



European Union Aviation Safety Agency

Notice of Proposed Amendment 2021-08(E)

in accordance with

Articles 6(3), 7 and 8 (Standard procedure: public consultation) of MB Decision
No 18-2015

Enhanced mobility options and streamlined qualifications for air traffic controllers

RMT.0668

AMC1 ATCO.D.010(a)(2)(iiiiv) Composition of initial training

AREA CONTROL PROCEDURAL RATING (ACP) TRAINING - ~~SUBJECT OBJECTIVES AND TRAINING OBJECTIVES~~

This document has been provided to help reviewers make a comparison between the Easy Access Rules for Air Traffic Controllers' Licensing and Certification (Regulation (EU) 2015/340) and associated AMCs published in December 2019 (Reference: AMCs to ATCO.D.010(a)(2)(iv)- Composition of initial training) and the amendments proposed by the ATCO CCC TF. Proposed changes are the result of the review process agreed between EASA and EUROCONTROL and performed in 2020.

TRACK CHANGES FILE

The text of the amendment is arranged to show deleted, new or relocated text as shown below:

Deleted information is in red colour with the ~~strikethrough effect~~

New information is in blue colour text.

Relocated information is in black colour with the ~~strikethrough effect~~

The rationale/explanation of the change is, when appropriate, in the blue text box beneath the modified objective.

When an existing objective has been relocated (and consequently renumbered), the new number is shown in black to the left of the objective and the original (former version) number in red below the new one.

3.2.1 current objective number (if not modified it is the same as in the earlier version)

3.3.3 former objective number that may have an additional subject indication

if moved from one subject to another or B(asic) and R(ating) if moved from one syllabus to another. In Human Factors subject HUMUC indication means that related objective has been deleted and proposed for relocation to later stages of ATCO training (Unit-Continuation).

1.5.3 new objective number for relocated objectives at its original location that

may have an additional indication of a new subject or B(asic) and R(ating) if moved from one syllabus to another.

AREA CONTROL PROCEDURAL RATING (ACP) TRAINING — ~~SUBJECT OBJECTIVES AND TRAINING OBJECTIVES~~

(a) The general principles that apply to this AMC are contained in AMC1 ATCO.D.010(a).

(b) The ATCO rating training Area Control Procedural Rating (ACP) should contain the following ~~subject objectives and training objectives~~ that are associated with the subjects, topics and subtopics contained in Appendix ~~6.5 to~~ of Annex I to Commission Regulation (EU) 2015/340 — Area Control Procedural Rating (ACP).

(c) Subjects, topics and subtopics from Appendix ~~6.5 to~~ of Annex I to Commission Regulation (EU) 2015/340 are repeated in this AMC for the convenience of the reader and do not form part of it.

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.~~

INTR 1 COURSE MANAGEMENT

INTR 1.1 Course introduction

ACP INTR 1.1.1	Explain the aims and main objectives of the course.	2 2		ALL
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ACCCT TF decided to discontinue (delete) the subject objectives, now being AMCs to ATCO Licensing Regulation, since they have no added value to the remaining training content (subjects/topics/subtopisc in the IR and associated training objectives in the AMCs).
The proposal to remove the whole subject INTRODUCTION TO THE COURSE as regulatory requirement not accepted. Although not required by ICAO it is very useful and represents a good practice that should continue.

INTR 1.2 Course administration

ACP INTR 1.2.1	State how the course is administered.	1 1		ALL
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INTR 1.3 Study material and training documentation

ACP INTR 1.3.1	Use appropriate documents and their sources for course studies.	3 3	<i>Optional content: training documentation, library, CBT library, web, learning management server</i>	ALL
ACP INTR 1.3.2	Integrate appropriate information into course studies.	4 4	Training documentation <i>Optional content: supplementary information, library</i>	ALL

INTR 2 INTRODUCTION TO THE ATC TRAINING COURSE

INTR 2.1 Course content and organisation

ACP INTR 2.1.1	State the different training methods used during the course.	1 1	Theoretical training, practical training, self-study, types of training events	ALL
ACP INTR 2.1.2	State the subjects covered by the course and their purpose.	1 1		ALL
ACP INTR 2.1.3	Describe the organisation of theoretical training.	2 2	<i>Optional content: course programme</i>	ALL
ACP INTR 2.1.4	Describe the organisation of practical training.	2 2	<i>Optional content: PTP, simulation, briefing, debriefing, course programme</i>	ALL

INTR 2.2 Training ethos

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

ACP INTR 2.3.1	Describe the assessment process.	2 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:~~

LAW 1 ATCO LICENSING/CERTIFICATE OF COMPETENCE

LAW 1.1 Privileges and conditions

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

LAW 2 RULES AND REGULATIONS

LAW 2.1 Reports

ACPLAW 2.1.1	Describe the functions of, and processes for, reporting.	2 2	Reporting culture, mandatory and voluntary occurrence reporting forms air traffic incident report , Regulation (EU) No 376/2014, Regulation (EU) No 2015/1018 <i>Optional content: breach of regulations, watchbook/logbook, records, voluntary reporting</i>	ALL
2.1.2				
2.1.1				

The proposal to delete this objective as being more appropriate for Unit training not accepted. Content is modified to stress the importance of occurrence reports (mandatory and voluntary)

ACP LAW 2.1.1	List the standard forms for reports:	1 4	Air traffic incident report Optional content: routine air reports, breach of regulations, watch/log book, records	ALL
2.1.1				

The proposal to delete this objective as already covered in the following L2 and L3 objectives accepted.

ACPLAW	Use forms for reporting.	3	Regulation (EU) No 376/2014,	ALL
2.1.2		3	mandatory and voluntary occurrence reporting forms	
2.1.3			air traffic incident reporting form(s)	
2.1.2				
<i>Optional content: routine air reports, breach of regulations, watchbook/logbook, records</i>				

Content improved but proposal to move this LAW 2.1.2 objective to ABES subject not accepted - The location of the practical objective in the Rating training is almost irrelevant. They all need to be covered and are dependent on the prerequisites (relation with other subjects/topics...) The idea behind this L3 objective is to apply some practical examples in the Rating training that should prepare students for application in their future working environment! The form used could be any but based on Reg. (EU) No 376/2014 Annex 1 common and specific data fields

LAW 2.2 Airspace

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

LAW 3 ATS ATC SAFETY MANAGEMENT

LAW 3.1 Feedback process

ACPLAW	State the importance of controller contribution to the feedback process.	1	<i>Optional content: voluntary reporting</i>	ALL
3.1.1		1		

The proposal to expand the relevance of safety management to ATS (not only ATC) accepted - topic title modified accordingly.

ACPLAW	Describe how reported occurrences are analysed.	2	<i>Optional content: Regulation (EU) No 376/2014, local procedures</i>	ALL
3.1.2		2		
ACPLAW	Name the means used to disseminate recommendations.	1	<i>Optional content: safety letters, safety boards web pages</i>	ALL
3.1.3		1		

ACPLAW	Appreciate the "Just Culture" concept.	3	Benefits, prerequisites, constraints	ALL
3.1.4		3	Optional content: https://www.Skybrary.aero	

LAW 3.2 Safety investigation

ACPLAW	Describe role and objectives mission of	2		ALL
3.2.1	safety investigation in the improvement of safety.	2		

Improved wording but proposal to add ICAO Annex 13 to content not accepted - no need for any (regulatory) reference.

ACPLAW	Define working methods of Safety	1		ALL
3.2.2	Investigation:	1		

Objective deleted - partially covered in the objective 3.2.1 and working methods not important for ATCOs.

Subject 3 : AIR TRAFFIC MANAGEMENT

The subject objective is:

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

ATM 1 PROVISION OF SERVICES

ATM 1.1 Air traffic control (ATC) service

ACP ATM	Appreciate own area of responsibility.	3		APP ACP APS ACS
1.1.1		3		

ACP ATM	Provide area control service.	4	Regulation (EU) No 923/2012, ICAO Annex 11, ICAO Doc 7030, ICAO Doc 4444 , Regulation (EU) 2017/373, operating procedures for the simulated/training environment operation manuals	ACP ACS
1.1.2		4		

More appropriate wording for simulation environment and referenced documents.

