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ƏMR

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0.4 Distribution and control

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Master	**(S)**	Quality control sector	SCAA Library/ Intranet
1	**(S)**	Quality control sector	Digital Control System
2	**(S)**	Quality control sector	SCAA web-site

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(H) Hard Copy – (printed version)

Note: *Electronic and hard copies are considered "uncontrolled" if they are printed or not included into this distribution list.*

0.5 Records of amendments and revisions

Edition/Revision number	Effective date	Entered into force by	Reason
Edition № 01	01.JUN.2021	Dir. Order № 44 dd.27.05.2021	
Edition 01 Rev.01	15.MAR.2022	Dir. Order № 17 dd.11.03.2022	
Edition 02	21. AUG. 2026	3-27-102/3-2-33/2026	

Edition: - *Release of a document having incorporated all previous revisions until the current version. New edition of a document will not show revised text in blue color. Current edition of a document shown on each page in footer.*

Revision: *- A change made to a part of document, where it is reflected with blue text or accompanied with a vertical line on right side of a document. Basic information on revisions (number and date) given in the List of effective Pages and indicated in header of affected page and in context itself.*

0.6 Terms ad definitions

'abnormal situation' - means circumstances, including degraded situations, which are neither routinely nor commonly experienced and for which an air traffic controller has not developed automatic skills;

'acceptable means of compliance (AMC)' - means non-binding standards adopted by the State Civil Aviation Agency" public legal entity (hereinafter – SCAA) to illustrate means by which to establish compliance with "Requirements for air traffic controller licensing"(R-PEL-006);

'air traffic control (ATC) service' - means a service provided for the purpose of:

(a) preventing collisions:

— between aircraft, and

— in the manoeuvring area between aircraft and obstructions; and

(b) expediting and maintaining an orderly flow of air traffic;

'air traffic control (ATC) unit' - means a generic term meaning variously, area control centre, approach control unit or aerodrome control tower;

'alternative means of compliance' - means an alternative to an existing AMC or a new means to establish compliance with "Requirements for air traffic controller licensing" (R-PEL-006) for which no associated AMC have been adopted by the SCAA;

'assessment' - means an evaluation of the practical skills leading to the issue of the licence, rating and/or endorsement(s) and their revalidation and/or renewal, including behaviour and the practical application of knowledge and understanding being demonstrated by the person being assessed;

'assessor endorsement' - means the authorisation entered on and forming part of the licence, indicating the competence in the certificate of the holder to assess the practical skills of student air traffic controller and air traffic controller;

'critical incident stress' - means the manifestation of unusual and/or extreme emotional, physical and/or behavioural reactions in an individual following an unexpected event, an accident, an incident or serious incident;

'emergency situation' - means a serious and dangerous situation requiring immediate actions;

'examination' - means a formalised test evaluating the person's knowledge and understanding;

'guidance material (GM)' - means non-binding material developed by the SCAA that helps to illustrate the meaning of a requirement or specification and is used to support the interpretation of "Requirements for air traffic controller licensing"(R-PEL-006);

'language proficiency endorsement' - means the statement entered on and forming part of a licence, indicating the language proficiency in the certificate of the holder;

'licence' - means a document issued and endorsed in accordance with "The Regulations on issuance of licences, certificates or authorizations to aviation personnel and recognition of equivalent documents issued by another state', approved by Decision No. 107 of the Cabinet of Ministers of the Republic of Azerbaijan dated 11 April 2025 and "Requirements for air traffic controller licensing" (R-PEL-006) and entitling its lawful holder to exercise the privileges of the ratings and endorsements contained therein;

'on-the-job training instruction' - means the phase of unit training during which previously acquired job-related routines and skills are integrated in practice under the supervision of a qualified on-the-job training instructor in a live traffic situation;

'on-the-job training instructor (OJTI) endorsement' - means the authorisation entered on and forming part of a licence, indicating the competence of the holder to give on-the-job training

instruction and instruction on synthetic training devices;

'part-task trainer (PTT)' - means a synthetic training device to provide training for specific and selected operational tasks without requiring the learner to practise all of the tasks which are normally associated with a fully operational environment;

'performance objective' - means a clear and unambiguous statement of the performance expected of the person undertaking the training, the conditions under which the performance takes place and the standards that the person undertaking training should meet;

'provisional inability' - means a temporary state in which the licence holder is prevented from exercising the privileges of the licence when ratings, endorsements and his/her medical certificate are valid;

'psychoactive substance' - means alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas caffeine and tobacco are excluded;

'rating endorsement' - means the authorisation entered on and forming part of a licence, indicating the specific conditions, privileges or limitations pertaining to the relevant rating;

'renewal' - means the administrative act taken after a rating, endorsement or certificate has expired that renew the privileges of the rating, endorsement or certificate for a further specified period subject to the fulfilment of specified requirements;

'revalidation' - means the administrative act taken within the period of validity of a rating, endorsement or certificate that allows the holder to continue to exercise the privileges of a rating, endorsement or certificate for a further specified period subject to the fulfilment of specified requirements;

'sector' - means a part of a control area and/or part of a flight information region or upper region;

'simulator' - means a synthetic training device that presents the important features of the real operational environment and reproduces the operational conditions under which the person undertaking training can practice real-time tasks directly;

'synthetic training device' - means any type of device by which operational conditions are simulated, including simulators and part-task trainers;

'synthetic training device instructor (STDI) endorsement' - means the authorisation entered on and forming part of a licence, indicating the competence of the holder to give instruction on synthetic training devices;

'training course' - means theoretical and/or practical instruction developed within a structured framework and delivered within a defined duration;

'training organisation' - means an organisation which has been certified by the SCAA to provide one or more types of training;

'unit endorsement' - means the authorisation entered on and forming part of a licence, indicating the ICAO location indicator and the sector, group of sectors or working positions where the licence holder is competent to work;

'validation' - means a process by which, through the successful completion of a unit endorsement course associated to a rating or a rating endorsement, the holder may start exercising the privileges of that rating or rating endorsement.

0.7 Abbreviations

ABAS	Aircraft-based Augmentation System (EGNOS)
ACAS	Airborne Collision Avoidance System
ACC	Area Control Centre
ACP	Area Control Procedural Rating
ACFT	Aircraft (subject)
ACN	Aircraft Classification Number
ACS	Area Control Surveillance Rating
ADF	Automatic Direction Finding System
ADC	Aerodrome Control
ADS	Automatic Dependent Surveillance
ADVS	Advisory Service
AEA	Association of European Airlines
AFIL	Air Filed Flight Plan
AFTN	Aeronautical fixed telecommunication network
AGA	Aerodromes
AIC	Aeronautical Information Circular
AIP	Aeronautical Information Publication
AIRAC	Aeronautical Information Regulation and Control
AIRAC SUP	AIRAC Supplement
AIREP	Air-Report
AIRMET	Information concerning en-route weather phenomena which may affect the safety of low-level aircraft operations
AIS	Aeronautical Information Service
ALRS	Alerting Service
AMC	Acceptable Means of Compliance
APM	Approach Path Monitor
APP	Approach Control/Centre/Procedural Rating
APS	Approach Control Surveillance Rating

APV	Approach Procedure with Vertical guidance
APW	Area Proximity Warning
ASDA	Accelerate Stop Distance Available
ASM	Airspace Management
ASMGCS	Advanced Surface Movement Guidance and Control Systems
ATC	Air Traffic Control
ATCO	Air Traffic Controller
ATCS	Air Traffic Control Service
ATFCM	Air Traffic Flow and Capacity Management
ATFM	Air Traffic Flow Management
ATIS	Automatic Terminal Information Service
ATM	Air Traffic Management
ATS	Air Traffic Services
ATZ	Aerodrome Traffic Zone
AVASI	Advanced Visual Approach Slope Indicator
B-RNAV	Basic Area Navigation
BIRDTAM	Bird hazard NOTAM (NOTAM reporting bird hazard)
CANSO	Civil Air Navigation Services Organisation
CAT	Clear Air Turbulence
CBA	Cross Border Area
CBT	Computer-Based Training
CCIS	Closed Circuit Information System
CDR	Conditional Route
CISM	Critical Incident Stress Management
CPDLC	Controller Pilot Data Link Communications
CPL	Current Flight Plan
D-GPS	Differential Global Positioning System
DFTI	Distance from Touchdown Indicator
DME	Distance Measuring Equipment
Doc	Document
EAT	Expected Approach Time
EET	Estimated Elapsed Time

EFIS	Electronic Flight Instrument System
EGNOS	European Geostationary Overlay Service
EQPS	Equipment and Systems (subject)
FAB	Functional Airspace Block
FDPS	Flight Data Processing System
FIR	Flight Information Region
FIS	Flight Information Service
FMS	Flight Management System
FPB	Flight Progress Board
FPL	Flight Plan
GLONASS	Global Orbiting Navigation Satellite System
GNSS	Global Navigation Satellite System
GP	Glide Path
GPS	Global Positioning System
GPWS	Ground Proximity Warning System
GUI	Guidelines
HF	High Frequency
HUM	Human Factors (subject)
IACA	International Air Carrier Association
IAOPA	International Council of Aircraft Owner and Pilot Associations
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisations
IFPS	Integrated Initial Flight Plan Processing System
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IMC	Instrument Meteorological Conditions
INS	Inertial Navigation System
INTR	Introduction to the course (subject)
IRS	Inertial Reference System
IRVR	Instrument Runway Visual Range
ISA	International Standard Atmosphere

ITU	International Telecommunications Union
LAW	Aviation Law (subject)
LDA	Landing Distance Available
LLZ	Localizer
LNAV	Lateral Navigation
LOA	Letter of Agreement
LPV	Lateral Precision with Vertical guidance approach
MET	Meteorology
METAR	Meteorological Aviation Routine Weather Report
MLS	Microwave Landing System
Mode A	SSR identification code
Mode C	SSR Mode C
Mode S	Mode Select
MONA	Monitoring Aids
MSAW	Minimum Safe Altitude Warning
MTCD	Medium Term Conflict Detection
MWO	Meteorological Watch Office
NAV	Navigation (subject)
NAVAID	Navigation(al) Aid
NDB	Non-Directional Beacon
NOTAM	Notice to Airmen
OJT	On the Job Training
OLDI	On-Line Data Interchange
P-RNAV	Precision Area Navigation
PANS	Procedures for Air Navigation Services
PAPI	Precision Approach Path Indicator
PAR	Precision Approach Radar
PBN	Performance Based Navigation
PCN	Pavement Classification Number
PEN	Professional Environment (subject)
PSR	Primary Surveillance Radar
PTP	Part Time Practice
QDM	Magnetic Heading
QDR	Magnetic Bearing
QFE	Atmospheric pressure at aerodrome elevation
QNH	Atmospheric pressure at mean sea level
QTF	The position of the transmitting station according

	to the bearings taken by the D/F station
RAIM	Receiver Autonomous Integrity Monitoring
RCC	Rescue Coordination Centre
RDPS	Radar Data Processing System
RNAV	Area Navigation
RNP	Required Navigation Performance
RNP-RNAV	Required Navigation Performance-Area Navigation
ROC	Rate of Climb
RPL	Stored Flight Plan
RTF	Radio Telephony
RVR	Runway Visual Range
RVSM	Reduced Vertical Separation Minimum
SADIS	Satellite Distribution of World Area Forecast System
SAR	Search and Rescue
SARPs	Standards and Recommended Practices (ICAO)
SBAS	Satellite Based Augmentation System
SELCAL	Selective Calling
SHELL (model)	Software, Hardware, Environment, Live ware, Live ware Model
SID	Standard Instrument Departure (Route)
SIGMET	Significant Meteorological Information
SMR	Surface Movement Radar
SNOWTAM	NOTAM on SNOW conditions
SPECI	Aviation Selected Special Weather Report
SRC	Safety Regulation Commission
SRU	Safety Regulation Unit
SSR	Secondary Surveillance Radar
STCA	Short Term Conflict Alert
SVFR	Special Visual Flight Rules Flight
SUR	Aerodrome Control Surveillance
TACAN	UHF Tactical Air Navigation Aid
TAF	Terminal Area (Aerodrome) Forecast
TCAC	Tropical Cyclone Advisory Centre
TODA	Take Off Distance Available
TORA	Take Off Run Available
TRM	Team Resource Management
TSA	Temporary Segregated Area
UDES	Unusual Degraded Emergency Situations
UDF	Ultra High Frequency Direction Finder
UHF	Ultra High Frequency
UTC	Coordinated Universal Time
VAAC	Volcanic Ash Advisory Centre
VASI	Visual Approach Slope Indicator
VDF	Very High Frequency Direction Finder
VFR	Visual Flight Rules
VHF	Very High Frequency
VMC	Visual Meteorological Conditions
VNAV	Vertical Navigation
VOLMET	Routine Weather Reports Broadcast on VHF
VOR	VHF Omni-directional Radio Range
WAFC	World Area Forecast Centre
WAFS	World Area Forecast System
WGS-84	World Geodetic System 84

0.8 Terms shall, should, may

The following terms shall have the meaning outlined below:

“Shall” - An action verb in the imperative sense means that the application of a rule or procedure or provision is mandatory.

“Should” - Means that the application of a procedure or provision is recommended.

“May” - Means that the application of a procedure or provision is optional.

0.9 Administration and control

The PDF files will be locked and signed to prevent changes.

This document is regularly revised and amended. All personnel must be familiarized with all revisions done.

This document will be amended and revised in accordance with requirements of “Documentation and Control” procedure.

ANNEX I (PART ATCO) – Requirements for the licensing of air traffic controllers
SUBPART A – General requirements

GM1 ATCO.A.015(b);(c) Exercise of the privileges of licences and provisional inability

Grounds for provisional inability

(a) Examples of grounds for doubting the ability to safely exercise the privileges of the licence may be that the licence holder is:
  (1) under the influence of psychoactive substances;
  (2) unfit to perform the duties due to injury, fatigue, sickness, stress, including critical incident stress or other similar causes;
  (3) not meeting all the competence-related requirements set out in the unit competence scheme.

(b) Provisional inability based on the grounds referred to in points (a)(1) and (a)(2) is meant to cover only short periods of time (for example: generally before the next scheduled duty period, but no longer than 7 days) with the aim of allowing the affected air traffic controller to consult an aero-medical examiner regarding the doubts about being able to safely exercise the privileges of their licence.
  In such cases, the provisional inability may only remain applicable until a medical review is performed by an aero-medical examiner.

GM1 ATCO.A.015(c) Exercise of the privileges of licences and provisional inability

In case of doubt about the medical condition of the air traffic controller, the provisions of R-PEL-006, ATCO.MED.A.020 should apply.

GM1 ATCO.A.015(d) Exercise of the privileges of licences and provisional inability

Procedures

The procedures developed and implemented to enable licence holders declaring provisional inability to exercise the privileges of their licence and to inform the SCAA should include but are not limited to:

(a) the processes to declare and terminate provisional inability;
(b) an indicative list of cases when the SCAA shall be informed of the declaration or termination of the provisional inability; and
(c) the processes to inform the SCAA;

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SUBPART B – LICENCES, RATINGS AND ENDORSEMENTS

GM1 ATCO.B.001(a);(d) Student air traffic controller licence

PRIVILEGES OF A STUDENT AIR TRAFFIC CONTROLLER LICENCE

The privileges of a student air traffic controller licence are exercised when providing air traffic control services in live traffic under the supervision of an on-the-job training instructor. A student air traffic controller licence is required for on-the-job training and not necessarily for the transitional and pre-on-the-job phases of unit training.

GM1 ATCO.B.001(b) Student air traffic controller licence

MATURITY OF AIR TRAFFIC CONTROLLERS

Persons who wish to undertake air traffic controller training at a training organisation satisfying the requirements laid down in R-PEL-006, Annex III (Part ATCO.OR) should be educationally, physically and mentally sufficiently mature. In order to assess their ability to complete air traffic controller training, training organisations may conduct aptitude assessments and/or set out educational or similar requirements which could serve as a prerequisite for commencing air traffic controller training.

AMC1 ATCO.B.001(d) Student air traffic controller licence

ASSESSMENT OF PREVIOUS COMPETENCE

When establishing previous competence in a rating, the assessment should be based on the requirements set out in R-PEL-006, Part ATCO, Subpart D, Section 2.

GM1 ATCO.B.001(d) Student air traffic controller licence

ASSESSMENT OF PREVIOUS COMPETENCE

The assessment of previous competence includes an assessment of the practical skills demonstrated by the person being assessed as well as an examination of the person's knowledge and understanding.

GM1 ATCO.B.005(e) Air traffic controller licence

ASSESSMENT OF PREVIOUS COMPETENCE

The assessment of previous competence includes an assessment of the practical skills demonstrated by the person being assessed as well as an examination of the person's knowledge and understanding.

AMC1 ATCO.B.010(a)(2);(3) Air traffic controller ratings

SURVEILLANCE FALLBACK AND CONTINGENCY MEASURES

The approach control procedural (APP) rating is not required for approach control surveillance (APS) rating holders when applying surveillance fallback and contingency measures. However, with reference to points ATCO.D.045(c)(3) and ATCO.D.080(b)(2), specific training related to surveillance fallback and contingency procedures should be included in the unit and refresher training to prepare air traffic controllers to deal with such situations.

If contingency plans also include procedures for service continuity by means of providing procedural air traffic control services, a procedural rating should be held and maintained.

AMC1 ATCO.B.010(a)(4);(5) Air traffic controller ratings

SURVEILLANCE FALLBACK AND CONTINGENCY MEASURES

The area control procedural (ACP) rating is not required for area control surveillance (ACS) rating

holders when applying surveillance fallback and contingency measures. However, with reference to points ATCO.D.045(c)(3) and ATCO.D.080(b)(2), specific training related to surveillance fallback and contingency procedures should be included in the unit and refresher training to prepare air traffic controllers to deal with such situations.

If contingency plans also include procedures for service continuity by means of providing procedural air traffic control services, a procedural rating should be held and maintained.

AMC1 ATCO.B.010(b) Air traffic controller ratings

ASSESSMENT OF PREVIOUS COMPETENCE

When establishing previous competence in a rating, the assessment should be based on the requirements set out in Part ATCO, Subpart D, Section 2.

GM1 ATCO.B.010(b) Air traffic controller ratings

ASSESSMENT OF PREVIOUS COMPETENCE

The assessment of previous competence includes an assessment of the practical skills demonstrated by the person being assessed as well as an examination of the person's knowledge and understanding.

AMC1 ATCO.B.015(a) Air traffic controller rating endorsements

AERODROME CONTROL SURVEILANCE (SUR) ENDORSEMENT PRIVILEGES

The SUR endorsement indicates that the holder has the skills to use ATS surveillance systems for the provision of aerodrome control service.

AMC1 ATCO.B.020(a) Unit endorsements

GENERAL

When aerodrome control service is provided from a 'remote tower', each aerodrome for which the service is provided should constitute its own unit endorsement.

GM1 to AMC1 ATCO.B.020(a) Unit endorsements

There might be cases where, for a given aerodrome, air traffic control service is provided from a 'conventional tower' during certain time periods and from a 'remote tower' at other times. In such cases, the unit endorsement(s) should indicate the working position(s) (conventional and/or remote tower) from which the licence holder is authorised to provide the service.

***Note**: This does not refer to contingency arrangements/contingency facilities, as the related training and use are deemed to be covered by any unit endorsement. When this is done on a temporary basis for shorter/limited time periods, e.g. during a validation or for transitional purposes, different unit endorsements for conventional and remote tower may not be considered necessary.*

GM1 ATCO.B.020(c) Unit endorsements

ISSUE OF A UNIT ENDORSEMENT IN CONNECTION WITH THE ISSUE OF A TEMPORARY ON-THE-JOB TRAINING INSTRUCTOR (OJTI) AUTHORISATION

It is recognised that the completion of a unit endorsement course in accordance with the requirements set out in Section 3 of Subpart D of Part ATCO as regards the on-the-job training (OJT) phase may not be possible in cases where a new ATC unit or sector is established, a new rating or rating endorsement is established at an ATC unit, or when a temporary ATC unit reopens.

AMC1 ATCO.B.020(d) Unit endorsements

LIMITATION IN RELATION TO THE EXERCISE OF THE AERODROME CONTROL RATING PRIVILEGES

If a unit endorsement course contains operational procedures only for air control or ground control, the unit endorsement should reflect the limitation in relation to the rating privileges.

AMC1 ATCO.B.020(g) Unit endorsements

VALIDITY OF THE UNIT ENDORSEMENT

When establishing the validity of a unit endorsement, the specificities of the unit and seasonal variations should be taken into account.

Appropriate means should be in place to monitor the competence of the air traffic controllers. The means should be proportionate to the validity time.

If the proposed validity time of the unit endorsement exceeds 12 months, additional means should be in place to monitor and ensure the continuous competence of the air traffic controllers.

If the ATC unit is proposing to increase the validity time of the unit endorsement, a safety assessment should be conducted. The safety assessment may cover several units.

AMC1 ATCO.B.020(i)(3) Unit endorsements

PRACTICAL SKILLS ASSESSMENT FOR THE REVALIDATION OF EACH UNIT ENDORSEMENT

(a) If the assessment of practical skills is taking the form of a dedicated assessment consisting of a single assessment or a series of assessments, the last assessment declaring the licence holder competent should take place within the 3-month period immediately preceding the unit endorsement expiry date.

(b) If the assessment of practical skills is taking the form of a continuous assessment by which the air traffic controller's competence is assessed along a defined period of time, the end of that defined period and the formal conclusion on declaring the licence holder competent should take place within the 3-month period immediately preceding the unit endorsement expiry date.

GM1 ATCO.B.020(k) Unit endorsements

COMMENCEMENT OF THE UNIT ENDORSEMENT VALIDITY IN CASE OF EARLY REVALIDATION

For the purpose of establishing the validity period of the unit endorsement in case of early revalidation, the date of the assessment should be the date of the:

(a) last assessment declaring the licence holder competent in case of a dedicated assessment; and

(b) formal conclusion of declaring the licence holder competent in case of continuous assessment, provided that the formal conclusion takes place immediately after the period during which the air traffic controller's competence has been assessed.

AMC1 ATCO.B.025(a)(3) Unit competence scheme

MINIMUM NUMBER OF HOURS

The minimum number of hours should be defined for each unit endorsement associated to a rating, and it should be identical for each unit endorsement holder within the same unit.

For licence holders holding more than one unit endorsement in the same ATC unit, the minimum number of hours may be defined as a combined value based on the assessment provided by the air navigation service provider.

Nevertheless, maintaining competence should be appropriately ensured for all valid unit endorsements, as well as for all sectors and/or working positions covered by a unit endorsement.

AMC1 ATCO.B.025(a)(5);(6) Unit competence scheme

PROCESSES FOR ASSESSING COMPETENCE AND EXAMINING THEORETICAL KNOWLEGDE AND UNDERSTANDING

(a) The practical performance and skills should be assessed in live traffic situations.

(b) Theoretical competence should be examined to ascertain the knowledge and understanding of air traffic controllers.

(c) Subjects taught during refresher training such as standard practices and procedures, abnormal and emergency situations and human factors should be assessed on STD or in other simulated environments and/or examined.

GM1 ATCO.B.025(a)(5) Unit competence scheme

ASSESSMENTS

(a) Assessments may have one or more components.

(b) One component should be the assessment of practical skills; other components may be oral and/or written examinations.

(c) Practical skills assessments should be conducted as continuous assessment or dedicated practical assessment(s).

(d) Continuous assessment

Continuous assessment should be achieved by the assessor assessing, during normal operational duties, the operational performance compared to the standard of the air traffic control service expected.

Where the assessor has not been able to adequately assess the air traffic controller by continuous assessment, he/she should not certify the air traffic controller's competence until a dedicated practical assessment has been conducted.

(e) Dedicated practical assessment

A dedicated practical assessment may consist of a single assessment or a series of assessments.

To conduct a dedicated practical assessment, the assessor(s) should sit with the air traffic controller with the purpose of assessing, under normal operational conditions, the operational performance compared to the standard of the air traffic control service expected.

The air traffic controller concerned should be advised that a dedicated practical assessment is to be conducted and be briefed on the conduct of the assessment.

For those situations where an applicant's performance cannot be observed at the time of the assessment (e.g. low visibility operations, snow clearing, military activity, etc.), the assessment may be supplemented by synthetic training device sessions and/or an oral examination.

(f) The performance objectives' topics to be assessed should be determined in detail by the air navigation service provider. Examples of performance objectives' topics are as follows:

— application of unit regulations and procedures (e.g. minimum separation standards, letters of agreement, Aeronautical Information Publications);

— traffic analysis and planning;

— task priority setting;

— communication, including phraseology;

— capacity and expedition;

— accuracy;

— initiative, adaptability and decision-making;

— air traffic control techniques;

— teamwork and other human factors skills;

— the level of risk associated with the tasks performed (e.g. attitudes to risk).

(g) Procedures when failing

Notwithstanding R-PEL-006, ATCO.B.025(a)(10), when an air traffic controller fails in one or more of the components of the assessment, he/she should not be allowed to exercise the privilege of this unit endorsement, and provisional inability in accordance with R-PEL-006, ATCO.A.015(b) may be declared until a successful competence assessment has been performed. Resitting the full competence assessment or the failed part only may be required.

(h) Record keeping

The results of all assessments, including those of the continuous assessment, and examinations should be documented and stored confidentially, accessible to the assessor and the person being assessed.

GM2 ATCO.B.025(a)(5) Unit competence scheme

ASSESSMENTS

Assessments should be adapted to the validity time of the unit endorsement of the ATC unit.

The assessment of air traffic controllers at ATC units with seasonal variations should reflect the higher volume and complexity situations.

GM3 ATCO.B.025(a)(5) Unit competence scheme

ASSESSMENTS OF REFRESHER TRAINING SUBJECTS

(a) Assessments should be conducted primarily on a synthetic training device or offline environments.

(b) Assessments should be conducted by appropriately qualified personnel having detailed knowledge of:

(1) the training objectives; and

(2) the subjects, topics and subtopics being examined or assessed.

GM1 ATCO.B.025(a)(6) Unit competence scheme

ORAL EXAMINATIONS

Oral examinations should be used to test understanding of applicable techniques and the rules governing them, particularly of unit and national air traffic control procedures. Scenario-type questioning allows the assessor to gather additional evidence of how an air traffic controller would react in circumstances that are not observable but are nevertheless considered important to the overall operation at that ATC unit.

The oral examination should give a clear indication that the air traffic controller knows not only what he/she should be doing, but why he/she should be doing it. The oral examination requires considerable skills and it should be undertaken in a way to ensure consistency among individual assessors.

GM1 ATCO.B.025(a)(9) Unit competence scheme

EXAMINATIONS AND ASSESSMENTS DURING CONVERSION TRAINING

(a) Assessments should be conducted primarily on a synthetic training device or offline environments.

(b) Examinations and assessments should be conducted by appropriately qualified personnel having detailed knowledge of:

(1) the training objectives; and

(2) the subjects, topics and subtopics being examined or assessed.

AMC ATCO.B.025(b) Unit competence scheme

(a) Every license/student licence holder shall maintain a personal log book in accordance with requirements in R-PEL-006. License/student licence holder shall log the actual watch period during which he has performed any duty for exercising the privileges of his licence or ratings, or for on-the-job training.

(b) Every license/student license holder shall maintain a personal log book in updated condition as specified in the Parts I, II, III and IV of this AMC, clearly indicating the purpose of duty while providing Air Traffic Services in unit(s), including OJT.

Parts of log book

(1) Instructions for maintenance of log book shall be first page of log book.

(2) Personal details of air traffic controller (Part-II) shall be next to as mentioned in para (1)

(3) Training courses at approved training centre and details of rating and related examination etc. (Part-III) shall be next to as mentioned in para (2)

(4) Record of experience and logging of on-watch period shall be in the format of Part-IV.

(c) The assessment, proficiency checks of an ATCO shall also be recorded in the personal log book.

(d) The licence/student licence holder shall submit his current personal logbook(s) in support of any application for obtaining/revalidation/renewal a licence/ratings endorsement to the SCAA.

(e) The air navigation service provider shall formulate a mechanism to check the correctness of entries in the log books. At the end of every quarter, the log books shall be certified for correctness of entries therein by the in-charge of the air traffic services unit.

(f) When the existing log book has been filled completely, a new log book shall be opened immediately and summary of the previous log book shall be carried forward to new log book.

(g) The air traffic controller shall preserve the log books for not less than five years after the date of the last entry therein.

STANDARD ATCO LOGBOOK FORMAT

Part-I

STATE CIVIL AVIATION AGENCY

AIR TRAFFIC CONTROLLER'S LOGBOOK

Part II

AIR TRAFFIC CONTROLLER'S LOGBOOK

Photo

Holder's name_____

Date of birth_____

Telephone/mobile_____

Address_____

E-mail_____

Licence number_____

Employee Organization_____

Logbook number entries from/to № (___) from (_____) to (_____)

Licence Details					
Type of Licence	**Licence number**	**Issuing Authority**	**Date of Issue**	**Date of expiry**	**Date of renewal**
Student Air Traffic Controller					
Air Traffic Controller					

Ratings and Endorsements on Licence			
No	**Unit/Rating/Endorsement**	**Date of Issue**	**Date of Suspended from/to**

Part-III

Training courses at approved training organization						
No	Name of training organization	Name of course	Course duration		Result	Signature of training manager
			From	To		

Details of ratings and related examination							
No	Unit (4 Letter ICAO code)	Rating/ Endorsement	Date of oral assessment	Date of Pre-OJT assessment	Date of intermediate assessment	Date of final assessment	Date of first independent duty (order)

Part-IV

YEAR		UNIT	ATS UNIT	TYPE OF DUTY	OJT Details (if applicable)		TIME(UTC) HH:MM		TOTAL DURATION		Remarks/ OJTI/ Supervisor Signature
Date	Month	ICAO 4 Letter Code	ACC/APP/TOWER/ GROUND/FIC or any other	Control/ Instruction/ OJT	Operation/ Simulation	Name of OJTI	From	To	HH:MM		
I certify that the information on this page is correct. ATCO's signature_____						Total this page:					
						Total from previous page:					
						Total time:					

AMC1 ATCO.B.035(a)(3)(i) Validity of language proficiency endorsement

VALIDITY OF THE LANGUAGE ENDORSEMENT OF PROFICIENCY LEVEL 6 IN ENGLISH LANGUAGE

When replacing the licences according to R-PEL-006, the validity period for the expert level (level six) language proficiency endorsements shall be introduced into the new licence.

AMC1 ATCO.B.040 Assessment of language proficiency

GENERAL

(a) The language proficiency assessment should be designed to reflect the tasks undertaken by air traffic controllers, but with specific focus on language rather than operational procedures and knowledge.

(b) The assessment should determine the applicant's ability to communicate effectively using visual and non-visual communication in both routine and non-routine situations.

AMC2 ATCO.B.040 Assessment of language proficiency

ASSESSMENT

(a) The assessment should comprise the following three elements:

(1) listening — assessment of comprehension;

(2) speaking — assessment of pronunciation, fluency, structure and vocabulary;

(3) interaction.

(b) The switch between phraseology and plain language should be assessed for listening and speaking proficiency.

(c) When the assessment is not conducted in a face-to-face situation, it should use appropriate technologies for the assessment of the applicant's abilities in listening and speaking, and for enabling interactions.

(d) In case of revalidation of the language proficiency endorsement, the assessment may be conducted during training activities or on operational position, with prior notification to the air traffic controller to be assessed.

(e) Irrespective of the way the assessment is organised, the requirements listed in (a) and (b) as well as the relevant provisions for language proficiency assessors should be met.

AMC3 ATCO.B.040 Assessment of language proficiency

LANGUAGE PROFICIENCY ASSESSORS

(a) Persons responsible for language proficiency assessment should be suitably trained and qualified.

(b) Language proficiency assessors should undergo regular refresher training on language assessment skills.

(c) Language proficiency assessors should not conduct language proficiency assessments whenever their objectivity may be affected.

AMC4 ATCO.B.040 Assessment of language proficiency

CRITERIA FOR THE ACCEPTABILITY OF LANGUAGE ASSESSMENT BODIES

(a) A language assessment body should provide clear information about its organisation and its relationships with other organisations.

(b) If a language assessment body is also an air traffic controller training organisation, there should be a clear and documented separation between the two activities.

(c) The language assessment body should employ a sufficient number of qualified interlocutors and language proficiency assessors to administer the required tests.

(d) The assessment documentation should include at least the following:

(1) assessment objectives;

(2) assessment layout, timescale, technologies used, assessment samples, voice samples;

(3) assessment criteria and standards (at least for the operational, extended and expert levels of the rating scale in Appendix 1 to Annex I of R-PEL-006);

(4) documentation demonstrating the assessment validity, relevance and reliability for the expert level;

(5) procedures to ensure that language assessments are standardised within the language assessment body and in the ATC community;

(6) assessment procedures and responsibilities, such as:

— preparation of individual assessment;

— administration: location(s), identity check and invigilation, assessment discipline, confidentiality/security;

— reporting and documentation provided to the SCAA and/or to the applicant, including sample certificate; and

— retention of documents and records.

(7) The assessment documentation and records should be kept for a period of time determined by the SCAA and made available to the SCAA upon request.

GM1 ATCO.B.040 Assessment of language proficiency

LANGUAGE PROFICIENCY ASSESSORS

(a) Persons responsible for language proficiency assessment should be either aviation specialists (e.g. current or former air traffic controllers) or language specialists with additional aviation- related training. The preferred approach for an assessment would be to form a team consisting of an operational expert and a language expert.

(b) Language proficiency assessors should be trained in the requirements specific to the language proficiency assessment, and assessment and interlocution techniques.

GM2 ATCO.B.040 Assessment of language proficiency

Further information can be found in the 'Manual on the Implementation of ICAO Language Proficiency Requirements' (ICAO Doc 9835) and the Language Testing Criteria for Global Harmonization (ICAO Cir 318 AN/180).

AMC1 ATCO.B.045 Language training

(a) Language training should contain communication in a job-related context particularly to handle abnormal and emergency situations and conduct non-routine coordination with colleagues, crews and technical staff.

(b) Emphasis should be placed on listening comprehension, speaking interaction and vocabulary building.

GM1 ATCO.B.045 Language training

While it is true that many licence holders regularly have prolonged and extensive opportunities to practise — and so to maintain — their language proficiency, it is also true that a purely routine use of the language through phraseology, standard procedures and limited social contact only maintains a restricted core usage of the language which might be quite inadequate for managing unexpected and abnormal situations.

Research shows that language proficiency erosion (language attrition) occurs rapidly over time; the lower the initial level, the faster the rate of erosion unless systematic strategies and a high degree of motivation counter this trend.

It is very well documented that one's language and communicative proficiency, even in one's native language, deteriorates sharply under stress, therefore, it is recommended that licence holders participate in available language training.

GM2 ATCO.B.045 Language training

Training for language proficiency skills may be delegated to language training organisations with knowledge in the field of aviation.

SUBPART C – REQUIREMENTS FOR INSTRUCTORS AND ASSESSORS

SECTION 1 – INSTRUCTORS

GM1 ATCO.C.001(b)(1) Theoretical instructors

QUALIFICATION OF THEORETICAL INSTRUCTORS

Professional qualification appropriate to the subject should ensure sufficient level of current knowledge, which is relevant to the subject and its application in air traffic control.

AMC1 ATCO.C.001(b)(2) Theoretical instructors

INSTRUCTIONAL SKILLS FOR THEORETICAL INSTRUCTORS

A satisfactory demonstration of instructional skills for theoretical instructors should establish competence at least in the following areas:

(a) lesson objectives are defined and communicated;

(b) subject questions are fully answered;

(c) visual aids are used appropriately;

(d) language is unambiguous;

(e) the lesson is correctly summarised; and

(f) lesson objectives are fulfilled.

GM1 ATCO.C.010(c) On-the-job training instructor (OJTI) privileges

SHORTENING OF THE RATING EXPERIENCE REQUIREMENT FOR OJTI

When assessing the training organisations' request for the shortening of the rating experience requirement for OJTIs, the SCAA will take into account the complexity of the traffic in the unit where the on-the-job instruction is provided, as well as the impact on the continuity and safety aspects of the service.

GM1 ATCO.C.015(b) Application for on-the-job training instructor endorsement

SHORTENING OF THE LICENCE EXPERIENCE REQUIREMENT FOR OJTI

When assessing the training organisations' request for the shortening of the licence experience requirement for OJTIs, the SCAA will take into account the complexity of the traffic in the unit where the on-the-job instruction is provided, as well as the impact on the continuity and safety aspects of the service.

GM1 ATCO.C.020(b) Validity of on-the-job training instructor endorsement

REVALIDATION

(a) Successful completion of the refresher training in practical instructional skills may be verified by several means, for example by:

  (1) dedicated or continuous assessment;

  (2) peer assessment; or

  (3) demonstration of the practical instructional skills.

(b) The verification should be undertaken following the completion of the refresher training.

AMC1 ATCO.C.025(a) Temporary OJTI authorisation

SAFETY ANALYSIS

The safety analysis should specify the reasons for which the relevant unit endorsement requirement provided for in R-PEL-006, ATCO.C.010(b)(2) cannot be met and how the equivalent level of safety will be ensured by other means.

GM1 ATCO.C.025(a) Temporary OJTI authorisation

EXCEPTIONAL SITUATIONS

Exceptional situations for which it may be considered not to be possible to comply with R-PEL-006, ATCO.C.010(b)(2) for the purpose of the valid unit endorsement experience, and, therefore, a temporary OJTI authorisation may be granted, are the following:

(a) establishment of a new ATC unit or new sector for the air navigation service provider;

(b) the continuity of the existing service is endangered due to the non-availability of personnel as a consequence of a change in the air navigation service provider at the ATC unit;

(c) new rating or rating endorsement put into operation at an ATC unit;

(d) reopening of a temporary ATC unit.

GM1 ATCO.C.030(a)(1) Synthetic training device instructor (STDI) privileges

SUBJECTS OF PRACTICAL NATURE

Subjects with objectives at taxonomy level 3 or higher, related to Air Traffic Management Basic (ATMB), are considered of practical nature during initial training.

