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# EUROCONTROL Specification

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

**Annex 2: Aerodrome Control Visual Rating - ADV**

Edition: 2.0

Edition date: 02/04/2015

Reference Number: EUROCONTROL-SPEC-157



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Specification for the ATCO  
Common Core Content  
Initial Training**

**Annex 2  
Aerodrome Control Visual Rating  
ADV**

<b>Edition Number</b>	:	<b>2.0</b>
<b>Edition Date</b>	:	<b>02/04/2015</b>
<b>Status</b>	:	<b>Released Issue</b>
<b>Intended for</b>	:	<b>NMD Stakeholders</b>

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## EXECUTIVE SUMMARY

Annex 2 of the EUROCONTROL Specification for the ATCO Common Core Content Initial Training V2.0 details the training objectives for the **Rating ATC training: Aerodrome Control Visual**.

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 **Aerodrome Control Visual 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)(i)) 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 **ADV 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

ADV 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

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

ADV 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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ADV 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

ADV 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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ADV INTR 2.1.2	State the subjects of the course and their purpose.	1		ALL
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ADV INTR 2.1.3	Describe the organisation of theoretical training.	2	<i>Optional content: course programme</i>	ALL
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ADV 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**

ADV 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**

ADV 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

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

### TOPIC LAW 2 - RULES AND REGULATIONS

#### Subtopic LAW 2.1 - Reports

ADV 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
ADV 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
ADV 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**

ADV LAW 2.2.1	Appreciate classes and structure of airspace and their relevance to Aerodrome Control Visual rating operations.	3		ADV
ADV 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
ADV LAW 2.2.3	Appreciate responsibility for terrain clearance.	3		ALL

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

ADV LAW 3.1.1	State the importance of controller contribution to the feedback process.	1	<i>Optional content: voluntary reporting</i>	ALL
ADV LAW 3.1.2	Describe how reported occurrences are analysed.	2	<i>Optional content: ESARR 2, local procedures</i>	ALL
ADV LAW 3.1.3	Name the means used to disseminate recommendations.	1	<i>Optional content: safety letters, safety boards web pages</i>	ALL
ADV 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**

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

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## 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 - Aerodrome control service

ADV ATM 1.1.1	Appreciate areas of responsibility.	3	Control zone, traffic circuit, manoeuvring area, movement area, vicinity	ADV ADI
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*Optional content: ATZ*

ADV ATM 1.1.2	Provide aerodrome control service.	4	Regulation (EU) No 923/2012, ICAO Annex 11, ICAO Doc 7030, ICAO Doc 4444, operation manuals	ADV ADI
			ICAO Annex 11, ICAO Doc 7030, ICAO Doc 4444, operation manuals	

#### Subtopic ATM 1.2 - Flight information service (FIS)

ADV ATM 1.2.1	Describe the information that shall be passed to aircraft by an aerodrome controller.	2	ICAO Doc 4444	ADV ADI
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ADV ATM 1.2.2	Provide FIS.	4	ICAO Doc 4444	ADV ADI
			<i>Optional content: national documents</i>	<i>ALL</i>

ADV ATM 1.2.3	Issue appropriate information.	3	ICAO Doc 4444, essential local traffic, traffic information	ADV ADI
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ADV ATM 1.2.4	Appreciate the use of ATIS for the provision of flight information service by aerodrome controller.	3		ADV ADI
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**Subtopic ATM 1.3 - Alerting service (ALRS)**

ADV ATM 1.3.1	Provide ALRS.	4	ICAO Doc 4444	ALL
			<i>Optional content: national documents</i>	
ADV 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	ALL
			<i>Optional content: EUROCONTROL Guidelines for Controller Training in the Handling of Unusual/Emergency Situations</i>	

**Subtopic ATM 1.4 - ATS system capacity and air traffic flow management**

ADV ATM 1.4.1	Appreciate principles of ATS system capacity and air traffic flow management.	3	<i>Optional content: EUROCONTROL ATFCM Users Manual, Slot management, Slot allocation procedures</i>	ADV ADI
ADV ATM 1.4.2	Organise traffic to take account of flow management.	4	<i>Optional content: departure sequence</i>	ADV ADI
ADV ATM 1.4.3	Inform appropriate authority.	3	<i>Optional content: abnormal situations, decrease in sector capacity, limitations on systems and equipment, changes in workload/capacity, unusual meteorological conditions, relevant information: reported ground-based incidents, forest fire, smoke, oil pollution</i>	ADV ADI