ATM 1.2 Flight information service (FIS)

ACP ATM	Provide FIS.	4	ICAO Doc 4444 Regulation (EU) No 923/2012, Regulation (EU) 2017/373	ALL
1.2.1		4		
			Optional content: national documents	

Regulatory update - Regulation (EU) 373/2017 - Transposed within ATS.TR.300(c)(1). and ATS.TR.305 and associated AMC1 ATS.TR.305

ACP ATM	Issue appropriate information concerning the position of conflicting traffic.	3	Regulation (EU) No 923/2012, Regulation (EU) 2017/373, ICAO Doc 4444 , traffic information, essential traffic information	APP ACP APS ACS
1.2.2		3		

Regulatory updated - Regulation (EU) 2017/373 - AMC1 ATS.TR.155(e).

ACP ATM	Appreciate the use of ATIS in the provision of flight information service.	3	Regulation (EU) No 923/2012	ADC APS ACS APP ACP
1.2.3		3		

Objective introduced for consistency between the ratings.

ATM 1.3 Alerting service (ALRS)

ACP ATM	Provide ALRS.	4	ICAO Doc 4444 Regulation (EU) 2017/373, Regulation (EU) No 923/2012	ALL
1.3.1		4		
			Optional content: national documents	

Regulatory updated - Regulation (EU) 2017/373 - Transposed within GM1 ATS.TR.400(b); GM1 ATS.TR.405 (a)(1); GM2 ATS.TR.300(c)(2).

ACP ATM 1.3.2	Respond to distress and urgency messages and signals.	3 3	Regulation (EU) No 923/2012, ICAO Annex 10, ICAO Doc 4444 <i>Optional content: EUROCONTROL Guidelines for Controller Training in the Handling of Unusual/Emergency Situations, ICAO Doc 4444, national documents</i>	ALL
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Regulatory updated - Regulation (EU) 2017/373. The proposal to add ICAO Annex 12 not accepted - Annex 12 is about and for SAR service - there is almost nothing there about how ATC units providing alerting service should respond to distress and urgency messages and signals.

ATM 1.4 ATS system capacity and air traffic flow management

ACP ATM 1.4.1	Appreciate the impact of ATS system capacity and air traffic flow management on the controller.	3 3	<i>Optional content: EUROCONTROL ATFCM Users Manual, FABs, FUA, free route airspace, local implementation of ATFCM principles, etc.</i>	APP ACP APS ACS
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The proposal to reduce the action verb level - not accepted. "Appreciate" in most of the cases does not require simulation and ACP environment is affected by ATFCM as well.

ACP ATM 1.4.2	Apply flow management procedures in the provision of ATC	3 3	<i>Optional content: EUROCONTROL ATFCM Users Manual</i>	ACP ACS
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ACP ATM 1.4.3	Organise traffic flows and patterns to take account of airspace boundaries.	4 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
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ACP ATM 1.4.4	Organise traffic flows and patterns to take account of areas of responsibility.	4 4	<i>Optional content: EUROCONTROL ATFCM Users Manual</i>	APP ACP APS ACS
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ACP ATM 1.4.5	Inform supervisor of local factors affecting ATS system capacity and air traffic flow management.	3 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
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ATM 1.5 Airspace management (ASM)

ACP ATM 1.5.1	Appreciate the impact of ASM on the controller.	3 3	<i>Optional content: FABs, EUROCONTROL Specification for the application of FUA, TSAs, CDRs, CBAs, free route airspace</i>	APP ACP APS ACS
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ACPATM 1.5.2	Organise traffic to take account of ASM.	4 4	Optional content: CDR, TSA, TRA, CBA, real-time activation, deactivation or reallocation of airspace	APP ACP
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ATM 2 COMMUNICATION

ATM 2.1 Effective communication

ACPATM 2.1.1	List communication means between controllers. in charge of the same area of responsibility (sector or tower):	1 1	Optional content: electronic, written, verbal and non-verbal communication	ALL
HUM 6.2.1 2.1.1				

The proposal of merging and moving some communication objectives to ATM subject accepted. Objective modified to widen the scope.

ACPATM 2.1.2	Select the most suitable means of communication given the situation.	5 5		ALL
2.1.2				

Important practical objective introduced in ATM communications .

ACPATM 2.1.3	Use approved phraseology.	3 3	Regulation (EU) No 923/2012 Optional content: published national/local language phraseology	ALL
2.1.1				

The proposal to add national references to optional content modified to "published national/local language phraseology" - to avoid the challenge for auditors in dealing with the national and EU/ICAO differences particularly in the practical part (safety risk due to different content)

ACPATM 2.1.4	Ensure effective communication.	4 4	Use of plain language when required, communication within the sector/working position, between the sectors/WPs /ATC Units Communication techniques , readback/verification of readback	ALL
2.1.2				

Improved content

ACPATM 2.1.5	Analyse examples of pilot and controller communication for effectiveness.	4 4	Optional content: real life recordings, situation in the simulator	ALL
HUM 6.1.2				

Merging of communication objectives in the ATM and optional content added to clarify the requirement.

ATM 3 ATC CLEARANCES AND ATC INSTRUCTIONS

ATM 3.1 ATC clearances

ACPATM 3.1.1	Issue appropriate ATC clearances.	3 3	Regulation (EU) No 923/2012 Optional content: ICAO Doc 4444, national documents	ALL
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ACP ATM 3.1.2	Integrate appropriate ATC clearances in control service.	4 4		ALL
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ACP ATM 3.1.3	Ensure the agreed course of action is carried out.	4 4		ALL
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ATM 3.2 ATC instructions

ACP ATM 3.2.1	Issue appropriate ATC instructions.	3 3	Regulation (EU) No 923/2012, ICAO Doc 4444 , Regulation (EU) 2017/373 <i>Optional content: national documents</i>	ALL
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Regulatory updated - Regulation (EU) 2017/373

ACP ATM 3.2.2	Integrate appropriate ATC instructions in control service.	4 4		ALL
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ACP ATM 3.2.3	Ensure the agreed course of action is carried out.	4 4		ALL
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ATM 4 COORDINATION

ATM 4.1 Necessity for coordination

ACP ATM 4.1.1	Identify the need for coordination.	3 3		ALL
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ATM 4.2 Tools and methods for coordination

ACP ATM 4.2.1	Use the available tools for coordination.	3 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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ATM 4.3 Coordination procedures

ACP ATM 4.3.1	Initiate appropriate coordination.	3 3	Delegation/transfer of responsibility for air-ground communications and separation, transfer of control, etc. ICAO Doc 4444 Regulation (EU) 2017/373 <i>Optional content: release point</i>	ALL
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Regulatory updated - Regulation (EU) 2017/373 - Transposed within ATS.TR.230.a and associated AMCs/GMs

ACPATM 4.3.2	Analyse effect of coordination requested by an adjacent position/unit.	4 4	<i>Optional content: delegation/transfer of responsibility for air-ground communications and separation, release point, transfer of control, etc.</i>	ALL
ACPATM 4.3.3	Select, after negotiation, an appropriate course of action.	5 5		ALL
ACPATM 4.3.4	Ensure the agreed course of action is carried out.	4 4		ALL
ACPATM 4.3.5	Coordinate when providing FIS.	4 4	ICAO Doc 4444 Regulation (EU) 2017/373 <i>Optional content: ICAO Doc 4444</i>	ALL
Regulatory update - Regulation (EU) 2017/373 with ICAO content transposed in the AMCs and GM to Part. ATS.TR.230.a, though not all, and, therefore ICAO Doc 4444 moved to optional content.				
ACPATM 4.3.6	Coordinate when providing ALRS.	4 4	ICAO Doc 4444 Regulation (EU) 2017/373 <i>Optional content: ICAO Doc 4444</i>	ALL
Regulatory update - Regulation(EU) 2015/373 - transposition as GM2 ATS.TR.300(c). The proposal to add ICAO Annex 12 to content - not accepted - there is almost nothing there about how ATC units providing alerting service should coordinate with others.				