GM1 ATCO.C.030(c)(1) Synthetic training device instructor (STDI) privileges

SHORTENING OF THE RATING EXPERIENCE REQUIREMENT FOR STDIs

When assessing a training organisation's request for the shortening of the rating experience requirement for STDIs, competent authorities should take into account the complexity of the training expected to be delivered by the potential STDI and the impact on the continuity of the provision of training.

GM1 ATCO.C.030(c)(3) Synthetic training device instructor (STDI) privileges

PROVISION OF TRAINING FOR SPECIFIC AND SELECTED OPERATIONAL TASKS

Some of the skills required for the two different procedural ratings, as well as for the two different surveillance ratings are the same or similar. Therefore, instruction not being specific for one rating or the training being for specific and selected operational tasks that do not require the learner to practise all the tasks which are normally associated with a fully operational environment, may be provided by an STDI that has at least 2 years of experience in a rating that requires similar skills.

GM1 ATCO.C.035(a) Application for synthetic training device instructor (STDI) endorsement

SHORTENING OF THE LICENCE EXPERIENCE REQUIREMENT FOR STDIs

When assessing a training organisation's request for the shortening of the licence experience requirement for STDIs, competent authorities should take into account the complexity of the training expected to be delivered by the potential STDI and the impact on the continuity of the provision of training.

GM1 ATCO.C.040(b) Validity of synthetic training device instructor endorsement

REVALIDATION

(a) Successful completion of the refresher training in practical instructional skills and current operational practices may be verified by several means, for example by:

(1) dedicated or continuous assessment;

(2) peer assessment; or

(3) demonstration of practical instructional skills.

(b) Current operational practices may be refreshed by transitional and pre-on-the-job training.

(c) The verification should be undertaken following the completion of the refresher training.

SECTION 2 – ASSESSORS

AMC1 ATCO.C.045(c)(2) Assessor privileges

DEMONSTRATION OF KNOWLEDGE OF CURRENT OPERATIONAL PRACTICES

The demonstration of knowledge of current operational practices may be achieved by establishing familiarity with current environment and operational procedures.

AMC1 ATCO.C.055(b) Application for Assessor Endorsement

(a) In addition to the requirements of ATCO.C.055(b), the air navigation service provider should ensure that all nominated assessors complete an internal assessor training prior to performing any assessment activities.

(b) The internal training should include, as a minimum:

— knowledge of the organisation's internal procedures, documentation, and quality assurance system relevant to assessment activities;

— understanding of the internal reporting, documentation, and record-keeping requirements for assessments;

(c) Upon completion of the internal training, an experienced assessor should evaluate the theoretical knowledge and practical assessment skills of the applicants to ensure their readiness to perform assessment duties independently.

GM1 ATCO.C.060(b) Validity of assessor endorsement

REVALIDATION

(a) Successful completion of the refresher training in assessment skills and current operational practices may be verified by several means, for example by:

(1) dedicated or continuous assessment;

(2) peer assessment; or

(3) demonstration of the assessment skills.

(b) Current operational practices may be refreshed by transitional and pre-on-the-job training.

(c) The verification should be undertaken following the completion of the refresher training.

GM1 ATCO.C.065(b) Temporary assessor authorisation

EXCEPTIONAL SITUATIONS

Exceptional situations for which it may be considered not to be possible to comply with R-PEL-006, ATCO.C.045(d)(1) for the purpose of the unit endorsement experience, and, therefore, a temporary assessor authorisation may be granted, are the following:

(a) establishment of a new ATC unit or new sector for the air navigation service provider;

(b) the continuity of the existing service is endangered due to the non-availability of personnel as a consequence of a change in the air navigation service provider at the ATC unit;

(c) new rating or rating endorsement put into operation at an ATC unit;

(d) reopening of a temporary ATC unit.

GM1 ATCO.C.065(c) Temporary assessor authorisation

INDEPENDENCE OF THE ASSESSMENT

In the case of units not having sufficient number of assessors or if the independence and objectivity of the assessment from the training process is otherwise endangered, a temporary assessor authorisation may be granted.

AMC1 ATCO.C.065(d) Temporary assessor authorisation

SAFETY ANALYSIS

The safety analysis should specify the reasons for which the relevant unit endorsement requirement provided for in R-PEL-006, ATCO.C.045(d)(1) cannot be met and how the equivalent level of safety will be ensured by other means.

For the purpose of ensuring the independence of the assessment for reasons of recurrent nature, the safety analysis performed could encompass the recurrent nature of the need to ensure the independence of the assessments from the training process and provide a basis for the issue of multiple temporary authorisations based on the same reason.

SUBPART D – AIR TRAFFIC CONTROLLER TRAINING

SECTION 1 – GENERAL REQUIREMENTS

AMC1 ATCO.D.005(a)(2) Types of air traffic controller training

UNIT TRAINING

Unit training should be undertaken by holders of student air traffic controllers licence or holders of air traffic controllers licence, as appropriate, for:

(a) the issue of an air traffic controller licence with a unit endorsement;

(b) the addition of a unit endorsement in an air traffic controller licence;

(c) the validation of a rating and rating endorsement, if applicable, in an existing licence;

(d) the addition of rating endorsement in an existing licence; and

(e) the renewal of an expired, suspended or revoked unit endorsement, where applicable.

GM1 ATCO.D.005(a)(2)(ii) Types of air traffic controller training

ON-THE-JOB TRAINING

(a) On-the-job training may be supplemented for pedagogical reasons by theoretical instructions and computer-based training, part-task trainers or any type of simulators aiming at increasing knowledge, understanding and application of local procedures.

(b) Hours accumulated using these training tools and methods during this phase cannot be counted towards the minimum duration of on-the-job training established in accordance with AMC1 ATCO.D.055(b)(6), with the exception of training for procedures unlikely to be encountered in the operational environment during the training.

SECTION 2 - INITIAL TRAINING REQUIREMENTS

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

GENERAL

[Please find the link to the concerned AMC here]

AMC2 ATCO.D.010(a)(1) Composition of initial training

BASIC TRAINING —TRAINING OBJECTIVES

[Please find the link to the AMC here]

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

AERODROME CONTROL INSTRUMENT RATING FOR TOWER ADC TRAINING —TRAINING OBJECTIVES

[Please find the link to the AMC here]

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

APPROACH CONTROL PROCEDURAL RATING (APP) TRAINING —TRAINING OBJECTIVES

[Please find the link to the concerned AMC here]

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

AREA CONTROL PROCEDURAL RATING (ACP) TRAINING —TRAINING OBJECTIVES

[Please find the link to the concerned AMC here]

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

APPROACH CONTROL SURVEILLANCE RATING (APS) TRAINING —TRAINING OBJECTIVES

[Please find the link to the concerned AMC here]

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

AREA CONTROL SURVEILLANCE RATING (ACS) TRAINING —TRAINING OBJECTIVES

[Please find the link to the concerned AMC here]

GM1 ATCO.D.010 Composition of initial training

GENERAL

(a) Initial training consists of basic training which is common to all applicants and rating training of which there are six different rating syllabi.

(b) Rating training may be commenced before the completion of the basic training.

(c) If an applicant already holds a student air traffic controller licence or an air traffic controller licence, and there is a requirement for training to achieve an additional rating (and, if relevant, rating endorsement), the applicant should not repeat the basic training objectives; however, there is a requirement to achieve the objectives contained within the relevant rating training plus any additional objectives specific to the local or national environment.

GM1 ATCO.D.020(d) Basic and rating training courses

CERTIFICATE OF COMPLETION OF INITIAL TRAINING

The certificate of completion may take any form and title and may cover multiple candidates.

AMC1 ATCO.D.040 Rating training performance objectives

GENERAL

Training organisations should define the detailed performance objectives for each rating training course, as well as the training scenario.

SECTION 3 - UNIT TRAINING REQUIREMENTS

GM1 ATCO.D.045(a) Composition of unit training

If an applicant undertakes unit endorsement training, and there is a requirement for training to achieve an additional unit endorsement, the applicant should not repeat the training objectives covered in the first unit endorsement training; however, the objectives of the additional unit endorsement course(s) should be achieved.

AMC1 ATCO.D.045(c)(3) Composition of unit training

ABNORMAL AND EMERGENCY SITUATIONS

(a) Training for all identified abnormal and emergency situations should primarily take place on synthetic training devices.

(b) Training organisations should develop performance objectives for the abnormal and emergency situation training.

(c) Where a low safety risk for the ATC service provision has been identified and agreed by the SCAA, training in abnormal and emergency situations may take place by means other than synthetic training devices.

(d) If the pre-on-the-job training phase is not provided, the abnormal and emergency situation training should be scenario-based and as realistic as possible while maintaining operational safety.

(e) Checklists for abnormal and emergency situations used in operations should be made available to the applicant and be available at all times during scenario training.

AMC1 ATCO.D.045(c)(4) Composition of unit training

HUMAN FACTORS

(a) Training organisations should train the applicant during on-the-job training in team resource management, fatigue management and stress management.

(b) Training organisations should develop performance objectives for the team resource management training.

(c) The team resource management training may also make use of synthetic training devices.

(d) Training organisations should develop training objectives for the fatigue management and stress management training.

AMC2 ATCO.D.045(c)(4) Composition of unit training

HUMAN FACTORS TRAINING

Human factors training should include, as a minimum, the following topics and related objectives:

(a) Basic needs of people at work

  (1) List the basic needs of people at work.

  (2) Characterise the factors for work satisfaction.

(b) Human performance

  (1) Describe the impact of responsibility on an air traffic controller’s actions.

  (2) Recognise the different responsibilities of an air traffic controller.

(c) Work environment

  (1) Explain the reasons for automation.

  (2) Describe the advantages and constraints of automation.

(d) Team resource management (TRM)

(1) Explain the relevance of TRM.

(2) Describe the content of the TRM concept.

(e) Stress and fatigue management

(1) Describe the fatigue and stress management policy(ies) in force (at the ATS unit).

(2) Explain the procedure(s) in force for air traffic controllers to report stress and fatigue (at the ATS unit).

(3) Consider the benefits of critical incident stress management (CISM).

(f) Human error

(1) Describe the impact an occurrence/incident may have on an air traffic controller.

(2) Explain the causes and dangers of violation of rules becoming accepted as common practice.

GM1 ATCO.D.055(a) Unit training plan

UNIT TRAINING PLAN FOR A REMOTE TOWER CENTRE

For the purpose of establishing a unit training plan, a ‘remote tower centre’ (RTC) may be considered as one Air Traffic Control (ATC) unit.

The unit training plan of an RTC should include the list of the unit endorsement courses for all aerodromes which the RTC is providing service to.

GM1 ATCO.D.055(b)(5) Unit training plan

TRAINING METHODS

Training organisations should consider a variety of methods when conducting training leading to a unit endorsement. Although this list is not exhaustive, such methods could be:

— on-the-job;
— lecture;
— lesson/demonstration;
— case study;
— computer-based practical exercise;
— exercise;
— facilitation;
— group work;
— hands-on;
— interactive training;
— supervised practices;
— part-task practice;
— individual simulation;
— team simulation;
— group simulation;
— briefing/debriefing;
— structured briefing;
— structured debriefing;
— virtual classroom;
— role play;
— skill acquisition;
— self-study;
— self-test;

— resilience training.

AMC1 ATCO.D.055(b)(6) Unit training plan

DURATION OF UNIT ENDORSEMENT COURSES

(a) The on-the-job training instruction as part of the unit endorsement course should be at least of the duration specified in Annex 1 to the Chicago Convention, Sections 4.5.2.2.1(b) and (c) and 4.5.2.2.3.

(b) Notwithstanding point (a), the minimum duration of the on-the-job training instruction for the surveillance radar approach rating endorsement may be partly substituted by utilising a simulator, if approved by the SCAA.

(c) The approach precision radar control rating in Annex 1 to the Chicago Convention.

(d) The inclusion of surveillance radar approach duties in the privileges of the approach control surveillance rating in Annex 1 to the Chicago Convention, Section 4.5.2.2.1(c).

GM1 ATCO.D.055(b)(7) Unit training planR-PEL-006

ADAPTING THE UNIT ENDORSEMENT COURSE(S)

When an applicant already holds the same rating for another unit, the training organisation may determine whether the unit endorsement course can be reduced, and if so, to what extent.R-PEL-006

AMC1 ATCO.D.055(b)(14) Unit training plan

DESIRABLE BEHAVIOURS FOR ABNORMAL AND EMERGENCY SITUATIONS

(a) Training organisations should establish desirable behaviours for the identified abnormal and emergency situations and associate them with established procedures.

(b) Desirable behaviours of the applicants in case of abnormal or emergency situations may be of technical or non-technical nature.

AMC1 ATCO.D.060(c) Unit endorsement course

UNIT ENDORSEMENT COURSE IN UNITS THAT PROVIDE GROUND MOVEMENT SURVEILLANCE CONTROL

The training for the provision of ground movement control with the support of aerodrome surface movement guidance systems should be included in the unit endorsement course.

AMC2 ATCO.D.060(c) Unit endorsement course

UNIT ENDORSEMENT COURSE IN UNITS THAT PROVIDE TERMINAL CONTROL

The training for the provision of air traffic control (ATC) services with the use of any surveillance equipment to aircraft that operate in a specified terminal area and/or adjacent sectors should be included in the unit endorsement course. For area control surveillance (ACS) rating holders, the training should include objectives of initial training for the approach control surveillance (APS) rating related to terminal control.

GM1 ATCO.D.060(c) Unit endorsement course

PERFORMANCE OBJECTIVES FOR AIR TRAFFIC CONTROLLERS PROVIDING SERVICES TO AIRCRAFT CARRYING OUT FLIGHT TESTS

The performance objectives for air traffic controllers providing air traffic control services to aircraft carrying out flight tests should ensure that applicants manage the workload and provide air traffic

services and apply specific ATC procedures to aircraft carrying out flight tests within a defined aerodrome, approach control and/or area control area of responsibility.

GM2 ATCO.D.060(c) Unit endorsement course

ADDITIONAL TRAINING FOR AIR TRAFFIC CONTROLLERS PROVIDING SERVICES TO AIRCRAFT CARRYING OUT FLIGHT TESTS

In accordance with R-PEL-006, ATCO.B.020(d), the unit endorsement course for air traffic controllers providing air traffic control services to aircraft carrying out flight tests may include the following subjects, subject objectives, topics and subtopics:

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 INTRO 1 — COURSE MANAGEMENT

Subtopic INTRO 1.1 — Course introduction

Subtopic INTRO 1.2 — Course administration

Subtopic INTRO 1.3 — Study material and training documentation

TOPIC INTRO 2 — INTRODUCTION TO THE ATC TRAINING COURSE

Subtopic INTR 2.1 — Course content and organisation

Subtopic INTR 2.2 — Training ethos

Subtopic INTR 2.3 — Assessment process

Subject 2: SCOPE OF FLIGHT TESTING

The subject objective is:

Learners shall understand the purpose of flight testing and integrate airworthiness issues in the provision of ATS to flight tests.

TOPIC FT 1 — AIRWORTHINESS REQUIREMENTS

Subtopic FT 1.1 — Airworthiness codes

Subtopic FT 1.2 — Flight test guide for CS aircrafts

Subtopic FT 1.3 — Prototypes and concept aircrafts

TOPIC FT 2 TEST AND ACCEPTANCE TRAFFIC ASPECTS

Subtopic FT 2.1 — Performance flight testing methods

Subtopic FT 2.2 — Handling qualities testing methods

Subtopic FT 2.3 — Systems, CNS and on-board safety systems testing methods

Subject 3: REGULATIONS AND EXEMPTIONS

The subject objective is:

Learners shall know, understand and apply the rules of the air and ATM regulations, and the principles of exemptions regarding the needs of flight test, and also take into account licensing and competence principles.

TOPIC REG 1 — ATC LICENSING/CERTIFICATE OF COMPETENCE

Subtopic REG 1.1 — Privileges and conditions

TOPIC REG 2 — EXEMPTIONS REGARDING ATM REGULATIONS

Subtopic REG 2.1 — ICAO annexes and rules of the air

Subtopic REG 2.2 — ATM regulations regarding airspace

Subtopic REG 2.3 — Airworthiness

Subtopic REG 2.4 — Flight test exemptions

Subject 4: AIRCRAFT ENVIRONMENT

The subject objective is:

Learners shall know the theory of flight, aircraft subsystems and integrate aircraft performances, limitations and handling qualities in the provision of ATS to flight tests.

TOPIC ACFT 1 — AIRCRAFT FLIGHT DYNAMICS

Subtopic ACFT 1.1 — Aircraft control and movement

Subtopic ACFT 1.2 — Performance testing

Subtopic ACFT 1.3 — Handling qualities

Subtopic ACFT 1.4 — Aero-elastic/Flutter stability

Subtopic ACFT 1.5 — Flight envelope

Subtopic ACFT 1.6 — Helicopter specific dynamics

TOPIC ACFT 2 — AIRCRAFT ENGINES

Subtopic ACFT 2.1 — The piston engine

Subtopic ACFT 2.2 — The turboshaft engine

Subtopic ACFT 2.3 — Jet and turbofan

TOPIC ACFT 3 — AIRCRAFT SYSTEMS

Subtopic ACFT 3.1 — Flight control systems

Subtopic ACFT 3.2 — Safety systems

Subtopic ACFT 3.3 — Communication and navigation systems

Subject 5: FLIGHT TESTING AIR TRAFFIC MANAGEMENT

The subject objective is:

Learners shall manage air traffic in complete safety, with methods to ensure a satisfactory rate of success regarding flight testing.

TOPIC FTATM 1 — AIR TRAFFIC SERVICES AND AIRSPACE MANAGEMENT

Subtopic FTATM 1.1 — Air traffic control (ATC) service

Subtopic FTATM 1.2 — Flight information service (FIS)

Subtopic FTATM 1.3 — Alerting service

TOPIC FTATM 2 — EXEMPTIONS DUE TO TESTING DEMONSTRATIONS

Subtopic FTATM 2.1 — Demonstration of compliance with airworthiness regulations

Subtopic FTATM 2.2 — Flight test for evaluation of an aircraft

Subtopic FTATM 2.3 — Flight test for evaluation of an aircraft subsystem

TOPIC FTATM 3 — FLIGHT TEST METHODS IN AERODROME CONTROL AREA

Subtopic FTATM 3.1 — Velocity of minimum control on ground

Subtopic FTATM 3.2 — Velocity of minimum unstick

Subtopic FTATM 3.3 — Lapse rate take-off

Subtopic FTATM 3.4 — Rejected take-off

Subtopic FTATM 3.5 — Tower fly-by method

Subtopic FTATM 3.6 — Hover manoeuvre methods

Subtopic FTATM 3.7 — Landing performances testing methods

Subtopic FTATM 3.8 — Other flight testing manoeuvres

TOPIC FTATM 4 — FLIGHT TEST METHODS IN APPROACH CONTROL AREA AND IN AREA CONTROL

Subtopic FTATM 4.1 — Velocity of minimum control in the air/Stalls

Subtopic FTATM 4.2 — Tuning of flight controls protections

Subtopic FTATM 4.3 — Autopilot tuning

Subtopic FTATM 4.4 — Wind milling/RAM air turbine/Engine relights

Subtopic FTATM 4.5 — Trailing pitot static method

Subtopic FTATM 4.6 — Lateral and longitudinal stability flights

Subtopic FTATM 4.7 — Flight in specific meteorological conditions

Subtopic FTATM 4.8 — Supersonic flights

Subtopic FTATM 4.9 — Other flight testing various manoeuvres

Subject 6: HUMAN FACTORS

The subject objective is:

Learners shall recognise the necessity to constantly consider the specific human factors influence on tests activity management.

TOPIC HUM 1 — CUSTOMERS RELATIONS AND ORGANISATION

Subtopic HUM 1.1 — Stress

Subtopic HUM 1.2 — Responsible behaviour

Subtopic HUM 1.3 — Violation of rules

TOPIC HUM 2 — FLIGHT TEST WORKING METHODS

Subtopic HUM 2.1 — Collaborative work within the same area of responsibility

Subtopic HUM 2.2 — Collaborative work between different areas of responsibility

Subtopic HUM 2.3 — FT-ATCO/CREW cooperation

Subtopic HUM 2.4 — Communication

TOPIC HUM 3 — FLIGHT TEST SAFETY CONSOLIDATION

Subtopic HUM 3.1 — Safety risk assessment

Subtopic HUM 3.2 — Experience feedback

Subtopic HUM 3.3 — Unusual/Degraded/Emergency situations

Subtopic HUM 3.4 — Safety Investigation Branch

Subject 7: METEOROLOGY

The subject objective is:

Learners shall acquire, decode and make proper use of meteorological information relevant to the airworthiness issues and the safe provision of ATS to flight tests.

TOPIC MTO 1 — METEOROLOGICAL AND AIRWORTHINESS CONCERNS

Subtopic MTO 1.1 — Airworthiness meteorological requirements

Subtopic MTO 1.2 — Demonstrator flights carrying specific test equipment

Subtopic MTO 1.3 — Phases with specific weather conditions (icing, wind, volcano, etc.)

GM3 ATCO.D.060(c) Unit endorsement course

TRAINING FOR AIR TRAFFIC CONTROLLERS PROVIDING REMOTE AERODROME AIR TRAFFIC SERVICES

The unit endorsement course should enable air traffic controllers providing aerodrome control service from a ‘remote tower’ to acquire knowledge of the concept of remote aerodrome air traffic services and of the characteristics of the operating environment, to appreciate the necessity to consider the specific human factors influence on the remote aerodrome air traffic services, as well as to recognise specific abnormal situations and to manage their impact.

This could be achieved by addressing the following items:

- Introduction to remote aerodrome air traffic services
  - Concept of remote aerodrome air traffic services;
  - ‘Remote tower modules’ (RTMs);
  - ‘Remote tower centre’ (RTC);
  - Technical enablers used for remote aerodrome air traffic services; and
  - Operational applications.
- Operating environment
  - Configuration of the RTM and RTC (if applicable) and modes of operation
  - ‘Visual presentation’ at the RTM, for example:
    - layout and orientation;
    - technical capabilities and limitations of a ‘visual surveillance system’, including among others:
      - impact of weather conditions on site the aerodrome;
      - end-to-end delay;
      - frame rate,
      - any differences in light conditions between the aerodrome and the visual presentation;
      - ‘dead’ pixels;
      - any overlaid information and any site-specific equipment/functions such as sun filters; and

  - seasonal settings.
- Set-up and characteristics of the local equipment at the aerodrome, e.g. location of cameras, signalling lamp, etc.
- Familiarisation with the physical aerodrome(s) environment and the different local stakeholders via study visit(s)
- Local weather characteristics

- Human factors aspects
  - Human factors influence on remote aerodrome air traffic services

    Factors that can generate fatigue in a 'remote tower' environment, for example:
    - eye strain caused by the performance of the visual presentation or by contrast in lighting against the background;
    - artificial light and/or lack of daylight in the RTM); and
    - preventing and mitigating strategies on fatigue.
- Procedures for degraded modes, for example:
  - Complete or partial loss of the visual presentation
  - Corrupt, delayed or frozen image
  - Loss or degradation of the 'binocular functionality'.

GM4 ATCO.D.060(c) Unit endorsement course

MULTIPLE MODE OF OPERATION

When performing 'multiple mode of operation', in addition to GM3 ATCO.D.060(c), the following items should also be considered:

- Use of communication facilities (e.g. aeronautical mobile service, aeronautical fixed service and surface movement control service) for simultaneous provision of air traffic services in geographically separated areas of responsibility
- Applicable procedures for traffic management, such as traffic prioritisation, enabling multiple mode of operation
- Procedures for prioritising between aerodromes
- Procedures for the transferring/merging/splitting of aerodromes in an RTM
- Different weather and light conditions at different aerodromes
- Human capabilities/limitations with regard to the simultaneous handling of more than one aerodrome and distribution of attention

GM1 ATCO.D.060(d);(e) Unit endorsement course

TRAINING FOR RATING ENDORSEMENTS

Training for rating endorsement(s) as part of the unit endorsement course may be delegated to training organisations certified for initial training.

GM1 ATCO.D.065 Demonstration of theoretical knowledge and understanding

METHODS OF EXAMINATION

(a) Oral examinations and/or written/computer-based examinations should be used to demonstrate the controller's knowledge and understanding.

(1) Oral examinations

The oral examination is used to test the understanding of applicable techniques and the rules governing them, particularly of unit and national air traffic control procedures. Scenario-type questioning allows examiners to gather additional evidence of how an applicant would react in circumstances that are not observable, but are nevertheless considered important to the overall operation at that ATC unit.

Oral examinations will give a clear indication that the persons undertaking training know not only what they should be doing, but why they should be doing it. The oral examination requires considerable skills and it should be undertaken in a way to ensure consistency among individual examiners.

(2) Written examinations

The written examination is used to test theoretical knowledge and to a lesser degree the understanding of applicable techniques and the rules governing them, particularly of unit and national air traffic control procedures. It is easier to administer and to ensure the consistency of written examinations particularly when using multiple-choice questioning. Although multiple-choice questioning can test knowledge, it is not appropriate for determining what a controller would do in a particular operational situation.

Written examinations can also be computer-based.

(b) The most comprehensive method of testing the understanding of the person undertaking training, contrary to their possession of pure knowledge, would be a combination of written examinations that assess the knowledge of unit and national procedures, together with a separate oral examination which tests the understanding and reactions to operational situations.

GM1 ATCO.D.070 Assessments during unit endorsement courses

(a) DEDICATED ASSESSMENTS

(1) A dedicated assessment should be carried out for the issue or renewal of a unit endorsement.

(2) A dedicated assessment may consist of a single assessment or a series of assessments, as detailed in the unit training plan.

(3) To conduct a dedicated assessment, the assessor(s) should sit with the applicant with the purpose of observing the quality and assessing the standard of work being carried out and, if also acting as OJTI at the same time, to maintain a safe, orderly and expeditious flow of air traffic.

(4) The applicant concerned should be briefed on the conduct of the assessment.

(5) For those situations where an applicant's performance cannot be observed at the time of the assessment (e.g. low visibility operations, snow clearing, military activity, etc.), the assessment may be supplemented by synthetic training device sessions and oral examination.

(6) Dedicated assessments may also be conducted at any stage of training as detailed in the unit training plan, where a more definitive measure of the progress is required, for example after 50 hours of practical training.

(b) CONTINUOUS ASSESSMENT

(1) Continuous assessment may be performed by the assessor observing the standard of the air traffic control service provided by those whose competence he/she will certify as he/she works with them during unit training or normal operational duties.

(2) In cases where the assessors have not had sufficient contact with the applicant to adequately assess his/her performance, they will not certify the applicant's competence until they have conducted a dedicated practical assessment. The applicant concerned must be advised that a dedicated practical assessment is to be conducted.

(c) ORAL EXAMINATION

(1) The oral examination is used to test the understanding of applicable techniques and the rules governing them, particularly of unit and national air traffic control procedures. Scenario-type questioning allows the examiners to gather additional evidence of how an applicant would react in circumstances that are not observable, but are nevertheless considered important to the overall operation at that ATC unit.

(2) The oral examination will give a clear indication that the applicant knows not only what he/she should be doing, but why he/she should be doing it. It requires considerable skills and it should be undertaken in a way to ensure consistency among individual examiners.

SECTION 4 - CONTINUATION TRAINING REQUIREMENTS

AMC1 ATCO.D.080 Refresher training

EXAMINATIONS AND ASSESSMENTS

Refresher topics should be examined or assessed using the processes described in the unit competence scheme.

GM1 ATCO.D.080 Refresher training

REFRESHER TRAINING SUBJECTS

Topics for refresher training subjects may include rarely used procedures and practices, such as seasonally dependent procedures, trends and observations from occurrence reports and results of normal operations safety surveys.

GM2 ATCO.D.080 Refresher training

REFRESHER TRAINING STRUCTURE

Refresher training may be developed and structured in accordance with the established duration of the unit endorsement it refreshes. This may mean structuring the refresher training in modular fashion. For instance, training in standard practices and procedures, abnormal and emergency situations and human factors may be given separately or integrated into any other modules.

GM1 ATCO.D.080(b) Refresher training

REFRESHER TRAINING FOR AIR TRAFFIC CONTROLLERS PROVIDING REMOTE AERODROME AIR TRAFFIC SERVICES

For air traffic controllers holding a unit endorsement for the provision of aerodrome control service from a 'remote tower', the refresher training should include familiarisation with the physical

aerodrome environment and the different stakeholders e.g. via study visit(s).

AMC1 ATCO.D.080(b)(1);(2) Refresher training

PHRASEOLOGY TRAINING

Training organisations should develop objectives for phraseology.

AMC2 ATCO.D.080(b)(2) Refresher training

ABNORMAL SITUATION AND EMERGENCY TRAINING

Abnormal situation and emergency training should be designed to expose air traffic controllers to circumstances and situations which they do not habitually or commonly experience.

The essential difference from an emergency situation is that the element of danger or serious risk is not necessarily present in an abnormal situation.

GM1 ATCO.D.080(b)(1);(2) Refresher training

EFFECTIVE COMMUNICATION

Communication misunderstanding is present in many air traffic occurrences and the consistent use of approved phraseology is designed to mitigate such occurrences.

For the purpose of refresher training, emphasis is, therefore, put on effective communication, including the use of approved phraseology, both for the use of standard practices and procedures and for abnormal and emergency situations training.

Effective communication should make use of a variety of communication modes, including the use of appropriate phraseology and radio communication.

Phraseology and radio communication training is part of the linguistic training according to ICAO; radio communication phraseology samples offer learning opportunities and foster harmonisation.

AMC1 ATCO.D.080(b)(3) Refresher training

HUMAN FACTORS

(a) Training organisations should train air traffic controllers at least in team resource management, fatigue management and stress management.

(b) The team resource management training may also make use of STD and/or occurrence case studies.

GM1 ATCO.D.085 Conversion training

CONVERSION TRAINING FOR AIR TRAFFIC CONTROLLERS PROVIDING REMOTE AERODROME AIR TRAFFIC SERVICES

In case of a transition from a ‘conventional tower’ to a ‘remote tower’, the conversion training for air traffic controllers should at least include the items listed in GM3 ATCO.D.060(c), and if applicable the items listed in GM4 ATCO.D.060(c).

In case of a transition from a ‘remote tower’ to a ‘conventional tower’, the training organisation should consider possible training needs, if appropriate, required by the change of operational environment.

In case of a transition from ‘single mode of operation’ to ‘multiple mode of operation’, the conversion training for air traffic controllers should at least include the items listed in GM4 ATCO.D.060(c).

SECTION 5 - TRAINING OF INSTRUCTORS AND ASSESSORS

AMC1 ATCO.D.090(a)(1) Training of practical instructors

SYNTHETIC TRAINING DEVICES USED FOR OJTI TRAINING

For the training of on-the-job training instructors, a part-task trainer or a simulator should be used.

If the synthetic training environment does not correspond to the rating of the intended instructional environment, the applicant should practise the instructional skills in those procedures in which it is intended to provide instruction for at least one day before being assessed.

AMC2 ATCO.D.090(a)(1) Training of practical instructors

ASSESSMENT OF INSTRUCTIONAL TECHNIQUES FOR PRACTICAL INSTRUCTORS

A successful assessment of instructional techniques for practical instructors should establish competence at least in the following areas:

(a) regulatory impact on air traffic controller training;

(b) human factors impact on air traffic controller training;

(c) determination of the background and experience of the person undertaking training;

(d) determination of the current level of ability of the person undertaking training;

(e) conduct of a pre-session briefing;

(f) planning and conduct of the training session;

(g) demonstration and explanation of the tasks;

(h) monitoring of the training session;

(i) management of interventions correctly, including error correction;

(j) evaluation of the performance of the person undertaking training;

(k) debrief of the person undertaking training;

(l) furnishing of written reports on the performance of the person undertaking training;

(m) taking appropriate follow-up action towards resolving training problems;

(n) techniques of pausing clocks; and

(o) knowledge of technical facilities/environment.

AMC1 ATCO.D.090(a)(2) Training of practical instructors

REFRESHER TRAINING IN PRACTICAL INSTRUCTIONAL SKILLS

Refresher training in practical instructional skills should prevent knowledge and skills erosion, and, for the training of STDIs, it should be designed to maintain awareness of the current operational practices.

AMC1 ATCO.D.090(a)(3) Training of practical instructors

PRACTICAL INSTRUCTOR COMPETENCE ASSESSMENT

The practical instructor competence assessment for an OJTI may be undertaken either in live operations or on a synthetic training device.

The practical instructor competence assessment for an STDI should be undertaken on a synthetic

training device.

AMC1 ATCO.D.095(a)(1) Training of assessors

ASSESSOR TRAINING COURSE

A successful assessment for the purpose of the assessor training course should establish competence at least in the following areas of assessment knowledge and techniques:

(a) regulatory environment and legal obligations;

(b) types of assessment and their application;

(c) performance objectives constituting air traffic controller competence;

(d) conditions of assessments to create reliable results;

(e) processing of assessments and administrative procedures;

(f) giving verbal feedback and writing assessment reports;

(g) vested interests and code of conduct;

(h) accurately assessing competence against the performance objectives;

(i) developing a good questioning technique and designing questions appropriate to the assessment.

AMC2 ATCO.D.095(a)(1) Training of assessors

ASSESSMENT OF ASSESSOR COMPETENCE

The assessment of assessor competence should focus on the application of the skills of an assessor. The skills should represent at least a subset of the competences taught during the assessor training course.

AMC1 ATCO.D.095(a)(2) Training of assessors

REFRESHER TRAINING IN ASSESSMENT SKILLS

Refresher training in assessment skills should prevent knowledge and skills erosion and it should be designed to maintain skills in assessment techniques and awareness of the regulatory environment.

GM1 ATCO.D.095(a)(3) Training of assessors

ASSESSMENT OF ASSESSOR COMPETENCE

The level of harmonisation on competence assessment is low as a result of the variety of methods. Any assessment of assessor competence should be realistic and it could take place during live traffic situations or during training.

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ANNEX II (PART ATCO.AR) – REQUIREMENTS FOR THE STATE CIVIL AVIATION AGENCY

SUBPART A – GENERAL REQUIREMENTS

GM1 ATCO.AR.A.005(c) Personnel

GENERAL

When SCAA personnel is authorised to conduct assessments for the issue and renewal of a unit endorsement who:

(a) do not hold the unit endorsement associated with the assessment, or

(b) hold the unit endorsement associated with the assessment without an OJTI endorsement, an OJTI holding the valid unit endorsement associated with the assessment should be present to ensure supervision on the operational working position.

AMC1 ATCO.AR.A.015(d)(3) Means of compliance

Reserved

GM1 ATCO.AR.A.015 (b) Means of compliance

Reserved

GM1 ATCO.AR.A.020(b) Information to the Agency

MEANING OF SAFETY-SIGNIFICANT INFORMATION STEMMING FROM OCCURRENCE REPORTS

The following should be considered safety-significant information from occurrence reports:

(a) conclusive safety analyses that summarise individual occurrence data and provide an in-depth assessment of the safety issue. These safety analyses can be used for SCAA rulemaking or for safety promotion activities; and

(b) individual occurrence data.

SUBPART B – MANAGEMENT

AMC1 ATCO.AR.B.001(a)(2) Management system

TRAINING PROGRAMME AND RECURRENT TRAINING

(a) The SCAA should establish a training programme for its personnel and a plan for its implementation. The training programme should include, as appropriate to the role, current knowledge, experience and skills of the personnel, at least the following:

(1) organisation and structure of the aviation legislation;

(2) the Chicago Convention, its relevant annexes and documents, the applicable requirements of R-PEL-006, Certification Specifications and Guidance Material, as well as assessment methodology of the alternative means of compliance and the applicable national legislation;

(3) the applicable requirements and procedures; and

(4) areas of particular interest.

(b) The training programme and plan should be updated, as needed, to reflect, at least, changes in aviation legislation and industry. The training programme should also cover the specific needs of the personnel and the SCAA.

(c) The SCAA should ensure that its personnel, including its ATM/ANS inspectors, receive recurrent training at regular intervals as defined by the SCAA or whenever deemed necessary, in order to be kept up to date.

GM1 ATCO.AR.B.015 Record keeping

STORAGE

Records may be stored electronically.

GM1 ATCO.AR.B.015(b)(5) Record keeping

DETAILS OF COURSES

Details of courses provided by training organisations may consist of subjects, subject objectives, topics and subtopics, where applicable.

SUBPART C – OVERSIGHT AND ENFORCEMENT

AMC1 ATCO.AR.C.005 Oversight programme

AUDIT AND INSPECTION

(a) The audit and inspection of a certified training organisation should be conducted through checking of the facility for compliance, interviewing personnel and sampling relevant training courses to assess their conduct and standard.

(b) Such audit and inspection should focus in addition to the items of AMC1 ATCO.AR.E.001(a) on:

(1) information on the competence of instructors and assessors;

(2) evidence of sufficient funding;

(3) adequacy of the facilities to the courses being conducted and to the number of persons undertaking training;

(4) synthetic training devices;

(5) documentation, in particular documents related to courses, information on the updating system, training and operations manual;

(6) training records and forms.

SUBPART D – ISSUE, REVALIDATION, RENEWAL, SUSPENSION AND REVOCATION OF LICENCES, RATINGS, ENDORSEMENTS AND AUTHORISATIONS

AMC1 ATCO.AR.D.001(a) Procedure for the issue, revalidation and renewal of licences, ratings, endorsements and authorisations

PROCEDURES

The SCAA may develop procedures to allow privileges to be exercised by the licence holder for a maximum period of eight weeks after successful completion of the applicable examination(s) and assessment(s), pending the issue of the licence, rating or endorsement.

Such procedures may cover licences, ratings and endorsements, but not the temporary authorisations.

GM1 ATCO.AR.D.001(a) Procedure for the issue, revalidation and renewal of licences, ratings, endorsements and authorisations

APPLICATION FOR THE ISSUE, REVALIDATION AND RENEWAL OF LICENCES, RATINGS, ENDORSEMENTS AND AUTHORISATIONS

Application for the issue, revalidation and renewal of licences, ratings, endorsements and authorisations together with all relevant certificates and/or documents supporting the application might be submitted by secure electronic means.