## TOPIC ATM 2 - COMMUNICATION

### Subtopic ATM 2.1 - Effective communication

ADV ATM 2.1.1	Use approved phraseology.	3	ICAO Doc 4444	<i>Optional content: ICAO Doc 9432 RTF manual, standard words and phrases as contained in ICAO Annex 10 Vol. 2</i>	ALL
ADV 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

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

### Subtopic ATM 3.2 - ATC instructions

ADV ATM 3.2.1	Issue appropriate ATC instructions.	3	ICAO Doc 4444	<i>Optional content: national documents</i>	ALL
ADV ATM 3.2.2	Integrate appropriate ATC instructions in control service.	4			ALL
ADV 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

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

ADV 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

ADV 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
			<i>Optional content: release point</i>	

ADV 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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ADV ATM 4.3.3	Select, after negotiation, an appropriate course of action.	5		ALL
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ADV ATM 4.3.4	Ensure the agreed course of action is carried out.	4		ALL
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ADV ATM 4.3.5	Coordinate in the provision of FIS.	4	ICAO Doc 4444	ALL
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ADV 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

ADV ATM 5.1.1	Allocate levels according to altimetry data.	4	ICAO Doc 8168, ICAO Doc 4444	ALL
ADV 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

## TOPIC ATM 6 - SEPARATIONS

### Subtopic ATM 6.1 - Separation between departing aircraft

ADV ATM 6.1.1	Provide separation between departing aircraft.	4	ICAO Doc 4444	ADV ADI
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### Subtopic ATM 6.2 - Separation of landing aircraft and preceding landing or departing aircraft

ADV ATM 6.2.1	Provide separation of landing aircraft and preceding landing or departing aircraft.	4	ICAO Doc 4444	ADV ADI
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### Subtopic ATM 6.3 - Time-based wake turbulence longitudinal separation

ADV ATM 6.3.1	Provide time-based wake turbulence longitudinal separation.	4	ICAO Doc 4444	ADV ADI
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### Subtopic ATM 6.4 - Reduced separation minima

ADV ATM 6.4.1	Provide reduced separation minima.	4	ICAO Doc 4444	ADV ADI
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## TOPIC ATM 7 - AIRBORNE COLLISION AVOIDANCE SYSTEMS AND GROUND-BASED SAFETY NETS

### Subtopic ATM 7.1 - Airborne collision avoidance systems

ADV ATM 7.1.1	Differentiate between ACAS advisory thresholds and aerodrome separation standards.	2	ICAO Doc 9863	ADV ADI
ADV ATM 7.1.2	Describe the controller responsibility during and following an ACAS RA reported by pilot.	2	ICAO Doc 4444	ALL
ADV 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

**Subtopic ATM 7.2 - Ground-based safety nets**

ADV ATM 7.2.1	Respond to available ground-based safety nets warnings.	3	<i>Optional content: anti-incursion</i>	ADV ADI
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**TOPIC ATM 8 - DATA DISPLAY****Subtopic ATM 8.1 - Data management**

ADV 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
ADV ATM 8.1.2	Analyse pertinent data on data displays.	4		ALL
ADV ATM 8.1.3	Organise pertinent data on data displays.	4		ALL
ADV ATM 8.1.4	Obtain flight plan information.	3	CPL, FPL, supplementary information  <i>Optional content: RPL, AFIL, etc.</i>	ALL
ADV 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**

ADV ATM 9.1.1	Obtain information concerning the operational environment.	3	<i>Optional content: briefing, notices, local orders, verification of information</i>	ALL
ADV ATM 9.1.2	Ensure the integrity of the operational environment.	4	<i>Optional content: frequency, VOLMET, ATIS, SIGMET, systems set-up, integrity of displays</i>	ADV ADI

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

ADV ATM 9.2.1	Check all relevant documentation before managing traffic.	3	<i>Optional content: briefing, LOAs, NOTAM, AICs</i>	ALL
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**Subtopic ATM 9.3 - Handover-takeover**