ATM 5 ALTIMETRY AND LEVEL ALLOCATION

ATM 5.1 Altimetry

ACPATM 5.1.1	Allocate levels according to altimetry data.	4 4	Regulation (EU) No 923/2012	ALL
ACPATM 5.1.2	Ensure separation according to altimetry data.	4 4	<i>Optional content: transition level, transition altitude, transition layer, height, flight level, altitude, vertical distance to airspace boundaries</i>	ALL

ATM 5.2 Terrain clearance

ACPATM 5.2.1	Provide planning, coordination and control actions appropriate to the rules for minimum safe usable levels and terrain clearance.	4 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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The proposal to soften the wording of the objective (usable instead of safe) accepted but removing the "terrain clearance" not.

ATM 6 SEPARATIONS

ATM 6.1 Vertical separation

ACPATM 6.1.1	Provide standard vertical separation.	4 4	Regulation (EU) No 923/2012, ICAO Doc 4444, level allocation, during climb/descent, rate of climb/descent, RVSM, non-RVSM aircraft, holding pattern	ACP ACS
ACPATM 6.1.2	Provide increased vertical separation.	4 4	Regulation (EU) No 923/2012, ICAO Doc 4444 <i>Optional content: level allocation, during climb/descent, rate of climb/descent, degraded aircraft performance, non-RVSM aircraft, reported severe turbulence</i>	APP ACP APS ACS
ACPATM 6.1.3	Appreciate the application of vertical emergency separation.	3 3	Regulation (EU) No 923/2012, ICAO Doc 4444, ICAO Doc 7030	APP ACP APS ACS

ATM 6.2 Horizontal separation

ACPATM 6.2.1	Provide longitudinal separation.	4 4	Regulation (EU) 2017/373, Based on time, based on distance (DME and/or GNSS, RNAV) <i>Optional content: based on time with Mach number technique</i>	ACP
ACPATM 6.2.2	Provide lateral separation.	4 4	Regulation (EU) 2017/373, ICAO Doc 4444, ICAO Doc 7030 , holding	APP ACP

Regulatory updated - Regulation (EU) 2017/373 - Transposed in AMC1 ATS.TR.210(c)(2)(ii).

ACPATM 6.2.3	Provide track separation.	4 4		ACP APP
ACPATM 6.2.4	Provide geographical separation.	4 4	Visual, using navigation aids, area navigation	ACP APP

ATM 7 AIRBORNE COLLISION AVOIDANCE SYSTEMS AND GROUND-BASED SAFETY NETS

ATM 7.1 Airborne safety nets collision avoidance systems

ACPATM 7.1.1	Recognise the independence of Differentiate between ACAS advisory thresholds and aerodrome ATC separation standards.	1 1<2	ICAO Doc 9863 <i>Optional content: Skybrary Safety Nets</i>	ALL
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Improved corpus and level reduced from 2 to 1, optional content and objective merged for all ratings.

ACPATM 7.1.2	Describe the controller responsibility during and following an ACAS RA reported by pilot.	2 2	ICAO Doc 4444 <i>Optional content: ICAO Doc 9863, Skybrary Safety Nets</i>	ALL
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Updated optional content with the relevant ICAO reference document and SKYbrary

ACPATM 7.1.3	Respond to pilot notification of actions based on airborne systems warnings.	3 3	ACAS, TAWS <i>Optional content: EUROCONTROL ACAS web page TAWS, Skybrary Safety Nets</i>	APP APS ACP ACS
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Updated content and redundant reference + Subtopic modified to 7.1 Airborne safety nets

ATM 8 DATA DISPLAY

ATM 8.1 Data management

ACPATM 8.1.1	Update the data display to accurately reflect the traffic situation.	3 3	<i>Optional content: information displayed, strip marking procedures, electronic information data displays, actions based on traffic display information, calculation of EETs</i>	ALL
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ACPATM 8.1.2	Analyse pertinent data on data displays.	4 4		ALL
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ACPATM 8.1.3	Organise pertinent data on data displays.	4 4		ALL
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ACPATM 8.1.4	Obtain flight plan information.	3 3	CPL, FPL , supplementary information <i>Optional content: FPL, RPL, AFIL, etc.</i>	ALL
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The proposal to delete this objective as being relevant only for pilots not accepted but mandatory content modified to reduce the scope only to CPL and supplementary information.

ACPATM 8.1.5	Use flight plan information.	3 3		ALL
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ATM 9 OPERATIONAL ENVIRONMENT (SIMULATED)

ATM 9.1 Integrity of the operational environment

ACPATM 9.1.1	Obtain information concerning the operational environment.	3 3	<i>Optional content: local/simulator operation manuals, briefing, notices, local orders, current flight plan data/information displays, pilot reports, coordination, verification of information</i>	ALL
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Improved optional content.

ACPATM 9.1.2	Ensure the integrity of the operational environment.	4 4	<i>Optional content: integrity of displays, verification of the information provided by displays, etc.</i>	APP ACP APS ACS
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ATM 9.2 Verification of the currency of operational procedures

ACP ATM 9.2.1	Check all relevant documentation before managing traffic.	3 3	<i>Optional content: briefing, letters of agreement (LOAs), NOTAMs, AICs</i>	ALL
ACP ATM 9.2.2	Manage traffic in accordance with a change to operational procedures.	4 4		APP ACP APS ACS

ATM 9.3 Handover-takeover

ACP ATM 9.3.1	Transfer information to the relieving controller.	3 3		ALL
ACP ATM 9.3.2	Obtain information from the controller handing over.	3 3		ALL
ACP ATM 9.3.3	List possible actions to provide a safe position handover- takeover .	1 1	<i>Optional content: rigour, preparation, overlap time</i>	ALL

HUM 6.2.3

ATM 9.3.3

Relocation of handover-takeover objective from HUM to the appropriate ATM subtopic.

ACP ATM 9.3.4	Explain consequences of a missed position handover- takeover process.	2 2		ALL
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HUM 6.2.4

ATM 9.3.4

Relocation of handover-takeover objective from HUM to the appropriate ATM subtopic

ATM 10 PROVISION OF CONTROL SERVICE

ATM 10.1 Responsibility and processing of information

ACP ATM 10.1.1	Describe the division of responsibility among air traffic control units.	2 2	ICAO Doc 4444 , Regulation (EU) 2017/373	ALL
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Optional content: ICAO Doc 4444

Regulatory update - Regulation (EU) 2017/373 - Transposed in AMC1 ATS.TR.205.;ATS.TR.230(a);GM1 ATS.TR.230(a)(3); GM1 to AMC3 ATS.TR.230(b)(2), though not all, and, therefore ICAO Doc 4444 moved to optional content.

ACPATM 10.1.2	Describe the responsibility in regard to military traffic.	2 2	ICAO Doc 4444 <i>Optional content: ICAO Doc 9554</i>	ALL
ACPATM 10.1.3	Describe the responsibility in regard to unmanned free balloons.	2	Regulation (EU) No 923/2012	ALL
ACPATM 10.1.4	Obtain operational information.	3 3	ICAO Doc 4444, local operation manuals	APP ACP APS ACS
Objective deleted - already covered in 9.1.1 (Obtain information concerning the operational environment.)				
ACPATM 10.1.4 10.1.5 10.1.4	Interpret operational information.	5 5		APP ACP APS ACS
ACPATM 10.1.5 10.1.6	Organise forwarding of operational information.	4 4	<i>Optional content: including the use of backup procedures</i>	APP ACP APS ACS
ACPATM 10.1.6 10.1.7	Integrate operational information into control decisions.	4 4		APP ACP APS ACS
ACPATM 10.1.7 10.1.8 10.1.7	Appreciate the influence of operational requirements.	3 3	<i>Optional content: military flying, calibration flights, aerial photography</i>	ALL

ATM 10.2 Area control

ACPATM 10.2.1	Explain the responsibility for the provision of an area procedural control service.	2 2	ICAO Doc 4444, Regulation (EU) 2017/373 ICAO Annex 11, local operation manuals <i>Optional content: local/simulator operation manuals</i>	ACP
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Regulatory update - Regulation (EU) 2017/373 - Transposed in Annex IV 'Part-ATS' as ATS.TR.205 and some associated AMCs and GM related to provision of area control services. Local/simulator operation manual added to optional content for consistency with the similar objectives applicable in the rating training simulation environment. The proposal to keep Doc 4444 in the content as not all applicable provisions from Chapter 4 had been transposed rejected with the rational that those related to responsibility for the provision of services had been transposed.