GM1 ATCO.AR.D.001(b) Procedure for the issue, revalidation and renewal of licences, ratings, endorsements and authorisations

DATE OF SUCCESSFUL COMPLETION OF THE TRAINING

The date of successful completion of the training relevant to the rating and/or rating endorsement to be included in the (Student) ATCO Licence should be the date indicated in the certificate of successful completion of the relevant training issued by the training organisation.

GM1 ATCO.AR.D.001(c) Procedure for the issue, revalidation and renewal of licences, ratings, endorsements and authorisations

FORMAT FOR LICENCES (APPENDIX I TO ANNEX II)

The SCAA may enter into point (XIII) of the licence format all additional licensing information, such as national licence endorsements.

GM1 ATCO.AR.D.001(d) Procedure for the issue, revalidation and renewal of licences, ratings, endorsements and authorisations

UNIQUE DATE OF VALIDITY FOR ENDORSEMENTS

The procedure for establishing a unique date of validity for several endorsements should be applied when requested by the air navigation service provider or the applicant.

GM1 ATCO.AR.D.001(e) Procedure for the issue, revalidation and renewal of licences, ratings, endorsements and authorisations

ADMINISTRATIVE REASONS

For the purpose of issuing a new licence, administrative reasons may be the following but are not limited to:

(a) loss;

(b) theft;

(c) significant damage leading to illegibility.

GM1 ATCO.AR.D.005 Revocation and suspension of licences, ratings and endorsements

EXAMINATIONS AND ASSESSMENTS

Examinations and assessments conducted by an assessor, during suspension or after the revocation of his/her assessor endorsement or by an OJTI or an STDI during suspension or after revocation of his/her OJTI or STDI endorsement respectively, should be invalid.

SUBPART E – CERTIFICATION PROCEDURE FOR AIR TRAFFIC CONTROLLER TRAINING ORGANISATIONS

AMC1 ATCO.AR.E.001(a); (b) Certification procedure for training organisations and issue of certificates

VERIFICATION OF COMPLIANCE

(a) The SCAA should verify the applicant's compliance through an audit of the organisation, including interviews of personnel and inspections carried out at the organisation's facilities.

(b) The SCAA should only conduct such audit after being satisfied that the application for a certificate complies with the applicable requirements.

(c) The audit should include but should not be limited to the following areas:

(1) detailed management structure, including names and qualifications of personnel required by point ATCO.OR.C.010, adequacy of the organisation and management structure; R-PEL-006

(2) adequacy of number and qualifications of personnel;

(3) safety management and compliance monitoring with applicable requirements;

(4) adequacy of the facilities with regard to the organisation's scope of training;

(5) documentation on the basis of which the certificate shall be granted (organisation documentation as required by R-PEL-006 Annex III (Part ATCO.OR), including manuals, training plans and course documentation).

(d) In case of non-compliance, the applicant should be informed in writing of the corrections required.

GM1 ATCO.AR.E.001(e) Certification procedure for training organisations and issue of certificates

REMARKS TO THE CERTIFICATE

Remarks in the attachment to the ATCO training organisation certificates may, as appropriate, be related to:

(a) sites where the initial training is to be provided, if different from the principal place of the operation;

(b) provision of information reasonably required for the verification of the continuous compliance with the applicable requirements;

(c) contracts, agreements or other arrangements concluded between the training organisation and a third party, and which concern the training to be provided;

(a) any possible (legal) conditions, which are not specific to the training to be provided, etc.

AMC1 ATCO.AR.E.010 Changes to the training organisations

GENERAL

(a) The SCAA should be informed of any changes to personnel specified in R-PEL-006, Annex III (Part ATCO.OR) that may affect the certificate or the training approval attached to it.

(b) A simple management system documentation system status sheet should be maintained, which contains information on when an amendment was received by the SCAA and when it was approved.

(c) The SCAA should receive from the organisation each management system documentation amendment, including amendments that do not require prior approval by the SCAA.

(1) Where the amendment requires the SCAA's approval, the SCAA, when satisfied, should approve in writing.

(2) Where the amendment does not require prior approval, the SCAA should acknowledge receipt of the notification in writing within 10 working days from receipt.

AMC1 ATCO.AR.E.010(a) Changes to the training organisations

CHANGES REQUIRING PRIOR APPROVAL

(a) Upon receipt of an application for a proposed change that requires prior approval, the SCAA should, in due time:

(1) assess the proposed change in relation to the training organisation's certificate or the training approval attached or the management system of it, and the applicable requirements of R-PEL-006 Part ATCO.OR, as well as any other applicable requirements;

(2) assess the actions proposed by the training organisation in order to show compliance; and

(3) notify the training organisation of its approval/rejection without delay.

(b) The SCAA should, in due time, verify the compliance of the training organisation and, depending on the change, examine the need for prescribing any condition for the operation of it during the change.

(c) For changes requiring prior approval, the SCAA may conduct an audit of the organisation in order to verify the training organisation's compliance with the applicable requirements.

(d) When notifying the training organisation, the SCAA should also inform the organisation of the right to appeal, as provided for under the applicable national legislation.

GM1 ATCO.AR.E.010 Changes to the training organisations

CHANGE OF NAME OF THE TRAINING ORGANISATION

(a) Upon receipt of the application and the relevant parts of the organisation's documentation as required by Annex III (Part ATCO.OR), the SCAA should reissue the certificate.

(b) A name change alone does not require the SCAA to audit the organisation unless there is evidence that other aspects of the organisation have changed.

GM1 ATCO.AR.E.010(b) Changes to the training organisations

ADEQUATE ACTION

Adequate action by the SCAA may include suspension, limitation or revocation of the training organisation's certificate.

AMC1 ATCO.AR.E.015(d)(2) Findings and corrective actions

CORRECTIVE ACTION IMPLEMENTATION PERIOD

The corrective action implementation period included in an action plan granted by the SCAA initially should not exceed three months. At the end of this period, and subject to the nature of the finding, the SCAA may extend the three-month period subject to a satisfactory corrective action plan agreed to by the SCAA.

GM1 ATCO.AR.E.015 Findings and corrective actions

LEVEL 1

For a level 1 finding, it may be necessary for the SCAA to ensure that further training by the organisation is carried out and audited by the SCAA before the activity is resumed, dependent upon the nature of the finding.

Only the certifying SCAA may take action on the certificate.

GM1 ATCO.AR.E.015(d)(2) Findings and corrective actions

CORRECTIVE ACTION IMPLEMENTATION PERIOD

The three-month period should commence from the date of the communication of the finding to the training organisation in writing and requesting corrective action to address the non-compliance(s) identified in accordance with R-PEL-006, ATCO.AR.E.015(d)

SUBPART F – SPECIFIC REQUIREMENTS RELATING TO AERO- MEDICAL CERTIFICATION

SECTION 1– DOCUMENTATION

AMC1 ATCO.AR.F.005 Medical certificate

STANDARD MEDICAL CERTIFICATE FORMAT

DECREASE IN MEDICAL FITNESS

Licence holders acting as aircrew shall not exercise the privileges of their licence, ratings or certificates when they become aware of any illness or health condition which might render them unable to safely exercise the privileges of their licence in the performance of their duties, when taking or using prescribed or non-prescribed medication which is likely to interfere with the safe exercise of the privileges of the licence, or when undergoing any medical, surgical or other treatment that may pose a threat to flight safety.

*Crew members shall, without undue delay and before exercising the privileges of their licence **in relation to the performance of their duties**, seek aero-medical advice from a medical institution certified as an aero-medical centre or from an aero-medical examiner, when they:*

1. *have undergone a surgical operation or invasive treatment;*
2. *have commenced the regular use of any medication;*
3. *have suffered any significant injury involving incapacity to exercise the privileges of the licence;*
4. *have been suffering from any significant illness involving incapacity to exercise the privileges of the licence;*
5. *are pregnant;*
6. *have been admitted to hospital or medical clinic;*
7. *first require correcting of visual acuity.*

Məhdudiyyət kodları və izahı / Limitation code and description

TML	Tibbi sertifikatın qüvvədəolma müddətinin məhdudlaşdırılması / *Limited period of validity of the medical certificate*
VDL	Uzaq məsafəyə görmə itiliyinin korreksiyası və ehtiyat eynək dəstinə sahib olmaq / *Correction for defective distant vision (spectacles or contact lenses) and carry spare set of spectacles*
VXL	İş şəraitindən asılı olaraq uzaq məsafəyə görmə itiliyinin korreksiyası / *Correction for defective distant vision depending on the working environment*
VML	Uzaq, orta və yaxın məsafəyə görmə itiliyinin korreksiyası və ehtiyat eynək dəstinə sahib olmaq / *Correction for defective distant, intermediate and near vision (spectacles) and carry spare set of spectacles*
VNL	Yaxın məsafəyə görmə itiliyinin korreksiyası və ehtiyat eynək dəstinə sahib olmaq / *Have available corrective spectacles for defective near vision and carry spare set of spectacles*

Məhdudiyyət kodları və izahı / Limitation code and description

VXN	Yaxın məsafəyə görmə itiliyinin korreksiyası korreksiyası və ehtiyat eynək dəstinə sahib olmaq; iş şəraitindən asılı olaraq uzaq məsafəyə görmə itiliyinin korreksiyası / *Correction for defective near vision and carry spare set of spectacles; correction for defective distant vision depending on the working environment*
RXO	Xüsusi oftalmoloji müayyinələr / *Specialist ophthalmological examinations*
CCL	Kontakt linzalarla korreksiya və ehtiyat eynək dəstinə sahib olmaq / *Correction by means of contact lenses and carry spare set of spectacles*
HAL	Eşitmə aparatlarından istifadə və ehtiyat batareya dəsti mövcud olmalıdır / *Wear hearing aid(s) and spare set of batteries should be available*
SİC	Xüsusi müntəzəm tibbi müayinə(lər) / *Specific regular medical examination(s)*
SSL	Müəyyən olunmuş xüsusi məhdudiyyətlər / *Special restrictions as specified*

AZƏRBAYCAN RESPUBLİKASI
REPUBLIC OF AZERBAIJAN

RƏQƏMSAL İNKİŞAF VƏ NƏQLİYYAT NAZİRLİYİ
MINISTRY OF DIGITAL DEVELOPMENT AND TRANSPORT

DÖVLƏT MÜLKİ AVİASİYA AGENTLİYİ
STATE CIVIL AVIATION AGENCY

SİNİF 3 TİBBİ SERTİFİKAT
CLASS 3 MEDICAL CERTIFICATE

BMAT standartlarına uyğun verilir / complies with ICAO standards

I. HHİ dispetçeri şəhadətnaməsini verən dövlət / State of issue the pilot licence

III. Tibbi sertifikatın nömrəsi / Medical certificate number

IV. Tibbi sertifikatın sahibinin adı və soyadı / First and last name of medical certificate holder

IVa. Doğum tarixi (gün.ay.il) / Date of birth (day.month.year)

VI. Vətəndaşlıq / Nationality

VII. Sahibin imzası / Signature of holder

IX. Tibbi sertifikatın qüvvədəolma müddəti (gün.ay.il) / Expiry date of medical certificate (day.month.year)

X. Tibbi sertifikatın verilmə tarixi (gün.ay.il) / Date of Issue of medical certificate (day.month.year)

Aviasiya tibb ekspertinin (ATE) və ya DMAA-nın tibbi ekspertinin imzası / Signature of aeromedical examiner (AME) or medical assessor of SCAA

XI. Möhür / Stamp

Aviasiya-tibbi müayinənin tarixi / Aero-medical examination date

Növü / Type	**Son** / Last	**Növbəti** / Next
Elektrokardioqram /Electrocardiogram		
Audioqram / Audiogram		
Oftalmologiya / Ophthalmology		

XIII. Məhdudiyyətlər / Limitations

Qeyd/ *Comment*

TİBBİ YARARLILIQ DƏRƏCƏSİNİN AZALMASI

Havada hərəkəti idarəetmə dispetçeri qismində şəhadətnamə sahibləri vəzifələrinin icrası ilə əlaqədar şəhadətnamənin imtiyazlarından təhlükəsiz şəkildə yararlanmasına manea ola biləcək xəstəliyi və ya sağlamlığı ilə bağlı hər hansı vəziyyəti barədə xəbərdar olduqda, şəhadətnamənin imtiyazlarından təhlükəsiz şəkildə yararlanmasına təsir edə bilən təyin olunmuş və ya olunmamış dərman vasitələrinin qəbulu və ya istifadəsi zamanı, həmçinin uçuşların təhlükəsizliyinə təhdid yaradacaq hər hansı tibbi, cərrahi və digər müdaxilələrə məruz qaldıqda şəhadətnamənin, ixtisas qeydlərinin və ya sertifikatın imtiyazlarından istifadə edə bilməzlər.

Havada hərəkəti idarəetmə dispetçeri hər hansı gecikməyə yol vermədən, vəzifəsinin icrası ilə əlaqədar şəhadətnamənin imtiyazlarından istifadə etməzdən əvvəl aşağıdakı hallarda məsləhət üçün aviasiya tibb mərkəzi kimi sertifikatlaşdırılmış tibb müəssisələrinə və ya aviasiya tibb ekspertinə müraciət etməlidir:

1. cərrahi müdaxiləyə və ya invaziv müalicəyə məruz qaldıqda
2. hər hansı dərman vasitəsinin müntəzəm istifadəsinə başladıqda;
3. şəhadətnamənin imtiyazlarından yararlanmasına manea olan hər hansı əhəmiyyətli zədəyə məruz qaldıqda;
4. şəhadətnamənin imtiyazlarından yararlanmasına manea olan hər hansı əhəmiyyətli xəstəlikdən əziyyət çəkdikdə;
5. hamilə olduqda;
6. xəstəxana və ya tibbi klinikaya qəbul olunduqda;
7. görmə itiliyinin korreksiyası ilk dəfə tələb olunduqda.

Requirements:

The size of each page should be one eighth A4.

Languages should be Azerbaijani and English.

* Date of issue is the date when the certificate is issued and signed.

STATE CIVIL AVIATION AGENCY

APPLICATION FORM FOR A MEDICAL CERTIFICATE

MEDICAL IN CONFIDENCE

Complete this page fully and in block capitals — Refer to instructions for completion.

<table>
<tr><td>(1) State of licence issue:</td><td colspan="2">(2) Medical certificate applied for:
Class 1 ☐ Class 2 ☐ Class 3 ☐</td></tr>
<tr><td>(3) Surname:</td><td colspan="2">(4) Previous surname(s):</td><td>(12) Application:
Initial ☐
Revalidation/Renewal ☐</td></tr>
<tr><td>(5) Forename(s):</td><td>(6) Date of birth (dd/mm/yyyy):</td><td>(7) Sex:
Male ☐
Female ☐</td><td>(13) Reference number:</td></tr>
<tr><td>(8) Place and country of birth:</td><td colspan="2">(9) Nationality:</td><td>(14) Type of licence applied for:</td></tr>
<tr><td rowspan="2">(10) Permanent address:

Country:
Telephone No:
Mobile No:
E-mail:</td><td colspan="2" rowspan="2">(11) Postal address (if different):

Country:
Telephone No:</td><td>(15) Occupation (principal):</td></tr>
<tr><td>(16) Employer:
(17) Last aero-medical examination:
Date:
Place:</td></tr>
<tr><td colspan="2">(18) Licence(s) held (type):
Licence(s) number(s):</td><td colspan="2">(19) Any limitations on licence(s)/medical certificate held:
No ☐
Yes ☐ Details:</td></tr>
<tr><td rowspan="2">(20) Have you ever had a medical certificate denied, suspended or revoked?
No ☐
Yes ☐ Date: Country:
Details:</td><td>(21) Flight time total:

Hrs n/a ☐</td><td colspan="2">(22) Flight time since last aero-medical examination:
Hrs n/a ☐</td></tr>
<tr><td colspan="3">(23) Aircraft class/type(s) currently flown: n/a ☐</td></tr>
<tr><td rowspan="2">(24) Any aviation accident or reported incident since last aero-medical examination?
No ☐ n/a ☐
Yes ☐ Date: Place:
Details:</td><td colspan="3">(25) Type of flying intended: n/a ☐</td></tr>
<tr><td colspan="3">(26) Current pilot activity: Single pilot ☐ Multi-pilot ☐
Current ATCO activity: ADI ☐ APS ☐ ACS ☐</td></tr>
<tr><td>(27) Do you drink alcohol?
No ☐ Yes ☐ If yes, amount</td><td colspan="3" rowspan="2">(28) Do you currently use any medication?
No ☐
Yes ☐ state medication, dose, date started and why:</td></tr>
<tr><td>(29) Do you smoke tobacco?
No, never ☐
No, stopped ☐ state date:
Yes ☐ state type and amount:</td></tr>
</table>

General and medical history: Do you have, or have you ever had, any of the following? (Please tick). If yes, give details in the remarks section (30).

Yes No Yes No Yes No Family history of: Yes No

101 Eye trouble/eye operation			112 Nose, throat or speech disorder			123 Malaria or other tropical disease			170 Heart disease				
102 Spectacles and/or contact lenses ever worn			113 Head injury or concussion			124 A positive HIV test			171 High blood pressure				
			114 Frequent or severe headaches			125 Sexually transmitted disease			172 High cholesterol level				
103 Spectacle/contact lens prescriptions change since last medical exam.			115 Dizziness or fainting spells			126 Sleep disorder/apnoea syndrome			173 Epilepsy				
			116 Unconsciousness for any reason			127 Musculoskeletal illness/impairment			174 Mental illness				
104 Hay fever, other allergy			117 Neurological disorders: stroke, epilepsy, seizure, paralysis, etc.			128 Any other illness or injury			175 Diabetes				
105 Asthma, lung disease						129 Admission to hospital			176 Tuberculosis				
106 Heart or vascular trouble			118 Psychological/ psychiatric trouble of any sort			130 Visit to medical practitioner since last aero-medical examination			177 Allergy/ asthma/eczema				
107 High or low blood pressure									178 Inherited disorders				
108 Kidney stone or blood in urine			119 Alcohol/drug/ substance abuse			131 Refusal of life insurance			179 Glaucoma				
109 Diabetes, hormone disorder			120 Attempted suicide			132 Refusal of pilot/ATCO licence							
110 Stomach, liver or intestinal trouble			121 Motion sickness requiring medication			133 Medical rejection from or for military service			Females only:				
									150 Gynaecological, menstrual problems				
111 Deafness, ear disorder			122 Anaemia/sickle cell trait/other blood disorders			134 Award of pension or compensation for injury or illness			151 Are you pregnant?				

(30) Remarks: If previously reported and no change since, so state.

(31) Declaration: I hereby declare that I have carefully considered the statements made above and to the best of my belief they are complete and correct and that I have not withheld any relevant information or made any misleading statements. I understand that if I have made any false or misleading statements in connection with this application, or fail to release the supporting medical information, the licensing authority may refuse to grant me a medical certificate or may withdraw any medical certificate granted, without prejudice to any other action applicable under national law.

CONSENT TO RELEASE OF MEDICAL INFORMATION: I hereby authorise the release of all information contained in this report and any or all attachments to the AME and, where necessary, to the medical assessor of the licensing authority, recognising that these documents or electronically stored data are to be used for completion of a medical assessment and will become and remain the property of the licensing authority, providing that I or my physician may have access to them according to national law. Medical confidentiality will be respected at all times.

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Date	Signature of applicant	Signature of AME/(medical assessor)

INSTRUCTIONS FOR COMPLETION OF THE APPLICATION FORM FOR A MEDICAL CERTIFICATE

This application form and all attached report forms will be transmitted to the licensing authority. Medical confidentiality shall be respected at all times.

The applicant should personally complete, in full, all questions (sections) on the application form. Writing should be legible and in block capitals, using a ball-point pen. Completion of this form by typing/printing is also acceptable. If more space is required to answer any questions, a plain sheet of paper should be used, bearing the applicant's name and signature, and the date of signing. The following numbered instructions apply to the numbered headings on the application form for a medical certificate.

Failure to complete the application form in full, or to write legibly, may result in non-acceptance of the application form. The making of false or misleading statements or the withholding of relevant information in respect of this application may result in criminal prosecution, denial of this application and/or withdrawal of any medical certificate(s) granted

1. LICENSING AUTHORITY: State name of country this application is to be forwarded to.	**17. LAST APPLICATION FOR A MEDICAL CERTIFICATE:** State date (day, month, year) and place (town, country). Initial applicants state 'NONE'.
2. MEDICAL CERTIFICATE APPLIED FOR: Tick appropriate box. Class 1: Professional Pilot Class 2: Private Pilot Class 3: Air Traffic Controller	**18. LICENCE(S) HELD (TYPE):** State type of licence(s) held. Enter licence number and State of issue. If no licences are held, state 'NONE'.
3. SURNAME: State surname/family name.	**19. ANY LIMITATIONS ON THE LICENCE(S)/MEDICAL CERTIFICATE:** Tick appropriate box and give details of any limitations on your licence(s)/medical certificate, e.g. vision, colour vision, safety pilot, etc.
4. PREVIOUS SURNAME(S): If your surname or family name has changed for any reason, state previous name(s).	**20. MEDICAL CERTIFICATE DENIAL, SUSPENSION OR REVOCATION:** Tick 'YES' box if you have ever had a medical certificate denied, suspended or revoked, even if only temporary. If 'YES', state date (dd/mm/yyyy) and country where it occurred.
5. FORENAME(S): State first and middle names (maximum three).	**21. FLIGHT TIME TOTAL:** State total number of hours flown or, for ATCO's tick n/a box.
6. DATE OF BIRTH: Specify in order dd/mm/yyyy.	**22. FLIGHT TIME SINCE LAST MEDICAL:** State number of hours flown since your last aero-medical examination or, for ATCO's tick n/a box.
7. SEX: Tick appropriate box.	**23. AIRCRAFT CLASS/TYPE(S) CURRENTLY FLOWN:** State name of principal aircraft flown, e.g. Boeing 737, Cessna 150, etc. or, for ATCO's tick n/a box.
8. PLACE AND COUNTRY OF BIRTH: State town and country of birth.	**24. ANY AVIATION ACCIDENT OR REPORTED INCIDENT SINCE LAST AERO-MEDICAL EXAMINATION:** If 'YES' box ticked, state date (dd/mm/yyyy) and country of accident/incident.
9. NATIONALITY: State name of country of citizenship.	**25. TYPE OF FLYING INTENDED:** State whether airline, charter, single pilot, commercial air transport, carrying passengers, agriculture, pleasure, etc., or, for ATCO's tick n/a box.

10. PERMANENT ADDRESS: State permanent postal address and country. Enter telephone area code as well as telephone number.	**26. CURRENT PILOT/ATCO ACTIVITY:** Tick appropriate box to indicate whether you fly as the SOLE pilot or not or, for ATCO's whether you operate as tower, radar or other.
11. POSTAL ADDRESS (IF DIFFERENT): If different from permanent address, state full current postal address including telephone number and area code. If the same, enter 'SAME'.	**27. DO YOU DRINK ALCOHOL?** Tick applicable box. If yes, state weekly alcohol consumption, e.g. 2 litres beer.
12. APPLICATION: Tick appropriate box.	**28. DO YOU CURRENTLY USE ANY MEDICATION?** If 'YES', give full details — name, how much you take and when, etc. Include any non-prescription medication.
13. REFERENCE NUMBER: State reference number allocated to you by the licensing authority. Initial applicants enter 'NONE'.	**29. DO YOU SMOKE TOBACCO?** Tick applicable box. Current smokers state type (cigarettes, cigars, pipe) and amount (e.g. 2 cigars daily; pipe — 1 oz. weekly).
14. TYPE OF LICENCE APPLIED FOR: State type of licence applied for from the following list: — Aeroplane Transport Pilot Licence — Multi-Pilot Licence — Commercial Pilot Licence/Instrument Rating — Commercial Pilot Licence — Air Traffic Controller Licence — Private Pilot Licence/Instrument Rating — Private Pilot Licence — Sailplane Pilot Licence — Balloon Pilot Licence — and whether Fixed Wing/Rotary Wing/Both	**GENERAL AND MEDICAL HISTORY** All items under this heading from number 101 to 179 inclusive should have the answer 'YES' or 'NO' ticked. You should tick 'YES' if you have ever had the condition in your life and describe the condition and approximate date in the (30) remarks section. All questions asked are medically important even though this may not be readily apparent. Items numbered 170 to 179 relate to immediate family history, whereas items numbered 150 to 151 should be answered by female applicants only. If information has been reported on a previous application form for a medical certificate and there has been no change in your condition, you may state 'Previously reported; no change since'. However, you should still tick 'YES' to the condition. Do not report occasional common illnesses such as colds.
15. OCCUPATION (PRINCIPAL): Indicate your principal employment.	**31. DECLARATION AND CONSENT TO OBTAINING AND RELEASING INFORMATION:** Do not sign or date these declarations until indicated to do so by the AME who will act as witness and sign accordingly.
16. EMPLOYER: If principal occupation is pilot/ATCO, then state employer's name or if self-employed as a pilot, state 'self'.	

AERO-MEDICAL EXAMINATION REPORT FORM FOR CLASS 1, CLASS 2 & CLASS 3 APPLICANTS

(201) Examination category Initial ☐ Revalidation ☐ Renewal ☐ Referral ☐	(202) Height (cm)	(203) Weight (kg)	(204) Colour eye	(205) Colour hair	(206) Blood pressure — seated (mmHg)		(207) Pulse — resting	
							Rate (bpm)	Rhythm: regular ☐ irregular ☐
					Systolic	Diastolic		

Clinical exam: Check each item Normal Abnormal Normal Abnormal

(208) Head, face, neck, scalp			(218) Abdomen, hernia, liver, spleen		
(209) Mouth, throat, teeth, voice, speech			(219) Anus, rectum		
(210) Nose, sinuses			(220) Genito-urinary system		
(211) Ears, drums, eardrum motility			(221) Endocrine system		
(212) Eyes — orbit & adnexa; visual fields			(222) Upper & lower limbs, joints		
(213) Eyes — pupils and optic fundi			(223) Spine, other musculoskeletal		
(214) Eyes — ocular motility; nystagmus			(224) Neurologic — reflexes, etc.		
(215) Lungs, chest, breasts			(225) Psychiatric		
(216) Heart			(226) Skin, identifying marks and lymphatics		
(217) Vascular system			(227) General systemic		
(228) Notes: Describe every abnormal finding. Enter applicable item number before each comment.					

Visual acuity

(229) Distant vision

	Uncorrected		Spectacles	Contact lenses
Right eye		Corr. to		
Left eye		Corr. to		
Both eyes		Corr. to		

(230) *Intermediate vision*	Uncorrected		Corrected	
	Yes	No	Yes	No
Right eye				
Left eye				
Both eyes				

(231) *Near vision*	Uncorrected		Corrected	
	Yes	No	Yes	No
Right eye				
Left eye				
Both eyes				

(232) Spectacles
Yes ☐ No ☐
Type:

(233) Contact lenses
Yes ☐ No ☐
Type:

Refraction	Sph	Cyl	Axis	Add
Right eye				
Left eye				

(313) **Colour vision** Normal ☐ Abnormal ☐

Colour vision testing method/s:
Results:

(234) **Hearing** (when 239/241 not performed)

			Right ear	Left ear
Conversational voice test (2m) with back turned to examiner			Yes ☐ No ☐	Yes ☐ No ☐
Audiometry				
Hz	500	1000	2000	3000
Right				
Left				

(236) **Pulmonary function**

FEV1/FVC _____ %

Normal ☐
Abnormal ☐

(237) **Haemoglobin**

_____ _____ _ (unit)

Normal ☐
Abnormal ☐

(235) **Urinalysis** Normal ☐ Abnormal ☐

Glucose	Protein	Blood	Other

Accompanying reports

	Not performed	Normal	Abnormal/ Comment
(238) ECG			
(239) Audiogram			
(240) Ophthalmology			
(241) ORL (ENT)			
(242) Blood lipids			
(243) Pulmonary function			
(244) Other (what?)			

(247) **AME recommendation**:

Name of applicant: Date of birth: Reference number:

---------- ---------- ----------

☐ Fit for class: ----------
☐ Medical certificate issued by undersigned (copy attached) for class: ----------
☐ Unfit for class: ----------
☐ Deferred for further evaluation. If yes, why and to whom?

(248) **Comments, limitations**

(249) AME declaration:

I hereby certify that I/my AME group have personally examined the applicant named on this aero-medical examination report and that this report with any attachment embodies my findings completely and correctly.

(250) Place and date:	AME name and address:	AME certificate No:
AME signature:	E-mail: Telephone No: Telefax No:	

INSTRUCTIONS FOR COMPLETION OF THE AERO-MEDICAL EXAMINATION REPORT FORMS

The AME performing the aero-medical examination should verify the identity of the applicant.

All questions (sections) on the aero-medical examination report form should be completed in full. If an otorhinolaryngology examination report form is attached, then questions 209, 210, 211, and 234 may be omitted. If an ophthalmology examination report form is attached, then questions 212, 213, 214, 229, 230, 231,232, and 233 may be omitted.

Writing should be legible and in block capitals using a ball-point pen. Completion of this form by typing/printing is also acceptable. If more space is required to answer any question, a plain sheet of paper should be used, bearing the applicant's name, the AME's name and signature, and the date of signing. The following numbered instructions apply to the numbered headings on the aero-medical examination report form.

Failure to complete the aero-medical examination report form in full, as required, or to write legibly, may result in non-acceptance of the application in total and may lead to withdrawal of any medical certificate issued. The making of false or misleading statements or the withholding of relevant information by an AME may result in criminal prosecution, denial of an application or withdrawal of any medical certificate(s) granted.

201 EXAMINATION CATEGORY — Tick appropriate box.

Initial — Initial examination for either class 1, 2 or 3; also initial examination for upgrading from class 2 to 1 (notate 'upgrading' in box 248).

Renewal/Revalidation —Subsequent ROUTINE examinations.

202 HEIGHT — Measure height, without shoes, in centimetres to nearest cm.

203 WEIGHT — Measure weight, in indoor clothes, in kilograms to nearest kg.

204 COLOUR EYE — State colour of applicant's eyes from the following list: brown, blue, green, hazel, grey, multi.

205 COLOUR HAIR — State colour of applicant's hair from the following list: brown, black, red, fair, bald.

206 BLOOD PRESSURE — Blood pressure readings should be recorded as Phase 1 for systolic pressure and Phase 5 for diastolic pressure. The applicant should be seated and rested. Recordings in mm Hg.

207 PULSE (RESTING) — The pulse rate should be recorded in beats per minute and the rhythm should be recorded as regular or irregular. Further comments if necessary may be written in section 228, 248 or separately.

208 to 227 inclusive constitute the general clinical examination, and each of the boxes should be marked (with a tick) as normal or abnormal.

208 HEAD, FACE, NECK, SCALP — To include appearance, range of neck and facial movements, symmetry, etc.

209 MOUTH, THROAT, TEETH, VOICE, SPEECH — To include voice and speech quality and appearance of buccal cavity, palate motility, tonsillar area, pharynx and also gums, teeth and tongue.

210 NOSE, SINUSES — To include appearance and any evidence of nasal obstruction or sinus tenderness on palpation.

211 EARS, DRUMS, EARDRUM MOTILITY — To include otoscopy of external ear, canal, tympanic membrane. Eardrum motility by valsalva manoeuvre or by pneumatic otoscopy.

212 EYES — ORBIT AND ADNEXA; VISUAL FIELDS — To include appearance, position and movement of eyes and their surrounding structures in general, including eyelids and conjunctiva. Visual fields check by campimetry, perimetry or confrontation.

213 EYES — PUPILS AND OPTIC FUNDI — To include appearance, size, reflexes, red reflex and fundoscopy. Special note of corneal scars.

214 EYES — OCULAR MOTILITY, NYSTAGMUS — To include range of movement of eyes in all directions; symmetry of movement of both eyes; ocular muscle balance; convergence; accommodation; signs of nystagmus.

215 LUNGS, CHEST, BREASTS — To include inspection of chest for deformities, operation scars, abnormality of respiratory movement, auscultation of breath sounds. Physical examination of female applicant's breasts should only be performed with informed consent.

216 HEART — To include apical heartbeat, position, auscultation for murmurs, carotid bruits, palpation for trills.

217 VASCULAR SYSTEM — To include examination for varicose veins, character and feel of pulse, peripheral pulses, evidence of peripheral circulatory disease.

218 ABDOMEN, HERNIA, LIVER, SPLEEN — To include inspection of abdomen; palpation of internal organs; check for inquinal hernias in particular.

219 ANUS, RECTUM — Examination only with informed consent.

220 GENITO-URINARY SYSTEM — To include renal palpation; inspection palpation male/female reproductive organs only with informed consent.

221 ENDOCRINE SYSTEM — To include inspection, palpation for evidence of hormonal abnormalities/imbalance; thyroid gland.

222 UPPER AND LOWER LIMBS, JOINTS — To include full range of movements of joints and limbs, any deformities, weakness or loss. Evidence of arthritis.

223 SPINE, OTHER MUSCULOSKELETAL — To include range of movements, abnormalities of joints.

224 NEUROLOGIC — REFLEXES, ETC. To include reflexes, sensation, power, vestibular system — balance, romberg test, etc.

225 PSYCHIATRIC — To include appearance, appropriate mood/thought, unusual behaviour.

226 SKIN, IDENTIFYING MARKS AND LYMPHATICS — To include inspection of skin; inspection, palpation for lymphadenopathy, etc. Briefly describe scars, tattoos, birthmarks, etc., which could be used for identification purposes.

227 GENERAL SYSTEMIC — All other areas, systems and nutritional status.

228 NOTES — Any notes, comments or abnormalities to be described — extra notes if required on separate sheet of paper, signed and dated.

229 DISTANT VISION — Each eye to be examined separately and then both together. First without correction, then with spectacles (if used) and lastly with contact lenses, if used. Record visual acuity in appropriate boxes. Visual acuity to be tested with the appropriate chart for the distance.

230 INTERMEDIATE VISION — Each eye to be examined separately and then both together. First without correction, then with spectacles, if used, and lastly with contact lenses, if used. Record visual acuity in appropriate boxes (Yes/No).

231 NEAR VISION — Each eye to be examined separately and then both together. First without correction, then with spectacles if used and lastly with contact lenses, if used. Record visual acuity in appropriate boxes (Yes/No).

Note: Bifocal contact lenses and contact lenses correcting for near vision only are not acceptable.

232 SPECTACLES — Tick appropriate box signifying if spectacles are or are not worn by applicant. If used, state type of lens and frame and use-distance.

233 CONTACT LENSES — Tick appropriate box signifying if contact lenses are or are not worn. If worn, state type from the following list; hard, soft, gas-permeable or disposable.

313 COLOUR VISION — Tick appropriate box signifying if applicant is a normal trichromat or not. Indicate the colour vision testing methodology used and provide the results.

234 HEARING — Tick appropriate box to indicate hearing level ability as tested separately in each ear at 2 m.

235 URINALYSIS — State whether result of urinalysis is normal or not by ticking appropriate box. If no abnormal constituents, state NIL in each appropriate box.

236 PULMONARY FUNCTION — When required or on indication, state actual FEV1/FVC value obtained in % and state if normal or not with reference to height, age, sex and race.

237 HAEMOGLOBIN — Enter actual haemoglobin test result and state units used. Then state whether normal value or not, by ticking appropriate box.

238 to 244 inclusive: ACCOMPANYING REPORTS — One box opposite each of these sections must be ticked. If the test is not required and has not been performed, then tick the NOT PERFORMED box. If the test has been performed (whether required or on indication) complete the normal or abnormal box as appropriate. In the case of question 244, the number of other accompanying reports must be stated.

247 AME RECOMMENDATION — The applicant's name, date of birth and reference number, should be entered here in block capitals. The applicable class of medical certificate should be indicated by a tick in the appropriate box. If a fit assessment is recommended and a medical certificate has been issued, this should be indicated in the appropriate box. An applicant may be recommended as fit for a lower class of medical certificate (e.g. class 2), but also be deferred or recommended as unfit for a higher class of medical certificate (e.g. class 1). If an unfit recommendation is made, applicable Part MED/Part ATCO.MED paragraph references should be entered. If an applicant is deferred for further evaluation, the reason and the specialist or licensing authority to whom the applicant is referred should be indicated.

248 COMMENTS, LIMITATIONS, ETC. — The AME's findings and assessment of any abnormality in the history or examination, should be entered here. The AME should also state any limitation required.

249 AME DETAILS — The AME should sign the declaration, complete his/her name and address in block capitals, contact details and lastly stamp the relevant section with his/her designated AME stamp incorporating his/her AME number.

250 PLACE AND DATE — The place (town or city) and the date of the aero-medical examination should be entered here. The date of examination is the date of the general examination and not the date of finalisation of the form. If the aero-medical examination report is finalised on a different date, the date of finalisation should be entered in section 248 as 'Report finalised on...'

OPHTHALMOLOGY EXAMINATION REPORT FORM

Complete this page fully and in block capitals — Refer to instructions for completion.