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

**TOPIC ATM 10 - PROVISION OF AN AERODROME CONTROL SERVICE****Subtopic ATM 10.1 - Responsibility for the provision**

ADV ATM 10.1.1	Explain the responsibility for the provision of an aerodrome control service.	2	ICAO Doc 4444, ICAO Annex 11	ADV ADI
ADV ATM 10.1.2	Describe the division of responsibility between air traffic control units.	2	ICAO Doc 4444	ALL
ADV ATM 10.1.3	Describe the responsibility in regard to military traffic.	2	ICAO Doc 4444  <i>Optional content: ICAO Doc 9554</i>	ALL
ADV ATM 10.1.4	Describe the responsibility in regard to unmanned free balloons.	2	ICAO Doc 4444	ADV ADI
ADV ATM 10.1.5	Appreciate the influence of operational requirements.	3	<i>Optional content: military flying, calibration flights, aerial photography</i>	ALL

**Subtopic ATM 10.2 - Functions of aerodrome control tower**

ADV ATM 10.2.1	Manage the general functions of aerodrome control.	4	ICAO Doc 4444	ADV ADI
ADV ATM 10.2.2	Manage the suspension of VFR operations.	4	ICAO Doc 4444	ADV ADI

**Subtopic ATM 10.3 - Traffic management process**

ADV ATM 10.3.1	Ensure that situational awareness is maintained.	4	Information gathering, observation, traffic projection	ADV ADI
ADV ATM 10.3.2	Detect conflicts in time for appropriate resolution.	4		ALL

**Subtopic ATM 10.3 - Traffic management process**

ADV ATM 10.3.3	Identify potential solutions to achieve a safe and effective flow of aerodrome traffic.	3		ADV ADI
ADV ATM 10.3.4	Evaluate possible outcomes of different control actions.	5		ADV ADI
ADV ATM 10.3.5	Select an appropriate plan in time to achieve safe and effective flow of aerodrome traffic.	5		ADV ADI
ADV ATM 10.3.6	Ensure an adequate priority of actions.	4		ALL
ADV ATM 10.3.7	Execute plan in a timely manner.	3		ADV ADI
ADV ATM 10.3.8	Ensure a safe and efficient outcome is achieved.	4	Traffic monitoring, adaptability and follow up	ALL

**Subtopic ATM 10.4 - Aeronautical ground lights**

ADV ATM 10.4.1	Select appropriate aeronautical ground lights.	5	ICAO Doc 4444	ADV ADI
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**Subtopic ATM 10.5 - Information to aircraft by aerodrome control tower**

ADV ATM 10.5.1	Provide information related to the operation of aircraft.	4	ICAO Doc 4444	ADV ADI
ADV ATM 10.5.2	Provide information on aerodrome conditions.	4	ICAO Doc 4444	ADV ADI

**Subtopic ATM 10.6 - Control of aerodrome traffic**

ADV ATM 10.6.1	Predict positions of aircraft in the aerodrome traffic and taxi circuits.	4	ICAO Doc 4444	ADV ADI
ADV ATM 10.6.2	Manage traffic on the manoeuvring area.	4	ICAO Doc 4444, aircraft, vehicles  <i>Optional content: runway inspection</i>	ADV ADI
ADV ATM 10.6.3	Manage traffic in accordance with procedural changes.	4	  <i>Optional content: taxiway closure</i>	ADV ADI
ADV ATM 10.6.4	Balance the workload against personal capacity.	5	  <i>Optional content: re-planning, prioritising solutions, denying requests, delaying traffic</i>	ADV ADI

**Subtopic ATM 10.7 - Control of traffic in the traffic circuit**

ADV ATM 10.7.1	Manage traffic in the traffic circuit.	4	ICAO Doc 4444, meteorological phenomena, geographical knowledge, environmental factors	ADV ADI
ADV ATM 10.7.2	Manage arriving and departing traffic.	4	ICAO Doc 4444, allocation of the order of priority, meteorological phenomena, wake turbulence, environmental factors	ADV ADI
ADV ATM 10.7.3	Integrate the serviceability of radio aids in the management of aerodrome traffic.	4	  <i>Optional content: UDF, VDF, MLS, ILS, NDB, VOR, DME</i>	ADV ADI
ADV ATM 10.7.4	Integrate surface conditions into the control of aerodrome traffic.	4	  <i>Optional content: damp, wet, water patches, flooding, snow, slush, ice, braking action</i>	ADV ADI
ADV ATM 10.7.5	Integrate information about meteorological phenomena into the control of aerodrome traffic.	4	  <i>Optional content: clouds, precipitation, visibility, wind, meteorological hazards</i>	ADV ADI
ADV ATM 10.7.6	Integrate the information provided by situation displays.	4	Use, advantages, disadvantages	ADV ADI
ADV ATM 10.7.7	Initiate missed approach.	3	  <i>Optional content: obstructed runway</i>	ADV ADI