ACPATM 10.2.2	Provide planning, coordination and control actions appropriate to VFR and IFR traffic in VMC and IMC.	4 4	Regulation (EU) No 923/2012, Regulation (EU) 2017/373, ICAO Doc 4444	ACP ACS
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ATM 10.3 Traffic management process

ACPATM 10.3.1	Ensure that situational awareness is maintained.	4 4	Information gathering, traffic projection	APP ACP
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ACPATM 10.3.2	Detect conflicts in time for appropriate resolution.	4 4		ALL
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ACPATM 10.3.3	Identify potential solutions to achieve a safe and effective traffic flow.	3 3		APP ACP APS ACS
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ACPATM 10.3.4	Evaluate possible outcomes of different planning and control actions.	5 5		ALL
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ACPATM 10.3.5	Select an appropriate plan in time to achieve safe and effective traffic flow.	5 5		APP ACP APS ACS
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ACPATM 10.3.6	Ensure an adequate priority of actions.	4 4		ALL
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ACPATM 10.3.7	Execute selected plan in a timely manner.	3 3		ALL
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ACPATM 10.3.8	Ensure a safe and efficient outcome is achieved.	4 4	Traffic monitoring, adaptability and follow up	ALL
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ATM 10.4 Handling traffic

ACPATM 10.4.1	Manage arrivals, departures and overflights.	4 4	<i>Optional content: simulator operation procedures</i>	APP ACP APS ACS
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The proposal to add "simulator operation procedures" to optional content accepted.

ACPATM 10.4.2	Balance the workload against personal capacity.	5 5	<i>Optional content: re-routing, re-planning, prioritising solutions, denying requests, delegating responsibility for separation</i>	APP ACP APS ACS
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ATM 11 HOLDING

ATM 11.1 General holding procedures

ACPATM	Apply holding procedures.	3	ICAO Doc 4444, Regulation (EU) No 923/2012, Regulation (EU) 2017/373 , holding instructions, allocation of holding levels, onward clearance times	APP ACP APS ACS
11.1.1		3		

Regulatory updated - Regulation (EU) 2017/373 - Transposed in Annex IV 'Part-ATS' as AMC4 ATS.TR.210 (a)(3) related to holding but Doc 4444 kept as not all provisions from Chapter 6.5.5 had been transposed.

ACPATM	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
11.1.2		3		

ATM 11.2 Holding aircraft

ACPATM	Issue expected onward clearance times.	3		ACP ACS
11.2.1		3		

Subject 4 : METEOROLOGY

The subject objective is:

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

MET 1 METEOROLOGICAL PHENOMENA

MET 1.1 Meteorological phenomena

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

MET 2 SOURCES OF METEOROLOGICAL DATA

MET 2.1 Sources of meteorological information

ACP MET 2.1.1	Obtain meteorological information.	3 3	METAR, TAF, SIGMET, AIRMET <i>Optional content: AIREP/AIREP Special</i>	APP ACP APS ACS
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The proposal to make the optional content mandatory not accepted as current mandatory content is enough for practical application in Initial training.

ACP MET 2.1.2	Decode information from meteorological data displays.	3 3		ALL
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The proposal to move METB objective related to decoding of weather reports and forecasts to all ratings modified by making similar ADC objective common for all ratings for consistency.

ACP MET 2.1.3	Relay meteorological information.	3 3	ICAO Doc 4444, Regulation (EU) No 923/2012 <i>Optional content: flight information centre, adjacent ATS unit</i>	ALL
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Subject 5 : NAVIGATION

The subject objective is:

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

NAV 1 MAPS AND AERONAUTICAL CHARTS

NAV 1.1 Maps and charts

ACP NAV	Use relevant maps and charts.	3		ALL
1.1.1		3		

The proposal to mandate the Cartography inserts that analyse Conventional and GNSS procedures not accepted. ACCCT TF addressed many similar comments in this review and in most of the cases took position that introducing too specific content (or objective) would limit the scope of the objective in Initial training. In this case we already have two level 3 objectives where suggested specifics would have similar effect. Suggested analyses, if needed, could be introduced in the Unit training.

ACP NAV	Decode symbols and information displayed on aeronautical maps and charts.	3	Enroute and Area charts	ACP ACS
1.1.2		3	Optional content: STAR charts	

New "decoding maps and charts" objective added to ACP/ACS NAV for consistency with other ratings (but with area control specific content)

NAV 2 INSTRUMENT NAVIGATION

NAV 2.1 Navigational systems

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

NAV 2.2 Navigational assistance

ACP NAV	Evaluate the necessary information to be provided to pilots in need of navigational assistance.	5	Optional content: nearest most suitable aerodrome, track, heading, distance, aerodrome information, any other navigational assistance relevant at the time	APP ACP APS ACS
2.2.1		5		

NAV 2.3 PBN applications

ACP NAV	State the navigation applications used in terminal and en-route environments.	1	Terminal-RNAV-1 (≈P-RNAV); En-route-RNAV-5 (B-RNAV)	ACP ACS
2.3.1		1	Optional content: A-RNP, EC PBN Implementing Rule, ICAO Doc 9613	

Part of the mandatory content removed - historical names for RNAV-1 (≈P-RNAV) and RNAV-5 (B-RNAV) not used anymore

ACP NAV 2.3.2	Explain the principles and designation of navigation specifications in use.	2	Performance, functionalities, sensors	APP ACP APS ACS
		2	Optional content: performance, functionality, sensors , aircrew and controller requirements, accuracy requirements, integrity and continuity	

Improved content and alignment between the ratings.

ACP NAV 2.3.3	Describe differences in turn performances.	2	Optional content: fly by, fly over, FRT, ICAO Doc 4444	ACP ACS
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Important for ATCOs to understand the turn performance and the wide variability in aircraft path around a turn at altitude (see ICAO Doc 4444 Chapter 5 Para 5.4.1.1.4 Note 2)

ACP NAV 2.3.4	State future PBN developments.	1	A-RNP, RNP (AR) DEP	ALL ACP ACS
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2.3.3

2.3.4

Subject 6 : AIRCRAFT

The subject objective is:

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

ACFT 1 AIRCRAFT INSTRUMENTS

ACFT 1.1 Aircraft instruments

ACPACFT	Integrate information from aircraft instruments provided by the pilot in the provision of ATS.	4		ALL
1.1.1		4		

The proposal to make some content mandatory not accepted - making some examples explicit and mandatory could be too demanding for both the students and TOs but also limit the implementation to listed mandatory content only.