MEDICAL IN CONFIDENCE

Applicant's details

(1) Licensing authority:	(2) Medical certificate applied for: Class 1 ☐ Class 2 ☐ Class 3 ☐		
(3) Surname:	(4) Previous surname(s):		(12) Application: Initial ☐ Revalidation/Renewal ☐
(5) Forename(s):	(6) Date of birth:	(7) Sex: Male ☐ Female ☐	(13) Reference number:
(301) Consent to release of medical information: I hereby authorise the release of all information contained in this report and any or all attachments to the AME and, where necessary, to the medical assessor of the licensing authority, recognising that these documents or electronically stored data, are to be used for completion of a medical assessment and will become and remain the property of the licensing authority, providing that I or my physician may have access to them according to national law. Medical confidentiality will be respected at all times. ---------- ---------- ---------- Date Signature of applicant Signature of AME			

(302) Examination category: Initial ☐ Revalidation ☐ Renewal ☐ Referral ☐	(303) Ophthalmological history:

Clinical examination

Visual acuity

Check each item		Normal	Abnormal
(304) Eyes, external & eyelids			
(305) Eyes, Exterior (slit lamp, ophth.)			
(306) Eye position and motility			
(307) Visual fields			
(308) Pupillary reflexes			
(309) Fundi (Ophthalmoscopy)			
(310) Convergence	cm		
(311) Accommodation	D		

ANNEX III (PART ATCO.OR) – REQUIREMENTS FOR AIR TRAFFIC CONTROLLER TRAINING ORGANISATIONS AND AERO-MEDICAL CENTRES

SUBPART B — REQUIREMENTS FOR AIR TRAFFIC CONTROLLER TRAINING ORGANISATIONS

GM1 ATCO.OR.B.001(c)(2) Application for a training organisation certificate

The requirement to add the list of ATC units is not relevant in the case of training organisations which provide initial training only.

AMC1 ATCO.OR.B.005 Means of compliance

DEMONSTRATION OF COMPLIANCE

In order to demonstrate that the R-PEL-006 are complied with, a safety (risk) assessment should be completed and documented. The result of this safety (risk) assessment should demonstrate that an equivalent level of safety to that established by the Acceptable Means of Compliance (AMC) adopted by the SCAA is reached.

AMC1 ATCO.OR.B.010(a) Terms of approval and privileges of a training organisation certificate

The management system documentation should contain the privileges and detailed scope of activities including the contracted ones for which the training organisation is certified, as relevant to R-PEL-006.

GM1 ATCO.OR.B.010(b) Terms of approval and privileges of a training organisation certificate

PROVIDING ON-THE-JOB TRAINING VIA AGREEMENT WITH THE ATC PROVIDER

The specific agreement should detail the issues of liability and insurance for the provision of air traffic control service during on-the-job training and consider the relevant provisions of R-PEL-006, ATCO.OR.C.005 in order to ensure conformity of the contracted or purchased activity or part of activity to the applicable requirements as well as those of R-PEL-006, ATCO.OR.B.040 on occurrence reporting and R-PEL-006, ATCO.OR.C.025 on funding and insurances.

AMC1 ATCO.OR.B.015 Changes to the training organisation

GENERAL

(a) Training organisations should inform the SCAA of any changes to personnel specified in Annex III of R-PEL-006 (Part ATCO.OR) that may affect the certificate or the training approval attached to it.

(b) Training organisations should send to the SCAA each management system documentation amendment. Where the amendment requires the SCAA`s approval, the training organisation should receive it in writing.

GM1 ATCO.OR.B.015 Changes to the training organisation

GENERAL

(a) Examples of changes that may affect the certificate or the terms of approval of the training organisation or the training organisation's management system are listed below:

(1) the name of the training organisation;

(2) change of legal entity;

(3) the training organisation's principal place of operation;

(4) the training organisation's type(s) of training;

(5) additional locations of the training organisation;

(6) the accountable manager;

(7) any of the persons referred to in Part ATCO.OR;

(8) the training organisation's documentation as required by R-PEL-006 Subpart ATCO.OR.C on safety policy and procedures;

(9) the facilities.

(b) Prior approval by the SCAA is required for any changes to the training organisation's procedure describing how changes not requiring prior approval will be managed and notified to the SCAA.

GM2 ATCO.OR.B.015 Changes to the training organisation

CHANGE OF NAME

A change of name requires the training organisation to submit a new application as a matter of urgency.

Where this is the only change to report, the new application can be accompanied by a copy of the documentation previously submitted to the SCAA under the previous name, as a means of demonstrating how the training organisation complies with the applicable requirements.

AMC1 ATCO.OR.B.030(b) Findings and corrective actions

GENERAL

The corrective action plan defined by the training organisation should address the effects of any non-compliance and its root cause.

GM1 ATCO.OR.B.030(a);(b) Findings

CORRECTIVE ACTION PLAN AND ROOT CAUSE

(a) Corrective action is the action to eliminate the root cause of a non-compliance in order to prevent its recurrence.

(b) Determination of the root cause is crucial for defining effective corrective actions.

GM2 ATCO.OR.B.030(c) Findings

COMPETENT AUTHORITY

When reference is made to the SCAA, this means either the SCAA that has issued the certificate or the SCAA ensuring oversight of activities, if they are different, based on the agreement concluded between the authorities.

GM1 ATCO.OR.B.040 Occurrence reporting

The training organisation's report should focus on occurrences taking place during on-the-job training with regard to the training aspects involved.

The report may be submitted together with or as an integral part of the report prepared by the air navigation service provider.

INTENTIONALLY LEFT BLANK

SUBPART C — MANAGEMENT OF AIR TRAFFIC CONTROLLER TRAINING ORGANISATIONS

GM1 ATCO.OR.C.001 Management system of training organisations

The requirements for the management system of training organisations may be satisfied if the air navigation service provider's management system/safety management system (SMS) specifically covers the requirements of R-PEL-006.

AMC1 ATCO.OR.C.001(b) Management system of training organisations

SAFETY POLICY

The safety policy should:

(a) be signed by the accountable manager;

(b) reflect the organisation's commitment regarding safety, and its proactive and systematic management;

(c) be communicated, with visible endorsement, throughout the organisation;

(d) include safety-reporting principles and procedures, if applicable;

(e) include the organisations's commitment to:

(1) improve towards the highest safety standards;

(2) comply with all applicable legal requirements, meet all applicable standards and consider best practices;

(3) provide appropriate resources;

(4) enforce safety as the primary responsibility of all managers and staff; and

(5) apply just culture principles and, in particular, not to make available or use the information on occurrences:

(i) to attribute blame or liability to someone for reporting something that would not have been otherwise detected; or

(ii) for any purpose other than the maintenance or improvement of aviation safety;

(f) clearly indicate which types of operational behaviour are unacceptable, and include the conditions under which disciplinary action would not apply, if applicable;

(g) enhance and embed safety culture and safety awareness; and

(h) be periodically reviewed to ensure it remains relevant and appropriate to the training organisation.

GM1 ATCO.OR.C.001(b) Management system of training organisations

SAFETY POLICY

(a) The safety policy is the means whereby a training organisation states its intention to maintain and, where practicable, improve safety levels in all its activities and to minimise its contribution to the risk of an aircraft accident or serious incident as far as is reasonably practicable. It reflects the management's commitment to safety, and should reflect the organisation's philosophy as regards safety management, as well as become the

foundation on which the organisation's management system is built. It serves as a reminder of 'how we do business here'. The establishment of a positive safety culture begins with the issuance of a clear, unequivocal direction.

(b) The commitment to apply just culture principles forms the basis for the organisation's internal rules describing how just culture principles are guaranteed and implemented, after consulting its staff representatives.

(c) The safety policy should state that the purpose of safety reporting is to improve safety, not to apportion blame to individuals.

AMC1 ATCO.OR.C.001(c) Management system of training organisations

IDENTIFICATION OF AVIATION SAFETY HAZARDS

For training organisations not providing on-the-job training, the hazard identification process may be limited to a demonstration that there are no hazards directly identified. However, the training should be designed so as to ensure future safe operations.

AMC1 ATCO.OR.C.001(d) Management system of training organisations

PERSONNEL

A training organisation should demonstrate that:

(a) a list of activities with relevant needed competence has been established;

(b) their personnel have the relevant competence needed to fulfil the activities they are required to perform;

(c) their personnel maintain a level of competence through training as appropriate;

(d) their theoretical and practical instructors are qualified in accordance with Part ATCO, Subpart C of R-PEL-006;

(e) their practical instructors either hold an OJTI endorsement or an STDI endorsement;

(f) their assessors hold an assessor endorsement; and

(g) their synthetic training device instructors and assessors demonstrate knowledge of and receive refresher training in current operational practices.

AMC1 ATCO.OR.C.001(e) Management system of training organisations

PROCESSES

Training organisations should demonstrate that the management system:

(a) policies, processes and procedures are monitored to ensure they are current and subject to periodic review and amendment, when necessary, to maintain their continued accuracy and suitability;

(b) allows for the impromptu recognition and initiation of improvements to policies, processes and procedures between periodic reviews;

(c) controls, records and tracks changes to all of the management system policy, process and procedure documents;

(d) includes a master record index that lists all the policies, processes and procedures; and

(e) includes as a minimum the following:

(1) master record index;

(2) training provider certificate;

(3) management structure;

(4) staff role profiles including accountabilities and responsibilities;

(5) training manuals, plans and courses;

(6) evidence of regulatory compliance;

(7) change control process;

(8) safety management manual;

(9) course design documents;

(10) instructor/assessor qualification and competence records.

AMC1 ATCO.OR.C.001(f) Management system of training organisations

COMPLIANCE MONITORING

(a) The implementation and use of a compliance monitoring function should enable the training organisation to monitor compliance with the relevant requirements of R-PEL-006.

(b) Training organisations should specify the basic structure of the compliance monitoring function applicable to the activities conducted.

(c) The compliance monitoring function should be structured according to the activities of the training organisation to be monitored.

GM1 ATCO.OR.C.001(f) Management system of training organisations

EXAMPLE OF COMPLIANCE MONITORING SYSTEM

(a) Training organisations may monitor compliance with the procedures they have designed to ensure safe activities. In doing so, they may, as a minimum, and, where appropriate, monitor:

(1) the organisational structure;

(2) the plans and objectives;

(3) the privileges of the organisation;

(4) the manuals, logs and records;

(5) the training standards;

(6) the management system.

(b) Organisational set-up

(1) To ensure that the training organisation continues to meet the requirements of R-PEL-006, the accountable manager may designate a person responsible for the compliance monitoring function whose role is to verify, by monitoring the activities of the organisation, that the standards required by R-PEL-006 and any additional requirements as established by the organisation are met under the supervision

of the relevant head of the functional area. For small training organisations, these identified functions can be fulfilled by the same person.

(2) The person designated for the compliance monitoring function should be responsible for ensuring that the compliance monitoring programme is properly implemented, maintained and continually reviewed and improved.

(3) The designated person responsible for the compliance monitoring function should:

(i) have direct access to the accountable manager; and

(ii) have access to all parts of the training organisation and, as necessary, to any contracted organisation.

(c) Compliance monitoring documentation

(1) Relevant documentation could include the relevant part(s) of the training organisation management system documentation.

(2) In addition, relevant documentation could also include the following:

(i) terminology;

(ii) specified activity standards;

(iii) description of the organisation;

(iv) allocation of duties and responsibilities;

(v) procedures to ensure regulatory compliance;

(vi) compliance monitoring programme, reflecting:

(A) schedule of the monitoring programme;

(B) audit procedures;

(C) reporting procedures;

(D) follow-up and corrective action procedures; and

(E) recording system;

(vii) training elements referred to in paragraph 4(b); and

(viii) document control.

(d) Training

(1) Correct and thorough training is essential to optimise compliance in every training organisation. In order to achieve significant outcomes of such training, the training organisation needs to ensure that all personnel understand the objectives laid down in the organisation's manual.

(2) Those responsible for managing the compliance monitoring function should receive training in this task. Such training could cover the requirements of compliance monitoring, manuals and procedures related to the task, audit techniques, reporting and recording.

(3) Time needs to be provided to train all personnel involved in compliance management and for briefing the rest of the personnel.

(4) The allocation of time and resources needs to be governed by the activities covered by the training organisation.

AMC2 ATCO.OR.C.001(f) Management system of training organisations

COMPLIANCE MONITORING

The person designated for the compliance monitoring function should be responsible for the review and continuous improvement of the established management system's policies, processes and procedures. The following tools are essential to the ongoing continuous improvement process:

(a) organisational risk profile;

(b) risk management plan;

(c) coherence matrix;

(d) corrective and preventive action reports; and

(e) inspection and audit reports.

GM2 ATCO.OR.C.001(f) Management system of training organisations

COMPLIANCE MONITORING

(a) These tools and processes related to the compliance monitoring function are interrelated and help define the continuous improvement efforts of the organisation. For example, any corrective or preventive action report could identify a deficiency or an opportunity for improvement. The person responsible for the compliance monitoring function would then be required to ensure the identified issue was addressed and the corrective or preventive action effectively implemented. The same would be true if the discovery of an issue was identified during an inspection or audit.

(b) The effective implementation of change and the subsequent validation that the change did result in the desired outcome is critical to the continuous improvement process. Simply introducing a well-meaning suggestion for improvement into the organisation without carefully managing that change could have undesirable consequences. It is, therefore, the responsibility of the person in charge of the compliance monitoring function to introduce, monitor and validate improvement efforts.

(c) A simple but effective process to use in managing continuous improvement is known as the plan-do-check-act, or PDCA, approach:

(1) plan — map out the implementation of the recommended change, identifying at least:

(i) those people who will be affected by the change;

(ii) the required measures necessary to mitigate risk; and

(iii) the desired outcome and its intended consequences.

(2) do — execute the implementation plan once all affected groups have accepted the proposal and understand their role in ensuring its success;

(3) check — apply sufficient quality control 'stage' checks throughout the implementation phase to ensure any unintended deviations in the execution are identified and addressed without delay; and

(4) act — analyse the results and take appropriate action as necessary.

AMC1 ATCO.OR.C.005 Contracted activities

(a) Training organisations may decide to contract certain parts of their activities to external organisations.

(b) A written agreement should exist between the training organisation and the contracted organisation clearly defining the contracted activities and the applicable requirements.

(c) The contracted safety-related activities relevant to the agreement should be included in the training organisation's compliance monitoring programme.

(d) Training organisations should ensure that the contracted organisation has the necessary authorisation or approval when required, and commands the resources and competence to undertake the task.

GM1 ATCO.OR.C.005 Contracted activities

RESPONSIBILITY WHEN CONTRACTING ACTIVITIES

(a) Regardless of the approval status of the contracted organisation, the contracting organisation is responsible to ensure that all contracted activities are subject to hazard identification and risk management as required by R-PEL-006, ATCO.OR.C.001(c) and to compliance monitoring as required by R-PEL-006, ATCO.OR.C.001(f).

(b) When the contracted organisation is itself certified to carry out the contracted activities, the organisation's compliance monitoring should at least check that the approval effectively covers the contracted activities and that it is still valid.

GM1 ATCO.OR.C.010(b);(c) Personnel requirements

(a) Training organisations may nominate the person responsible for training and a person or persons subordinate to him or her as chief training instructor(s)/unit responsible training officer(s).

(b) Usually, training organisations nominate only one person responsible for training.

(c) Prerequisites, typical function and responsibilities of the person responsible for training may be:

(1) to have extensive experience in instructing for all types of ATC training and possess sound managerial capability;

(2) to have overall responsibility for ensuring satisfactory integration of all training provided and for supervising the progress of the persons undertaking training;

(3) to be responsible for coordinating and delegating the contact to the SCAA in training-related issues; and

(4) to be ultimately responsible to the accountable manager.

(d) Prerequisites, typical functions and responsibilities of the chief training instructor(s)/unit responsible training officer(s) may be:

(1) to have extensive experience in instructing for all types of ATC training and possess sound managerial capability;

(2) to have responsibility for ensuring satisfactory training is provided and for supervising the progress of the persons undertaking training in the areas that have been delegated by the person responsible for training; and

(3) to report to the person responsible for training.

AMC1 ATCO.OR.C.015(a) Facilities and equipment

(a) General areas

A training organisation should have access to facilities appropriate to the size and scope of the intended operations provided in an environment conducive to learning.

(b) Training areas

For training organisations providing theoretical training, the facilities should also include sufficient suitably equipped classroom areas.

GM1 ATCO.OR.C.015(a) Facilities and equipment

(a) General areas

These facilities should include general areas, which consist of sufficient:

(1) office space for managerial and administrative as well as training staff;

(2) rooms for study and testing;

(3) library facilities; and

(4) storage areas, including secure areas for training and personnel records.

(b) Training areas

For training organisations providing practical training, the facilities should also include sufficient:

(1) rooms for briefing and debriefing; and

(2) suitably equipped rooms for practical training.

AMC1 ATCO.OR.C.015(b) Facilities and equipment

SPECIFICATIONS FOR SYNTHETIC TRAINING DEVICES

(a) Synthetic training devices classifications

Synthetic training devices used for training should be classified according to one of the following classifications:

(1) simulator (SIM);

(2) part-task trainer (PTT).

(b) Synthetic training device (STD) criteria

If an STD is used for training, it should be approved by the SCAA as part of the course approval process for any training plan. Training organisations should demonstrate how the STD will provide adequate support for the intended training, in particular, how the STD will meet the stated objectives of the practical training exercises and enable the performance objectives to be assessed to the level determined in the training programme.

This demonstration and the related documentation should include the following relevant criteria:

(1) the general environment, which should provide an environment in which STD exercises may be run without undue interference from unrelated activities;

(2) the STD layout;

(3) the equipment provided;

(4) the display presentation, functionality, and updating of operational information;

(5) data displays, including strip displays, where appropriate;

(6) coordination facilities;

(7) aircraft performance characteristics, including the availability of manoeuvres, e.g. holding or instrumental landing system (ILS) operation, required for a particular simulation;

(8) the availability of real-time changes during an exercise;

(9) the processes by which the training organisation can be assured that staff associated with the training conducted with the use of an STD are competent;

(10) the degree of realism of any voice recognition system associated with the STD; and

(11) where a simulator is an integral part of an operational ATC system, the processes by which the training organisation is assured that interference between the simulated and operational environments is prevented.

The extent to which the STD achieves the above criteria will be used to determine the adequacy of the STD for the proposed use. As a general principle, the greater the degree of replication of the operational position being represented, the greater the use will be possible for any particular training.

(c) STD used for pre-on-the-job training

When an STD is used for pre-on-the-job training and the training time is counted as operational training, the STD classification should be a full-size replica of a working position, including all equipment, and computer programmes necessary to represent the full tasks associated with that position, including realistic wind at all levels to facilitate SRA. In the case of a working position at a tower unit, it includes an out-of-the-tower view.

AMC1 ATCO.OR.C.020(a);(b) Record keeping

Training organisations should maintain the following records:

(a) Records of persons undertaking training:

(1) personal information;

(2) details of training received including the starting date of the training, as well as the

results of the examinations and assessments;

(3) detailed and regular progress report forms;

(4) certificate of completion of training courses.

(b) Records of instructors and assessors:

(1) personal information;

(2) qualification records;

(3) records of refresher training for instructors and assessors;

(4) assessment reports;

(5) instructional and/or assessment time records.

Training organisations should submit training records and reports to the SCAA as required.

AMC1 ATCO.OR.C.025 Funding and insurances

SUFFICIENT FUNDING

To demonstrate compliance with the requirement on the availability of sufficient funding, training organisations may be required to present an economic study identifying the minimum amount necessary to ensure that the training is conducted in accordance with the applicable requirements.

AMC2 ATCO.OR.C.025 Funding and insurances

SUFFICIENT INSURANCE COVER

To demonstrate compliance with the requirement on sufficient insurance cover, training organisations may be required to provide a deposit of an insurance certificate or other evidence of valid insurance.

The insurance cover should be established by taking into account the nature of the training provided, the frequency and the fees applicable to the training courses.

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ANNEX IV (PART ATCO.MED) – MEDICAL REQUIREMENTS FOR AIR TRAFFIC CONTROLLERS

SUBPART A – GENERAL REQUIREMENTS

SECTION 1 – GENERAL

AMC1 ATCO.MED.A.015 Medical confidentiality

To ensure medical confidentiality, all medical reports and records should be securely held with accessibility restricted to personnel authorised by the medical assessor.

GM1 ATCO.MED.A.020 Decrease in medical fitness

MEDICATION — GUIDANCE FOR AIR TRAFFIC CONTROLLERS

(a) Any medication can cause side effects, some of which may impair the safe exercise of the privileges of the licence. Equally, symptoms of colds, sore throats, diarrhoea and other abdominal upsets may cause little or no problem whilst not exercising the privileges of the licence, but may distract the air traffic controller and degrade their performance whilst on duty. Therefore, one issue with medication and the safe exercise of the privileges of the licence is the underlying condition and, in addition, the symptoms may be compounded by the side effects of the medication prescribed or bought over the counter for treatment. This guidance material provides some help to air traffic controllers in deciding whether expert aero-medical advice by an AME, AeMC or Medical Assessor is needed.

(b) Before taking any medication and exercising the privileges of the licence, the following three basic questions should be satisfactorily answered:

(1) Do I feel fit to control?

(2) Do I really need to take medication at all?

(3) Have I given this particular medication a personal trial whilst not exercising the privileges of my licence to ensure that it will not have any adverse effects on my ability to exercise the privileges of my licence?

(c) Confirming the absence of adverse effects may well need expert aero-medical advice.

(d) The following are some widely used medicines with a description of their compatibility with the safe exercise of the privileges of the licence:

(1) Antibiotics. Antibiotics may have short-term or delayed side effects which can affect the performance of the air traffic controller. More significantly, however, their use usually indicates that an infection is present and, thus, the effects of this infection may mean that an air traffic controller is not fit to control and should obtain expert aero-medical advice.

(2) Anti-malaria drugs. The decision on the need for anti-malaria drugs depends on the geographical areas to be visited, and the risk that the air traffic controller has of being exposed to mosquitoes and of developing malaria. An expert medical opinion should be obtained to establish whether anti-malaria drugs are needed and what kind of drugs should be used. Most of the anti-malaria drugs (atovaquone plus proguanil, chloroquine, doxycycline) are compatible with the safe exercise of the privileges of the licence. However, adverse effects associated with mefloquine include insomnia, strange dreams, mood changes, nausea, diarrhoea and headaches. In addition, mefloquine may cause spatial disorientation and lack of fine coordination and is,

therefore, not compatible with the safe exercise of the privileges of the licence.

(3) Antihistamines. Antihistamines can cause drowsiness. They are widely used in 'cold cures' and in treatment of hay fever, asthma and allergic rashes. They may be in tablet form or a constituent of nose drops or sprays. In many cases, the condition itself may preclude the safe exercise of the privileges of the licence, so that, if treatment is necessary, expert aero-medical advice should be sought so that so-called non-sedative antihistamines, which do not degrade human performance, can be prescribed.

(4) Cough medicines. Antitussives often contain codeine, dextromethorfan or pseudo-ephedrine which are not compatible with the safe exercise of the privileges of the licence. However, mucolytic agents (e.g. carbocysteine) are well tolerated and are compatible with the safe exercise of the privileges of the licence.

(5) Decongestants. Nasal decongestants with no effect on alertness may be compatible with the safe exercise of the privileges of the licence.

(6) Nasal corticosteroids are commonly used to treat hay fever, and are compatible with the safe exercise of the privileges of the licence.

(7) (i) Common pain killers and antifebrile drugs. Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) and paracetamol, commonly used to treat pain, fever or headaches, may be compatible with the safe exercise of the privileges of the licence. However, the air traffic controller should give affirmative answers to the three basic questions in paragraph (b) before using the medication and exercising the privileges of the licence.

(ii) Strong analgesics. The more potent analgesics including codeine are opiate derivatives, and may produce a significant decrement in human performance and, therefore, are not compatible with the safe exercise of the privileges of the licence.

(8) Anti-ulcer medicines. Gastric secretion inhibitors such as H2 antagonists (e.g. ranitidine, cimetidine) or proton pump inhibitors (e.g. omeprazole) may be acceptable after diagnosis of the pathological condition. It is important to seek for the medical diagnosis and not to only treat the dyspeptic symptoms.

(9) Anti-diarrhoeal drugs. Loperamide is one of the more common anti-diarrhoeal drugs and is usually safe to take whilst exercising the privileges of the licence. However, the diarrhoea itself often makes the air traffic controller unable to exercise the privileges of the licence.

(10) Hormonal contraceptives and hormone replacement therapy usually have no adverse effects and are compatible with the safe exercise of the privileges of the licence.

(11) Erectile dysfunction medication. This medication may cause disturbances in colour vision and dizziness. There should be at least six hours between taking sildenafil and exercising the privileges of the licence; and 36 hours between taking vardenafil or tadalafil and exercising the privileges of the licence.

(12) Smoking cessation. Nicotine replacement therapy may be acceptable. However, other medication affecting the central nervous system (buproprion, varenicline) is not acceptable for air traffic controllers.

(13) High blood pressure medication. Most anti-hypertensive drugs are compatible with the safe exercise of the privileges of the licence. However, if the level of blood pressure is such that drug therapy is required, the air traffic controller should be monitored for any side effects before exercising the privileges of the licence. Therefore, consultation with the AME, AeMC or Medical Assessor as applicable, is needed.

(14) Asthma medication. Asthma has to be clinically stable before an air traffic controller can return to exercising the privileges of the licence. The use of respiratory aerosols or powders, such as corticosteroids, beta-2-agonists or chromoglycic acid may be compatible with the safe exercise of the privileges of the licence. However, the use of oral steroids or theophylline derivatives is usually incompatible with the safe exercise of the privileges of the licence. Air traffic controllers using medication for asthma should consult an AME, AeMC, or Medical Assessor, as applicable.

(15) Tranquillisers, anti-depressants and sedatives. The inability to react, due to the use of this group of medicines, together with the underlying condition for which these medications have been prescribed, will almost certainly mean that the mental state of an air traffic controller is not compatible with the safe exercise of the privileges of the licence. Air traffic controllers using tranquillisers, anti-depressants and sedatives should consult an AME, AeMC, or Medical Assessor, as applicable.

(16) Sleeping tablets. Sleeping tablets dull the senses, may cause confusion and slow reaction times. The duration of effect may vary from individual to individual and may be unduly prolonged. Air traffic controllers using sleeping tablets should consult an AME, AeMC, or Medical Assessor, as applicable.

(17) Melatonin. Melatonin is a hormone that is involved with the regulation of the circadian rhythm. In some countries it is a prescription medicine, whereas in most other countries it is regarded as a ‘dietary supplement’ and can be bought without any prescription. The results from the efficiency of melatonin in treatment of jet lag or sleep disorders have been contradictory. Air traffic controllers using melatonin should consult an AME, AeMC, or Medical Assessor, as applicable.

(18) Coffee and other caffeinated drinks may be acceptable, but excessive coffee drinking may have harmful effects, including disturbance of the heart’s rhythm. Other stimulants including caffeine pills, amphetamines, etc. (often known as ‘pep’ pills) used to maintain wakefulness or suppress appetite can be habit forming. Susceptibility to different stimulants varies from one individual to another, and all may cause dangerous overconfidence. Overdosage causes headaches, dizziness and mental disturbance. These other stimulants should not be used.

(19) Anaesthetics. Following local, general, dental and other anaesthetics, a period of time should elapse before returning to exercising the privileges of the licence. The period will vary considerably from individual to individual, but an air traffic controller should not exercise the privileges of the licence for at least 12 hours after a local anaesthetic, and for at least 48 hours after a general, spinal or epidural anaesthetic.

(e) Many preparations on the market nowadays contain a combination of medicines. It is, therefore, essential that if there is any new medication or dosage, however slight, the effect should be observed by the air traffic controller whilst not exercising the privileges of the

licence. It should be noted that medication which would not normally affect air traffic controller performance may do so in individuals who are 'oversensitive' to a particular preparation. Individuals are, therefore, advised not to take any medicines before or whilst exercising the privileges of their licence unless they are completely familiar with their effects on their own bodies. In cases of doubt, air traffic controllers should consult an AME, AeMC, or Medical Assessor, as applicable.

(f) Other treatments

Alternative or complementary medicine, such as acupuncture, homeopathy, hypnotherapy and several other disciplines, is developing and gaining greater credibility. Such treatments are more acceptable in some States than others. There is a need to ensure that 'other treatments', as well as the underlying condition, are declared and considered by the AME, AeMC, or Medical Assessor, as applicable, for assessing fitness.

AMC1 ATCO.MED.A.025 Obligations of AeMC and AME

(a) If the aero-medical examination is carried out by two or more AMEs, only one of them should be responsible for coordinating the results of the examination, evaluating the findings with regard to medical fitness and signing the report.

(b) The applicant should be made aware that the associated medical certificate may be suspended or revoked if the applicant provides incomplete, inaccurate or false statements on their medical history to the AME or AeMC.

(c) The AME or AeMC should give advice to the applicant on treatment and preventive measures if, during the course of the examination, medical conditions which may endanger the medical fitness of the applicant in the future are found.

GM1 ATCO.MED.A.025 Obligations of AeMC and AME

GUIDELINES FOR THE AEMC AND AME CONDUCTING THE AERO-MEDICAL EXAMINATIONS AND ASSESSMENTS FOR CLASS 3 MEDICAL CERTIFICATES

(a) Before performing the aero-medical examination, the AeMC or AME should:

(1) verify the applicant's identity by checking their identity card, passport, driving licence or other official document containing a photograph of the applicant;

(2) obtain details of the applicant's licence from the applicant's licensing authority if they do not have their licence with them;

(3) obtain details of the applicant's most recent medical certificate from the applicant's licensing authority if they do not have their certificate with them;

(4) in the case of a specific medical examination (SIC) on the existing medical certificate, obtain details of the specific medical condition and any associated instructions from the applicant's licensing authority. This could include, for example, a requirement to undergo a specific examination or test;

(5) except for initial applicants, ascertain, from the previous medical certificate, which routine medical test(s) should be conducted, for example electrocardiogram (ECG);

(6) provide the applicant with the application form for a medical certificate and the instructions for its completion and ask the applicant to complete the form but not to sign it yet;

(7) go through the form with the applicant and give information to help the applicant understand the significance of the entries and ask any questions which might help the applicant to recall important historical medical data; and

(8) verify that the form is complete and legible, ask the applicant to sign and date the form and then sign it as well. If the applicant declines to complete the application form fully or declines to sign the declaration consent to the release of medical information, inform the applicant that it may not be possible to issue a medical certificate regardless of the outcome of the clinical examination.

(b) Once all the items in (a) have been addressed, the AeMC or AME should:

(1) perform the aero-medical examination of the applicant in accordance with the applicable rules;

(2) arrange for additional specialist medical examinations, such as otorhinolaryngology or ophthalmology, to be conducted as applicable and obtain the associated report forms or reports;

(3) complete the aero-medical examination report form in accordance with the associated instructions for completion; and

(4) ensure that all of the report forms are complete, accurate and legible.

(c) Once all the actions in (b) have been carried out, the AeMC or AME should review the report forms and:

(1) if satisfied that the applicant meets the applicable medical requirements as set out in this Part, issue a medical certificate, with limitations if necessary. The applicant should sign the certificate once signed by the AeMC or AME; or

(2) if the applicant does not meet the applicable medical requirements or if the fitness of the applicant is in doubt:

(i) refer the decision on medical fitness to the licensing authority as indicated in ATCO.MED.B.001; or

(ii) deny issuance of a medical certificate, explain the reason(s) for denial to the applicant and inform them of their right of a review according to the procedures of the SCAA.

(d) The AeMC or AME should send the documents as required by ATCO.MED.A.025(b) to the applicant's licensing authority within five days from the date of the aero-medical examination. If a medical certificate has been denied or the decision has been referred, the documents should be sent to the licensing authority on the same day that the denial or referral decision is reached.

SECTION 2 – REQUIREMENTS FOR MEDICAL CERTIFICATES

AMC1 ATCO.MED.A.035 Application for a medical certificate

Except for initial applicants, when applicants do not present the most recent medical certificate to the AeMC or AME prior to the relevant examinations, the AeMC or AME should not issue the medical certificate unless relevant information is received from the licensing authority.

SUBPART B – SPECIFIC REQUIREMENTS FOR CLASS 3 MEDICAL CERTIFICATES

SECTION 1 – GENERAL

AMC1 ATCO.MED.B.001 Limitations to medical certificates

(a) An AeMC or AME may refer the decision on fitness of an applicant to the licensing authority in borderline cases or where fitness is in doubt.

(b) In cases where a fit assessment may only be considered with a limitation, the AeMC, AME or the licensing authority should evaluate the medical condition of the applicant with appropriate personnel from the air navigation service provider and other experts, if necessary.

(c) Entry of limitations

(1) Limitations TML, VDL, VML, VNL, CCL, HAL, RXO may be imposed by an AME or an AeMC.

(2) Limitations VXL and VXN should be imposed with advice of the air navigation service provider.

(3) Limitations SIC and SSL should only be imposed by the licensing authority.

(d) Removal of limitations

All limitations should only be removed by the licensing authority.

AMC2 ATCO.MED.B.001 Limitations to medical certificates

LIMITATION CODES

(a) The following abbreviations for limitations should be used on the medical certificate as applicable:

Code	Limitation
TML	Restriction of the period of validity of the medical certificate
VDL	Wear correction for defective distant vision and carry spare set of spectacles
VXL	Correction for defective distant vision depending on the working environment
VML	Wear correction for defective distant, intermediate and near vision and carry spare set of spectacles
VNL	Have correction available for defective near vision and carry spare set of spectacles
VXN	Correction for defective near vision; correction for defective distant vision depending on the working environment
RXO	Specialist ophthalmological examinations
CCL	Correction by means of contact lenses
HAL	Valid only when hearing aids are worn
SIC	Specific medical examination(s)
SSL	Special restrictions as specified

(b) The abbreviations for the limitation codes should be explained to the holder of a medical certificate as follows:

(1) TML — Time limitation

The period of validity of the medical certificate is limited to the duration as shown on the medical certificate. This period of validity commences on the date of the aero-medical examination. Any period of validity remaining on the previous medical

certificate is no longer valid. The holder of a medical certificate should present him/herself for reassessment or examination when advised and should follow any medical recommendations.

(2) VDL — Wear corrective lenses and carry a spare set of spectacles

Correction for defective distant vision: whilst exercising the privileges of the licence, the holder of a medical certificate should wear spectacles or contact lenses that correct for defective distant vision as examined and approved by the AeMC or AME. Contact lenses may not be worn until cleared to do so by an AeMC or AME. A spare set of spectacles, approved by the AeMC or AME, should be readily available.

(3) VXL — Correction for defective distant vision depending on the working environment

Correction for defective distant vision does not have to be worn if the air traffic controller's visual working environment is in the area of up to 100 cm. Applicants who do not meet the uncorrected distant visual acuity requirement but meet the visual acuity requirement for intermediate and near vision without correction and whose visual working environment is only the intermediate and near vision area (up to 100 cm) may work without corrective lenses.

(4) VML — Wear multifocal spectacles and carry a spare set of spectacles

Correction for defective distant, intermediate and near vision: whilst exercising the privileges of the licence, the holder of a medical certificate should wear spectacles that correct for defective distant, intermediate and near vision as examined and approved by the AeMC or AME. Contact lenses or full-frame spectacles, when either correct for near vision only, may not be worn.

(5) VNL — Have available corrective spectacles and a spare set of spectacles

Correction for defective near vision: whilst exercising the privileges of the licence, the holder of a medical certificate should have readily available spectacles that correct for defective near vision as examined and approved by the AeMC or AME. Contact lenses or full-frame spectacles, when either correct for near vision only, may not be worn.

(6) VXN — Have available corrective spectacles and a spare set of spectacles; correction for defective distant vision depending on the working environment.

Correction for defective distant vision does not have to be worn if the air traffic controller's visual working environment is in the area of up to 100 cm. Applicants who do not meet the uncorrected distant and uncorrected near visual acuity requirements, but meet the visual acuity requirement for intermediate vision without correction and whose visual working environment is only the intermediate and near vision area (up to 100 cm) should have readily available spectacles and a spare set that correct for defective near vision as examined and approved by the AeMC or AME. Contact lenses or full-frame spectacles, when either correct for near vision only, may not be worn.

(7) CCL — Wear contact lenses that correct for defective vision

Correction for defective distant vision: whilst exercising the privileges of the licence, the holder of a medical certificate should wear contact lenses that correct for defective distant vision, as examined and approved by the AeMC or AME. A spare set of similarly correcting spectacles shall be readily available for immediate use whilst exercising the privileges of the licence.

(8) RXO — Specialist ophthalmological examination(s)

Specialist ophthalmological examination(s), other than the examinations stipulated in this Part, are required for a significant reason.

(9) HAL — Hearing aid(s)

Whilst exercising the privileges of the licence, the holder of the medical certificate should use hearing aid(s) that compensate(s) for defective hearing as examined and approved by the AeMC or AME. A spare set of batteries should be available.

(10) SIC — Specific medical examination(s)

This limitation requires the AeMC or AME to contact the licensing authority before embarking upon renewal or revalidation aero-medical assessment. It is likely to concern a medical history of which the AME should be aware prior to undertaking the aero- medical assessment.

(11) SSL — Special restrictions as specified

This limitation may be considered when an individually specified limitation, not defined in this paragraph, is appropriate to mitigate an increased level of risk to the safe exercise of the privileges of the licence. The description of the SSL should be entered on the medical certificate or in a separate document to be carried with the medical certificate.

SECTION 2 – SPECIFIC REQUIREMENTS FOR CLASS 3 MEDICAL CERTIFICATES

AMC1 ATCO.MED.B.010 Cardiovascular system

(a) Electrocardiography

(1) An exercise electrocardiogram (ECG) when required as part of a cardiovascular assessment should be symptom-limited and completed to a minimum of Bruce Stage IV or equivalent.

(2) Reporting of resting and exercise ECGs should be carried out by the AME or an appropriate specialist.

(b) General

(1) Cardiovascular risk factor assessment

(i) Serum/plasma lipid estimation is case finding and significant abnormalities should require investigation and management under the supervision of the AeMC or AME in consultation with the licensing authority if necessary.

(ii) An accumulation of risk factors (smoking, family history, lipid abnormalities, hypertension, etc.) should require cardiovascular evaluation by the AeMC or AME in consultation with the licensing authority if necessary.

(2) Extended cardiovascular assessment

(i) The extended cardiovascular assessment should be undertaken at an AeMC or by a cardiologist.

(ii) The extended cardiovascular assessment should include an exercise ECG or other test that will provide equivalent information.