**Subtopic ATM 10.8 - Runway in use**

ADV ATM 10.8.1	Select the runway in use.	5	ICAO Doc 4444	ADV ADI
ADV ATM 10.8.2	Coordinate runway in use.	4	<i>Optional content: approach control, area control, runway selection, change of runway</i>	ADV ADI
ADV ATM 10.8.3	Manage traffic in the event of runway-in-use change.	4		ADV ADI

## 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

ADV MET 1.1.1	Appreciate the impact of different cloud types.	3	Cumulus, cumulonimbus  <i>Optional content: stratus, nimbostratus, etc.</i>	ADV ADI
ADV MET 1.1.2	Appreciate the impact of precipitation.	3	Precipitation and microphysics  <i>Optional content: rain, snow, sleet, hail</i>	ADV ADI
ADV MET 1.1.3	Appreciate the impact of atmospheric obscurity.	3	  <i>Optional content: advection fog, radiation fog, mixing, evaporation, mist, drizzle</i>	ADV ADI
ADV MET 1.1.4	Appreciate the effect and impact of wind.	3	Gusting, veering, backing  <i>Optional content: land breezes, sea breezes, Föhn</i>	ADV ADI
ADV MET 1.1.5	Appreciate the effect and danger of hazardous meteorological phenomena.	3	Wind shear, turbulence, thunderstorms, icing, microbursts	ADV ADI
ADV MET 1.1.6	Appreciate the effect of a frontal system on aerodrome operations.	3		ADV ADI
ADV MET 1.1.7	Integrate data about meteorological phenomena into provision of ATS.	4	Clearances, instructions and transmitted information  <i>Optional content: relevant meteorological phenomena</i>	ALL



## TOPIC MET 2 - SOURCES OF METEOROLOGICAL DATA

### Subtopic MET 2.1 - Meteorological instruments

ADV MET 2.1.1	Extract information from meteorological instruments.	3	<i>Optional content: anemometer, RVR indicator, cloud base indicator, ceilometer, barometer</i>	ADV ADI
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### Subtopic MET 2.2 - Other sources of meteorological data

ADV MET 2.2.1	Decode information from meteorological data displays.	3		ADV ADI
ADV MET 2.2.2	Use appropriate communication tools and networks to obtain meteorological data.	3		ADV ADI
ADV MET 2.2.3	Relay meteorological information.	3	ICAO Doc 4444	ALL  <i>Optional content: flight information centre, adjacent ATS unit</i>

## 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

ADV NAV 1.1.1	Decode symbols and information displayed on aeronautical maps and charts.	3	Visual approach/departure charts, aerodrome charts	ADV
			<i>Optional content: military maps and charts</i>	
ADV NAV 1.1.2	Use relevant maps and charts.	3	Visual approach/departure charts, aerodrome charts	ADV
			<i>Optional content: Military maps and charts</i>	

### TOPIC NAV 2 - INSTRUMENT NAVIGATION

#### Subtopic NAV 2.1 - Navigational systems

ADV NAV 2.1.1	Describe the possible operational status of navigational systems.	2		ADV
			<i>Optional content: NDB, VOR, DME</i>	
ADV NAV 2.1.2	Decode operational status displays of navigational systems.	3		ADV
			<i>Optional content: NDB, VOR, DME</i>	
ADV NAV 2.1.3	Appreciate the effect of precision, limitations and change of the operational status of navigational systems.	3		ALL
			<i>Optional content: limitations, status, degraded procedures</i>	

#### Subtopic NAV 2.2 - Stabilised approach

ADV NAV 2.2.1	Describe the concept of stabilised approach.	2	ICAO Doc 8168	ADV ADI APP APS
			<i>Optional content: SKYbrary, Regulation (EC) No 1899/2006</i>	
ADV NAV 2.2.2	Appreciate the effect of late change of runway-in-use for landing aircraft.	3		ADV ADI