ACPACFT	1.1.2 Explain the operation of aircraft radio equipment.	2	Optional content: radios (number of), emergency radios	ALL
		2		

ACFT 2 AIRCRAFT CATEGORIES

ACFT 2.1 Wake turbulence

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

ACFT 3 FACTORS AFFECTING AIRCRAFT PERFORMANCE

ACFT 3.1 Climb factors

ACPACFT	3.1.1 Integrate the influence of factors affecting aircraft during climb.	4	Optional content: speed, mass, air density, cabin pressurisation, wind and temperature	APP ACP APS ACS
		4		

ACFT 3.2 Cruise factors

ACPACFT	3.2.1 Integrate the influence of factors affecting aircraft during cruise.	4	Level, cruising speed, wind, mass, cabin pressurisation	ACP ACS
		4		

ACFT 3.3 Descent factors

ACPACFT	3.3.1 Integrate the influence of factors affecting aircraft during descent.	4	Optional content: wind, speed, rate of descent, cabin pressurisation	ACP ACS
		4		

ACFT 3.4 Economic factors				
ACPACFT 3.4.1	Integrate consideration of economic factors affecting aircraft.	4 4	<i>Optional content: routing, level, speed, rate of climb and rate of descent, approach profile, top of descent</i>	ACP ACS
ACPACFT 3.4.2	Use continuous climb techniques where applicable.	3 3		APP ACP
ACPACFT 3.4.3	Use direct routing where applicable.	3 3		APP ACP APS ACS

ACFT 3.5 Environmental factors				
ACPACFT 3.5.1	Appreciate the performance restrictions due to environmental considerations.	3 3	<i>Optional content: fuel dumping, minimum flight levels, continuous descent operations</i>	ACP ACS

ACFT 4 AIRCRAFT DATA

ACFT 4.1 Performance data				
ACPACFT 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 4	Performance data under a representative variety of circumstances	APP ACP APS ACS

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.

HUM 1 INFORMATION PROCESSING PSYCHOLOGICAL FACTORS

HUM 1.1 Cognitive and factors influencing it

ACPHUM 1.1.1	Describe the human information processing model.	2 2	Attention, perception, memory, situational awareness, decision-making, response	ALL
ACPHUM 1.1.2	Describe the factors which influence human information processing.	2 2	Confidence, stress, learning, knowledge, experience, fatigue, alcohol/drugs, distraction, interpersonal relations	ALL

HUM 1.2 Situational awareness

ACPHUM 1.2.1	Appreciate the effect of human information-processing factors on situational awareness.	3 3	<i>Optional content: workload, knowledge, interpersonal relations, distraction, confidence, experience, fatigue, stress</i>	ALL
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New subtopic "Situational awareness" and associated objective to stress the importance of situational awareness and in the right order (Cognitive->SA->DM)

HUM 1.3 Decision-making

ACPHUM 1.3.1 1.1.3 1.3.1	Appreciate Monitor the effect of human information processing factors on decision-making.	3 3	<i>Optional content: workload, stress, interpersonal relations, distraction, confidence</i>	ALL
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New subtopic "**Decision-making**" and more appropriate action verb for associated objective to stress the importance of decision-making and in the right order (Cognitive->SA->DM)

HUM 2 MEDICAL AND PHYSIOLOGICAL FACTORS AFFECTING HEALTH AND WELL-BEING

HUM 2.1 Fatigue

ACPHUM 2.1.1 2.1.1	State factors that cause fatigue:	1 4	Shift work <i>Optional content: night shifts and rosters; Regulation (EU) 2017/373; ICAO/IFATCA/CANSO's Fatigue Management Guide for Air Traffic Service Providers</i>	ALL
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The proposal to delete this objective accepted - Well covered at level 2 in Basic HUMB 2.2.4 Explain the causal factors of stress and fatigue.

ACPHUM	Describe the onset of fatigue.	2	Regulation (EU) 2017/373	ALL
2.1.1		2	<i>Optional content: lack of concentration, listlessness, irritability, frustration, Skybrary Human Behaviour: EUROCONTROL Fatigue and sleep management ICAO Circular 241 – AN/145 Human factors in Air Traffic Control</i>	
2.1.2				
Improved content and renumbering: Eurocontrol booklet better for IT while CANSO/ICAO guide is more for unit training				

ACPHUM	Recognise the onset of fatigue in self and in others.	1	<i>Optional content: ICAO/FATCA/CANSO's Fatigue Management Guide for Air Traffic Service Providers Skybrary Human Behaviour:EUROCONTROL Fatigue and sleep management</i>	ALL
2.1.2		1		
2.1.3				
Merged objectives related to recognition of the onset of fatigue in self and in others.				

ACPHUM	Describe appropriate action when recognising fatigue.	2	<i>Optional content: Skybrary Human Behaviour, EUROCONTROL Fatigue and sleep management</i>	ALL
2.1.3		2		
2.1.5				
Improved content and renumbering: skybrari and Eurocontrol booklet added to optional content.				

ACPHUM	Recognise the onset of fatigue in others:	1		ALL
2.1.4		+		
2.1.4				
2.1.2				
The proposal to delete/merge this objective with 2.1.2 above accepted.				

HUM 2.2 Fitness

ACPHUM	Recognise signs of lack of personal fitness:	1		ALL
2.2.1		+		
HUM 2.2.1				
HUMB 2.1.3				
The proposal to move this objective to Basic training accepted. Now moved and well covered in the Basic subtopic "Fitness for duty" lack of personal fitness.				

ACPHUM	Describe actions when aware of a lack of personal fitness:	2		ALL
2.2.2		2		
2.2.2				
HUMB 2.1.4				
The proposal to delete this objective accepted - now well covered in the new Basic topic 2 HEALTH AND WELL-BEING				

HUM 2.2 Stress					
ACPHUM 2.2.1 4.1.1 2.2.1	Recognise the effects of stress on performance.	1 1	Stress and its symptoms in self and in others <i>Optional content: Regulation (EU) 2017/373</i>	ALL	
The proposal to move this stress related subtopic and associated objective to new (this) location accepted.					
ACPHUM 2.2.2	Describe appropriate action when recognising stress.	2 2		ALL	
The proposal to introduce new stress objective for consistency with the similar "fatigue" objective accepted.					
ACPHUM 2.2.3 4.2.1 2.2.3	Act to reduce stress.	3 3	The effect of personality in coping with stress, the benefits of active stress management	ALL	
The proposal to delete the content that limits the implementation of the objective accepted but another to introduce the Regulation (EU) 2017/373 in the content was not as provisions of this Regulation are more about ATS providers responsibilities with respect to stress. The whole topic and associated objectives are more related to the learners and how they should cope with it.					
ACPHUM 2.2.4 4.2.2 2.2.4	Respond to stressful situation by offering, asking or accepting assistance.	3 3	Optional content: the benefits of offering, accepting and asking for help in stressful situations	ALL	
The proposal to delete the content that was the same as objective's corpus accepted					
ACPHUM 2.2.5 4.2.3 2.2.5	Recognise the effect of shocking and stressful events.	1 1	Self and others, abnormal situations, Critical Incident Stress Management (CISM)	ALL	
Improved wording both for the objective and the content: CISM removed from mandatory content - more applicable in the Unit and/or Continuation training.					
HUM 3 THREAT AND ERROR MANAGEMENT					
HUM 3.1 Threat and error management framework					
ACPHUM 3.1.1 5.1.7 3.1.1	Explain the importance of threat and error management.	2 2	<i>Optional content: prevention of incidents, safety improvement, revision of procedures and/or working practices</i>	ALL	
The proposal to introduce New TEM topic/subtopic and associated objective accepted. TEM was missing in the Initial training and is required by ICAO Annex 1.					

ACPHUM 3.1.2	Explain the threat and error management framework.	2 2	Threats, errors, undesired states, countermeasures	ALL
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Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control

As above...

ACPHUM 3.1.3	Differentiate threats in ATC.	2 2	Internal, external, airborne, environmental	ALL
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Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control

As above...

ACPHUM 3.1.4	Differentiate errors in ATC.	2 2	Equipment, procedural, communication	ALL
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Optional content: increase in traffic, changes in procedures, complexities of systems or traffic, weather, unusual occurrences

As above...

ACPHUM 3.1.5	Differentiate undesired states.	2 2	On the ground, airborne	ALL
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Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control

As above...

ACPHUM 3.1.6	Analyse examples of threat and error management in ATC.	4 4	Case studies	ALL
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Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control

As above...