(c) Peripheral arterial disease

Applicants with peripheral arterial disease, before or after surgery, should undergo satisfactory cardiological evaluation including an exercise ECG and 2D echocardiography. Further tests may be required which should show no evidence of myocardial ischaemia or significant coronary artery stenosis. A fit assessment may be considered provided:

(1) the exercise ECG is satisfactory; and

(2) there is no sign of significant coronary artery disease or evidence of significant atheroma elsewhere, and no functional impairment of the end organ supplied.

(d) Aortic aneurysm

(1) Applicants with an aneurysm of the infra-renal abdominal aorta may be assessed as fit following a satisfactory cardiological evaluation.

(2) Applicants may be assessed as fit after surgery for an aneurysm of the thoracic or abdominal aorta if the blood pressure and cardiovascular evaluation are satisfactory. Regular evaluations by a cardiologist should be carried out.

(e) Cardiac valvular abnormalities

(1) Applicants with previously unrecognised cardiac murmurs should require cardiological evaluation. If considered significant, further investigation should include at least 2D Doppler echocardiography.

(2) Applicants with minor cardiac valvular abnormalities may be assessed as fit by the licensing authority. Applicants with significant abnormality of any of the heart valves should be assessed as unfit.

(3) Aortic valve disease

(i) Applicants with bicuspid aortic valve may be assessed as fit if no other cardiac or aortic abnormality is demonstrated. Regular cardiological follow-up, including 2D Doppler echocardiography, may be required.

(ii) Applicants with mild aortic stenosis may be assessed as fit. Annual cardiological follow-up may be required and should include 2D Doppler echocardiography.

(iii) Applicants with aortic regurgitation may be assessed as fit only if regurgitation is minor and there is no evidence of volume overload. There should be no demonstrable abnormality of the ascending aorta on 2D Doppler echocardiography. Cardiological follow-up including 2D Doppler echocardiography may be required.

(4) Mitral valve disease

(i) Applicants with rheumatic mitral stenosis may only be assessed as fit in favourable cases after cardiological evaluation including 2D echocardiography.

(ii) Applicants with uncomplicated minor regurgitation may be assessed as fit. Regular cardiological follow-up including 2D echocardiography may be required.

(iii) Applicants with mitral valve prolapse and mild mitral regurgitation may be assessed as fit.

(iv) Applicants with evidence of volume overloading of the left ventricle demonstrated by increased left ventricular end-diastolic diameter should be

assessed as unfit.

(f) Valvular surgery

Applicants with cardiac valve replacement/repair should be assessed as unfit. After a satisfactory cardiological evaluation, fit assessment may be considered.

(1) Asymptomatic applicants may be assessed as fit by the licensing authority six months after valvular surgery subject to:

(i) normal valvular and ventricular function as judged by 2D Doppler echocardiography;

(ii) satisfactory symptom-limited exercise ECG or equivalent;

(iii) demonstrated absence of coronary artery disease unless this has been satisfactorily treated by re-vascularisation;

(iv) no cardioactive medication is required;

(v) annual cardiological follow-up to include an exercise ECG and 2D Doppler echocardiography. Longer periods may be acceptable once a stable condition has been confirmed by cardiological evaluations.

(2) Applicants with implanted mechanical valves may be assessed as fit subject to documented exemplary control of their anti-coagulant therapy. Age factors should form part of the risk assessment.

(g) Thromboembolic disorders

Applicants with arterial or venous thrombosis or pulmonary embolism should be assessed as unfit during the first six months of anticoagulation. A fit assessment, with a limitation, if necessary, may be considered by the licensing authority after six months of stable anticoagulation. Anticoagulation should be considered stable if, within the last six months, at least five international normalised ratio (INR) values are documented, of which at least four are within the INR target range and the haemorrhagic risk is acceptable. In cases of anticoagulation medication not requiring INR monitoring, a fit assessment may be considered after review by the licensing authority after a period of three months. Applicants with pulmonary embolism should also be evaluated by a cardiologist. Following cessation of anticoagulant therapy, for any indication, applicants should undergo a reassessment by the licensing authority.

(h) Other cardiac disorders

(1) Applicants with a primary or secondary abnormality of the pericardium, myocardium or endocardium should be assessed as unfit. A fit assessment may be considered following complete resolution and satisfactory cardiological evaluation which may include 2D Doppler echocardiography, exercise ECG, 24-hour ambulatory ECG, and/or myocardial perfusion scan or equivalent test. Coronary angiography may be indicated. Regular cardiological follow-up may be required.

(2) Applicants with a congenital abnormality of the heart should be assessed as unfit. Applicants following surgical correction or with minor abnormalities that are functionally unimportant may be assessed as fit following cardiological assessment. No cardioactive medication is acceptable. Investigations may include 2D Doppler echocardiography, exercise ECG and 24-hour ambulatory ECG. Regular cardiological follow-up may be required.

(i) Syncope

(1) Applicants with a history of recurrent episodes of syncope should be assessed as unfit. A fit assessment may be considered after a sufficient period of time without recurrence provided cardiological evaluation is satisfactory.

(2) A cardiological evaluation should include:

(i) a satisfactory symptom exercise ECG. If the exercise ECG is abnormal, a myocardial perfusion scan or equivalent test should be required;

(ii) a 2D Doppler echocardiogram showing neither significant selective chamber enlargement nor structural or functional abnormality of the heart, valves or myocardium;

(iii) a 24-hour ambulatory ECG recording showing no conduction disturbance, complex or sustained rhythm disturbance or evidence of myocardial ischaemia;

(iv) a tilt test carried out to a standard protocol showing no evidence of vasomotor instability.

(3) Neurological review should be required.

(j) Blood pressure

(1) Anti-hypertensive treatment should be agreed by the licensing authority. Medication may include:

(i) non-loop diuretic agents;

(ii) Angiotensin Converting Enzyme (ACE) inhibitors;

(iii) angiotensin II receptor blocking agents;

(iv) long-acting slow channel calcium blocking agents;

(v) certain (generally hydrophilic) beta-blocking agents.

(2) Following initiation of medication for the control of blood pressure, applicants should be re-assessed to verify that the treatment is compatible with the safe exercise of the privileges of the licence.

(k) Coronary artery disease

(1) Applicants with chest pain of an uncertain cause should undergo a full investigation before a fit assessment may be considered. Applicants with angina pectoris should be assessed as unfit, whether or not it is abolished by medication.

(2) Applicants with suspected asymptomatic coronary artery disease should undergo a cardiological evaluation including exercise ECG. Further tests (myocardial perfusion scanning, stress echocardiography, coronary angiography or equivalent) may be required, which should show no evidence of myocardial ischaemia or significant coronary artery stenosis.

(3) After an ischaemic cardiac event, including revascularisation, applicants without symptoms should have reduced any vascular risk factors to an appropriate level. Medication, when used to control cardiac symptoms, is not acceptable. All applicants should be on acceptable secondary prevention treatment.

(i) A coronary angiogram obtained around the time of, or during, the ischaemic myocardial event and a complete, detailed clinical report of the ischaemic event and of any operative procedures should be available.

(A) there should be no stenosis more than 50 % in any major untreated vessel, in any vein or artery graft or at the site of an angioplasty/stent, except in a vessel subtending a myocardial infarction;

(B) the whole coronary vascular tree should be assessed as satisfactory by a cardiologist, and particular attention should be paid to multiple stenoses and/or multiple revascularisations;

(C) an untreated stenosis greater than 30 % in the left main or proximal left anterior descending coronary artery should not be acceptable.

(ii) At least six months from the ischaemic myocardial event, including revascularisation, the following investigations should be completed:

(A) an exercise ECG showing neither evidence of myocardial ischaemia nor rhythm or conduction disturbance;

(B) an echocardiogram or equivalent test showing satisfactory left ventricular function with no important abnormality of wall motion (such as dyskinesia or akinesia) and a left ventricular ejection fraction of 50 % or more;

(C) in cases of angioplasty/stenting, a myocardial perfusion scan or equivalent test, which should show no evidence of reversible myocardial ischaemia. If there is any doubt about myocardial perfusion, in other cases (infarction or bypass grafting), a perfusion scan should also be required;

(D) further investigations, such as a 24-hour ECG, may be necessary to assess the risk of any significant rhythm disturbance.

(iii) Follow-up should be conducted annually (or more frequently, if necessary) to ensure that there is no deterioration of the cardiovascular status. It should include a cardiological evaluation, exercise ECG and cardiovascular risk assessment. Additional investigations may be required.

(iv) After coronary artery vein bypass grafting, a myocardial perfusion scan or equivalent test should be performed on clinical indication, and in all cases within five years from the procedure.

(v) In all cases, coronary angiography, or an equivalent test, should be considered at any time if symptoms, signs or non-invasive tests indicate myocardial ischaemia.

(vi) Applicants may be assessed as fit after successful completion of the three-month or subsequent review.

(l) Rhythm and conduction disturbances

(1) Applicants with any significant rhythm or conduction disturbance may be assessed as fit after cardiological evaluation and with appropriate follow-up. Such evaluation should include:

(i) exercise ECG which should show no significant abnormality of rhythm or conduction, and no evidence of myocardial ischaemia. Withdrawal of cardioactive medication prior to the test should be required;

(ii) 24-hour ambulatory ECG which should demonstrate no significant rhythm or conduction disturbance;

(iii) 2D Doppler echocardiogram which should show no significant selective chamber enlargement or significant structural or functional abnormality, and a left ventricular ejection fraction of at least 50 %.

Further evaluation may include:

(i) 24-hour ECG recording repeated as necessary;

(ii) electrophysiological study;

(iii) myocardial perfusion imaging or equivalent test;

(iv) cardiac magnetic resonance imaging (MRI) or equivalent test;

(v) coronary angiogram or equivalent test.

(2) Applicants with supraventricular or ventricular ectopic complexes on a resting ECG may require no further evaluation, provided the frequency can be shown to be no greater than one per minute, for example on an extended ECG strip.

Applicants with asymptomatic isolated uniform ventricular ectopic complexes may be assessed as fit, but frequent or complex forms require full cardiological evaluation.

(3) Where anticoagulation is needed for a rhythm disturbance, a fit assessment may be considered if the haemorrhagic risk is acceptable and the anticoagulation is stable. Anticoagulation should be considered stable if, within the last six months, at least five INR values are documented, of which at least four are within the INR target range. In cases of anticoagulation medication not requiring INR monitoring, a fit assessment with an appropriate limitation may be considered after review by the licensing authority after a period of three months.

(4) Ablation

(i) Applicants who have undergone ablation therapy should be assessed as unfit for a minimum period of two months.

(ii) A fit assessment may be considered following successful catheter ablation provided an electrophysiological study (EPS) demonstrates satisfactory control has been achieved.

(iii) Where EPS is not performed, longer periods of unfitness and cardiological follow- up should be considered.

(iv) Follow-up should include a cardiological review.

(5) Supraventricular arrhythmias

Applicants with significant disturbance of supraventricular rhythm, including sinoatrial dysfunction, whether intermittent or established, should be assessed as unfit. A fit assessment may be considered if cardiological evaluation is satisfactory.

(i) For initial applicants with atrial fibrillation/flutter, a fit assessment should be limited to those with a single episode of arrhythmia which is considered to be unlikely to recur.

(ii) For revalidation, applicants may be assessed as fit if cardiological evaluation is satisfactory and the stroke risk is sufficiently low. A fit assessment may be considered after a period of stable anticoagulation as prophylaxis, after review

by the licensing authority. Anticoagulation should be considered stable if, within the last six months, at least five INR values are documented, of which at least four are within the INR target range. In cases of anticoagulation medication not requiring INR monitoring, a fit assessment may be considered after review by the licensing authority after a period of three months.

(iii) Applicants with asymptomatic sinus pauses up to 2.5 seconds on a resting ECG may be assessed as fit if exercise ECG, 2D echocardiography and 24-hour ambulatory ECG are satisfactory.

(iv) Applicants with symptomatic sino-atrial disease should be assessed as unfit.

(6) Mobitz type 2 atrio-ventricular block

Applicants with Mobitz type 2 AV block may be assessed as fit after a full cardiological evaluation confirms the absence of distal conducting tissue disease.

(7) Complete right bundle branch block

Applicants with complete right bundle branch block should require cardiological evaluation on first presentation.

(8) Complete left bundle branch block

A fit assessment may be considered as follows:

(i) Initial applicants may be assessed as fit after full cardiological evaluation showing no pathology. Depending on the clinical situation, a period of stability may be required.

(ii) Applicants for revalidation or renewal of a medical certificate with a de-novo left bundle branch block may be assessed as fit after cardiological evaluation showing no pathology. A period of stability may be required.

(iii) A cardiological evaluation should be required after 12 months in all cases.

(9) Ventricular pre-excitation

Applicants with pre-excitation may be assessed as fit if they are asymptomatic, and an electrophysiological study, including an adequate drug-induced autonomic stimulation protocol, reveals no inducible re-entry tachycardia and the existence of multiple pathways is excluded. Cardiological follow-up should be required including a 24-hour ambulatory ECG recording showing no tendency to symptomatic or asymptomatic tachy- arrhythmia.

(10) Pacemaker

Applicants with a subendocardial pacemaker may be assessed as fit three months after insertion provided:

(i) there is no other disqualifying condition;

(ii) bipolar lead systems programmed in bipolar mode without automatic mode change have been used;

(iii) that the applicant is not pacemaker dependent;

(iv) regular cardiological follow-up should include a symptom-limited exercise ECG that shows no abnormality or evidence of myocardial ischaemia.

(11) QT prolongation

Applicants with asymptomatic QT-prolongation may be assessed as fit subject to a satisfactory cardiological evaluation.

(12) Brugada pattern on electrocardiography

Applicants with a Brugada pattern Type 1 should be assessed as unfit. Applicants with Type 2 or Type 3 may be assessed as fit, with limitations as appropriate, subject to satisfactory cardiological evaluation.

GM1 ATCO.MED.B.010 Cardiovascular system

MITRAL VALVE DISEASE

(a) Minor regurgitation should have evidence of no thickened leaflets or flail chordae and left atrial internal diameter of less than or equal to 4.0 cm.

(b) The following may indicate severe regurgitation:

(1) LV internal diameter (diastole) > 6.0 cm; or

(2) LV internal diameter (systole) > 4.1 cm; or

(3) Left atrial internal diameter > 4.5 cm.

(c) Doppler indices, such as width of jet, backwards extension and whether there is flow reversal in the pulmonary veins may be helpful in assessing severity of regurgitation.

GM2 ATCO.MED.B.010 Cardiovascular system

VENTRICULAR PRE-EXCITATION

(a) Asymptomatic applicants with pre-excitation may be assessed as fit at revalidation with an Operational Multi-pilot Limitation (OML) if they meet the following criteria:

(1) no inducible re-entry;

(2) refractory period > 300 ms;

(3) no induced atrial fibrillation.

(4) There should be no evidence of multiple accessory pathways.

GM3 ATCO.MED.B.010 Cardiovascular system

COMPLETE LEFT BUNDLE BRANCH BLOCK

Left bundle branch block is more commonly associated with coronary artery disease and, thus, requires more in-depth investigation, which may be invasive.

GM4 ATCO.MED.B.010 Cardiovascular system

PACEMAKER

(a) Scintigraphy may be helpful in the presence of conduction disturbance/paced complexes in the resting ECG.

(b) Experience has shown that any failures of pacemakers are most likely to occur in the first three months after being fitted. Therefore, a fit assessment should not be considered before this period has elapsed.

(c) It is known that certain operational equipment may interfere with the performance of the pacemaker. The type of pacemaker used, therefore, should have been tested to ensure it does not suffer from interference in the operational environment. Supporting data and a performance statement to this effect should be available from the supplier.

GM5 ATCO.MED.B.010 Cardiovascular system

ANTICOAGULATION

Applicants and licence holders taking anticoagulant medication which requires monitoring with INR testing, should measure their INR on a 'near patient' testing system within 12 hours prior to starting a shift pattern and then at least every three days during the shift pattern. The privileges of the licence should only be exercised if the INR is within the target range. The INR result should be recorded and the results should be reviewed at each aero-medical assessment.

GM6 ATCO.MED.B.010 Cardiovascular system

CARDİOVASCULAR RİSK ASSESSMENT

(a) Indication:

(1) Hypertension;

(2) Hyperlipidaemia;

(3) Diabetes;

(4) Smoking;

(5) Obesity and lack of exercise;

(6) Adults 45–74 years without known history of CVD;

(7) Metabolic Syndrome (hypertension, hyperlipidaemia, insulin resistance and truncal obesity);

(8) Obstructive sleep apnoea.

(b) Method for CVD risk assessment

(1) Test required for assessment include but are not limited to lipid profile, check for blood pressure, random blood glucose and HBA1c.

(2) The AME should use internationally recognised calculators/charts/or score cards for the estimation of CHD. If SCORE chart is used for the estimation of CHD risk may be higher than indicated in the chart in:

(i) Sedentary or obese subjects, especially those with central obesity;

(ii) Those with a strong family history of premature CVD;

(iii) Socially deprived individuals and those from some ethnic minorities;

(iv) Individuals with diabetes. The SCORE charts should only be used in those with type 1 diabetes without target-organ damage; other diabetic subjects are already at very high risk;

(v) Those with low HDL cholesterol or increased LDL, triglyceride, fibrinogen, opoB, Lp(a) levels and increased high-sensitivity CRP;

(vi) Asymptomatic subjects with evidence of pre-clinical atherosclerosis, for example plaque on ultrasonography.

(c) Assessing and management of the cardiovascular risks

(1) Risk of CVD less than 10% risk over 10 years (SCORE≤3%):
The medical certificate may be issued without limitation once all modifiable risk factors have been discussed with the applicant. A management strategy should be detailed in the reports to the licensing authority.

(2) Risk of CVD 10-20% over 10 years (SCORE 4-7%):

(i) Modifiable risk factors should be addressed in conjunction with adjustment of current or the addition of approved prevention medications e.g. statins

(ii) After the control of the modifiable risk factors, if the calculated risk remains in the intermediate zone, the extended cardiovascular assessment including exercise electrocardiography or equivalent should be undertaken by an approved cardiologist.

(iii) If cardiac evaluation rules out significant risk of ischemic heart events, the medical certificate may be issued with limitations if necessary, and annual approved cardiology follow up.

(3) Risk of CVD > 20% over 10 years (SCORE≥7%) or presence of diabetes, left ventricular hypertrophy, symptomatic carotid disease (CVA cerebrovascular accident, TIA transient ischemic attacks), or peripheral vascular disease including aneurysm, abnormal tests – ABIs)

(i) The licence holder should be assessed as unfit.

(ii) An approved cardiac consultation will be required with further cardiac evaluation including exercise electrocardiography or equivalent to rule out any significant risk of ischemic heart events changes.

(iii) All the modifiable risk factor should be discussed with the applicant and a management strategy detailed in the report to the licensing authority.

(iv) On satisfactory the medical certificate may be issued with limitation and cardiology follow up as detailed by the approved cardiologist.

AMC1 ATCO.MED.B.015 Respiratory system

(a) Examination

(1) Spirometric examination is required for initial examination. An FEV1/FVC ratio less than 70 % should require evaluation by a specialist in respiratory disease before a fit assessment can be considered.

(2) Posterior/anterior chest radiography may be required at initial, revalidation or renewal examinations when indicated on clinical or epidemiological grounds.

(b) Chronic obstructive airways disease

Applicants with chronic obstructive airways disease should be assessed as unfit. Applicants with only minor impairment of their pulmonary function may be assessed as fit after specialist respiratory evaluation. Applicants with pulmonary emphysema may be assessed as fit following specialist evaluation showing that the condition is stable and not causing significant symptoms.

(c) Asthma

Applicants with asthma requiring medication or experiencing recurrent attacks of asthma may be assessed as fit if the asthma is considered stable with satisfactory pulmonary function tests and medication is compatible with the safe execution of the privileges of the licence. Use of low dose systemic steroids may be acceptable.

(d) Inflammatory disease

(1) For applicants with active inflammatory disease of the respiratory system, a fit assessment may be considered when the condition has resolved without sequelae and no medication is required.

(2) Applicants with chronic inflammatory diseases may be assessed as fit following specialist evaluation showing mild disease with acceptable pulmonary function test and medication compatible with the safe execution of the privileges of the licence.

(e) Sarcoidosis

(1) Applicants with active sarcoidosis should be assessed as unfit. Specialist evaluation should be undertaken with respect to the possibility of systemic, particularly cardiac, involvement. A fit assessment may be considered if no medication is required, and the disease is limited to hilar lymphadenopathy and inactive. Use of low dose systemic steroids may be acceptable.

(2) Applicants with cardiac or neurological sarcoid should be assessed as unfit.

(f) Pneumothorax

Applicants with a spontaneous pneumothorax should be assessed as unfit. A fit assessment may be considered:

(1) six weeks after the event provided full recovery from a single event has been confirmed in a full respiratory evaluation including a CT scan or equivalent;

(2) following surgical intervention in the case of a recurrent pneumothorax provided there is satisfactory recovery.

(g) Thoracic surgery

(1) Applicants requiring thoracic surgery should be assessed as unfit until such time as the effects of the operation are no longer likely to interfere with the safe exercise of the privileges of the licence.

(2) A fit assessment may be considered after satisfactory recovery and full respiratory evaluation including a CT scan or equivalent. The underlying pathology which necessitated the surgery should be considered in the aero-medical assessment.

(h) Sleep apnoea syndrome/sleep disorder

(3) Applicants with unsatisfactorily treated sleep apnoea syndrome and suffering from excessive daytime sleepiness should be assessed as unfit.

(4) A fit assessment may be considered subject to the extent of symptoms, including vigilance, and satisfactory treatment. ATCO operational experience, sleep apnoea syndrome/sleep disorder education and work place considerations are essential components of the aero-medical assessment.

AMC1 ATCO.MED.B.020 Digestive system

(a) Oesophageal varices

Applicants with oesophageal varices should be assessed as unfit.

(b) Pancreatitis

(1) Applicants with pancreatitis should be assessed as unfit. A fit assessment may be considered if the cause (e.g. gallstone, other obstruction, medication) is removed.

(2) Alcohol may be a cause of dyspepsia and pancreatitis. If considered appropriate, a full evaluation of its use or misuse should be undertaken.

(c) Gallstones

(1) Applicants with a single large gallstone may be assessed as fit after evaluation.

(2) Applicants with multiple gallstones may be assessed as fit while awaiting treatment provided the symptoms are unlikely to interfere with the safe exercise of the privileges of the licence.

(d) Inflammatory bowel disease

Applicants with an established diagnosis or history of chronic inflammatory bowel disease may be assessed as fit if the disease is in established stable remission, and only minimal, if any, medication is being taken. Regular follow-up should be required.

(e) Dyspepsia

Applicants with recurrent dyspepsia requiring medication should be investigated by internal examination including radiologic or endoscopic examination. Laboratory testing should include haemoglobin assessment and faecal examination. Any demonstrated ulceration or significant inflammation requires evidence of recovery before a fit assessment may be considered.

(f) Digestive tract and abdominal surgery

Applicants who have undergone a surgical operation on the digestive tract or its adnexa, including a total or partial excision or a diversion of any of these organs, should be assessed as unfit. A fit assessment may be considered if recovery is complete, the applicant is asymptomatic and the risk of secondary complication or recurrence is minimal.

AMC1 ATCO.MED.B.025 Metabolic and endocrine system

(a) Metabolic, nutritional or endocrine dysfunction

Applicants with metabolic, nutritional or endocrine dysfunction may be assessed as fit if the condition is asymptomatic, clinically compensated and stable with or without replacement therapy, and regularly reviewed by an appropriate specialist.

(b) Obesity

(1) Applicants with a Body Mass Index ≥ 35 may be assessed as fit only if the excess weight is not likely to interfere with the safe exercise of the privileges of the licence and a satisfactory cardiovascular risk review and evaluation of the possibility of sleep apnoea syndrome has been undertaken.

(2) Functional testing in the working environment may be necessary before a fit assessment may be considered.

(c) Thyroid dysfunction

Applicants with hyperthyroidism or hypothyroidism should attain a stable euthyroid state before a fit assessment may be considered.

(d) Abnormal glucose metabolism

Glycosuria and abnormal blood glucose levels require investigation. A fit assessment may be considered if normal glucose tolerance is demonstrated (low renal threshold) or impaired glucose tolerance without diabetic pathology is fully controlled by diet and regularly reviewed.

(e) Diabetes mellitus

(1) The following medication, alone and in combination, may be acceptable for control of

type 2 diabetes:

(i) alpha-glucosidase inhibitors;

(ii) medication that acts on the incretin pathway;

(iii) biguanides.

(2) A fit assessment may be considered after evaluation of the operational environment, including means of glucose monitoring/management whilst performing rated duties, and with demonstrated exemplary glycaemic control.

(3) Annual follow-up by a specialist should be required including demonstration of absence of complications, good glycaemic control demonstrated by six-monthly HbA1c measurements, and a normal exercise tolerance test.

AMC1 ATCO.MED.B.030 Haematology

(a) Anaemia

(1) Anaemia demonstrated by a reduced haemoglobin level should require investigation. A fit assessment may be considered in cases where the primary cause has been treated (e.g. iron or B12 deficiency) and the haemoglobin or haematocrit has stabilised at a satisfactory level. The recommended range of the haemoglobin level is 11–17 g/dl.

(2) Anaemia which is unamenable to treatment should be disqualifying.

(b) Haemoglobinopathy

Applicants with a haemoglobinopathy should be assessed as unfit. A fit assessment may be considered where minor thalassaemia, sickle cell disease or other haemoglobinopathy is diagnosed without a history of crises and where full functional capability is demonstrated.

(c) Coagulation disorders

(1) Significant coagulation disorders require investigation. A fit assessment may be considered if there is no history of significant bleeding or clotting episodes and the haematological data indicate that it is safe to do so.

(2) If anticoagulant therapy is prescribed, AMC1 ATCO.MED.B.010(g) should be followed.

(d) Disorders of the lymphatic system

Lymphatic enlargement requires investigation. A fit assessment may be considered in cases of an acute infectious process which is fully recovered, or Hodgkin's lymphoma, or other lymphoid malignancy which has been treated and is in full remission, or that requires minimal or no treatment.

(e) Leukaemia

(1) Applicants with acute leukaemia should be assessed as unfit. Once in established remission, applicants may be assessed as fit.

(2) Applicants with chronic leukaemia should be assessed as unfit. A fit assessment may be considered after remission and a period of demonstrated stability.

(3) Applicants with a history of leukaemia should have no history of central nervous

system involvement and no continuing side effects from treatment which are likely to interfere with the safe exercise of the privileges of the licence. Haemoglobin and platelet levels should be satisfactory.

(4) Regular follow-up is required in all cases of leukaemia.

(f) Splenomegaly

Splenomegaly requires investigation. A fit assessment may be considered if the enlargement is minimal, stable and no associated pathology is demonstrated, or if the enlargement is minimal and associated with another acceptable condition.

GM1 ATCO.MED.B.030 Haematology

HODGKIN'S LYMPHOMA

Due to potential side effects of specific chemotherapeutic agents, the precise regime utilised should be taken into account.

GM2 ATCO.MED.B.030 Haematology

CHRONIC LEUKAEMIA

A fit assessment may be considered if the chronic leukaemia has been diagnosed as:

(a) lymphatic at stages 0, I, and possibly II without anaemia and minimal treatment; or

(b) stable 'hairy cell' leukaemia with normal haemoglobin and platelets.

GM3 ATCO.MED.B.030 Haematology

SPLENOMEGALY

(a) Splenomegaly should not preclude a fit assessment, but should be assessed on an individual basis.

(b) Associated pathology of splenomegaly is e.g. treated chronic malaria.

(c) An acceptable condition associated with splenomegaly is e.g. Hodgkin's lymphoma in remission.

AMC1 ATCO.MED.B.035 Genitourinary system

(a) Abnormal urinalysis

Any abnormal finding on urinalysis requires investigation. This investigation should include proteinuria, haematuria and glycosuria.

(b) Renal disease

(1) Applicants presenting with any signs of renal disease should be assessed as unfit. A fit assessment may be considered if blood pressure is satisfactory and renal function is acceptable.

(2) Applicants requiring dialysis should be assessed as unfit.

(c) Urinary calculi

(1) Applicants with an asymptomatic calculus or a history of renal colic require investigation. A fit assessment may be considered after successful treatment for a calculus and with appropriate follow-up.

(2) Residual calculi should be disqualifying unless they are in a location where they are unlikely to move and give rise to symptoms.

(d) Renal and urological surgery

(1) Applicants who have undergone a major surgical operation on the genitourinary system or its adnexa involving a total or partial excision or a diversion of any of its organs should be assessed as unfit until recovery is complete, the applicant is asymptomatic and the risk of secondary complications is minimal.

(2) Applicants with compensated nephrectomy without hypertension or uraemia may be assessed as fit.

(3) Applicants who have undergone renal transplantation may be considered for a fit assessment if it is fully compensated and tolerated with only minimal immuno-suppressive therapy after at least 12 months.

(4) Applicants who have undergone total cystectomy may be considered for a fit assessment if there is satisfactory urinary function, no infection and no recurrence of primary pathology.

AMC1 ATCO.MED.B.040 Infectious disease

(a) Infectious disease — General

In cases of infectious disease, consideration should be given to a history of, or clinical signs indicating, underlying impairment of the immune system.

(b) Tuberculosis

(1) Applicants with active tuberculosis should be assessed as unfit. A fit assessment may be considered following completion of therapy.

(2) Applicants with quiescent or healed lesions may be assessed as fit. Specialist evaluation should consider the extent of the disease, the treatment required and possible side effects of medication.

(c) Syphilis

Applicants with acute syphilis should be assessed as unfit. A fit assessment may be considered in the case of those fully treated and recovered from the primary and secondary stages.

(d) HIV positivity

(1) Applicants who are HIV positive may be assessed as fit if a full investigation provides no evidence of HIV associated diseases that might give rise to incapacitating symptoms. Frequent review of the immunological status and neurological evaluation by an appropriate specialist should be carried out. A cardiological review may also be required depending on medication.

(2) Applicants with an AIDS defining condition should be assessed as unfit except in individual cases for revalidation of a medical certificate after complete recovery and dependent on the review.

(3) The aero-medical assessment of individual cases under (1) and (2) should be dependent on the absence of symptoms or signs of the disease and the acceptability of serological markers. Treatment should be evaluated by a specialist on an individual basis for its appropriateness and any side effects.

(e) Infectious hepatitis

Applicants with infectious hepatitis should be assessed as unfit. A fit assessment may be considered once the applicant has become asymptomatic after treatment and specialist evaluation. Regular review of the liver function should be carried out.

GM1 ATCO.MED.B.040 Infectious disease

HIV INFECTION

(a) There is no requirement for routine testing of HIV status, but testing may be carried out on clinical indication.

(b) If HIV positivity has been confirmed, a process of rigorous aero-medical assessment and follow- up should be introduced to enable individuals to continue working provided their ability to exercise their licenced privileges to the required level of safety is not impaired. The operational environment should be considered in the decision-making.

AMC1 ATCO.MED.B.045 Obstetrics and gynaecology

(a) Gynaecological surgery

Applicants who have undergone a major gynaecological operation should be assessed as unfit until recovery is complete, the applicant is asymptomatic and the risk of secondary complications or recurrence is minimal.

(b) Pregnancy

(1) A pregnant licence holder may be assessed as fit during the first 34 weeks of gestation provided obstetric evaluation continuously indicates a normal pregnancy.

(2) The AeMC or AME or the licensing authority should provide written advice to the applicant and the supervising physician regarding potentially significant complications of pregnancy which may negatively influence the safe exercise of the privileges of the licence.

AMC1 ATCO.MED.B.050 Musculoskeletal system

(a) Applicants with any significant sequelae from disease, injury or congenital abnormality affecting the bones, joints, muscles or tendons with or without surgery require full evaluation prior to a fit assessment.

(b) Abnormal physique, including obesity, or muscular weakness may require aero-medical assessment and particular attention should be paid to an aero-medical assessment in the working environment.

(c) Locomotor dysfunction, amputations, malformations, loss of function and progressive osteoarthritic disorders should be assessed on an individual basis in conjunction with the appropriate operational expert with a knowledge of the complexity of the tasks of the applicant.

(d) Applicants with inflammatory, infiltrative or degenerative disease of the musculoskeletal system may be assessed as fit provided the condition is in remission and the medication is acceptable.

AMC1 ATCO.MED.B.055 Mental Health

(a) Mental health assessment as part of the initial class 3 aero-medical examination

(1) A comprehensive mental health assessment should be conducted and recorded taking into account social, environmental and cultural contexts.

(2) The applicant's history and symptoms of disorders that might pose a threat to flight

safety should be identified and recorded.

(3) The mental health assessment should include assessment and documentation of:

(i) general attitudes to mental health, including understanding possible indications of reduced mental health in themselves and others;

(ii) coping strategies under periods of psychological stress or pressure in the past, including seeking advice from others;

(iii) childhood behavioural problems;

(iv) interpersonal and relationship issues;

(v) current work and life stressors; and

(vi) overt personality disorders.

(4) Where there are signs or is established evidence that an applicant may have a psychiatric or psychological disorder, the applicant should be referred for specialist opinion and advice.

(b) Mental health assessment as part of revalidation or renewal class 3 medical examination

(1) The assessment should include review and documentation of:

(i) current work and life stressors;

(ii) coping strategies under periods of psychological stress or pressure in the past, including seeking advice from others;

(iii) any difficulties with operational crew resource management (TRM);

(iv) any difficulties with employer and/or other colleagues and managers; and

(v) interpersonal and relationship issues, including difficulties with relatives, friends, and work colleagues.

(2) Where there are signs or is established evidence that an applicant may have a psychiatric or psychological disorder, the applicant should be referred for specialist opinion and advice.

(3) Established evidence should be verifiable information from an identifiable source related to the mental fitness or personality of a particular individual. Sources for this information can be accidents or incidents, problems in training or proficiency checks, behaviour or knowledge relevant to the safe exercise of the privileges of the applicable licence(s).

(c) Assessment of holders of a class 3 medical certificate referenced in appropriate limitation MED.B.055(d)

Assessment of holders of a class 3 medical certificate referenced in MED.B.055(d) may require psychiatric and psychological evaluation as determined by the medical assessor of the licensing authority. A SIC limitation should be imposed in case of a fit assessment. Follow-up and removal of SIC limitation, as necessary, should be determined by the medical assessor of the licensing authority.

(d) Psychoactive substance testing

(1) Drug tests should screen for opioids, cannabinoids, amphetamines, cocaine, hallucinogens and sedative hypnotics. Following a risk assessment performed by the competent authority on the target population, screening tests may include additional drugs.

(2) For renewal/revalidation, random psychoactive substance screening test may be performed based on the risk assessment by the competent authority on the target population. If random psychoactive substance screening test is considered, it should be performed and reported in accordance with the procedures developed by the competent authority.

(3) In the case of a positive psychoactive substance screening result, confirmation should be required in accordance with national standards and procedures for psychoactive substance testing.

(4) In case of a positive confirmation test, a psychiatric evaluation should be undertaken before a fit assessment may be considered by the medical assessor of the licensing authority.

(e) Assessment and referral decisions

(1) Psychotic disorder

Applicants with a history, or the occurrence, of a functional psychotic disorder should be assessed as unfit. A fit assessment may be considered if a cause can be unequivocally identified as one which is transient, has ceased and the risk of recurrence is minimal.

(2) Organic mental disorder

Applicants with an organic mental disorder should be assessed as unfit. Once the cause has been treated, an applicant may be assessed as fit following satisfactory psychiatric evaluation.

(3) Psychoactive medication

Applicants who use psychoactive medication likely to affect flight safety should be assessed as unfit. If stability on maintenance psychoactive medication is confirmed, a fit assessment with an appropriate limitation may be considered. If the dosage or type of medication is changed, a further period of unfit assessment should be required until stability is confirmed.

(4) Schizophrenia, schizotypal or delusional disorder

Applicants with an established history or clinical diagnosis of schizophrenia, schizotypal or delusional disorder may only be considered for a fit assessment if the medical assessor of the licensing authority concludes that the original diagnosis was inappropriate or inaccurate as confirmed by psychiatric evaluation, or, in the case of a single episode of delirium of which the cause was clear, provided that the applicant has suffered no permanent mental impairment.

(5) Mood disorder

Applicants with an established mood disorder should be assessed as unfit. After full recovery and after full consideration of the individual case, a fit assessment may be considered, depending on the characteristics and severity of the mood disorder.

(6) Neurotic, stress-related or somatoform disorder

Where there are signs or is established evidence that an applicant may have a neurotic, stress-related or somatoform disorder, the applicant should be referred for psychiatric or psychological opinion and advice.

(7) Personality or behavioural disorders

Where there are signs or is established evidence that an applicant may have a personality or behavioural disorder, the applicant should be referred for psychiatric or psychological opinion and advice.

(8) Disorders due to alcohol or other psychoactive substance(s) use or misuse

(i) Applicants with mental or behavioural disorders due to alcohol or other psychoactive substance(s) use or misuse, with or without dependency, should be assessed as unfit.

(ii) A fit assessment may be considered after a period of two years of documented sobriety or freedom from psychoactive substance use or misuse. At revalidation or renewal, a fit assessment may be considered earlier with an appropriate limitation. Depending on the individual case, treatment and evaluation may include in-patient treatment of some weeks and inclusion into a support programme followed by ongoing checks, including drug and alcohol testing and reports resulting from the support programme, which may be required indefinitely.

(9) Deliberate self-harm and suicide attempt

Applicants who have carried out a single self-destructive action or repeated acts of deliberate self-harm or suicide attempt should be assessed as unfit. A fit assessment may be considered after full consideration of an individual case and may require psychiatric or psychological evaluation. Neuropsychological evaluation may also be required.

(10) Assessment

The assessment should take into consideration if the indication for the treatment, side effects and addiction risks of such treatment and the characteristics of the psychiatric disorder are compatible with flight safety.

(f) Specialist opinion and advice

(1) In case a specialist evaluation is needed, following the evaluation, the specialist should submit a written report to the AME, AeMC or medical assessor of the licensing authority as appropriate, detailing their opinion and recommendation.

(2) Psychiatric evaluations should be conducted by a qualified psychiatrist having adequate knowledge and experience in aviation medicine.