## 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

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

### TOPIC ACFT 2 - AIRCRAFT CATEGORIES

#### Subtopic ACFT 2.1 - Wake turbulence

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

### TOPIC ACFT 3 - FACTORS AFFECTING AIRCRAFT PERFORMANCE

#### Subtopic ACFT 3.1 - Take-off factors

ADV ACFT 3.1.1	Integrate the influence of factors affecting aircraft on take-off.	4	ADV ADI <i>Optional content: runway conditions, runway slope, aerodrome elevation, wind, temperature, aircraft configuration, airframe contamination and aircraft mass</i>
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#### Subtopic ACFT 3.2 - Climb factors

ADV ACFT 3.2.1	Appreciate the influence of factors affecting aircraft during climb.	3	ADV ADI <i>Optional content: speed, mass, air density, wind and temperature</i>
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**Subtopic ACFT 3.3 - Final approach and landing factors**

ADV ACFT 3.3.1	Integrate the influence of factors affecting aircraft during final approach and landing.	4	<i>Optional content: wind, aircraft configuration, mass, runway conditions, runway slope, aerodrome elevation</i>	ADV ADI
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**Subtopic ACFT 3.4 - Economic factors**

ADV ACFT 3.4.1	Integrate consideration of economic factors affecting aircraft.	4	<i>Optional content: starting-up, taxiing, routing, departure sequence</i>	ADV ADI
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**Subtopic ACFT 3.5 - Environmental factors**

ADV ACFT 3.5.1	Appreciate the performance restrictions due to environmental constraints.	3	<i>Optional content: noise abatement procedures, minimum flight altitudes, bird hazard</i>	ADV ADI
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**TOPIC ACFT 4 - AIRCRAFT DATA****Subtopic ACFT 4.1 - Recognition of aircraft types**

ADV ACFT 4.1.1	Characterise a representative sample of aircraft which will be encountered in the operational/working environment.	2	Recognition, ICAO type designators, wake turbulence categories	ADV
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**Subtopic ACFT 4.2 - Performance data**

ADV ACFT 4.2.1	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	ADV ADI
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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

ADV HUM 1.1.1	Describe the human information processing model.	2	Attention, perception, memory, situational awareness, decision making, response	ALL
ADV 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
ADV 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

ADV HUM 2.1.1	State factors that cause fatigue.	1	Shift work  <i>Optional content: night shifts and rosters</i>	ALL
ADV 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
ADV 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

**Subtopic HUM 2.1 - Fatigue**

ADV HUM 2.1.4	Recognise the onset of fatigue in others.	1		ALL
ADV HUM 2.1.5	Describe appropriate action when recognising fatigue.	2		ALL

**Subtopic HUM 2.2 - Fitness**

ADV HUM 2.2.1	Recognise signs of lack of personal fitness.	1		ALL
ADV 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)**

ADV 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
ADV 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**

ADV HUM 3.2.1	Identify reasons for conflict.	3		ALL
ADV HUM 3.2.2	Describe actions to prevent human conflicts.	2	<i>Optional content: TRM team roles</i>	ALL
ADV 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**

ADV 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
ADV 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**

ADV 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**

ADV HUM 4.2.1	Act to reduce stress.	3	The effect of personality in coping with stress, the benefits of active stress management	ALL
ADV 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
ADV HUM 4.2.3	Recognise the effect of shocking and stressful events.	1	Self and others, abnormal situations, CISM	ALL
ADV HUM 4.2.4	Consider the benefits of Critical Incident Stress Management (CISM).	2		ALL
ADV 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

ADV HUM 5.1.1	Explain the relationship between error and safety.	2	<p>Number and combination of errors, proactive versus reactive approach to discovery of error</p> <p><i>Optional content: ICAO Circular 314 – AN/178 Threat and Error Management (TEM) in Air Traffic Control</i></p>	ALL
ADV HUM 5.1.2	Differentiate between the types of error.	2	<p>Slips, lapses, mistakes</p> <p><i>Optional content: Circular 314 – AN/178 Threat and Error Management (TEM) in Air Traffic Control</i></p>	ALL
ADV HUM 5.1.3	Describe error-prone conditions.	2	<p><i>Optional content: increase in traffic, changes in procedures, complexities of systems or traffic, weather, unusual occurrences</i></p>	ALL
ADV HUM 5.1.4	Collect examples of different error types, their causes and consequences in ATC.	3	<p><i>Optional content: ICAO Circular 314 – AN/178 Threat and Error Management (TEM) in Air Traffic Control</i></p>	ALL
ADV HUM 5.1.5	Explain how to detect errors to compensate for them.	2	<p>STCA, MSAW, individual and collective strategy</p> <p><i>Optional content: ICAO Circular 314 – AN/178 Threat and Error Management (TEM) in Air Traffic Control</i></p>	ALL
ADV HUM 5.1.6	Execute corrective actions.	3	<p>Error compensation</p> <p><i>Optional content: ICAO Circular 314 – AN/178 Threat and Error Management (TEM) in Air Traffic Control</i></p>	ALL



