<i>Optional content: between executive and planner/coordinator, with the supervisor, between sectors, between ACC, APP and TWR , with ground staff, etc.</i>	ALL
APP ABES 2.2.4	Consider asking for help.	2		ALL

**Subtopic ABES 2.3 - Air / ground cooperation**

APP ABES 2.3.1	Collect appropriate information relevant to the situation.	3		ALL
APP ABES 2.3.2	Assist the pilot.	3	<b>Pilot workload</b>  <i>Optional content: instructions, information, support, human factors, etc.</i>	ALL

**TOPIC ABES 3 - PROCEDURES FOR ABNORMAL AND EMERGENCY SITUATIONS**

**Subtopic ABES 3.1 - Application of procedures for ABES**

APP ABES 3.1.1	Apply the procedures for given abnormal and emergency situations.	3	<i>Optional content: EATM Guidelines for Controller Training in the Handling of Unusual/Emergency Situations, ambulance flights, ground based safety nets alerts, airframe failure</i>	ALL
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**Subtopic ABES 3.2 - Radio failure**

APP ABES 3.2.1	Describe the procedures followed by a pilot when he/she experiences complete or partial radio failure.	2	<b>ICAO Doc 7030</b>  <i>Optional content: military procedures</i>	ALL
APP ABES 3.2.2	Apply the procedures to be followed when a pilot experiences complete or partial radio failure.	3	<i>Optional content: prolonged loss of communication</i>	ALL

**Subtopic ABES 3.3 - Unlawful interference and aircraft bomb threat**

APP ABES 3.3.1	Apply ATC procedures associated with unlawful interference and aircraft bomb threat.	3	ICAO Doc 4444	ALL
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**Subtopic ABES 3.4 - Strayed or unidentified aircraft**

APP ABES 3.4.1	Apply the procedures in the case of strayed aircraft.	3	ICAO Doc 4444	ALL
			<i>Optional content: inside controlled airspace, outside controlled airspace</i>	

APP ABES 3.4.2	Apply the procedures in the case of unidentified aircraft.	3	ICAO Doc 4444	ALL
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**Subtopic ABES 3.5 - Diversions**

APP ABES 3.5.1	Provide navigational assistance to diverting emergency aircraft.	4	Track/heading, distance, other navigational assistance	APP ACP APS ACS
			<i>Optional content: nearest most suitable aerodrome</i>	



## SUBJECT 11: AERODROMES

The subject objective is:

Learners shall recognise and understand the design and layout of aerodromes.

### TOPIC AGA 1 - AERODROME DATA, LAYOUT AND COORDINATION

#### Subtopic AGA 1.1 - Definitions

APP AGA 1.1.1	Define aerodrome data.	1	Regulation (EU) No 139/2014 - EASA ED Decision 2014/013/R for CS-ADR-DSN - Initial issue and EASA ED Decision 2014/012/R for ADR AMC/GM ICAO Annex 14 <i>Optional content: aerodrome elevation, reference point, apron, movement area, manoeuvring area, hot spot</i>	ADV ADI APP APS
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#### Subtopic AGA 1.2 - Coordination

APP AGA 1.2.1	Identify the information that has to be passed between Air Traffic Services (ATS) and the airport authority.	3	Airport conditions, fire/rescue category, condition of ground equipment and NAVAIDs, AIRAC, Regulation (EU) No 139/2014 - EASA ED Decision 2014/013/R for CS-ADR-DSN - Initial issue and EASA ED Decision 2014/012/R for ADR AMC/GM Airport conditions, Fire/rescue category, Condition of ground equipment and NAVAIDs, AIRAC, ICAO Annex 14	APP APS ADV ADI
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### TOPIC AGA 2 - MOVEMENT AREA

#### Subtopic AGA 2.1 - Movement area

APP AGA 2.1.1	Describe movement area.	2	Regulation (EU) No 139/2014 - EASA ED Decision 2014/013/R for CS-ADR-DSN - Initial issue and EASA ED Decision 2014/012/R for ADR AMC/GM ICAO Annex 14	ADV ADI APP APS
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**Subtopic AGA 2.1 - Movement area**