HUM 3.2 Applied threat and error management

ACPHUM 3.2.1	Manage threats.	4	Detect and respond	ALL
		4	<i>Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	

The proposal to move this objective to more appropriate new subtopic on conflict management accepted.

ACPHUM 3.2.2	Manage errors.	4	Detect and respond	ALL
		4	<i>Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	

As above...

ACPHUM 3.2.3	Manage undesired states.	4	Detect and respond	ALL
		4	<i>Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	

As above...

~~HUM 3 SOCIAL AND ORGANISATIONAL FACTORS~~

HUM 3.1 Team resource management (TRM)

ACPHUM 3.1.1	State the relevance of TRM:	1	<i>Optional content: TRM course, EUROCONTROL Guidelines for the development of TRM training</i>	ALL
HUM 3.1.1		4		

HUMUC

The proposal to move the introduction to TRM to later stages of ATCO training (Unit-Continuation) accepted. It will be easier for students to understand it in the operational environment and this topic is explicitly mentioned in AMC1 ATCO.D.045(c)(4) Composition of unit training and AMC1 ATCO.D.080(b)(3) Refresher training.

ACPHUM 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
3.1.2		4		

HUMUC

The proposal to move the introduction to TRM to later stages of ATCO training (Unit-Continuation) accepted. It will be easier for students to understand it in the operational environment and this topic is explicitly mentioned in AMC1 ATCO.D.045(c)(4) Composition of unit training and AMC1 ATCO.D.080(b)(3) Refresher training.

HUM 3.2 Teamwork and team roles				
ACPHUM	Identify reasons for conflict.	3		ALL
4.3.1		3		
3.2.1				
4.2.1				
The proposal to move this objective to more appropriate new subtopic on conflict management accepted.				
HUM 3.3 Responsible behaviour				
ACPHUM	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
3.3.4		2		
3.3.1				
HUMB 3.2.2				
Moved from Rating to Basic – more appropriate for Basic training and Topic on Human performance				
ACPHUM	Apply responsible judgement.	3	Case study and discussion about a dilemma situation	ALL
3.3.2		3		
The proposal to delete this unclear objective accepted.				
HUM 4 TEAMWORK-STRESS				
HUM 4.1 Benefits of a teamwork Stress				
ACPHUM	State the benefits of teamwork.	1	Increased safety, efficiency and capacity	ALL
4.1.1		1		
The proposal to introduce new objective to start with some positive aspect/benefits of team work accepted.				
ACPHUM	List the ATCO's human performance elements affected by teamwork.	1	Situational awareness, communication, decision making, threat and error management, workload management	ALL
4.1.2		1		
The proposal to introduce new objective to start with some positive aspect/benefits of teamwork accepted.				
HUM 4.2 Conflict Stress management				
ACPHUM	Identify reasons for conflict.	3		ALL
4.2.1		3		
3.2.1				
Proposal to move this objective to, more appropriate, new subtopic on conflict management accepted.				
ACPHUM	Describe strategies to cope with human conflicts.	2	Optional content: in your team, in the simulator	ALL
4.2.2		2		
3.2.3				
The proposal to move this conflict related objective to new subtopic "4.2 Conflict management" accepted.				

ACPHUM 4.2.3 3.2.2	Describe actions to prevent human conflicts.	2 2	<i>Optional content: TRM team roles</i>	ALL
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The proposal to remove optional content accepted - no need for TRM related content here.

ACPHUM 4.2.4 HUM 4.2.4 HUMUC	Consider the benefits of Critical Incident Stress Management (CISM):	2 2		ALL
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The proposal to move the CISM objective to later stages of ATCO training (Unit-Continuation) accepted. It will be easier for students to understand this safety related concept in the operational environment.

ACPHUM 4.2.5 HUMUC	Explain procedures used following an incident/accident:	2 2	<i>Optional content: CISM, counselling, human element</i>	ALL
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The proposal to move this incident/accident objective to later stages of ATCO training (Unit-Continuation) accepted. It will be easier for students to understand this safety related procedure in the operational environment.

HUM 5 SYSTEMS

HUM 5.1 Concept of systems in ATM/ANS

ACPHUM 5.1.1 HUMB 1.3.3 HUMR 5.1.1	Explain the concept of systems.	2 2	People, procedures, equipment, ATM in system terms, simple; complicated and complex systems, system thinking	ALL
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Moved from Basic to Rating training for students to better understand the content. Suggestion to include the explanation of three complexity levels accepted.

ACPHUM 5.1.2 HUMB 1.3.5 HUMR 5.1.2	Describe how changes in one part of a system may impact the other parts. Explain the consequences of a systems failure in ATS:	2 2		ALL
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Moved from Basic to Rating training for students to better understand the content. Corpus changed for clarity.

ACPHUM 5.1.3 HUMB 1.3.6 HUMR 5.1.3	Explain the need for matching human and equipment: Describe the role of the human in the system.	2 2		ALL
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Moved from Basic to Rating training for students to better understand the content. Corpus changed for clarity.

HUM 5 HUMAN ERROR

HUM 5.1 Human error

ACP HUM 5.1.1 HUMB 4.2.4	Explain the relationship between error and safety:	2 2	Number and combination of errors; proactive versus reactive approach to discovery of error <i>Optional content: ICAO Circular 314 = AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	ALL
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The proposal to refresh/delete Topic 5 ERROR and associated Subtopics/objectives accepted - now well covered in either Basic or new "Threat and error management" topic in the Ratings.

ACP HUM 5.1.2	Differentiate between the types of error:	2 2	Slips, lapses, mistakes <i>Optional content: Circular 314 = AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	ALL
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The proposal to delete this objective accepted - Not need for this classification in the Initial training but later in Safety management training.

ACP HUM 5.1.3	Describe error-prone conditions:	2 2	<i>Optional content: increase in traffic, changes in procedures, complexities of systems or traffic, weather, unusual occurrences</i>	ALL
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The proposal to refresh/delete Topic 5 ERROR and associated Subtopics/objectives accepted - now well covered in the new TEM topic.

ACP HUM 5.1.4	Collect examples of different error types, their causes and consequences in ATC:	3 3	<i>Optional content: ICAO Circular 314 = AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	ALL
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As above.

ACP HUM 5.1.5	Explain how to detect errors to compensate for them:	2 2	STCA, MSAW, individual and collective strategy <i>Optional content: ICAO Circular 314 = AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	ALL
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As above.

ACP HUM 5.1.6	Execute corrective actions:	3 3	Error compensation <i>Optional content: ICAO Circular 314 = AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	ALL
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As above.

ACPHUM 5.1.7 5.1.7 3.1.1	Explain the importance of error management:	2 2	<i>Optional content: prevention of incidents, safety improvement, revision of procedures and/or working practises</i>	ALL
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Modified by adding the notion of "threat" and moved to new TEM Topic as 3.1.1

ACPHUM 5.1.8 5.1.8 HUMUC	Describe the impact on an ATCO following an occurrence/incident:	2 2	<i>Optional content: reporting, SMS, investigation, CISM</i>	ALL
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The proposal to delete this objective for consideration/inclusion in the later stages of ATCO training (Unit-Continuation-Development) accepted.

HUM 5.2 Violation of rules

ACPHUM 5.2.1 5.2.1 HUMUC	Explain the causes and dangers of violation of rules becoming accepted as a practice:	2 2	<i>Optional content: ICAO Circular 314= AN/178 Threat and Error Management (TEM) in Air Traffic Control</i>	ALL
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The proposal to move this violation of rules objective to later stages of ATCO training (Unit-Continuation) accepted. It will be easier for students to understand it in the operational environment.

HUM 6 COMMUNICATION COLLABORATIVE WORK

HUM 6.1 Effective communication

ACPHUM 6.1.1 6.1.1	Explain effective communication in ATC operations.	2 2	ICAO Doc 9868	ALL
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The proposal to introduce new communication related objective to explain the importance of effective communication in ATC environment (from human performance point of view) accepted.