**Subtopic HUM 5.1 - Human error**

ADV 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
ADV 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**

ADV 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**

ADV HUM 6.1.1	Use communication effectively in ATC.	3		ALL
ADV 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**

ADV 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
ADV 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
ADV HUM 6.2.3	List possible actions to provide a safe position handover.	1	<i>Optional content: rigour, preparation, overlap time</i>	ALL
ADV 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**

ADV 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**

ADV 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

ADV EQPS 1.1.1	Operate two-way communication equipment.	3	Transmit/receive switches, procedures <i>Optional content: frequency selection, standby equipment</i>	ALL
ADV EQPS 1.1.2	Identify indications of operational status of radio equipment.	3	<i>Optional content: indicator lights, serviceability displays, selector/frequency displays</i>	ALL

#### Subtopic EQPS 1.2 - Other voice communications

ADV EQPS 1.2.1	Operate landline communications.	3	<i>Optional content: telephone, interphone and intercom equipment</i>	ALL
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### TOPIC EQPS 2 - AUTOMATION IN ATS

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

ADV EQPS 2.1.1	Decode AFTN messages.	3	<i>Optional content: movement and control messages, NOTAM, SNOWTAM, BIRDTAM, etc.</i>	ALL
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#### Subtopic EQPS 2.2 - Automatic data interchange

ADV EQPS 2.2.1	Use automatic data transfer equipment where available.	3	<i>Optional content: sequencing systems, automated information and coordination, OLDI</i>	ADV ADI APS ACS
ADV EQPS 2.2.2	Explain operational application of CPDLC for departure clearance (DCL) delivery and D-ATIS.	2	ICAO Doc 9694	ADV ADI

**TOPIC EQPS 3 - CONTROLLER WORKING POSITION****Subtopic EQPS 3.1 - Operation and monitoring of equipment**

ADV EQPS 3.1.1	Monitor the technical integrity of the controller working position.	3	Notification procedures, responsibilities	ALL
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ADV 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
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ADV EQPS 3.1.3	Operate available equipment in abnormal and emergency situations.	3		ALL
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**Subtopic EQPS 3.2 - Situation displays and information systems**

ADV EQPS 3.2.1	Use situation displays.	3		ALL
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ADV EQPS 3.2.2	Check availability of information material.	3		ALL
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ADV EQPS 3.2.3	Obtain information from equipment.	3	<i>Optional content: information from wind direction indicator</i>	ADV ADI
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**Subtopic EQPS 3.3 - Flight data systems**

ADV 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**

ADV 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

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

### Subtopic EQPS 5.2 - Communication equipment degradation

ADV EQPS 5.2.1	Identify that communication equipment has degraded.	3		ADV ADI
			<i>Optional content: ground-air, ground-ground and landline communications</i>	
ADV EQPS 5.2.2	Integrate contingency procedures in the event of communication equipment degradation.	4		ADV ADI
			<i>Optional content: total or partial degradation of ground-air, ground-ground and landline communications; alternative methods of transferring data</i>	

### Subtopic EQPS 5.3 - Navigational equipment degradation

ADV EQPS 5.3.1	Identify when a navigational equipment failure will affect operational ability.	3		ALL
			<i>Optional content: VOR, navigational aids</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 aerodrome

ADV PEN 1.1.1	Appreciate the functions and provision of an operational aerodrome control service.	3	Study visit to TWR	ADV ADI
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### TOPIC PEN 2 - AIRSPACE USERS

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

ADV PEN 2.1.1	Characterise civil ATS activities at aerodrome.	2	Study visit to TWR	ADV ADI
			<i>Optional content: familiarisation visits to APP, ACC, AIS, RCC</i>	

ADV 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

ADV 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

ADV PEN 3.1.1	Identify the role of ATC as a service provider.	3		ALL
ADV 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**