APP AGA 2.1.2	Describe the marking of obstacles and unusable or unserviceable areas.	2	Flags, signs on pavement, lights	ADV ADI APP APS
APP AGA 2.1.3	Identify the information on conditions of the movement area that have to be passed to aircraft.	3	Essential information on aerodrome conditions	ADV ADI APP APS

**Subtopic AGA 2.2 - Manoeuvring area**

APP AGA 2.2.1	Describe manoeuvring area.	2	Regulation (EU) No 139/2014 - EASA ED Decision 2014/013/R for CS-ADR-DSN - Initial issue and EASA ED Decision 2014/012/R for ADR AMC/GM ICAO Annex 14	ADV ADI APP APS
APP AGA 2.2.2	Describe taxiway.	2		ADV ADI APP APS
APP AGA 2.2.3	Describe the daylight marking on taxiways.	2		ADV ADI APP APS
APP AGA 2.2.4	Describe taxiway lighting.	2		ADV ADI APP APS

**Subtopic AGA 2.3 - Runways**

APP AGA 2.3.1	Describe runway.	2	Runway, runway surface, runway strip, shoulder, runway end safety areas, clearways, stopways	ADV ADI APP APS
APP AGA 2.3.2	Describe instrument runway.	2	Regulation (EU) No 139/2014 - EASA ED Decision 2014/013/R for CS-ADR-DSN - Initial issue and EASA ED Decision 2014/012/R for ADR AMC/GM ICAO Annex 14	ADI APP APS

<b>Subtopic AGA 2.3 - Runways</b>				
APP AGA 2.3.3	Describe non-instrument runway.	2	Regulation (EU) No 139/2014 - EASA ED Decision 2014/013/R for CS-ADR-DSN - Initial issue and EASA ED Decision 2014/012/R for ADR AMC/GM ICAO Annex 14	ADV ADI APP APS
APP AGA 2.3.4	Explain declared distances.	2	TORA, TODA, ASDA, LDA	ADV ADI APP APS
APP AGA 2.3.5	Explain the differences between ACN and PCN.	2	Strength of pavements	ADV ADI APP APS
APP AGA 2.3.6	Describe the daylight markings on runways.	2	<i>Optional content: runway designator, centre line, threshold, aiming point, fixed distance, touchdown zone, side strip, colour</i>	ADV ADI APP APS
APP AGA 2.3.7	Describe runway lights.	2	<i>Optional content: colour, centre line, intensity, edge, touchdown zone, threshold, barettes</i>	ADV ADI APP APS
APP AGA 2.3.8	Explain the functions of visual landing aids.	2	<i>Optional content: AVASI, VASI, PAPI</i>	ADV ADI APP APS
APP AGA 2.3.9	Describe the approach lighting systems.	2	Centre line, cross bars, stroboscopic lights, colours, intensity and brightness	ADV ADI APP APS
APP AGA 2.3.10	Characterise the effect of water/ice on runways.	2		ADV ADI APP APS
APP AGA 2.3.11	Explain braking action.	2	Braking action coefficient	ADV ADI APP APS
APP AGA 2.3.12	Explain the effect of runway visual range on aerodrome operation.	2		ADV ADI APP APS

## TOPIC AGA 3 - OBSTACLES

### Subtopic AGA 3.1 - Obstacle-free airspace around aerodromes

APP	Explain the necessity for establishing and maintaining an obstacle-free airspace around aerodromes.	2	ADV
AGA			ADI
3.1.1			APP
			APS

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## TOPIC AGA 4 - MISCELLANEOUS EQUIPMENT

### Subtopic AGA 4.1 - Location

APP	Explain the location of different aerodrome ground equipment.	2	ADV
AGA			ADI
4.1.1			APP
			APS

*Optional content: LLZ, GP, VDF, radio communication or ATS surveillance systems sensors, stopbars, AVASI, VASI, PAPI*

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