ACPHUM 6.1.1 ATM 2.1.4	Use communication effectively in ATC:	3 3		ALL
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The proposal to delete this objective as similar (at level 4) already exists in ATM accepted.

ACPHUM 6.1.2	Explain key strategies used to enable open communication.	2 2	<i>Optional content: Active listening, active speaking, assertiveness, honesty, relevance, facts, neutrality</i>	ALL
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The proposal to introduce new communication related objective to stress the importance of open communication accepted.

ACPHUM 6.1.2	Analyse examples of pilot and controller communication for effectiveness.	4 4		ALL
HUM 6.1.2				
ATM 2.1.5				

The proposal of merging and moving some practical related communication objectives to ATM subject accepted.

ACPHUM 6.1.3 6.4.1	Describe parameters affecting controller's communication competency. / pilot cooperation	2 2	Workload, mutual knowledge, controller versus pilot mental picture, distractions, sound, human conflicts	ALL
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Optional content: Communication between and in the team(s), in the simulator, with the pilots, instructors, coordination partners workload, mutual knowledge, controller vs pilot mental picture

Improved wording, content and objective moved to Effective communication to broaden the scope from pilot controller cooperation only to overall ATCO's communication competence.

HUM 6.2 Effective feedback

ACPHUM 6.2.1	Define feedback.	1 1		ALL
HUM 6.2.1				

The proposal to introduce new communication related subtopic and associated objectives to stress the importance of Effective feedback accepted.

ACPHUM 6.2.2	Explain the purpose of receiving and giving feedback and its effect on performance.	2 2		ALL
HUM 6.2.2				

As above.

ACPHUM 6.2.3	Consider the impact of communication styles on feedback, and resolving conflicts.	2 2		ALL
HUM 6.2.3				

As above.

ACPHUM 6.2.4	Integrate feedback into performance.	4 4		ALL
HUM 6.2.4				

As above.

HUM 6.2 Collaborative work within the same area of responsibility

ACP HUM 6.2.1	List communication means between controllers in charge of the same area of responsibility (sector or tower):	1 4	<i>Optional content: electronic, written, verbal and non-verbal communication</i>	ALL
HUM 6.2.1				
ATM 2.1.1				

The proposal to move this communication objective to EQPS subject modified and some communication objectives moved/merged to ATM communication related topic.

ACP HUM 6.2.2	Explain consequences of the use of communication means on effectiveness:	2 2	<i>Optional content: strips legibility and encoding, labels designation, feedback</i>	ALL
6.2.2				

The proposal of merging some communication (collaborative work) objectives in the appropriate ATM topic accepted. This objective is already well covered there.

ACP HUM 6.2.3	List possible actions to provide a safe position handover:	1 1	<i>Optional content: rigour, preparation, overlap time</i>	ALL
HUM 6.2.3				
ATM 9.3.3				

The proposal of moving and merging some communication (handover/takeover) objectives in the appropriate ATM topic accepted.

ACP HUM 6.2.4	Explain consequences of a missed position handover process:	2 2		ALL
HUM 6.2.4				
ATM 9.3.4				

The proposal of moving and merging some communication (handover/takeover) objectives in the appropriate ATM topic accepted.

HUM 6.3 Collaborative work between different areas of responsibility

ACP HUM 6.3.1	List factors and means for an effective coordination between sectors and/or tower positions:	1 4	<i>Optional content: other sectors constraints, electronic coordination tools</i>	ALL
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The proposal to delete this communication (collaborative work) objective accepted. This objective is already well covered in ATMB 5.3 "Means of coordination" subtopic and at a higher levels (2 and 3)

HUM 6.4 Controller/pilot cooperation

ACP HUM 6.4.1	Describe parameters affecting controller /pilot cooperation	2 2		ALL
6.4.1			<i>Optional content: workload, mutual knowledge, controller vs pilot mental picture</i>	
6.1.3				

The objective (with the modified wording and content) moved to Effective communication to broaden the scope from pilot controller cooperation only to overall ATCO's communication competence.

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.~~

EQPS 1 VOICE COMMUNICATIONS				
EQPS 1.1 Radio communications				
ACPEQPS 1.1.1	Operate two-way communication equipment.	3 3	Transmit/receive switches, procedures <i>Optional content: frequency selection, standby equipment</i>	ALL
ACPEQPS 1.1.2	Identify indications of operational status of radio equipment.	3 3	<i>Optional content: indicator lights, serviceability displays, selector/frequency displays</i>	ALL
ACPEQPS 1.1.3	Consider radio range.	2 2	<i>Optional content: transfer to another frequency, apparent radio failure, failure to establish radio contact, frequency protection range</i>	APP ACP APS ACS
EQPS 1.2 Other voice communications				
ACPEQPS 1.2.1	Operate landline communications.	3 3	<i>Optional content: telephone, interphone and intercom equipment</i>	ALL
EQPS 2 AUTOMATION IN ATS				
EQPS 2.1 Aeronautical fixed telecommunication network (AFTN)				
ACPEQPS 2.1.1	Decode AFTN messages.	3 3	<i>Optional content: movement and control messages, NOTAM, SNOWTAM, BIRDTAM, etc.</i>	ALL
EQPS 2.2 Automatic data interchange				
ACPEQPS 2.2.1	Use automatic data transfer equipment where available.	3 3	<i>Optional content: automated information and coordination, OLDI</i>	APP ACP
EQPS 3 CONTROLLER WORKING POSITION				
EQPS 3.1 Operation and monitoring of equipment				
ACPEQPS 3.1.1	Monitor the technical integrity of the controller working position.	3 3	Notification procedures, responsibilities	ALL
ACPEQPS 3.1.2	Operate the equipment of the controller working position.	3 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

ACPEQPS 3.1.3	Operate available equipment in abnormal and emergency situations.	3 3		ALL
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EQPS 3.2 Situation displays and information systems

ACPEQPS 3.2.1	Use situation displays.	3 3		ALL
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ACPEQPS 3.2.2	Check availability of information.	3 3		ALL
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ACPEQPS 3.2.3	Obtain information from equipment.	3 3		APP ACP APS ACS
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EQPS 3.3 Flight data systems

ACPEQPS 3.3.1	Use the flight data information at controller working position.	3 3		ALL
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EQPS 4 FUTURE EQUIPMENT

EQPS 4.1 New developments

ACPEQPS 4.1.1	Recognise future developments.	1 1	New advanced systems <i>Optional content: European ATM master plan, European plan for aviation safety</i>	ALL
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The proposal to clarify this objective accepted by adding relevant reference to optional content.

EQPS 5 EQUIPMENT AND SYSTEMS LIMITATIONS AND DEGRADATION

EQPS 5.1 Reaction to limitations

ACPEQPS 5.1.1	Take account of the limitations of equipment and systems.	2 2		ALL
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The proposal to move this objective to ATM or ABES not accepted - The location of the objectives in the Rating training is almost irrelevant. They all need to be covered and are dependent on the prerequisites (relation with other subjects/topics...). This level 2 objective is introduction to the following (detailed) level 3 objective related to standard ATC equipment degradation.

ACPEQPS 5.1.2	Respond to technical deficiencies of the operational position.	3 3	Notification procedures, responsibilities	ALL
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EQPS 5.2 Communication equipment degradation

ACPEQPS 5.2.1	Identify that communication equipment has degraded.	3 3	<i>Optional content: ground-air and landline communications</i>	APP ACP APS ACS
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ACPEQPS 5.2.2	Apply contingency procedures in the event of communication equipment degradation.	3 3	<i>Optional content: total or partial degradation of ground-air and landline communications, alternative methods of transferring data</i>	ALL
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EQPS 5.3 Navigational equipment degradation

ACPEQPS 5.3.1	Identify when a navigational equipment failure will affect operational ability.	3 3	<i>Optional content: VOR, navigational aids</i>	ALL
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The proposal to add GNSS to content modified. The generic term "Navigational aids" includes the proposed GNSS as well; VOR also removed from optional content (included in the generic term of nav aids)

ACPEQPS 5.3.2	Apply contingency procedures in the event of a navigational equipment degradation.	3 3	<i>Optional content: vertical separation, information to aircraft, navigational assistance, seeking assistance from adjacent units</i>	ALL
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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.~~

PEN 1 FAMILIARISATION

PEN 1.1 Study visit to an area control centre

ACPPEN 1.1.1	Appreciate the functions and provision of an operational area control service.	3 3	Study visit to an area control centre	ACP ACS
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Editorial correction of the subtopic and associated objective's corpus.