(3) The psychological opinion and advice should be based on a clinical psychological assessment conducted by a suitably qualified and accredited clinical psychologist with expertise and experience in aviation psychology.

(4) The psychological evaluation may include a collection of biographical data, the administration of aptitude as well as personality tests and clinical interview.

GM1 MED.B.055 Mental health

(a) Symptoms of concern may include but are not limited to:

(1) use of alcohol or other psychoactive substances;

(2) loss of interest/energy;

(3) eating and weight changes;

(4) sleeping problems;

(5) low mood and, if present, any suicidal thoughts;

(6) family history of psychiatric disorders, particularly suicide;

(7) anger, agitation or high mood; and

(8) depersonalisation or loss of control

(b) The following aspects should be taken into consideration when conducting the mental health examination:

(1) Appearance;

(2) Attitude;

(3) Behaviour;

(4) Mood;

(5) Speech;

(6) Thoughts process and content;

(7) Perception;

(8) Cognition;

(9) Insight; and

(10) Judgement.

GM2 MED.B.055 Mental health

(a) Drugs and alcohol screening tests used should:

(1) provide information regarding medium-term consumption;

(2) be accepted on national level by the competent authority based on the availability and suitability for the scope mentioned in point(a)(1) above.

(b) Statistical data of the screening campaign mentioned in AMC1 MED.B.055(d)(1) should be made available to the Agency on a yearly basis.

AMC1 ATCO.MED.B.065 Neurology

(a) Electroencephalography (EEG)

(1) EEG should be carried out when indicated by the applicant's history or on clinical grounds.

(2) Epileptiform paroxysmal EEG abnormalities and focal slow waves should be disqualifying. A fit assessment may be considered after further evaluation.

(b) Epilepsy

(1) Applicants who have experienced one or more convulsive episodes after the age of

five should be assessed as unfit.

(2) A fit assessment may be considered if:

(i) the applicant is seizure free and off medication for a period of at least 10 years;

(ii) full neurological evaluation shows that a seizure was caused by a specific non-recurrent cause, such as trauma or toxin.

(3) Applicants who have experienced an episode of benign Rolandic seizure may be assessed as fit provided the seizure has been clearly diagnosed including a properly documented history and typical EEG result and the applicant has been free of symptoms and off treatment for at least 10 years.

(c) Neurological disease

Applicants with any stationary or progressive disease of the nervous system which has caused or is likely to cause a significant disability should be assessed as unfit. A fit assessment may be considered after full neurological evaluation in cases of minor functional losses associated with stationary disease.

(d) Disturbance of consciousness

Applicants with a history of one or more episodes of disturbed consciousness may be assessed as fit if the condition can be satisfactorily explained by a non-recurrent cause. A full neurological evaluation is required.

(e) Head injury

Applicants with a head injury which was severe enough to cause loss of consciousness or is associated with penetrating brain injury should be evaluated by a consultant neurologist. A fit assessment may be considered if there has been a full recovery and the risk of epilepsy is sufficiently low. Behavioural and cognitive aspects should be taken into account.

AMC1 ATCO.MED.B.070 Visual system

(a) Eye examination

(1) At each aero-medical revalidation examination, the visual fitness should be assessed and the eyes should be examined with regard to possible pathology.

(2) All abnormal and doubtful cases should be referred to an ophthalmologist. Conditions which indicate ophthalmological examination include but are not limited to a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity and/or the occurrence of eye disease, eye injury or eye surgery.

(3) Where ophthalmological examinations are required for any significant reason, this should be imposed as a limitation on the medical certificate.

(4) The effect of multiple eye conditions should be evaluated by an ophthalmologist with regard to possible cumulative effects. Functional testing in the working environment may be necessary to consider a fit assessment.

(5) Visual acuity should be tested using Snellen charts, or equivalent, under appropriate illumination. Where clinical evidence suggests that Snellen may not be appropriate, Landolt ‘C’ may be used.

(b) Comprehensive eye examination

A comprehensive eye examination by an eye specialist is required at the initial examination.

All abnormal and doubtful cases should be referred to an ophthalmologist. The examination should include:

(1) history;

(2) visual acuities — near, intermediate and distant vision; uncorrected and with best optical correction if needed;

(3) objective refraction — hyperopic initial applicants with a hyperopia of more than +2 dioptres and under the age of 25 in cycloplegia;

(4) ocular motility and binocular vision;

(5) colour vision;

(6) visual fields;

(7) tonometry;

(8) examination of the external eye, anatomy, media (slit lamp) and fundoscopy;

(9) assessment of contrast and glare sensitivity.

(c) Routine eye examination

At each revalidation or renewal examination, the visual fitness should be assessed and the eyes should be examined with regard to possible pathology. All abnormal and doubtful cases should be referred to an ophthalmologist. This routine eye examination should include:

(1) history;

(2) visual acuities — near, intermediate and distant vision; uncorrected and with best optical correction if needed;

(3) morphology by ophthalmoscopy;

(4) further examination on clinical indication.

(d) Refractive error

(1) Applicants with a refractive error between +5.0/-6.0 dioptres may be assessed as fit provided optimal correction has been considered and no significant pathology is demonstrated. If the refractive error exceeds +3.0/-3.0 dioptres, a four-yearly follow-up by an eye specialist should be required.

(2) Applicants with:

(i) a refractive error exceeding -6 dioptres;

(ii) an astigmatic component exceeding 3 dioptres; or

(iii) anisometropia exceeding 3 dioptres; may be considered for a fit assessment if:

(A) no significant pathology can be demonstrated;

(B) optimal correction has been considered;

(C) visual acuity is at least 6/6 (1.0) in each eye separately with normal visual fields while wearing the optimal spectacle correction;

(D) two-yearly follow-up is undertaken by an eye specialist.

(3) Applicants with hypermetropia exceeding +5.0 dioptres may be assessed as fit subject to a satisfactory ophthalmological evaluation provided there are adequate fusional reserves, normal intraocular pressures and anterior angles and no significant pathology has been demonstrated. Corrected visual acuity in each eye shall be 6/6 or better.

(4) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

(e) Convergence

Applicants with convergence outside the normal range may be assessed as fit provided it does not interfere with near vision (30–50 cm) or intermediate vision (100 cm) with or without correction.

(f) Substandard vision

(1) Applicants with reduced central vision in one eye may be assessed as fit for a revalidation or renewal of a medical certificate if the binocular visual field is normal and the underlying pathology is acceptable according to ophthalmological evaluation. Testing should include functional testing in the appropriate working environment.

(2) Applicants with acquired substandard vision in one eye (monocularity, functional monocular vision including eye muscle imbalance) may be assessed as fit for revalidation or renewal if the ophthalmological examination confirms that:

(i) the better eye achieves distant visual acuity of 1.0 (6/6), corrected or uncorrected;

(ii) the better eye achieves intermediate and near visual acuity of 0.7 (6/9), corrected or uncorrected;

(iii) there is no significant ocular pathology;

(iv) a functional test in the working environment is satisfactory; and

(v) in the case of acute loss of vision in one eye, a period of adaptation time has passed from the known point of visual loss, during which the applicant is assessed as unfit.

(3) An applicant with a monocular visual field defect may be assessed as fit if the binocular visual fields are normal.

(g) Keratoconus

Applicants with keratoconus may be considered for a fit assessment if the visual requirements are met with the use of corrective lenses and periodic review is undertaken by an ophthalmologist.

(h) Heterophoria

Applicants with heterophoria (imbalance of the ocular muscles) exceeding when measured with optimal correction, if prescribed:

(1) at six metres:

— 2.0 prism dioptres in hyperphoria,

— 10.0 prism dioptres in esophoria,

— 8.0 prism dioptres in exophoria

— and

(2) at 33 centimetres:

— 1.0 prism dioptre in hyperphoria,

— 8.0 prism dioptres in esophoria,

— 12.0 prism dioptres in exophoria

may be assessed as fit provided that orthoptic evaluation demonstrates that the fusional reserves are sufficient to prevent asthenopia and diplopia. The Netherlands Optical Society (TNO) testing or equivalent should be carried out to demonstrate fusion.

(i) Eye surgery

(1) After refractive surgery or surgery of the cornea including cross linking, a fit assessment may be considered, provided:

(i) satisfactory stability of refraction has been achieved (less than 0.75 dioptres variation diurnally);

(ii) examination of the eye shows no post-operative complications;

(iii) glare sensitivity is normal;

(iv) mesopic contrast sensitivity is not impaired;

(v) evaluation is undertaken by an ophthalmologist.

(2) Cataract surgery

Following intraocular lens surgery, including cataract surgery, a fit assessment may be considered once recovery is complete and the visual requirements are met with or without correction. Intraocular lenses should be monofocal and should not impair colour vision.

(3) Retinal surgery/retinal laser therapy

(i) After successful retinal surgery, applicants may be assessed as fit once the recovery is complete. Annual ophthalmological follow-up may be necessary. Longer periods may be acceptable after two years on recommendation of the ophthalmologist.

(ii) After successful retinal laser therapy, applicants may be assessed as fit provided an ophthalmological evaluation shows stability.

(4) Glaucoma surgery

A fit assessment may be considered six months after successful glaucoma surgery, or earlier if recovery is complete. Six-monthly ophthalmological examinations to follow up secondary complications caused by the glaucoma may be necessary.

(5) Extraocular muscle surgery

A fit assessment may be considered not less than six months after surgery and after a satisfactory ophthalmological evaluation.

(j) Visual correction

Spectacles should permit the licence holder to meet the visual requirements at all distances.

GM1 ATCO.MED.B.070 Visual system

COMPARISON OF DIFFERENT READING CHARTS (APPROXIMATE FIGURES)

(a) Test distance: 40 cm

Decimal	Nieden	Jäger	Snellen	N	Parinaud
1,0	1	2	1,5	3	2
0,8	2	3	2	4	3
0,7	3	4	2,5		
0,6	4	5	3	5	4
0,5	5	5		6	5
0,4	7	9	4	8	6
0,35	8	10	4,5		8
0,32	9	12	5,5	10	10
0,3	9	12		12	
0,25	9	12		14	
0,2	10	14	7,5	16	14
0,16	11	14	12	20	

(b) Test distance: 80 cm

Decimal	Nieden	Jäger	Snellen	N	Parinaud
1,2	4	5	3	5	4
1,0	5	5		6	5
0,8	7	9	4	8.0	6
0,7	8	10	4,5		8
0,63	9	12	5,5	10	10
0,6	9	12		12	10
0,5	9	12		14	10
0,4	10	14	7,5	16	14
0,32	11	14	12	20	14

AMC1 ATCO.MED.B.075 Colour vision

(a) At revalidation and renewal examinations, colour vision should be tested on clinical indication.

(b) The Ishihara test (24 plate version) is considered passed if the first 15 plates, presented in a random order, are identified without error.

(c) Those failing the Ishihara test should be examined either by:

(1) anomaloscopy (Nagel or equivalent). This test is considered passed if the colour match is trichromatic and the matching range is 4 scale units or less, or if the anomalous quotient is acceptable; or by

(2) lantern testing with a Spectrolux, Beynes or Holmes-Wright lantern. This test is considered passed if the applicant passes without error a test with accepted lanterns.

(3) Colour Assessment and Diagnosis (CAD) test. This test is considered passed if the threshold is less than 6 standard normal (SN) units for deutan deficiency, or less than 12 SN units for protan deficiency. A threshold greater than 2 SN units for tritan deficiency indicates an acquired cause which should be investigated.

AMC1 ATCO.MED.B.080 Otorhinolaryngology

(a) Examination

(1) An otorhinolaryngological examination includes:

(i) history;

(ii) clinical examination including otoscopy, rhinoscopy and examination of the mouth and throat;

(iii) clinical examination of the vestibular system.

(2) Ear, nose and throat (ENT) specialists involved in the aero-medical assessment of air traffic controllers should have an understanding of the functionality required by air traffic controllers whilst exercising the privileges of their licence(s).

(3) Where a full aero-medical assessment and functional check are needed, due regard should be paid to the operational environment in which the operational functions are undertaken.

(b) Hearing

(1) The follow-up of an applicant with hypoacusis should be decided by the licensing authority. If at the next annual test there is no indication of further deterioration, the normal frequency of testing may be resumed.

(2) An appropriate prosthetic aid may be a special headset with individual earpiece volume controls. Full functional and environmental assessments should be carried out with the chosen prosthetic equipment in use.

(c) Ear conditions

An applicant with a single dry perforation of non-infectious origin and which does not interfere with the normal function of the ear may be considered for a fit assessment.

(d) Vestibular disturbance

The presence of vestibular disturbance and spontaneous or positional nystagmus requires complete vestibular evaluation by a specialist. Significant abnormal caloric or rotational vestibular responses are disqualifying. At revalidation and renewal aero-medical examinations, abnormal vestibular responses should be assessed in their clinical context.

(e) Speech disorder

Applicants with a speech disorder should be assessed with due regard to the operational environment in which the operational functions are undertaken. Applicants with significant disorder of speech or voice should be assessed as unfit.

GM1 ATCO.MED.B.080 Otorhinolaryngology

HEARING

(a) Speech discrimination test: discriminating speech against other noise including other sources of verbal communication and ambient noise in the working environment, but not against engine noise.

(b) Functional hearing test: the objective of this test is to evaluate the controller's ability to hear the full range of communications that occur in an operational environment and not just through a headset or speaker.

(c) Prosthetic aid: the functional hearing test to be carried out with the prosthetic aid in use is to ensure that the individual is able to perform the functions of his/her licence and that the equipment is not adversely affected by interference from headsets or other factors.

(d) Pure-tone audiometry: testing at frequencies at or above 4 000 Hz will aid the early diagnosis of acoustic neuroma, noise-induced hearing loss (NIH) and other disorders of hearing. Particular attention should be paid in cases where there is a significant difference between thresholds of the left and right ear.

AMC1 ATCO.MED.B.085 Dermatology

(a) Referral to the licensing authority should be made if doubt exists about the fitness of an applicant with eczema (exogenous and endogenous), severe psoriasis, chronic infections, drug- induced or bullous eruptions or urticaria.

(b) Systemic effects of radiation or pharmacological treatment for a dermatological condition should be evaluated before a fit assessment may be considered.

(c) An applicant with a skin condition that causes pain, discomfort, irritation or itching may only be assessed as fit if the condition can be controlled and does not interfere with the safe exercise of the privileges of the licence.

(d) In cases where a dermatological condition is associated with a systemic illness, full consideration should be given to the underlying illness before a fit assessment may be considered.

AMC1 ATCO.MED.B.090 Oncology

(a) Applicants who have been diagnosed with a malignant disease may be assessed as fit provided:

(1) after primary treatment there is no evidence of residual malignant disease likely to interfere with the safe exercise of the privileges of the licence;

(2) time appropriate to the type of tumour has elapsed since the end of primary treatment;

(3) the risk of incapacitation from a recurrence or metastasis is sufficiently low;

(4) there is no evidence of short- or long-term sequelae from treatment. Special attention should be paid to applicants who have received anthracycline chemotherapy;

(5) satisfactory oncology follow-up reports are provided to the licensing authority.

(b) Applicants receiving ongoing chemotherapy or radiation treatment should be assessed as unfit.

(c) Applicants with a benign intracerebral tumour may be assessed as fit after satisfactory specialist and neurological evaluation and the condition does not compromise the safe exercise of the privileges of the licence.

(d) Applicants with pre-malignant conditions may be assessed as fit if treated or excised as necessary and there is a regular follow-up.

SUBPART C – AERO-MEDICAL EXAMINERS (AMES)

AMC1 ATCO.MED.C.015 Training courses in aviation medicine

BASIC TRAINING COURSE

(a) Basic training course for AMEs

The basic training course for AMEs should consist of 60 hours of theoretical and practical training, including specific examination techniques.

(b) The learning objectives to acquire the necessary competences should include theoretical knowledge, risk management and decision-making principles in the following subjects. Demonstrations and practical skills should also be included, where appropriate.

(1) Introduction to aviation medicine;

(2) Basic aeronautical knowledge;

(3) Aviation physiology;

(4) Cardiovascular system;

(5) Respiratory system;

(6) Digestive system;

(7) Metabolic and endocrine system;

(8) Haematology;

(9) Genitourinary system;

(10) Obstetrics and gynaecology;

(11) Musculoskeletal system;

(12) Psychiatry;

(13) Psychology;

(14) Neurology;

(15) Visual system and colour vision;

(16) Otorhinolaryngology;

(17) Oncology;

(18) Incidents and accidents, escape and survival;

(19) Legislation, rules and regulations;

(20) Medication and air traffic control.

AMC2 ATCO.MED.C.015 Training courses in aviation medicine

(a) The advanced training course for AMEs should consist of another 60 hours of theoretical and practical training, including specific examination techniques.

(b) The syllabus for the advanced training course should concentrate on the specific air traffic control environment, and demonstrations and practical skills should be included, where appropriate. The course should cover at least the following subjects:

(1) Air traffic control working environment;

(2) Ophthalmology, including demonstration and practical training;

(3) Otorhinolaryngology, including demonstration and practical training;

(4) Clinical medicine;

(5) Cardiovascular system;

(6) Neurology;

(7) Psychiatry;

(8) Oncology;

(9) Metabolic and endocrine systems;

(10) Human factors in aviation with a specific focus on the air traffic control environment;

(11) Problematic use of substances.

(c) Practical training at an AeMC should be under the guidance and supervision of the Head of the AeMC.

(d) After the successful completion of the practical training, a report of demonstrated competence should be issued.

AMC1 ATCO.MED.C.025(b) Validity of AME certificates

REFRESHER TRAINING IN AVIATION MEDICINE

(a) During the period of authorisation certification, an AME should attend 20 hours of refresher training, including training with regard to the environment of air traffic control.

(b) A proportionate number of refresher training hours should be provided by, or conducted under the direct supervision of, the SCAA or the medical assessor.

(c) Attendance at scientific meetings and congresses and air traffic control observation may be credited by the SCAA for a specified number of hours against the training obligations of the AME, provided the medical assessor has assessed it in advance as being relevant for crediting purposes.

GM1 ATCO.MED.C.025(b) Validity of AME certificates

REFRESHER TRAINING IN AVIATION MEDICINE

Scientific meetings or congresses that may be credited by the SCAA:

(a) European Conference of Aerospace Medicine;

(b) International Academy of Aviation and Space Medicine annual congresses;

(c) Aerospace Medical Association annual scientific meetings; and

(d) Other scientific meetings.

INITIAL TRAINING CONTENT

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

GENERAL

1. Structure of the basic and rating training syllabi

(a) The basic and rating training syllabi have been structured as follows:

(1) The syllabus is divided into subjects, which are divided into topics that are in turn divided into subtopics. This structure serves the definition and classification of the objectives. There can be one or several objectives linked to each subtopic.

(2) Objectives are assigned to a specific subject which deals with the knowledge and skills needed to accomplish the related subject objective.

(3) Subjects, topics and subtopics are contained in Appendices 2 to 8 to Annex I to R-PEL-006, and are repeated in:

- AMC1 ATCO.D.010(a)(1) Composition of initial training — BASIC TRAINING — TRAINING OBJECTIVES;
- AMC1 ATCO.D.010(a)(2)(i) Composition of initial training — AERODROME CONTROL RATING (ADC) FOR TOWER ADC TRAINING — SUBJECT OBJECTIVES AND TRAINING OBJECTIVES;
- AMC1 ATCO.D.010(a)(2)(ii) Composition of initial training — APPROACH CONTROL PROCEDURAL RATING (APP) TRAINING — TRAINING OBJECTIVES;
- AMC1 ATCO.D.010(a)(2)(iii) Composition of initial training — AREA CONTROL PROCEDURAL RATING (ACP) TRAINING — TRAINING OBJECTIVES;
- AMC1 ATCO.D.010(a)(2)(iv) Composition of initial training — APPROACH CONTROL SURVEILLANCE RATING (APS) TRAINING — TRAINING OBJECTIVES
- AMC1 ATCO.D.010(a)(2)(v) Composition of initial training — AREA CONTROL SURVEILLANCE RATING (ACS) TRAINING — TRAINING OBJECTIVES

in order to provide the reader with a comprehensive and unique reference document for the basic and each of the rating trainings. Subject objectives and training objectives are included in and form an integral part of each of the aforementioned AMC.

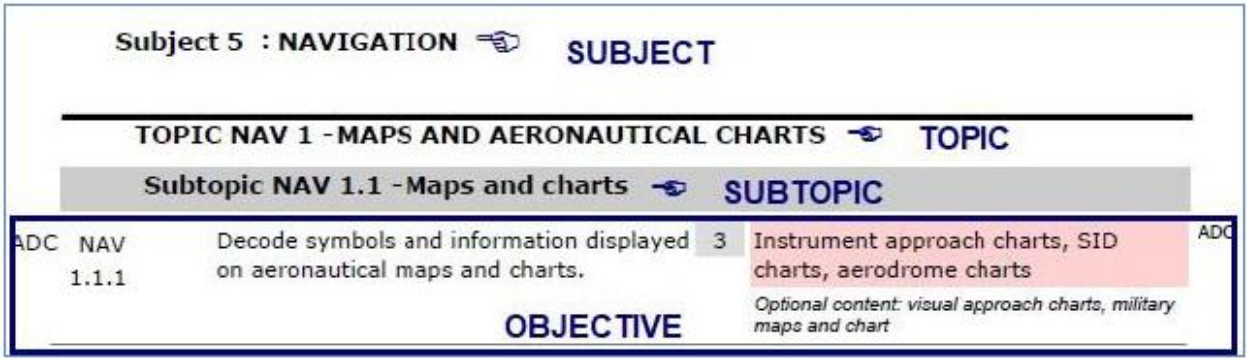

Figure 1: Layout of the syllabus

(b) The following principles may be applied to the development of a training course that is based on any of the syllabi:

(1) The structure of the syllabi and the order of the objectives contained therein is neither intended to convey a pedagogical sequence nor to indicate a relative level of importance.

(2) No objective from the basic training syllabus is repeated as 'a refresher' in the rating training syllabi.

(3) The number of objectives contained within a subtopic does not necessarily signify how long it should take to teach that subtopic. For example, a subtopic containing five relatively straightforward objectives, may take a shorter time to be taught than another subtopic containing two complex objectives.

2. Structure of the objectives

(a) An objective consists of three elements:

(1) The corpus, which is a description of the required performance. It always contains an action verb to ensure that the outcome is observable. The action verb is always associated with a defined taxonomy.

(2) The level, which indicates numerically the taxonomy of the action verb.

(3) The content, which may be implicit or explicit. Explicit content is written in the content field, while implicit content is not but, instead, is implied in the corpus of the objective and other elements (syllabus, subject, etc.). Content that is a required part of the objective is written in the red-shaded field. Optional content, written in italics is provided to help training designers develop their training material and may suggest possible reference documents that could be used and/or elaborate on the content with specific examples. With or without explicit content, the objective needs to be covered since the implementation is implied in its corpus (text of the objective) and associated context (Subtopic/Topic/Subject/ Rating).

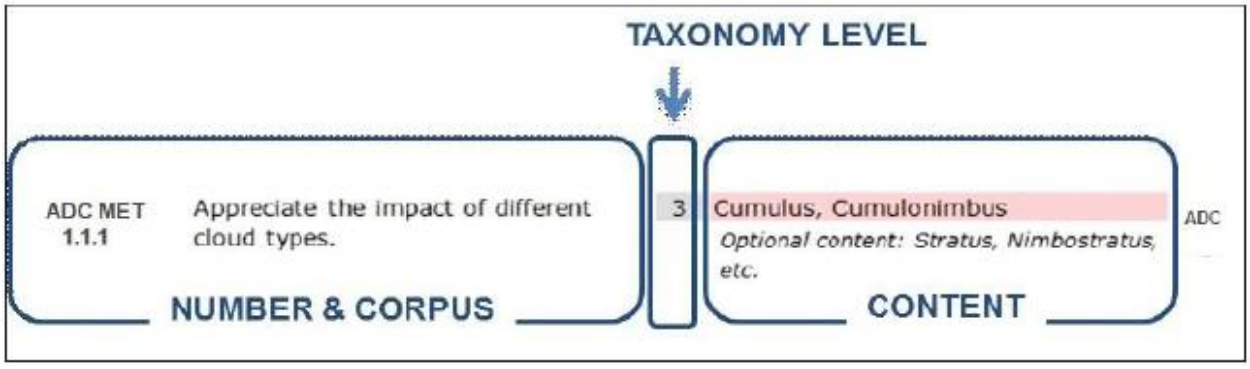

Figure 2: Layout of an objective

3. Repeated and common objectives

(a) Repeated and common objectives are only applicable to rating training.

(b) To the right of each objective, there is an indication of which other ratings contain this particular objective. If the rating is indicated in red italics, it notifies the reader that the

objective(s) is (are) verbatim in each rating; however, the objective numbers are different. This indication is the first step to help training providers identify potential commonalities between the various syllabi. As a second step, training providers must determine, on the level of local implementation, whether the objective is to be regarded as repeated or common.

Subtopic ATM 1.2 – Flight information service (FIS)

ADC ATM 1.2.1	Describe the information that shall be passed to aircraft by an aerodrome controller.	2	ATM Manual	ADC
ADC ATM 1.2.2	Provide FIS	4	ATM Manual *Optional content: national documents*	*ALL*
ADC ATM 1.2.3	Issue appropriate information	3	ATM Manual, essential local traffic, traffic information	ADC
ADC ATM 1.2.4	Appreciate the use of ATIS for the provision of flight information service by aerodrome controller.	3		*ALL*

Figure 3: Indication of the ratings to which a particular objective applies

3.1 Repeated objectives

All the objectives appearing in a syllabus are implicitly appropriate to this syllabus. As a consequence, objectives may be repeated 'verbatim' in different rating syllabi and nevertheless specify a different performance. The reader always needs to mentally add the sentence 'in this syllabus context' at the end of each objective.

For example, the objective 'use approved phraseology' is repeated (same level, same corpus, same content) in all the syllabi but is different because the context is different in each syllabus (a learner that is able to use approved phraseology for en-route traffic will need additional training before mastering the phraseology in the provision of aerodrome control).

3.2 Common objectives

(a) Common objectives are verbatim the same objectives that appear in more than one rating syllabi in the same context so that they do not need to be taught again in case of combined or successively organised courses.

For example, the objective 'describe the human information-processing model' is common for all the syllabi because the context is non-specific and is, therefore, not determined by the type of rating.

(b) As a general principle, the rating subject `Human Factors` is identical in each of the rating training syllabi and can be considered as containing common objectives because the context is always the same. This means that the rating training objectives relating to Human Factors need to be taught only once. If a learner acquires an additional rating, that leaner would not be required to repeat the Human Factors objectives.

4. Action verbs that support the taxonomy for training objectives

(a) The five taxonomy levels should be understood to have the following levels of complexity:

(1) Action verbs for Level 1

Level 1 — A basic knowledge of the subject. It is the ability to remember essential points, to memorise data and retrieve it.

L1 Verb	Definition	Example
Define	State what it is and what its limits are; state the definition.	Define ATC service.
Draw	Produce a picture, pattern or diagram.	Draw the block diagram. Draw a holding pattern.
List	Say one after the other.	List the different types of jet engines.
Name	Give name of objects or procedures.	Name the competent authorities responsible for ATCO licensing and ANSP oversight.
Quote	Repeat what is written or said.	Quote ICAO definition of ATC service.
Recognise	To know what it is because you have seen it before.	Recognise the information contained in the different parts of the AIP.
State	Say or write in a formal or definite way.	State the meteorological hazards to aviation.

(2) Action verbs for Level 2

Level 2 — The ability to understand and to discuss the subject matter intelligently in order to represent and act upon certain objects and events.

L2 Verb	Definition	Example
Characterise	To describe the quality of features in something.	Characterise the main radio navigation techniques based on ground-based systems.
Consider	To think carefully about it.	Consider how the evolution of a situation may have an impact on safety.
Demonstrate	Describe and explain; logically or mathematically prove the truth of a statement.	Demonstrate the importance of good communications in ATC.
Describe	Say what it is like or what happened.	Describe the methods by which ICAO notifies and implements legislation.
Differentiate	Show the differences between things.	Differentiate between different types of visibility.
Explain	Give details about something or describe so that it can be understood.	Explain the purpose and function of ICAO.
Take account of	Take into consideration before deciding.	Take account of the limitations of equipment and systems.

(3) Action verbs for Level 3

Level 3 — A thorough knowledge of the subject and the ability to apply it with accuracy. The ability to make use of the repertoire of knowledge to develop plans and activate them.

L3 Verb	Definition	Example
Act	Carry out, execute.	Act to reduce stress.
Apply	Use something in a situation or activity.	Apply separation.
Appreciate	To understand a situation and know what is involved in a problem-solving situation, to state a plan without applying it.	Appreciate the need for coordination (the learner says that the coordination will be done and with whom; the learner does not perform the actual coordination).
Assist	Help somebody to do a job by doing part of it.	Assist the pilot.
Calculate	To discover from information you already have by arithmetic; to think about a possible cause of action in order to form an opinion or decide what to do.	Calculate appropriate levels. Calculate conversions between the three north designations.
Check	Make sure the information is correct (satisfactory).	Check all relevant documentation before managing traffic. Check availability of information.
Choose	Select out of number, decide to do one thing rather than another.	Choose appropriate levels. Choose the appropriate separation methods.
Collect	Assemble, accumulate, bring or come together.	Collect appropriate information relevant to the situation.
Conduct	Organise and carry out.	Conduct level changes.
Confirm	Establish more firmly, corroborate.	Confirm sequence order.
Decode	Turn into ordinary writing, decipher.	Decode the content of weather reports and forecast.
Encode	Put into code or cipher.	Encode and decode flight plans (including supplementary information).
Estimate	Form an approximate judgement of a number, form an opinion.	Estimate distance and direction between two points.
Execute	Perform action.	Execute corrective actions.
Extract	Copy out, make extracts from, find, deduce.	Extract pertinent data from relevant sources to produce a flight progress display.

Identify	Associate oneself inseparably with, establish the identity.	Identify potential or actual abnormal and emergency situations. Identify aircraft.
Inform	Tell, give facts or information.	Inform the supervisor of local factors affecting the ATS system capacity and air traffic flow management.
Initiate	Begin, set going, originate.	Initiate appropriate coordination.
Input	Enter in the system.	Input data.
Issue	Send forth, publish.	Issue appropriate ATC clearances. Issue appropriate information concerning the position of conflicting traffic.
Maintain	Cause or enable to continue.	Maintain situational awareness by monitoring traffic
Measure	Ascertain extent or quality of (thing) by comparison with fixed unit or with object of known size.	Measure distance on a map.
Monitor	Keep under observation.	Monitor the technical integrity of the controller working position.
Notify	Make known, announce, report.	Notify runway in use.
Obtain	Acquire easily without research.	Obtain meteorological information.
Operate	Conduct work on equipment.	Operate the equipment of the controller working position.
Pass	Move, cause to go, transmit.	Pass essential traffic information without delay.
Perform	Carry into effect, go through, execute.	Perform communication effectively.
Process	To put through the steps of a prescribed procedure.	Process pertinent data on data displays.
Record	Register, set down for remembrance or reference.	Record information by writing effectively.
Relay	Receive and pass on, broadcast.	Relay meteorological information.
Respond	Provide an answer, perform answering or corresponding action.	Respond to loss/doubt concerning identification. Respond to distress and urgency messages and signals.
Scan	Continuously observe rapidly, sequentially and selectively in order to extract relevant data.	Scan data display.
Transfer	Hand over.	Transfer information to the relieving controller.
Update	Refresh, bring up to date.	Update the data display to accurately reflect the traffic situation.

Use	Employ for a purpose, handle as instrument, put into operation.	Use approved phraseology. Use the available means for coordination.
Verify	Establish truth of.	Verify that the settings of the working position are appropriate.

(4) Action verbs for Level 4

Level 4 — Ability to establish a line of action within a unit of known applications following the correct chronology and the adequate method to resolve a problematic situation. This involves the integration of known applications in a familiar situation.

L4 Verb	Definition	Example
Acquire	Gain by oneself and for oneself, obtain after research.	Acquire relevant aeronautical information.
Adjust	Change to a new position, value or setting.	Adjust the surveillance system display.
Allocate	Assign, devote.	Allocate levels (height, altitude, flight level) according to altimetry data.
Analyse	Examine minutely the constitution of.	Analyse examples of pilot-controller communication for effectiveness. Analyse the information provided by the radar equipment.
Assign	Designate or set an element.	Assign codes.
Coordinate	Negotiate with others in order to work together effectively.	Coordinate runway in use. Coordinate when providing FIS.
Comply	Act in accordance with.	Comply with rules.
Delegate	Commit authority to somebody.	Delegate separation to pilots in the case of aircraft executing successive visual approaches.
Detect	Discover existence of.	Detect conflicts in time for appropriate resolution.
Ensure	Make safe, make certain.	Ensure the agreed course of action is carried out.
Expedite	Assist the progress of, do speedily.	Expedite traffic.
Integrate	Combine into a whole, complete by addition of parts.	Integrate appropriate ATC clearances in control service.
Manage	Handle, conduct, maintain control over something, be in charge of.	Manage traffic on the manoeuvring area. Manage traffic in accordance with a change to operational procedures.
Organise	Give orderly structure to, frame and put into working order.	Organise pertinent data on data displays. Organise priority of actions.
Predict	Forecast.	Predict positions of aircraft in the aerodrome traffic and taxi circuits.
Provide	Supply, furnish.	Provide vectoring. Provide FIS.
Relate	Establish link with.	Relate a pressure setting to an altitude.

(5) Action verbs for Level 5

Level 5 — Ability to analyse new situation in order to elaborate and apply one or other relevant strategy to solve a complex problem. The defining feature is that the situation is qualitatively different from those previously met, requiring judgement and evaluation of options.

L5 verb	Definition	Example
Assess	Estimate value or difficulty, evaluate, appraise.	Assess workload.
Balance	Weigh (a question, two arguments, etc., against each other).	Balance the workload against personal capacity.
Discuss	Investigate by reasoning or argument.	Discuss the impact of regulation.
Evaluate	Ascertain amount of, find numerical expression for.	Evaluate the necessary information to be provided to pilots in need of navigational assistance.
Interpret	To decide on something's meaning or significance when there is a choice.	Interpret operational information.
Optimise	To make optimal; get the most out of; use best; modify to achieve maximum efficiency.	Optimise the use of support tools.
Resolve	Solve, clear up, settle.	Resolve conflict.
Select	Pick out as best or most suitable.	Select the runway in use.
Theorise	Extract general principles from a particular experience.	Theorise the resolution of conflict between a slow and a fast aircraft.
Validate	Make valid, ratify, prove valid, show or confirm the validity of something.	Validate one radar vectoring option to expedite the traffic.

(b) Application of taxonomy levels to practically based objectives

(1) Objectives at taxonomy level 3 or higher, which are of a practical nature, related to all subjects except ATM, may be achieved by any suitable type of practical training methods, e.g. hands on, plotting on charts, etc.

(2) Objectives at taxonomy level 3 or higher, for the ATM subject (basic and rating), are practical by nature and require the integration of several knowledge areas and skills at the same time, e.g. vectoring of an aircraft requires knowledge and skills in the areas of radiotelephony, aircraft performance, navigation and radar theory. Therefore, ATM level 3 objectives should be achieved through the use of a part-task trainer or a simulator.

(3) ATM level 4 objectives should be achieved for the most part through the use of a simulator. A part-task trainer, which presents operational situations at an enforced pace, may be used to achieve some ATM level 4 objectives.

(4) ATM level 5 objectives should be achieved through the use of a simulator.

AMC1 ATCO.D.010(A)(1) Composition of initial training

BASIC TRAINING — TRAINING OBJECTIVES

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

(b) Basic training should contain the following training objectives that are associated with the subjects, topics and subtopics contained in Appendix 2 (Basic training) to Annex I to R-PEL-006.

(c) Subjects, topics and subtopics from Appendix 2 to Annex I to R-PEL-006 is 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 how to obtain the appropriate information, and recognise the potential for development of their careers in ATC.

TOPIC INTRB 1 — COURSE MANAGEMENT

Subtopic INTRB 1.1 — Course introduction

BASIC INTRB 1.1.1	Explain the aims and main objectives of the course.	2	

Subtopic INTRB 1.2 — Course administration

BASIC INTRB 1.2.1	State how the course is administered.	1	

Subtopic INTRB 1.3 — Study material and training documentation

BASIC INTRB 1.3.1	Use appropriate documents and their sources for the course.	3	*Optional content: training documentation, library, CBT library, web, learning management server*
BASIC INTRB 1.3.2	Integrate appropriate information into course studies.	4	Training documentation *Optional content: supplementary information, library*

TOPIC INTRB 2 — INTRODUCTION TO THE ATC TRAINING COURSE

Subtopic INTRB 2.1 — Course content and organisation

BASIC INTRB 2.1.1	State the different training methods used during the course.	1	Theoretical training, practical training, self-study, types of training events
BASIC INTRB 2.1.2	State the subjects covered by the course and their purpose.	1	
BASIC INTRB 2.1.3	Describe the organisation of theoretical training.	2	*Optional content: course programme*
BASIC INTRB 2.1.4	Describe the organisation of practical training.	2	*Optional content: PTP, simulation, briefing, debriefing, course programme*
BASIC INTRB 2.1.5	Appreciate appropriate learning techniques.	3	How the influence of interactive techniques can lead to improved learning

Subtopic INTRB 2.2 — Training ethos			
BASIC INTRB 2.2.1	Recognise the feedback mechanisms available.	1	*Optional content: instructor discussions, training progress, assessment, examinations, results, briefing, debriefing*
BASIC INTRB 2.2.2	Describe the positive effect of working and learning together with course participants.	2	Teamwork in theoretical and practical training
Subtopic INTRB 2.3 — Assessment process			
BASIC INTRB 2.3.1	Describe the assessment process.	2	

TOPIC INTRB 3 — INTRODUCTION TO THE ATCO's FUTURE

Subtopic INTRB 3.1 — Job prospects			
BASIC INTRB 3.1.1	Recognise an ATCO's working environment.	1	Area control unit, approach control unit, aerodrome control unit
BASIC INTRB 3.1.2	Recognise career developments.	1	*Optional content: OJT instructor, supervisor, operational managerial posts, non-operational posts*

SUBJECT 2: AVIATION LAW

The subject objective is:

Learners shall apply the regulations governing the rules of the air, airspace and flight planning and explain their development or, where applicable, their incorporation into national legislation.