ADV 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
ADV PEN 4.1.2	Explain the use of Collaborative Environmental Management (CEM) process at airports.	2		ADV ADI APP APS
ADV PEN 4.1.3	Appreciate the mitigation techniques used at aerodromes to minimise aviation's impact on the environment.	3	<i>Optional content: noise abatement procedures, flight efficiency</i>	ADV ADI

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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

ADV 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
ADV ABES 1.1.2	Identify potential or actual abnormal and emergency situations.	3		ALL
ADV ABES 1.1.3	Take into account the procedures for given abnormal and emergency situations.	2	<b>Bird strike, aborted take-off</b> <i>Optional content: ICAO Doc 4444</i>	ADV ADI
ADV 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
ADV 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

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



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

ADV 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
ADV ABES 2.2.2	Organise priority of actions.	4		ALL
ADV 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
ADV ABES 2.2.4	Consider asking for help.	2		ALL

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

ADV ABES 2.3.1	Collect appropriate information relevant to the situation.	3		ALL
ADV 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**

ADV 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**

ADV 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
ADV 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**

ADV 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**

ADV 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>	

ADV ABES 3.4.2	Apply the procedures in the case of unidentified aircraft.	3	ICAO Doc 4444	ALL
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ADV ABES 3.4.3	Provide navigational assistance to aircraft.	4		ADV ADI
			<i>Optional content: diverted aircraft, aircraft lost or unsure of position, information derived locally or from radar service or from other pilots, nearest most suitable aerodrome, track, heading, distance, aerodrome information, any other relevant navigational assistance, ICAO Doc 4444, etc.</i>	

**Subtopic ABES 3.5 - Runway incursion**

ADV ABES 3.5.1	Apply ATC procedures associated with runway incursion.	3	ICAO Doc 4444	ADV ADI
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## 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

ADV 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

ADV 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

ADV 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**

ADV AGA 2.1.2	Describe the marking of obstacles and unusable or unserviceable areas.	2	Flags, signs on pavement, lights	ADV ADI APP APS
ADV 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**

ADV 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
ADV AGA 2.2.2	Describe taxiway.	2		ADV ADI APP APS
ADV AGA 2.2.3	Describe the daylight marking on taxiways.	2		ADV ADI APP APS
ADV AGA 2.2.4	Describe taxiway lighting.	2		ADV ADI APP APS

**Subtopic AGA 2.3 - Runways**

ADV AGA 2.3.1	Describe runway.	2	Runway, runway surface, runway strip, shoulder, runway end safety areas, clearways, stopways	ADV ADI APP APS
ADV AGA 2.3.2	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
ADV AGA 2.3.3	Explain declared distances.	2	TORA, TODA, ASDA, LDA	ADV ADI APP APS

**Subtopic AGA 2.3 - Runways**

ADV AGA 2.3.4	Explain the differences between ACN and PCN.	2	Strength of pavements	ADV ADI APP APS
ADV AGA 2.3.5	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
ADV AGA 2.3.6	Describe runway lights.	2	<i>Optional content: colour, centre line, intensity, edge, touchdown zone, threshold, barettes</i>	ADV ADI APP APS
ADV AGA 2.3.7	Explain the functions of visual landing aids.	2	<i>Optional content: AVASI, VASI, PAPI</i>	ADV ADI APP APS
ADV AGA 2.3.8	Describe the approach lighting systems.	2	Centre line, cross bars, stroboscopic lights, colours, intensity and brightness	ADV ADI APP APS
ADV AGA 2.3.9	Characterise the effect of water/ice on runways.	2		ADV ADI APP APS
ADV AGA 2.3.10	Explain braking action.	2	Braking action coefficient	ADV ADI APP APS
ADV AGA 2.3.11	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

ADV AGA 3.1.1	Explain the necessity for establishing and maintaining an obstacle-free airspace around aerodromes.	2	ADV ADI APP APS
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## TOPIC AGA 4 - MISCELLANEOUS EQUIPMENT

### Subtopic AGA 4.1 - Location

ADV AGA 4.1.1	Explain the location of different aerodrome ground equipment.	2	ADV ADI APP APS
			<i>Optional content: LLZ, GP, VDF, radio communication or ATS surveillance systems sensors, stopbars, AVASI, VASI, PAPI</i>

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