PEN 2 AIRSPACE USERS

PEN 2.1 Contributors to civil ATS operations

ACPPEN	Characterise civil ATS activities in area control centre.	2 2	Study visit to an area control centre <i>Optional content: familiarisation visits to TWR, APP, AIS, RCC</i>	ACP ACS
ACPPEN 2.1.2	Characterise other parties interfacing with ATS operations.	2 2	<i>Optional content: familiarisation visits to engineering services, firefighting and emergency services, airline operations offices</i>	ALL

PEN 2.2 Contributors to military ATS operations

ACPPEN 2.2.1	Characterise military ATS activities.	2 2	<i>Optional content: familiarisation visits to TWR, APP, ACC, AIS, RCC, Air Defence Units</i>	ALL
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PEN 3 CUSTOMER RELATIONS

PEN 3.1 Provision of services and user requirements

ACPPEN 3.1.1	Appreciate Identify the role of an air navigation ATC as a service provider.	3 3	Regulation (EU) 2018/1139	ALL
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The proposal to clarify this objective accepted - better wording and appropriate regulatory reference added to mandatory content.

ACPPEN 3.1.2	Appreciate ATS users' requirements.	3 3		ALL
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PEN 4 ENVIRONMENTAL PROTECTION

PEN 4.1 Environmental protection

ACPPEN 4.1.1	Appreciate the mitigation techniques used en-route to minimise the aviation's impact on the environment.	3 3	<i>Optional content: free route airspace (FRA), night/weekend routes, ICAO Doc 10013 Circular 303 - Operational opportunities to reduce minimise fuel burn use and reduce emissions</i>	ACP
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The proposal to update optional content to more appropriate document accepted.

Subject 10: ABNORMAL AND EMERGENCY SITUATIONS

The subject objective is:

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

ABES 1 ABNORMAL AND EMERGENCY SITUATIONS (ABES)

ABES 1.1 Overview of ABES

ACPABES 1.1.1	List common abnormal and emergency situations.	1 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, GNSS failure</i>	ALL
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Improved content due to emerged use and possible failure of GNSS + The proposal to move this objective to ACFT not accepted - The location of the objectives in the Rating training is almost irrelevant. They all need to be covered and are dependent on the prerequisites (relation with other subjects/topics...). Therefore most of them are related to or covered in the SIM and linked with the major subject - ATM, anyway.

ACPABES 1.1.2	Identify potential or actual abnormal and emergency situations.	3 3		ALL
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The proposal to move this objective to ACFT not accepted - The location of the objectives in the Rating training is almost irrelevant. They all need to be covered and are dependent on the prerequisites (relation with the other subjects/topics...). Therefore most of them are related to or covered in the simulator and linked with the major subject - ATM, anyway.

ACPABES 1.1.3	Take into account the procedures for given abnormal and emergency situations.	2 2	<i>Optional content: ICAO Doc 4444</i>	APP ACP APS ACS
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ACPABES 1.1.4	Take into account that procedures do not exist for all abnormal and emergency situations.	2 2	<i>Optional content: real life examples</i>	ALL
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The proposal to move this objective to ACFT not accepted - The location of the objectives in the Rating training is almost irrelevant. They all need to be covered and are dependent on the prerequisites (relation with the other subjects/topics...). Therefore, most of them are related to or covered in the simulator and linked with the major subject - ATM, anyway.

ACPABES 1.1.5	Consider how the evolution of a situation may have an impact on safety.	2 2	<i>Optional content: separation, information, coordination</i>	ALL
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ABES 2 SKILLS IMPROVEMENT

ABES 2.1 Communication effectiveness

ACPABES 2.1.1	Ensure effective communication in all circumstances including the case where standard phraseology is not applicable.	4 4	Phraseology, vocabulary, readback, silence instruction	ALL
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ACP ABES 2.1.2	Apply change of radiotelephony call sign.	3 3	ICAO Doc 4444 ICAO Doc Regulation (EU) No 923/2012 <i>Optional content: ICAO Doc 4444</i>	ALL
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The proposal to reintroduce again this objective (deleted in 2019 - Phase 1) accepted and content updated appropriately.

ABES 2.2 Avoidance of mental overload				
ACP ABES 2.2.1	Describe actions to keep control of the situation.	2 2	<i>Optional content: sector splitting, holding, flow management, task delegation</i>	ALL
ACP ABES 2.2.2	Organise priority of actions.	4 4		ALL
ACP ABES 2.2.3	Ensure effective circulation of information.	4 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
ACP ABES 2.2.4	Consider asking for help.	2 2		ALL

ABES 2.3 Air / ground cooperation				
ACP ABES 2.3.1	Collect appropriate information relevant to the situation.	3 3		ALL
ACP ABES 2.3.2	Assist the pilot.	3 3	Pilot workload <i>Optional content: instructions, information, support, human factors, etc.</i>	ALL

ABES 3 PROCEDURES FOR ABNORMAL AND EMERGENCY SITUATIONS

ABES 3.1 Application of procedures for ABES

ACP ABES 3.1.1	Apply the procedures for given abnormal and emergency situations.	3 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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The proposal to add GNSS failure to content due to emerged use and possible failure of GNSS not accepted for this practical objective - No procedures published therefore difficult to implement in Initial training.

ABES 3.2 Radio failure

ACP ABES 3.2.1	Describe the procedures followed by a pilot when he/she experiences complete or partial radio failure.	2 2	Regulation (EU) No 923/2012 <i>Optional content: ICAO Doc 4444, military procedures, simulator operation procedures</i>	ALL
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The proposal to add national procedures related to the pilots' comm. failure to the content of ABES objective accepted by adding simulator operation procedures.

ACP ABES 3.2.2	Apply the procedures to be followed when a pilot experiences complete or partial radio failure.	3 3	Regulation (EU) No 923/2012 <i>Optional content: prolonged loss of communication</i>	ALL
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The proposal to add SERA Regulation (EU) No 923/2012 to mandatory content accepted. (SERA.14087 Use of relay communication technique) includes the ATC action after the comm. failure.)

ABES 3.3 Unlawful interference and aircraft bomb threat

ACP ABES 3.3.1	Apply ATC procedures associated with unlawful interference and aircraft bomb threat.	3 3	Regulation (EU) No 923/2012 <i>Optional content: simulator operation procedures</i>	ALL
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The proposal to add ICAO Annexes (14 and 17) modified by adding the simulator operation procedures to optional content in addition to SERA reference in mandatory content.

ABES 3.4 Strayed or unidentified aircraft

ACP ABES 3.4.1	Apply the procedures in the case of strayed aircraft.	3 3	Regulation (EU) No 923/2012 <i>Optional content: inside controlled airspace, outside controlled airspace</i>	ALL
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ACP ABES 3.4.2	Apply the procedures in the case of unidentified aircraft.	3 3	Regulation (EU) No 923/2012	ALL
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ABES 3.5 Diversions

ACP ABES 3.5.1	Provide navigational assistance to diverting emergency aircraft.	4 4	Track/heading, distance, other navigational assistance	APP ACP APS ACS
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ABES 3.6 Interception of civil aircraft

ACP ABES 3.6.1	Explain the procedures in the event of interception of civil aircraft.	2 2	Regulation (EU) No 923/2012	ALL
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New subtopic an associated objective to cover important safety and regulatory requirement that was missing in the IT.