TOPIC LAWB 1 — INTRODUCTION TO AVIATION LAW

Subtopic LAWB 1.1 — Relevance of aviation law			
BASIC LAWB 1.1.1	State the necessity for air law, the sources and development of aviation law.	1	Relevant national legislation, ICAO Convention *Optional content: Rules of Flight Decision №4*
BASIC LAWB 1.1.2	Describe the impact key international and national organisations have on ATC and their interaction with each other.	1	*Optional content: ICAO, EASA, SCAA*

TOPIC LAWB 2 — INTERNATIONAL ORGANISATIONS

Subtopic LAWB 2.1 — ICAO			
BASIC LAWB 2.1.1	Explain the purpose and function of ICAO.	2	
BASIC LAWB 2.1.2	Describe the methods by which ICAO notifies and implements legislation.	2	SARPs, PANS, ICAO annexes, ICAO documents *Optional content: regional offices*
Subtopic LAWB 2.2 — European and other agencies			
BASIC LAWB 2.2.1	Explain the purpose and functions of EUROCONTROL.	2	
BASIC LAWB 2.2.2	Explain the purpose and functions of EASA.	2	
BASIC LAWB 2.2.3	State the purpose and function of other international agencies and their relevance to air traffic operations.	1	*Optional content: ECAC, EU, CANSO*
Subtopic LAWB 2.3 — Aviation associations			
BASIC LAWB 2.3.1	State the purpose of controller, pilot, airline and airspace user associations and their interaction with ATC.	1	*Optional content: IATA, IACA, military services*

TOPIC LAWB 3 — NATIONAL ORGANISATIONS

Subtopic LAWB 3.1 — National authorities

BASIC LAWB 3.1.1	Describe the purpose and function of appropriate national agencies and their relevance to air traffic operations.	2	*Optional content: SCAA, government agencies*

Subtopic LAWB 3.2 — National legislative procedures

BASIC LAWB 3.2.1	Recognise how legislation is implemented, notified and updated.	1	

Subtopic LAWB 3.3 — Competent authority

BASIC LAWB 3.3.1	Name the competent authority responsible for ATCO licensing and ANSP oversight	1	
BASIC LAWB 3.3.2	State how the SCAA carries out its safety oversight responsibilities.	1	

Subtopic LAWB 3.4 — National aviation associations

BASIC LAWB 3.4.1	State the purpose of national controller, pilot, airline and airspace user associations.	1	

TOPIC LAWB 4 — ATS SAFETY MANAGEMENT

Subtopic LAWB 4.1 — Safety regulation

BASIC LAWB 4.1.1	Describe the need for safety regulation.	2	
BASIC LAWB 4.1.2	Describe the general principles of the safety organisation.	2	
BASIC LAWB 4.1.3	Explain the impact of safety regulation on the controller.	2	*Optional content: R-PEL-006 on ATCO Licensing*

Subtopic LAWB 4.2 — Safety management system

BASIC LAWB 4.2.1	Explain the regulatory requirements of safety management systems in ATM.	2	SCAA applicable documents, ICAO Annex 19
BASIC LAWB 4.2.2	Explain the principles of the safety management systems.	2	ICAO Annex 19
BASIC LAWB 4.2.3	Describe the safety assessment methodology.	2	ICAO Annex 19

TOPIC LAWB 5 — RULES AND REGULATIONS

Subtopic LAWB 5.1 — Units of measurement			
BASIC LAWB 5.1.1	List the units of measurement used in aviation.	2	SCAA applicable documents
Subtopic LAWB 5.2 — ATCO licensing/certification			
BASIC LAWB 5.2.1	Explain the ATCO licensing/certification process.	2	R-PEL-006, approved training courses; ATCO licences, ratings and endorsements *Optional content: national processes*
BASIC LAWB 5.2.2	Explain the privileges and limitations of controller licences.	2	R-PEL-006
Subtopic LAWB 5.3 — Overview of ANS			
BASIC LAWB 5.3.1	Differentiate between the ANS	2	
Subtopic LAWB 5.4 — Overview of ATS			
BASIC LAWB 5.4.1	State the considerations which determine the need for ATS.	1	Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the 'Rules on the Use of Airspace and Flight Operations' and AAR-ATS
BASIC LAWB 5.4.2	Differentiate between ATS.	2	ATCS, ADVS, FIS, ALRS
BASIC LAWB 5.4.3	Explain the objectives of ATS.	2	General flight rules, instrument flight rules, visual flight rules
Subtopic LAWB 5.5 — Overview of Aeronautical Information Management (AIM)			
BASIC LAWB 5.5.1	Describe the means by which aeronautical information is notified, updated and disseminated.	2	Optional content: AIS, integrated aeronautical information package (AIPs, AIRAC, SUPs, AICs, NOTAMs), AAR-AIS
BASIC LAWB 5.5.2	Recognise the information contained in the different parts of the AIP.	1	
Subtopic LAWB 5.6 — Rules of the air			
BASIC LAWB 5.6.1	Explain the rules of the air.	2	"Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the 'Rules on the Use of Airspace and Flight Operations'.", SCAA applicable documents, ATM Manual

BASIC LAWB 5.6.2	State the published differences with ICAO.	1	SCAA applicable documents, ATM Manual
BASIC LAWB 5.6.3	Appreciate the influence of relevant flight rules on ATC.	3	General flight rules, instrument flight rules, visual flight rules
BASIC LAWB 5.6.4	Appreciate the differences between flying in accordance with VFR, special VFR and IFR in VMC and IMC.	3	
Subtopic LAWB 5.7 — Airspace and ATS routes			
BASIC LAWB 5.7.1	Explain airspace classification.	2	Runway(s), taxiways, apron, movement area, manoeuvring area, designated positions on an aerodrome
BASIC LAWB 5.7.2	Differentiate between the different types of airspace.	2	Optional content: control zones, control areas, airways, upper and lower airspace, restricted areas, prohibited and danger areas, FIR, aerodrome traffic zone, etc.
BASIC LAWB 5.7.3	Differentiate between the different types of ATS routes.	2	Airway, arrival route, departure route, advisory route, controlled route, uncontrolled route, etc.
BASIC LAWB 5.7.4	Decode information from aeronautical charts.	3	
Subtopic LAWB 5.8 — Flight plan			
BASIC LAWB 5.8.1	Explain the functions of a flight plan.	2	ATM Manual
BASIC LAWB 5.8.2	Explain the different types of flight plans and associated update messages.	2	ATM Manual
BASIC LAWB 5.8.3	Explain the pilot's responsibilities in relation to adherence to flight plan.	2	Inadvertent changes, intended changes, position reporting
BASIC LAWB 5.8.4	Describe flight plan submission and distribution processes.	2	
Subtopic LAWB 5.9 — Aerodromes			
BASIC LAWB 5.9.1	Describe the general design and layout of an aerodrome.	2	Runway(s), taxiways, apron, movement area, manoeuvring area, designated positions on an aerodrome
BASIC LAWB 5.9.2	Explain the numbering system and orientation of runways.	2	
BASIC LAWB 5.9.3	Differentiate between different types of aerodromes.	2	Controlled, uncontrolled *Optional content: military, international, regional*

BASIC LAWB 5.9.4	Describe designated positions in the traffic circuit.	2	
BASIC LAWB 5.9.5	List the factors affecting the selection of runway in use.	1	
Subtopic LAWB 5.10 — Holding procedures for IFR flights			
BASIC LAWB 5.10.1	Describe the purpose of holding.	2	Traffic management, weather, pilot request, ICAO Doc 8168 *Optional content: ATM Manual*
BASIC LAWB 5.10.2	Describe the types of holding patterns.	2	Published, non-published
BASIC LAWB 5.10.3	Describe an ICAO holding pattern.	2	ICAO Doc 8168 — Parts of an IFR holding pattern, entry/exit procedures, dimensions of patterns, protected airspace, holding areas, alignment, rates of turns, holding times, expect further clearance, Expected Approach Times (EATs)
BASIC LAWB 5.10.4	Describe the factors affecting the holding pattern.	2	Effect of speed, effect of level used, effect of navigation aid in use, turbulence
Subtopic LAWB 5.11 — Holding procedures for VFR flights			
BASIC LAWB 5.11.1	Describe VFR holding.	2	

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SUBJECT 3: AIR TRAFFIC MANAGEMENT

The subject objective is:

Learners shall describe the basic principles of air traffic management and apply basic operational procedures.

TOPIC ATMB 1 — AIR TRAFFIC MANAGEMENT

Subtopic ATMB 1.1 — Application of units of measurement			
BASIC ATMB 1.1.1	Apply the units of measurement appropriate to ATM.	3	
Subtopic ATMB 1.2 — Air traffic control (ATC) service			
BASIC ATMB 1.2.1	Define ATC service.	1	SCAA applicable documents, Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the 'Rules on the Use of Airspace and Flight Operations' and AAR-ATS
BASIC ATMB 1.2.2	Explain the division of the ATC service.	2	SCAA applicable documents (AAR-ATS)
BASIC ATMB 1.2.3	Explain the responsibility for the provision of the ATC service.	2	SCAA applicable documents (AAR-ATS)
BASIC ATMB 1.2.4	Differentiate between the different methods of providing ATC services.	2	Aerodrome, surveillance, procedural
Subtopic ATMB 1.3 — Flight information service (FIS)			
BASIC ATMB 1.3.1	Define FIS.	1	Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July, SCAA applicable documents, ATM Manual
BASIC ATMB 1.3.2	Describe the scope of the FIS.	2	Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July, SCAA applicable documents, ATM Manual
BASIC ATMB 1.3.3	Explain the responsibility for the provision of the FIS.	2	Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July, SCAA applicable documents, ATM Manual
BASIC ATMB 1.3.4	State the methods of transmitting information.	1	*Optional content: RTF, data link, ATIS, VOLMET, etc.*
BASIC ATMB 1.3.5	List the content of ATIS and VOLMET.	1	ATM Manual, SCAA applicable documents (Meteorological Service for International Air Navigation)

			Optional content: meteorological data obtained by data link, ICAO Annex 3
BASIC ATMB 1.3.6	Issue information to aircraft.	3	*Optional content: SIGMET, serviceability of navaids, weather, flight safety information, essential traffic, essential local traffic, information related to aerodrome conditions, etc.*
Subtopic ATMB 1.4 — Alerting service			
BASIC ATMB 1.4.1	Define ALRS.	1	Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July, AAR-ATS
BASIC ATMB 1.4.2	Describe the scope of the ALRS.	2	Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July, AAR-ATS
BASIC ATMB 1.4.3	Explain the responsibility for the provision of the ALRS.	2	ATM Manual, Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July, AAR-ATS
BASIC ATMB 1.4.4	Differentiate between the phases of emergency.	2	Uncertainty, alert, distress
BASIC ATMB 1.4.5	Describe the organisation of an ALRS.	2	Responsibilities, local organisation
BASIC ATMB 1.4.6	Describe the cooperation between units providing the alerting services and the SAR units.	2	
BASIC ATMB 1.4.7	Differentiate between distress and urgency signals.	2	Mayday, Pan Pan, Pan Pan Medical *Optional content: visual signals, etc.*
Subtopic ATMB 1.5 — Air traffic advisory service			
BASIC ATMB 1.5.1	Define air traffic advisory service.	1	Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July, AA-ATS
BASIC ATMB 1.5.2	State the scope of air traffic advisory service.	2	ATM Manual, Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July, AA-ATS
BASIC ATMB 1.5.3	Explain the responsibility for the provision of the air traffic advisory service.	2	ATM Manual, Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July, AAR-ATS
Subtopic ATMB 1.6 — ATS system capacity and air traffic flow management			
BASIC ATMB 1.6.1	Define ATFM.	1	SCAA applicable documents (ATS, ATM Manual)
BASIC ATMB 1.6.2	Describe the scope of air traffic flow capacity management (ATFCM).	2	SCAA applicable documents (ATS, ATM Manual)

BASIC ATMB 1.6.3	Explain the responsibility for the provision of ATFCM.	2	SCAA applicable documents (AA-ATS, ATM Manual)
BASIC ATMB 1.6.4	Explain the methods of providing ATFCM.	1	SCAA applicable documents (AAR-ATS, ATM Manual)
Subtopic ATMB 1.7 — Airspace management (ASM)			
BASIC ATMB 1.7.1	Define ASM.	1	SCAA applicable documents (AAR-ATS, ATM Manual)
BASIC ATMB 1.7.2	Describe the scope of ASM.	2	SCAA applicable documents (AAR-ATS, ATM Manual)
BASIC ATMB 1.7.3	Explain the responsibility for the provision of ASM.	2	SCAA applicable documents (AAR-ATS, ATM Manual)
BASIC ATMB 1.7.4	Explain the methods of managing airspace.	1	SCAA applicable documents (AAR-ATS, ATM Manual)

TOPIC ATMB 2 — ALTIMETRY AND LEVEL ALLOCATION

Subtopic ATMB 2.1 — Altimetry			
BASIC ATMB 2.1.1	Appreciate the relationship between height, altitude and flight level.	3	QFE, QNH, standard pressure
Subtopic ATMB 2.2 — Transition level			
BASIC ATMB 2.2.1	Appreciate the relationship between transition level, transition altitude and transition layer.	3	ATM Manual, ICAO Doc 8168
BASIC ATMB 2.2.2	Calculate the appropriate levels.	3	*Optional content: transition level, transition layer, height, lowest useable flight level, vertical distance to airspace boundaries*
Subtopic ATMB 2.3 — Level allocation			
BASIC ATMB 2.3.1	Describe the cruising level allocation system.	2	SCAA applicable documents (AAR-ATS, ATM Manual), table of cruising levels
BASIC ATMB 2.3.2	Choose the appropriate levels.	3	Flight levels, altitudes, heights

TOPIC ATMB 3 — RADIOTELEPHONY (RTF)

Subtopic ATMB 3.1 — RTF general operating procedures

BASIC ATMB 3.1.1	Explain the need for approved phraseology.	2	
BASIC ATMB 3.1.2	Use approved phraseology.	3	Parts of the following documents relevant to the Basic course: AAR-ATS, ICAO Doc 9432 RTF manual — standard words and phrases, AAR-AC II
BASIC ATMB 3.1.3	Perform communication effectively.	3	Communication techniques, readback/verification of readback

TOPIC ATMB 4 — ATC CLEARANCES AND ATC INSTRUCTIONS

Subtopic ATMB 4.1 — Type and content of ATC clearances

BASIC ATMB 4.1.1	Define ATC clearance.	1	SCAA applicable documents (AAR-ATS, ATM Manual)
BASIC ATMB 4.1.2	Describe the contents of an ATC clearance.	2	SCAA applicable documents (AAR-ATS, ATM Manual)
BASIC ATMB 4.1.3	Issue appropriate ATC clearances.	3	ATM Manual *Optional content: national documents*

Subtopic ATMB 4.2 — ATC instructions

BASIC ATMB 4.2.1	Define ATC Instructions.	1	Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July, AAR-ATS, ATM Manual
BASIC ATMB 4.2.2	Describe the contents of an ATC instruction.	2	SCAA applicable documents (AAR-ATS, ATM Manual)
BASIC ATMB 4.2.3	Issue appropriate ATC instructions.	3	ATM Manual

TOPIC ATMB 5 — COORDINATION

Subtopic ATMB 5.1 — Principles, types and content of coordination

BASIC ATMB 5.1.1	Explain the principles, types and content of coordination.	2	SCAA applicable documents (ATM Manual, AAR-ATS) *Optional content: notification, negotiation, agreement, transfer of flight data and local agreements, etc*.

Subtopic ATMB 5.2 — Necessity for coordination			
BASIC ATMB 5.2.1	Appreciate the need for coordination.	3	*Optional content: ATM Manual, local procedures, letters of agreements*
BASIC ATMB 5.2.2	Differentiate between transfer of control and transfer of communication procedures.	2	
Subtopic ATMB 5.3 — Means of coordination			
BASIC ATMB 5.3.1	Describe the means of coordination	2	*Optional content: data link, telephone, intercom, voice, etc.*
BASIC ATMB 5.3.2	Use the available means for coordination.	3	

TOPIC ATMB 6 — DATA DISPLAY

Subtopic ATMB 6.1 — Data extraction			
BASIC ATMB 6.1.1	Encode and decode an appropriate selection of standard ICAO abbreviations.	3	*Optional content: ICAO Doc 8585, ICAO Doc 8643, ICAO Doc 7910*
BASIC ATMB 6.1.2	Extract pertinent data from relevant sources to produce a flight progress display.	3	Pilot reports, coordination, data exchange *Optional content: flight plan*
BASIC ATMB 6.1.3	Encode and decode flight plans (including supplementary information).	3	ICAO format, AFTN format
Subtopic ATMB 6.2 — Data management			
BASIC ATMB 6.2.1	Update the situation display to accurately reflect the traffic situation.	3	*Optional content: strip marking symbols, strip movement procedures, electronic data, label*

TOPIC ATMB 7 — SEPARATIONS

Subtopic ATMB 7.1 — Vertical separation and procedures			
BASIC ATMB 7.1.1	State the vertical separation standards.	1	ATM Manual
BASIC ATMB 7.1.2	Explain the vertical separation procedures.	2	ATM Manual
Subtopic ATMB 7.2 — Horizontal separation and procedures			
BASIC ATMB 7.2.1	State the principles of longitudinal separation procedures based on time and distance.	1	ATM Manual

BASIC ATMB 7.2.2	State the principles of lateral separation procedures.	1	ATM Manual
Subtopic ATMB 7.3 — Visual separation			
BASIC ATMB 7.3.1	State the occasions when clearance to fly by maintaining own separation while in VMC can be used.	1	
Subtopic ATMB 7.4 — Aerodrome separation and procedures			
BASIC ATMB 7.4.1	State the aerodrome separation standards.	1	Separation on the manoeuvring area, in the traffic circuit, for departing and arriving aircraft
BASIC ATMB 7.4.2	Explain the aerodrome separation procedures.	2	ATM Manual
BASIC ATMB 7.4.3	Define essential local traffic.	1	ATM Manual
Subtopic ATMB 7.5 — Separation based on ATS surveillance systems			
BASIC ATMB 7.5.1	Explain the use of ATS surveillance systems in ATS.	2	Separation, identification, monitoring, vectoring, expedition and assistance to traffic *Optional content: ATM Manual*
BASIC ATMB 7.5.2	Explain the ATS surveillance systems separation standards and procedures.	2	ATM Manual
BASIC ATMB 7.5.3	Explain the methods and procedures for establishing identification.		ATM Manual
Subtopic ATMB 7.6 — Wake turbulence separation			
BASIC ATMB 7.6.1	Explain the wake turbulence separations.	2	ATM Manual

TOPIC ATMB 8 — AIRBORNE COLLISION AVOIDANCE SYSTEMS AND GROUND-BASED SAFETY NETS

Subtopic ATMB 8.1 — Airborne collision avoidance systems			
BASIC ATMB 8.1.1	State the requirement for carriage of airborne collision avoidance system.	1	ICAO Doc 9863
BASIC ATMB 8.1.2	Explain the main characteristics of airborne safety nets and their relevance to ATC operations.	2	ACAS, TAWS *Optional content: TCAS, EGPWS, wind shear alerts*
BASIC ATMB 8.1.3	Explain the function of ACAS Traffic Alerts and Resolution Advisories.	2	ICAO Doc 9863, ICAO Doc 8168

BASIC ATMB 8.1.4	List the actions of the pilot in case of TA and RA.	1	ICAO Doc 9863, ICAO Doc 8168
BASIC ATMB 8.1.5	List the ACAS limitations.	1	ICAO Doc 9863
Subtopic ATMB 8.2 — Ground-based safety nets			
BASIC ATMB 8.2.1	Explain the main characteristics of ground- based safety nets and their relevance to ATC operations.	2	*Optional content: STCA, MSAW, APW, APM*

TOPIC ATMB 9 — BASIC PRACTICAL SKILLS

Subtopic ATMB 9.1 — Traffic management process			
BASIC ATMB 9.1.1	Consider human information-processing in the provision of ATC.	2	Situational awareness, conflict detection, planning, decision-making, prioritisation, execution
BASIC ATMB 9.1.2	Consider the need for verification that actions are carried out.	2	Monitoring
Subtopic ATMB 9.2 — Basic practical skills applicable to all ratings			
BASIC ATMB 9.2.1	Verify that the settings of the working position are appropriate.	3	
BASIC ATMB 9.2.2	Operate the available working position equipment.	3	
BASIC ATMB 9.2.3	Maintain situational awareness y monitoring traffic.	3	Information gathering, scanning, planning
BASIC ATMB 9.2.4	Appreciate priority of actions.	3	
BASIC ATMB 9.2.5	Execute selected plan.	3	
BASIC ATMB 9.2.6	Apply the prescribed procedures for the area of responsibility.	3	*Optional content: LOPs, transfer of control and communication, level allocation, inbound and outbound procedures*
BASIC ATMB 9.2.7	Appreciate relative velocity between aircraft.	3	
BASIC ATMB 9.2.8	Identify separation problems.	3	

BASIC ATMB 9.2.9	Choose the appropriate separation methods.	3	
BASIC ATMB 9.2.10	Apply separation.	3	*Optional content: vertical, longitudinal, lateral, aerodrome, based on ATS surveillance systems, distances from airspace boundaries*
Subtopic ATMB 9.3 — Basic practical skills applicable to aerodrome			
BASIC ATMB 9.3.1	Perform the basic functions of aerodrome control.	3	
BASIC ATMB 9.3.2	Perform the control of aerodrome traffic.	3	Single runway operations including VFR and IFR traffic
Subtopic ATMB 9.4 — Basic practical skills applicable to surveillance			
BASIC ATMB 9.4.2	Apply the procedures for establishing identification.	3	Any of the ATS surveillance systems identification methods
BASIC ATMB 9.4.3	Estimate the heading for a new track and the distance to the next waypoint.	3	
BASIC ATMB 9.4.4	Apply vectoring techniques.	3	
BASIC ATMB 9.4.5	Conduct level changes.	3	*Optional content: cruising level allocation, requested level change, climb/descent to exit level, descent to an altitude or a height*

SUBJECT 4: METEOROLOGY

The subject objective is:

Learners shall describe how meteorology affects ATS operations and aircraft performance, and apply meteorological information in the basic operational procedures of ATS.

TOPIC METB 1 — INTRODUCTION TO METEOROLOGY

Subtopic METB 1.1 — Application of units of measurement			
BASIC METB 1.1.1	Apply the units of measurement appropriate to meteorology.	3	
Subtopic METB 1.2 — Aviation and meteorology			
BASIC METB 1.2.1	Recognise the relevance of meteorology in aviation.	1	
BASIC METB 1.2.2	Explain the requirements for the provision of meteorological information available to operators, flight crew members, and to air traffic services.	2	SCAA applicable documents (Meteorological Service for International Air Navigation, AAR-ATS)
BASIC METB 1.2.3	State the meteorological hazards to aviation.	1	Turbulence, thunderstorms, icing, micro bursts, squall, macro burst, wind shear, volcanic ash
Subtopic METB 1.3 — Organisation of meteorological service			
BASIC METB 1.3.1	State the basic duties of meteorological offices.	1	*Optional content: WAFS, WAFC, MWO, VAAC, TCAC, SADIS*
BASIC METB 1.3.2	State the international and national standards for coordination between ATS and MET services.	1	

TOPIC METB 2 — ATMOSPHERE

Subtopic METB 2.1 — Composition and structure			
BASIC METB 2.1.1	State the composition and structure of the atmosphere.	1	Gases, layers
BASIC METB 2.1.2	Describe the basic characteristics of the atmospheric parameters measured.	2	Temperature, pressure, wind, humidity, density
BASIC METB 2.1.3	List the tools used for the collection of meteorological data.	1	*Optional content: barometer, thermometer, ceilometer, anemometer, weather balloons, transmissometer, radar, satellites, etc.*

Subtopic METB 2.2 — Standard atmosphere			
BASIC METB 2.2.1	Describe the elements of the International Standard Atmosphere (ISA).	2	Temperature, pressure, density
BASIC METB 2.2.2	State the reasons why the ISA has been defined.	1	
Subtopic METB 2.3 — Heat and temperature			
BASIC METB 2.3.1	Define the processes by which heat is transferred and how the atmosphere is heated.	1	Radiation, convection, advection, conduction, water cycle
BASIC METB 2.3.2	Describe how temperature varies.	2	Adiabatic processes, lapse rates, stability, instability
BASIC METB 2.3.3	State the influencing factors on surface temperature.	1	
Subtopic METB 2.4 — Water in the atmosphere			
BASIC METB 2.4.1	Differentiate between the different processes related to atmospheric moisture.	2	Condensation, evaporation, sublimation, saturation
BASIC METB 2.4.2	Characterise relative humidity, dew point and latent heat.	2	
Subtopic METB 2.5 — Air pressure			
BASIC METB 2.5.1	Describe the relationship between pressure, temperature, density and height.	2	
BASIC METB 2.5.2	Explain the relationship between pressure settings.	2	QFE, QNH, standard pressure
BASIC METB 2.5.3	Explain the effect of air pressure and temperature on altimeter readings and the true altitude of aircraft.	2	

TOPIC METB 3 — ATMOSPHERIC CIRCULATION

Subtopic METB 3.1 — General air circulation			
BASIC METB 3.1.1	State the major atmospheric circulation features on the Earth.	1	*Optional content: Hadley cells, high and low belts, polar fronts, westerly winds, upper-level jet streams*
Subtopic METB 3.2 — Air masses and frontal systems			
BASIC METB 3.2.1	State the typical air masses relevant to European weather.	2	Polar, arctic, tropical, equatorial (maritime and continental)

BASIC METB 3.2.2	Recognise the main isobaric features.	2	Cyclones, anticyclones, ridge, trough
BASIC METB 3.2.3	Describe the difference between various fronts and the associated weather.	2	Warm front, cold front, occluded front
Subtopic METB 3.3 — Mesoscale systems			
BASIC METB 3.3.1	Describe the main phenomena caused by mesoscale systems.	2	Mountain waves, valley winds, thunderstorm, squall line *Optional content: land/sea breezes, tornadoes, land spouts, waterspouts*
BASIC METB 3.3.2	Explain the relevance of mesoscale systems to aviation.	2	
Subtopic METB 3.4 — Wind			
BASIC METB 3.4.1	Explain the significance of wind phenomena and types.	2	*Optional content: veering, backing, gusting, jet streams, land/sea breezes, surface, upper*
BASIC METB 3.4.2	State the means by which wind is measured.	1	Anemometer, wind sock *Optional content: wind sensor, Beaufort scale, etc.*
BASIC METB 3.4.3	Explain the effect of forces which influence wind.	2	

TOPIC METB 4 — METEOROLOGICAL PHENOMENA

Subtopic METB 4.1 — Clouds			
BASIC METB 4.1.1	Explain the different conditions for the formation of clouds.	2	
BASIC METB 4.1.2	State the different cloud types and their main characteristics.	1	
BASIC METB 4.1.3	State how the cloud base and the amount of cloud are measured and/or observed.	1	
BASIC METB 4.1.4	Define cloud base and ceiling.	1	
BASIC METB 4.1.5	Differentiate between cloud base and ceiling.	2	
Subtopic METB 4.2 — Types of precipitation			
BASIC METB 4.2.1	Explain the significance of precipitation in aviation.	2	

BASIC METB 4.2.2	Describe types of precipitation and their corresponding cloud families.	2	*Optional content: rain, snow, snow grains, hail, ice pellets, ice crystals, drizzle*
Subtopic METB 4.3 — Visibility			
BASIC METB 4.3.1	Explain the causes of atmospheric obscurity.	2	
BASIC METB 4.3.2	Differentiate between different types of visibility.	2	Horizontal visibility, slant visibility, prevailing visibility, RVR
BASIC METB 4.3.3	State the means by which visibility is measured.	1	
BASIC METB 4.3.4	Explain the significance of visibility in aviation.	2	
Subtopic METB 4.4 — Meteorological hazards			
BASIC METB 4.4.1	Explain the meteorological hazards to aviation.	2	Turbulence, icing, micro bursts, macro burst, wind shear, thunderstorms, volcanic ash *Optional content: thunderstorms, squall*
BASIC METB 4.4.2	Describe the effect of meteorological hazards on aviation.	2	

TOPIC METB 5 — METEOROLOGICAL INFORMATION FOR AVIATION

Subtopic METB 5.1 — Messages and reports			
BASIC METB 5.1.1	Decode the content of weather reports and forecasts.	3	METAR, SPECI, TAF, SIGMET *Optional content: local reports*

SUBJECT 5: NAVIGATION

The subject objective is:

Learners shall explain the basic principles of navigation and use this knowledge in ATS operations.

TOPIC NAVB 1 — INTRODUCTION TO NAVIGATION

Subtopic NAVB 1.1 — Application of units of measurement			
BASIC NAVB 1.1.1	Apply the units of measurement appropriate to navigation.	3	
Subtopic NAVB 1.2 — Purpose and use of navigation			
BASIC NAVB 1.2.1	Explain the need for navigation in aviation.	2	
BASIC NAVB 1.2.2	Characterise navigation methods.	2	*Optional content: historical overview, celestial, on-board, radio, satellites*

TOPIC NAVB 2 — THE EARTH

Subtopic NAVB 2.1 — Place and movement of the Earth			
BASIC NAVB 2.1.1	Explain the Earth's properties and their effects.	2	*Form, size, rotation, revolution in space,* seasons*, day, night, twilight, units of time, time zones, UTC*
Subtopic NAVB 2.2 — System of coordinates, direction and distance			
BASIC NAVB 2.2.1	Characterise the general principles of a grid system.	2	Latitude/longitude, degrees, minutes, seconds
BASIC NAVB 2.2.2	Explain direction and distance on a globe.	2	*Optional content: great circle, small circle, rhumb line, cardinal points, intercardinal points*
BASIC NAVB 2.2.3	Estimate position on the Earth's surface.	3	*Latitude/longitude*
BASIC NAVB 2.2.5	State the reference system used in aviation.	1	WGS 84 *Optional content: impact of alternative reference models*
Subtopic NAVB 2.3 — Magnetism			
BASIC NAVB 2.3.1	Explain the general principles of the Earth's magnetism.	2	True north, magnetic north, variation, deviation, inclination, declination
BASIC NAVB 2.3.2	Calculate conversions between the three north designations.	3	True north, magnetic north, compass north

TOPIC NAVB 3 — MAPS AND AERONAUTICAL CHARTS

Subtopic NAVB 3.1 — Maps and charts used in aviation			
BASIC NAVB 3.1.1	Differentiate between the various maps and charts.	2	AIP
BASIC NAVB 3.1.2	State the specific use of various maps and charts.	1	
BASIC NAVB 3.1.3	Decode symbols and information displayed on maps and charts.	3	*Optional content: chart scale, topographical features, NAV aids, fixes fly over and fly by waypoints etc.*

TOPIC NAVB 4 — NAVIGATIONAL BASICS

Subtopic NAVB 4.1 — Influence of wind			
BASIC NAVB 4.1.1	Appreciate the influence of wind on the flight path.	3	Heading, track, drift, wind vector *Optional content: triangle of velocities*
Subtopic NAVB 4.2 — Speed			
BASIC NAVB 4.2.1	Explain the relationship between various speeds used in aviation.	2	True air speed, ground speed, indicated air speed (including Mach number)
BASIC NAVB 4.2.2	Appreciate the use of various speeds in ATC.	3	
Subtopic NAVB 4.3 — Visual navigation			
BASIC NAVB 4.3.1	Describe visual navigation.	2	Map reading, visual reference
BASIC NAVB 4.3.2	State the cases where visual navigation is primarily used in commercial aviation.	1	Approach and landing, taxiing *Optional content: visual aids*
Subtopic NAVB 4.4 — Navigational aspects of flight planning			
BASIC NAVB 4.4.1	Describe the navigational aspects affecting flight planning.	2	*Optional content: fuel/time calculations, min altitudes, alternative routes, weather conditions, ICAO Flight Plan (Item 18 use)*

TOPIC NAVB 5 — INSTRUMENT NAVIGATION

Subtopic NAVB 5.1 — Ground-based systems			
BASIC NAVB 5.1.1	Explain the basic working principles of ground-based systems.	2	VOR, DME, ILS *Optional content: VDF, NDB, TACAN*

BASIC NAVB 5.1.2	State the use of ground-based systems.	1	VOR, DME, ILS *Optional content: VDF, NDB, TACAN*
BASIC NAVB 5.1.3	Characterise the main radio navigation techniques based on ground-based systems.	2	Area navigation, conventional navigation *Optional content: homing, inbound/ outbound tracking, instrument approach procedures, holding, drift assessment*
BASIC NAVB 5.1.4	Explain the accuracy and limitations of ground-based systems.	2	VDF, NDB, VOR, DME, ILS *Optional content: TACAN*
Subtopic NAVB 5.2 — Inertial navigation systems			
BASIC NAVB 5.2.1	Explain the basic working principles, precision and limitations of on-board systems.	2	*Optional content: INS/IRS*
BASIC NAVB 5.2.2	State the use of on-board systems.	1	
Subtopic NAVB 5.3 — Satellite-based systems			
BASIC NAVB 5.3.1	Explain the basic working principles of a satellite positioning system.	2	*Optional content: GPS, GLONASS, Galileo, Beidou*
BASIC NAVB 5.3.2	State the basic principles of GNSS concept.	1	Basic, ABAS, SBAS, GBAS *Optional content: core constellations, MCMF, integrity, RAIM, accuracy improvement, geometric altitude accuracy*
BASIC NAVB 5.3.3	Explain the limitations of satellite-based systems.	2	GPS, Galileo *Optional content: GLONASS, Beidou, integrity, GPS NOTAMs*
Subtopic NAVB 5.4 — Instrument approach procedures			
BASIC NAVB 5.4.1	Recognise various types of instrument approach using aeronautical charts.	1	Precision Approach (PA), Approach Procedure with Vertical guidance (APV), Non-Precision Approach (NPA)
BASIC NAVB 5.4.2	Differentiate between precision approach and non-precision approach procedures.	2	*Optional content: 2D/3D operations*
BASIC NAVB 5.4.3	Recognise the different minima used during an instrument approach.	1	
BASIC NAVB 5.4.4	Define the terms appropriate to instrument approach minima.	1	OCA/OCH, MDA/MDH and DA/DH
BASIC NAVB 5.4.5	List the instrumental approach fixes.	1	IAF, IF, FAF, FAP, MAPt

TOPIC NAVB 6 — PERFORMANCE BASED NAVIGATION

Subtopic NAVB 6.1 — Principles and benefits of area navigation			
BASIC NAVB 6.1.1	Explain the basic principles of area navigation.	2	*Optional content: Requirement for navigation computer, suitable sensors, ICAO Doc 9613*
BASIC NAVB 6.1.2	State the benefits of area navigation.	1	*Optional content: ICAO Doc 9613*
BASIC NAVB 6.1.3	State the effects of navigational performance accuracy of RNAV systems on the flight.	1	TSE, PDE, NSE, FTE *Optional content: high-quality data, ICAO Doc 9613*
BASIC NAVB 6.1.4	Characterise the main aircraft and avionics functionalities used in area navigation.	2	*Optional content: database, fly over and fly by waypoints transitions, managed turns (RF and FRT) path terminators, parallel offset, autopilot/flight director (AP/FD)*
BASIC NAVB 6.1.5	Characterise the navigational functions of FMS.	2	*Optional content: VNAV, LNAV*
Subtopic NAVB 6.2 — Introduction to PBN			
BASIC NAVB 6.2.1	State the general concept of PBN.	1	Components of PBN *Optional content: key enabler, ICAO Doc 9613*
BASIC NAVB 6.2.2	Differentiate between RNAV and RNP.	2	On board performance monitoring and alerting *Optional content: different generations of aircraft and on-board systems*
BASIC NAVB 6.2.3	State the navigation infrastructure that may be used in PBN.	1	VOR, DME, GNSS *Optional content: functionality IRS/INS*
BASIC NAVB 6.2.4	State the benefits of PBN concept.	1	*Optional content: global interoperability, limited number of navigation specifications, the PBN concept enables continuous descent operations (CDO) and continuous climb operations (CCO)*
BASIC NAVB 6.2.5	List the navigation specifications and the phases of flight they are applicable to.	1	RNAV 10, RNAV 5, RNAV 2, RNAV 1, RNP 4, RNP 2, RNP 1, RNP 0.3, A-RNP, RNP APCH and RNP AR APCH *Optional content: ICAO Doc 9613*
Subtopic NAVB 6.3 — PBN applications			
BASIC NAVB 6.3.1	State the navigation applications used in Europe.	1	RNAV 5, RNAV 1, RNP 1 with RF, RNP 0.3, RNP APCH *Optional content: RNAV-5 (B-RNAV), RNAV-1 (≈ P-RNAV)*

TOPIC NAVB 7 — DEVELOPMENTS IN NAVIGATION

Subtopic NAVB 7.1 — Future developments

BASIC NAVB 7.1.1	State future developments in navigation.	1	*Optional content: 3D VNAV outside FA, trajectory-based operations*

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SUBJECT 6: AIRCRAFT

The subject objective is:

Learners shall describe the basic principles of the theory of flight and aircraft characteristics and how these influence ATS operations.

TOPIC ACFTB 1 — INTRODUCTION TO AIRCRAFT

Subtopic ACFTB 1.1 — Application of units of measurement

BASIC ACFTB 1.1.1	Apply the units of measurement appropriate to aircraft and principles of flight.	3	

Subtopic ACFTB 1.2 — Aviation and aircraft

BASIC ACFTB 1.2.1	Explain the relevance of theory of flight and aircraft characteristics in ATS operations.	2	

TOPIC ACFTB 2 — PRINCIPLES OF FLIGHT

Subtopic ACFTB 2.1 — Forces acting on aircraft

BASIC ACFTB 2.1.1	Explain the forces acting on an aircraft in flight and their interaction.	2	Lift, thrust, drag, weight during level flight *Optional content: during climb, descent, turn*
BASIC ACFTB 2.1.2	Explain causes and effects of wake turbulence.	2	Induced drag

Subtopic ACFTB 2.2 — Structural components and control of an aircraft

BASIC ACFTB 2.2.1	Describe the main structural components of an aircraft.	2	Rotary and fixed wing, tail plane, fuselage, flap, aileron, elevator, rudder, landing gear
BASIC ACFTB 2.2.2	Explain how the pilot controls the movements of an aircraft.	2	Rudder, aileron, elevator, throttle, rotary wing controls
BASIC ACFTB 2.2.3	Explain the factors affecting aircraft stability.	2	
BASIC ACFTB 2.2.4	List aircraft design features reducing induced drag.	1	*Optional content: winglet, tip tanks, reducing wing incidence, aspect ratio, etc.*
BASIC ACFTB 2.2.5	Explain aircraft lights and their functions.	2	OPS Requirements Optional content: position lights, anti-collision lights, taxi lights, navigation lights, stroboscopic lights, landing lights

Subtopic ACFTB 2.3 — Flight envelope

BASIC ACFTB 2.3.1	Characterise the critical factors which affect aircraft performance.	2	Maximum speeds, minimum and stall speeds, ceiling, critical angle of attack, maximum ROC

TOPIC ACFTB 3 — AIRCRAFT CATEGORIES

Subtopic ACFTB 3.1 — Aircraft categories

BASIC ACFTB 3.1.1	List the different categories of aircraft.	1	Fixed wing, rotary wing, balloon, glider, RPAS

Subtopic ACFTB 3.2 — Wake turbulence categories

BASIC ACFTB 3.2.1	List the wake turbulence categories.	1	ATM Manual

Subtopic ACFTB 3.3 — ICAO approach categories

BASIC ACFTB 3.3.1	List the ICAO approach categories.	1	ICAO Doc 8168

Subtopic ACFTB 3.4 — Environmental categories

BASIC ACFTB 3.4.1	List ICAO noise classification.	1	ICAO Annex 16

TOPIC ACFTB 4 — AIRCRAFT DATA

Subtopic ACFTB 4.1 — Recognition

BASIC ACFTB 4.1.1	Recognise the most commonly used aircraft.	1	

Subtopic ACFTB 4.2 — Performance data

BASIC ACFTB 4.2.1	State the ICAO aircraft type designators and categories for the most commonly used aircraft.	1	Type designators, approach and wake turbulence categories
BASIC ACFTB 4.2.2	State the standard average performance data of the most commonly used aircraft.	1	Rate of climb/descent, cruising speed, ceiling

TOPIC ACFTB 5 — AIRCRAFT ENGINES

Subtopic ACFTB 5.1 — Piston engines

BASIC ACFTB 5.1.1	Explain the operating principles, advantages and disadvantages of the piston engine and propeller.	2	Piston engines, fixed pitch, variable pitch, number of blades

Subtopic ACFTB 5.2 — Jet engines			
BASIC ACFTB 5.2.1	Explain the operating principles, advantages and disadvantages of the jet engine.	2	
BASIC ACFTB 5.2.2	List the different types of jet engines.	1	
Subtopic ACFTB 5.3 — Turboprop engines			
BASIC ACFTB 5.3.1	Explain the operating principles, advantages and disadvantages of the turboprop engine and propeller.	2	
Subtopic ACFTB 5.4 — Electric engines			
BASIC ACFTB 5.4.1	Explain the operating principles, advantages and disadvantages of the electric engine.	2	
Subtopic ACFTB 5.5 — Sources of energy used in aviation			
BASIC ACFTB 5.5.1	List the sources of energy used in aviation propulsion systems.	1	Petroleum-based fuels (Avgas, Jet A-1, Jet B, biokerosene), electrical energy stored or generated on board the aircraft *Optional content: hydrogen cell*

TOPIC ACFTB 6 — AIRCRAFT SYSTEMS AND INSTRUMENTS

Subtopic ACFTB 6.1 — Flight instruments			
BASIC ACFTB 6.1.1	Explain the basic operating principles and interpretation of the information displayed by flight instruments.	2	Altimeter, air speed indicator, vertical speed indicator, turn and bank indicator, artificial horizon, gyrosyn compass
BASIC ACFTB 6.1.2	Explain the impact of errors and abnormal indications of flight instruments on aircraft operations.	2	*Optional content: pitot-static failures, unreliable gyro source*
Subtopic ACFTB 6.2 — Navigational instruments			
BASIC ACFTB 6.2.1	Describe the basic on-board operating principles and interpretation of the information displayed by navigational instruments/systems.	2	*Optional content: ADF, VOR (TACAN), DME, ILS, inertial reference system, satellite-based systems*
Subtopic ACFTB 6.3 — Engine instruments			
BASIC ACFTB 6.3.1	List the vital engine monitoring parameters and their associated instruments.	1	*Optional content: oil pressure and temperature, engine temperature, rpm, fuel state and flow*

Subtopic ACFTB 6.4 — Aircraft systems			
BASIC ACFTB 6.4.1	Explain the use of the most common aircraft systems.	2	SSR transponder, GPWS, EFIS, flight director, autopilot, FMS, ice protection, cabin pressurisation, fire detection and extinguishing, emergency oxygen supply system *Optional content: ADS capability, head- up display, wind shear indicator, weather radar, hydraulic system, electrical system, environmental system*
BASIC ACFTB 6.4.2	Explain the impact of degradation/failure of the most common aircraft systems on aircraft operations.	2	Engine failure *Optional content: hydraulic failure, electrical failure, environmental system failure, degradation of aircraft position source data*
BASIC ACFTB 6.4.3	Explain common aircraft elements and their functions.		Aircraft cabin, flight deck, galley, doors, cargo compartments
TOPIC ACFTB 7 — FACTORS AFFECTING AIRCRAFT PERFORMANCE			
Subtopic ACFTB 7.1 — Take-off factors			
BASIC ACFTB 7.1.1	Explain the factors affecting aircraft during take-off.	2	Runway conditions, runway slope, wind, temperature, aerodrome elevation, aircraft mass
Subtopic ACFTB 7.2 — Climb factors			
BASIC ACFTB 7.2.1	Explain the factors affecting aircraft during climb.	2	Speed, mass, wind, temperature, cabin pressurisation, air density
Subtopic ACFTB 7.3 — Cruise factors			
BASIC ACFTB 7.3.1	Explain the factors affecting aircraft during cruise.	2	Level, cruising speed, wind, wind shear, mass, cabin pressurisation
Subtopic ACFTB 7.4 — Descent and initial approach factors			
BASIC ACFTB 7.4.1	Explain the factors affecting aircraft during descent.	2	Wind, speed, rate of descent, aircraft configuration, cabin pressurisation
BASIC ACFTB 7.4.2	Explain the factors affecting an aircraft in a holding pattern.	2	Speed, level, turbulence, icing
BASIC ACFTB 7.4.3	Explain the benefits of continuous descent operations.	2	

Subtopic ACFTB 7.5 — Final approach and landing factors			
BASIC ACFTB 7.5.1	Explain the factors affecting aircraft during final approach and landing.	2	Aircraft configuration, mass, wind, wind shear, aerodrome elevation, runway conditions, runway slope
Subtopic ACFTB 7.6 — Economic factors			
BASIC ACFTB 7.6.1	Explain the economic consequences of ATC changes on the flight profile of an aircraft.	2	Routing, flight level, speed, rates of climb or descent, continuous descent operations (CDO), continuous climb operations (CCO)
Subtopic ACFTB 7.7 — Environmental factors			
BASIC ACFTB 7.7.1	Explain performance restrictions due to environmental considerations.	2	*Optional content: continuous descent operation (CDO), continuous climb operations (CCO), fuel-dumping, noise-abatement procedures, minimum flight levels*

SUBJECT 7: HUMAN FACTORS

The subject objective is:

Learners shall characterise factors which affect personal and team performance.

TOPIC HUMB 1 — INTRODUCTION TO HUMAN FACTORS

Subtopic HUMB 1.1 — Relevance of human factors for ATC			
BASIC HUMB 1.1.1	Explain the relevance and importance of human factors.	1	
BASIC HUMB 1.1.2	Define human performance.	1	
BASIC HUMB 1.1.3	Explain the relevance of human factors to ATM.	2	Historical background, safety impact on ATM, licensing requirements, incidents
BASIC HUMB 1.1.4	Recognise the evolution of human performance during an ATCO's career.	2	*Optional content: R-PEL-006; experience; initial, unit, continuation and development training*

TOPIC HUMB 2 — HEALTH AND WELL-BEING

Subtopic HUMB 2.1 — Fitness for duty			
BASIC HUMB 2.1.1	Recognise the effect of health and well-being on fitness for duty.	1	
BASIC HUMB 2.1.2	List the reasons for provisional inability to exercise the privileges of the ATCO licence.	1	R-PEL-006
BASIC HUMB 2.1.3	Recognise signs of lack of personal fitness.	1	Cognitive and physical fitness
BASIC HUMB 2.1.4	Describe good practices that contribute to maintaining fitness for duty..	2	*Optional content: fitness, diet*
Subtopic HUMB 2.2 — Stress and fatigue			
BASIC HUMB 2.2.1	Define stress.	1	
BASIC HUMB 2.2.2	Define fatigue.	1	
BASIC HUMB 2.2.3	Differentiate between stress and fatigue.	2	ICAO Doc 9966

BASIC HUMB 2.2.4	Explain the causal factors of stress and fatigue.	2	*Optional content: EUROCONTROL Fatigue and sleep management*

Subtopic HUMB 2.3 — Substance use and responsibility

BASIC HUMB 2.3.1	Define psychoactive substance.	1	
BASIC HUMB 2.3.2	Explain the effect of psychoactive substance use on the individual and on safety.		
BASIC HUMB 2.3.3	Describe individual responsibility in terms of psychoactive substance use.		

TOPIC HUMB 3 — HUMAN PERFORMANCE

Subtopic HUMB 3.1 — Individual behaviour

BASIC HUMB 3.1.1	Define human behaviour.	1	
BASIC HUMB 3.1.2	Explain the differences and commonalities that exist among people.	2	*Optional content: attitude, cultural, language, motivation*
BASIC HUMB 3.1.3	Describe the reasons for complacency and the associated effects.	2	Safety, working relationship — team
BASIC HUMB 3.1.4	Describe the reasons for overconfidence and the associated effects.	2	Safety, working relationship — team
BASIC HUMB 3.1.5	Explain the dangers of boredom.	2	

Subtopic HUMB 3.2 — Safety culture and professional conduct

BASIC HUMB 3.2.1	Recognise professional conduct in the workplace.	1	*Optional content: professionalism, attitude, communication, teamwork*
BASIC HUMB 3.2.2	Describe how the air traffic controller contributes to a positive safety culture.	2	*Optional content: attitude towards safety, punctuality, rigour, adherence to rules and regulations, teamwork attitude, etc.*

BASIC HUMB 3.2.3	Consider the factors which influence responsible behaviour.		*Optional content: situation, team, personal situation and judgement, instance of justification, moral motivation, personality*

TOPIC HUMB 4 — HUMAN ERROR

Subtopic HUMB 4.1 — Definition of human error

BASIC HUMB 4.1.1	Define human error.	1	

Subtopic HUMB 4.2 — Classification of human error

BASIC HUMB 4.2.1	List the types of errors.	1	Optional content: slips, lapses, mistakes
BASIC HUMB 4.2.2	Describe the factors which contribute to the occurrence of different types of errors and how these may be reduced.	2	Fatigue, lack of skill, misunderstanding, multitasking, lack of information, distraction, lack of work satisfaction
BASIC HUMB 4.2.3	Define violations.	1	
BASIC HUMB 4.2.4	Differentiate between errors and violations of rules and their consequences for the controller.	2	

TOPIC HUMB 5 — TEAMWORK

Subtopic HUMB 5.1 — Teamwork and team roles

BASIC HUMB 5.1.1	Define teamwork.	1	
BASIC HUMB 5.1.2	Describe the differences between social human relations and professional interactions.	2	
BASIC HUMB 5.1.3	Explain the different types of teams in the ATC environment.	2	*Optional content: executive/planner, shift team, sector group or ATC unit team, team with pilots, team with adjacent ATC units*
BASIC HUMB 5.1.4	Recognise the different types, roles and characters in a team	1	
BASIC HUMB 5.1.5	Characterise the principles of teamwork.	2	*Optional content: team membership, team roles, group dynamics, advantages/disadvantages of teamwork, conflicts and their solutions*

TOPIC HUMB 6 — COMMUNICATION

Subtopic HUMB 6.1 — Communication in ATC			
BASIC HUMB 6.1.1	Define communication.	1	
BASIC HUMB 6.1.2	List an ATCO's communication partners.	1	
BASIC HUMB 6.1.3	Explain good communication practices.	2	Speaking and listening
BASIC HUMB 6.1.4	Differentiate between hearing and listening.	2	
Subtopic HUMB 6.2 — Communication modes			
BASIC HUMB 6.2.1	Describe the factors which affect verbal communication.	2	*Optional content: word choice, intonation, speed, tone, distortion, load, expectation, noise, interruption, language competence*
BASIC HUMB 6.2.2	Describe the factors which affect non-verbal communication.	2	*Optional content: touch, choice, expectation, noise, interruption*
BASIC HUMB 6.2.3	Describe misunderstandings that may arise during a controller's communication.	2	

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SUBJECT 8: EQUIPMENT AND SYSTEMS

The subject objective is:

Learners shall explain the basic working principles of equipment that is generally used in ATC and appreciate how this equipment aids the controller in providing safe and efficient ATS.

TOPIC EQPSB 1 — ATC EQUIPMENT

Subtopic EQPSB 1.1 — Main types of ATC equipment			
BASIC EQPSB 1.1.1	Explain the relevance of ATC equipment.	2	CWP, communication equipment, ATS surveillance systems

TOPIC EQPSB 2 — RADIO

Subtopic EQPSB 2.1 — Radio theory			
BASIC EQPSB 2.1.1	Describe the characteristics of radio waves.	2	Propagation, limitations
BASIC EQPSB 2.1.2	State the use, characteristics and limitations of frequency bands.	1	Use in ATC, navigation and communications, use and application in the Aeronautical Mobile Service
BASIC EQPSB 2.1.3	State the different uses of radio wave spectrum.	1	
Subtopic EQPSB 2.2 — Direction finding			
BASIC EQPSB 2.2.1	State the principles and use of VDF/UDF.	1	VDF/UDF, QDM, QDR, QTF

TOPIC EQPSB 3 — COMMUNICATION EQUIPMENT

Subtopic EQPSB 3.1 — Radio communications			
BASIC EQPSB 3.1.1	State the use of the radio in ATC.	1	
BASIC EQPSB 3.1.2	Describe the working principles of a transmitting and receiving system.	2	
BASIC EQPSB 3.1.3	Explain the effect of antenna shadowing on RTF communications.	2	
Subtopic EQPSB 3.2 — Voice communication between ATS units/positions			
BASIC EQPSB 3.2.1	Describe the use of other voice communications in ATC.	2	*Optional content: telephone, interphone, intercom*

Subtopic EQPSB 3.3 — Data link communications			
BASIC EQPSB 3.3.1	Explain the use and benefits of Controller Pilot Data Link Communications (CPDLC).	2	
BASIC EQPSB 3.3.2	Explain the use and benefits of aircraft communications addressing and reporting system (ACARS)	2	
Subtopic EQPSB 3.4 — Airline communications			
BASIC EQPSB 3.4.1	State the use of SELCAL.	1	

TOPIC EQPSB 4 — INTRODUCTION TO SURVEILLANCE

Subtopic EQPSB 4.1 — Surveillance concept in ATS			
BASIC EQPSB 4.1.1	Describe the concept of surveillance for the provision of ATS.	2	

TOPIC EQPSB 5 — RADAR

Subtopic EQPSB 5.1 — Principles of radar			
BASIC EQPSB 5.1.1	State the principles of radar.	1	
BASIC EQPSB 5.1.2	Recognise the characteristics of radar wavelengths.	1	
BASIC EQPSB 5.1.3	Recognise the use, characteristics and limitations of different radar types.	1	*Optional content: frequency bands, long and short-range radar, weather radar, high-resolution radar*
Subtopic EQPSB 5.2 — Primary radar			
BASIC EQPSB 5.2.1	Explain the working principles of PSR.	2	
Subtopic EQPSB 5.3 — Secondary radar			
BASIC EQPSB 5.3.1	Explain the working principles of SSR.	2	Mode A, Mode C
BASIC EQPSB 5.3.2	Explain SSR code management	2	Discrete, non-discrete codes, special codes
BASIC EQPSB 5.3.3	Explain the effect of antenna shadowing on SSR operation.	2	

Subtopic EQPSB 5.4 — Use of radars			
BASIC EQPSB 5.4.1	Explain the use of PSR/SSR in area, approach and aerodrome control.	2	Mode A, Mode C, Mode S, SMR *Optional content: DFTI*
BASIC EQPSB 5.4.2	Explain the advantages and disadvantages of PSR/SSR.	2	

TOPIC EQPSB 6 — AUTOMATIC DEPENDENT SURVEILLANCE

Subtopic EQPSB 6.1 — Principles of automatic dependent surveillance (ADS)			
BASIC EQPSB 6.1.1	State the different applications of ADS.	1	ADS-B, ADS-C
BASIC EQPSB 6.1.2	Explain the working principles of ADS.	2	
Subtopic EQPSB 6.2 — Use of automatic dependent surveillance (ADS)			
BASIC EQPSB 6.2.1	Describe the use of ADS in ATC.	2	Area, approach, aerodrome, ATM Manual
BASIC EQPSB 6.2.2	Explain the limitations of ADS.	2	Dependency on GNSS, dependency on airborne equipment

TOPIC EQPSB 7 — MULTILATERATION

Subtopic EQPSB 7.1 — Principles of multilateration (MLAT)			
BASIC EQPSB 7.1.1	State the different applications of MLAT.	1	*Optional content: ATC, environmental management, airport operations, LAM, WAM*
BASIC EQPSB 7.1.2	Explain the working principles of MLAT.	2	*Optional content: passive and active MLAT*
Subtopic EQPSB 7.2 — Use of multilateration			
BASIC EQPSB 7.2.1	Describe the use of MLAT in ATC.	2	Area, approach, aerodrome
BASIC EQPSB 7.2.2	Explain the limitations of MLAT.	2	Dependency on airborne equipment

TOPIC EQPSB 8 —DATA PROCESSING

Subtopic EQPSB 8.1 — Surveillance data networking

BASIC EQPSB 8.1.1	Explain the advantages and disadvantages of different surveillance technologies.	2	Data quality, coverage, refresh rate, reliability, redundancy, cost-effectiveness
BASIC EQPSB 8.1.2	Describe the implementation of Surveillance Data Networks.	2	*Optional content: different technologies/sensors, network*

Subtopic EQPSB 8.2 — Working principles of surveillance data networking

BASIC EQPSB 8.2.1	Explain the working principles of surveillance data processing.	2	Surveillance information presented on CWP
BASIC EQPSB 8.2.2	State other use of processed surveillance data.	1	*Optional content: safety nets, airport operations, environmental management*

Subtopic EQPSB 8.3 — Flight data processing

BASIC EQPSB 8.3.1	Explain the FDPS core functions.	2	*Optional content: system flight plan, data input, SSR code management, coordination, correlation/decorrelation, etc.*

TOPIC EQPSB 9 — FUTURE EQUIPMENT

Subtopic EQPSB 9.1 — New developments

BASIC EQPSB 9.1.1	State the developments in the equipment field for introduction in the near future.	1	

TOPIC EQPSB 10 — AUTOMATION IN ATS

Subtopic EQPSB 10.1 — Principles of automation

BASIC EQPSB 10.1.1	Describe the principles of automation in communication and data links in ATS.	2	

Subtopic EQPSB 10.2 — Aeronautical fixed telecommunication network (AFTN)

BASIC EQPSB 10.2.1	Describe the principles of AFTN.	2	

Subtopic EQPSB 10.3 — On-line data interchange

BASIC EQPSB 10.3.1	Describe the benefits of automatic exchange of ATS data in coordination and transfer processes.	2	Accuracy, speed and safety, non-verbal communications

BASIC EQPSB 10.3.2	Describe the limitations of automatic exchange of ATS data in coordination.	2	Non-recognition of a system's failure
Subtopic EQPSB 10.4 — Systems used for the automatic dissemination of information			
BASIC EQPSB 10.4.1	State the working principles of broadcasting systems.	1	*Optional content: ATIS, VOLMET*
BASIC EQPSB 10.4.2	Explain the use of ATIS and VOLMET in ATS.	2	SCAA applicable ANS documents

TOPIC EQPSB 11 — WORKING POSITIONS

Subtopic EQPSB 11.1 — Working position equipment			
BASIC EQPSB 11.1.1	Recognise equipment in a working position.	1	*Optional content: FPB, radio, telephone and other communications equipment, relevant maps and charts, strip printer, teleprinter, clock, information monitors, situation displays*
Subtopic EQPSB 11.2 — Aerodrome control			
BASIC EQPSB 11.2.1	Recognise equipment to be found specifically in a TWR.	1	*Optional content: wind indicator, aerodrome traffic monitor, SMR, crash alarm, signalling lamp, lighting control panel, runway-in-use indicator, binoculars, signalling/flare gun, IRVR and altimeter-setting indicators, local information systems*
Subtopic EQPSB 11.3 — Approach control			
BASIC EQPSB 11.3.1	Recognise equipment to be found specifically in an APP.	1	*Optional content: sequencing system, PAR, RVR indicators*
Subtopic EQPSB 11.4 — Area control			
BASIC EQPSB 11.4.1	Recognise equipment to be found specifically in an ACC.	1	

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SUBJECT 9: PROFESSIONAL ENVIRONMENT

The subject objective is:

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

TOPIC PENB 1 — FAMILIARISATION

Subtopic PENB 1.1 — ATS and aerodrome facilities			
BASIC PENB 1.1.1	Recognise civil and military ATS facilities.	1	*Optional content: TWR, APP, ACC, AIS, RCC, Air Defence Unit*
BASIC PENB 1.1.2	Recognise airport facilities and local operators.	1	*Optional content: firefighting and emergency services, airline operations*

TOPIC PENB 2 — AIRSPACE USERS

Subtopic PENB 2.1 — Civil aviation			
BASIC PENB 2.1.1	Describe airspace usage by civil aircraft.	2	*Optional content: commercial flying, recreational flying, gliders, balloons, calibration flights, aerial photography, parachute dropping, UASs*
Subtopic PENB 2.2 — Military aviation			
BASIC PENB 2.2.1	Describe airspace usage by the military aircraft.	2	Airspace reservations, training, interception, in-flight refuelling, RPAS *Optional content: low-level flying, test flights, special military operations*
Subtopic PENB 2.3 — Pilot expectations and requirements			
BASIC PENB 2.3.1	Recognise pilots` expectations and requirements.	1	
BASIC PENB 2.3.2	State the use of Standard Operating Procedures (SOPs) by aircraft operators.	1	

TOPIC PENB 3 — CUSTOMER RELATIONS

Subtopic PENB 3.1 — Customer relations			
BASIC PENB 3.1.1	State the role of ATC as a service provider	1	*Optional content: Skybrary — Air Traffic Service*
BASIC PENB 3.1.2	Recognise the means by which ATC is funded.	1	

TOPIC PENB 4 — ENVIRONMENTAL PROTECTION

Subtopic PENB 4.1 — Environmental protection			
BASIC PENB 4.1.1	Describe the impact aviation has on the environment.	2	Noise, air quality, climate change, third-party risks
BASIC PENB 4.1.2	Explain the role of ATC in the concept of sustainable development.	2	*Optional content: ICAO Annex 16*
BASIC PENB 4.1.3	State how the impact of aviation on the environment can be mitigated by ANSPs.	1	*Optional content: continuous descent operations (CDOs), continuous climb operations (CCO), collaborative environmental management (CEM), noise-abatement procedures*

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

AERODROME CONTROL RATING (ADC) TRAINING — TRAINING OBJECTIVES

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

(b) The ATCO rating training Aerodrome Control Rating (ADC) should contain the following training objectives that are associated with the subjects, topics and subtopics contained in Appendix 3 Aerodrome Control Rating (ADC) to Annex I to R-PEL-006.

(c) Subjects, topics and subtopics from Appendix 3 to Annex I to R-PEL-006 are repeated in this AMC for the convenience of the reader and do not form part of it.

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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				
ADC INTR 1.1.1	Explain the aims and main objectives of the course.	2		ALL
Subtopic INTR 1.2 - Course administration				
ADC INTR 1.2.1	State how the course is administered.	1		ALL
Subtopic INTR 1.3 - Study material and training documentation				
ADC INTR 1.3.1	Use appropriate documents and their sources for course studies.	3	*Optional content: training documentation, library, CBT library, web, learning management server*	ALL
ADC INTR 1.3.2	Integrate appropriate information into course studies.	4	Training documentation *Optional content: supplementary information, library*	ALL

TOPIC INTR 2 - INTRODUCTION TO THE ATC TRAINING COURSE

Subtopic INTR 2.1 - Course content and organisation				
ADC INTR 2.1.1	State the different training methods used during applied in the course.	1	Theoretical training, practical training, self-study, types of training events	ALL
ADC INTR 2.1.2	State the subjects covered by the course and their purpose.	1		ALL
ADC INTR 2.1.3	Describe the organisation of theoretical training.	2	*Optional content: course programme*	ALL
ADC INTR 2.1.4	Describe the organisation of practical training.	2	*Optional content: PTP, simulation, briefing, debriefing, course programme*	ALL
Subtopic INTR 2.2 - Training ethos				
ADC INTR 2.2.1	Recognise the feedback mechanisms available.	1	Training progress, assessment, briefing, debriefing, learner-instructor feedback, instructor-instructor feedback	ALL

Subtopic INTR 2.3 - Assessment process			
ADC INTR 2.3.1	Describe the assessment process.	2	ALL

SUBJECT 2: AVIATION LAW

The subject objective is:

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

TOPIC LAW 1 - ATCO LICENSING/CERTIFICATE OF COMPETENCE

Subtopic LAW 1.1 - Privileges and conditions				
ADC LAW 1.1.1	Appreciate the conditions which shall be met to issue an Aerodrome Control Instrument rating with Tower Control endorsement.	3	R-PEL-006 *Optional content: national documents*	ADC
ADC LAW 1.1.2	Explain how to maintain and update professional knowledge and skills to retain competence in the operational environment.	2		ALL
ADC LAW 1.1.3	Explain the conditions for suspension/revocation of an ATCO licence.	2	R-PEL-006	ALL

TOPIC LAW 2 - RULES AND REGULATIONS

Subtopic LAW 2.1 - Reports				
ADC LAW 2.1.1	Describe the functions of, and processes for, reporting.	2	Reporting culture, air traffic incident report, SCAA applicable documents (MOR) *Optional content: breach of regulations, watchbook/logbook, records, voluntary reporting.*	ALL
ADC LAW 2.1.2	Use forms for reporting.	3	SCAA applicable documents (MOR), air traffic incident reporting form(s) *Optional content: routine air reports, breach of regulations,*	ALL
Subtopic LAW 2.2 - Airspace				
ADC LAW 2.2.1	Appreciate airspace classes and structure and their relevance to operations using the Aerodrome Control Instrument rating with Tower Control endorsement.	3		ADC
ADC LAW 2.2.2	Provide planning, coordination and control actions appropriate to the classification and structure of airspace.	4	*Optional content: Rules of Flight Decision №4, AAR - ATS, international requirements, civil requirements, military requirements, areas of responsibility, sectorization, national requirements*	ALL

ADC LAW 2.2.3	Appreciate responsibility for terrain clearance.	3		ALL

TOPIC LAW 3 - ATC SAFETY MANAGEMENT

Subtopic LAW 3.1 - Feedback process

ADC LAW 3.1.1	State the importance of controller contribution to the feedback process.	1	*Optional content: voluntary reporting*	ALL
ADC LAW 3.1.2	Describe how reported occurrences are analysed.	2	*Optional content: AAR – MOR, local procedures*	ALL
ADC LAW 3.1.3	Name the means used to disseminate recommendations.	1	*Optional content: safety letters, safety boards web pages*	ALL
ADC LAW 3.1.4	Appreciate the 'Just Culture' concept.	3	Benefits, prerequisites, constraints	ALL

Subtopic LAW 3.2 - Safety Investigation

ADC LAW 3.2.1	Describe role and mission of Safety Investigation in the improvement of safety.	2		ALL

SUBJECT 3: AIR TRAFFIC MANAGEMENT

The subject objective is:

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

TOPIC ATM 1 - PROVISION OF SERVICES

Subtopic ATM 1.1 - Aerodrome control service				
ADC ATM 1.1.1	Appreciate areas of responsibility.	3	Control zone, traffic circuit, manoeuvring area, movement area, vicinity *Optional content: ATZ*	ADC
ADC ATM 1.1.2	Provide aerodrome control service.	4	SCAA applicable documents (AAR-ATS, ATM Manual), ICAO Doc 7030, operation manuals	ADC
Subtopic ATM 1.2 - Flight information service (FIS)				
ADC ATM 1.2.1	Describe the information that shall be passed on to aircraft by an aerodrome controller.	2	ATM Manual	ADC
ADC ATM 1.2.2	Provide FIS.	4	ATM Manual *Optional content: national documents*	ALL
ADC ATM 1.2.3	Issue appropriate information.	3	ATM Manual, essential local traffic, traffic information	ADC
ADC ATM 1.2.4	Appreciate the use of ATIS in the provision of flight information service.	3		ALL
Subtopic ATM 1.3 - Alerting service (ALRS)				
ADC ATM 1.3.1	Provide ALRS.	4	ATM Manual *Optional content: national documents*	ALL
ADC ATM 1.3.2	Respond to distress and urgency messages and signals.	3	"Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the 'Rules on the Use of Airspace and Flight Operations'.", SCAA applicable documents (AAR-ATS, ATM Manual, Aeronautical Communication)	ALL
Subtopic ATM 1.4 - ATS system capacity and air traffic flow management				
ADC ATM 1.4.1	Appreciate the impact of ATS system capacity and air traffic flow management on the controller.	3	*Optional content: ATM Manual*	ADC

ADC ATM 1.4.2	Organise traffic to take account of flow management.	4	*Optional content: departure sequence*	ADC
ADC ATM 1.4.3	Inform the appropriate authority of local factors affecting ATS system capacity and air traffic flow management.	3	*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*	ADC

TOPIC ATM 2 - COMMUNICATION

Subtopic ATM 2.1 - Effective communication

ADC ATM 2.1.1	List the communication means between controllers.	1	Optional content: electronic, written, verbal and non-verbal communication	ALL
ADC ATM 2.1.2	Select the most suitable means of communication given the situation.	5		ALL
ADC ATM 2.1.3	Use approved phraseology.	3	ATM Manual *Optional content: ICAO Doc 9432 RTF manual, standard words and phrases as contained in AAR-AC II*	ALL
ADC ATM 2.1.4	Ensure effective communication.	4	Communication techniques, readback/verification of readback	ALL
ADC ATM 2.1.5	Analyse examples of pilot–controller communication for effectiveness.	4	Optional content: real-life recordings, situation in the simulator	ALL

TOPIC ATM 3 - ATC CLEARANCES AND ATC INSTRUCTIONS

Subtopic ATM 3.1 - ATC clearances

ADC ATM 3.1.1	Issue appropriate ATC clearances.	3	ATM Manual *Optional content: national documents*	ALL
ADC ATM 3.1.2	Integrate appropriate ATC clearances in control service.	4		ALL
ADC ATM 3.1.3	Ensure the agreed course of action is carried out.	4		ALL

Subtopic ATM 3.2 - ATC instructions				
ADC ATM 3.2.1	Issue appropriate ATC instructions.	3	ATM Manual *Optional content: national documents*	ALL
ADC ATM 3.2.2	Integrate appropriate ATC instructions in control service.	4		ALL
ADC 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				
ADC ATM 4.1.1	Identify the need for coordination.	3		ALL
Subtopic ATM 4.2 - Tools and methods for coordination				
ADC ATM 4.2.1	Use the available tools for coordination.	3	*Optional content: electronic transfer of flight data, telephone, interphone, intercom, direct speech, radiotelephone (RTF), local agreements, automated system coordination*	ALL
Subtopic ATM 4.3 - Coordination procedures				
ADC ATM 4.3.1	Initiate appropriate coordination.	3	Delegation/transfer of responsibility for air-ground communications and separation, transfer of control, etc., ATM Manual *Optional content: release point*	ALL
ADC ATM 4.3.2	Analyse effect of coordination requested by an adjacent position/unit.	4	*Optional content: delegation/transfer of responsibility for air-ground communications and separation, release point, transfer of control, etc.*	ALL
ADC ATM 4.3.3	Select, after negotiation, an appropriate course of action.	5		ALL
ADC ATM 4.3.4	Ensure the agreed course of action is carried out.	4		ALL
ADC ATM 4.3.5	Coordinate when providing FIS.	4	ATM Manual	ALL

ADC ATM 4.3.6	Coordinate when providing ALRS.	4	ATM Manual	ALL

TOPIC ATM 5 - ALTIMETRY AND LEVEL ALLOCATION

Subtopic ATM 5.1 - Altimetry

ADC ATM 5.1.1	Allocate levels according to altimetry data.	4	ICAO Doc 8168, ATM Manual	ALL
ADC ATM 5.1.2	Ensure separation according to altimetry data.	4	*Optional content: transition level, transition altitude, transition layer, height, flight level, altitude, vertical distance to airspace boundaries*	ALL

Subtopic ATM 5.2 - Terrain clearance

ADC ATM 5.2.1	Provide planning, coordination and control actions appropriate to the rules for minimum safe height and terrain clearance.	4	*Optional content: terrain clearance dimensions, minimum safe altitudes, transition level, minimum flight level, minimum sector altitude*	ADC

TOPIC ATM 6 - SEPARATIONS

Subtopic ATM 6.1 - Separation between departing aircraft

ADC ATM 6.1.1	Provide separation between departing aircraft.	4	ATM Manual	ADC

Subtopic ATM 6.2 - Separation of departing aircraft from arriving aircraft

ADC ATM 6.2.1	Provide separation of departing aircraft from arriving aircraft.	4	ATM Manual	ADC

Subtopic ATM 6.3 - Separation of landing aircraft and preceding landing or departing aircraft

ADC ATM 6.3.1	Provide separation of landing aircraft and preceding landing or departing aircraft.	4	ATM Manual	ADC

Subtopic ATM 6.4 - Time-based wake turbulence longitudinal separation

ADC ATM 6.4.1	Provide time-based wake turbulence longitudinal separation.	4	ATM Manual	ADC

Subtopic ATM 6.5 - Reduced separation minima

ADC ATM 6.5.1	Provide reduced separation minima.	4	ATM Manual	ADC

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

Subtopic ATM 7.1 - Airborne collision avoidance systems				
ADC ATM 7.1.1	Differentiate between ACAS advisory thresholds and aerodrome separation standards.	2	ICAO Doc 9863	ADC
ADC ATM 7.1.2	Describe the controller responsibility during and following an ACAS RA reported by pilot.	2	ATM Manual	ALL
ADC ATM 7.1.3	Respond to pilot notification of actions based on airborne systems warnings.	3	ACAS, TAWS	ALL
Subtopic ATM 7.2 - Ground-based safety nets				
ADC ATM 7.2.1	Respond to available ground-based safety nets warnings.	3	*Optional content: anti-incursion*	ADC

TOPIC ATM 8 - DATA DISPLAY

Subtopic ATM 8.1 - Data management				
ADC ATM 8.1.1	Update the data display to accurately reflect the traffic situation.	3	*Optional content: information displayed, strip-marking procedures, electronic information data displays, actions based on traffic display information, calculation of EETs*	ALL
ADC ATM 8.1.2	Analyse pertinent data on data displays.	4		ALL
ADC ATM 8.1.3	Organise pertinent data on data displays.	4		ALL
ADC ATM 8.1.4	Obtain flight plan information.	3	CPL, FPL, supplementary information *Optional content: RPL, AFIL,*	ALL
ADC 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				
ADC ATM 9.1.1	Obtain information concerning the operational environment.	3	*Optional content: briefing, notices, local orders, verification of information*	ALL

ADC ATM 9.1.2	Ensure the integrity of the operational environment.	4	*Optional content: frequency, VOLMET, ATIS, SIGMET, systems set-up, integrity of displays*	ADC
Subtopic ATM 9.2 - Verification of the currency of operational procedures				
ADC ATM 9.2.1	Check all relevant documentation before managing traffic.	3	*Optional content: briefing, letters of agreement (LoAs, NOTAMs, AICs*	ALL
Subtopic ATM 9.3 - Handover-takeover				
ADC ATM 9.3.1	Transfer information to the relieving controller.	3		ALL
ADC 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				
ADC ATM 10.1.1	Explain the responsibility for the provision of an aerodrome control service.	2	SCAA applicable documents (ATM Manual, AAR-ATS)	ADC
ADC ATM 10.1.2	Describe the division of responsibility among air traffic control units.	2	ATM Manual	ALL
ADC ATM 10.1.3	Describe the responsibility in regard to military traffic.	2	ATM Manual *Optional content: ICAO Doc 9554*	ALL
ADC ATM 10.1.4	Describe the responsibility in regard to unmanned free balloons.	2	ATM Manual	ADC
ADC ATM 10.1.5	Appreciate the influence of operational requirements.	3	*Optional content: military flying, calibration flights, aerial photography*	ALL
Subtopic ATM 10.2 - Traffic management process				
ADC ATM 10.2.1	Ensure that situational awareness is maintained.	4	Information gathering, observation, traffic projection	ADC
ADC ATM 10.2.2	Detect conflicts in time for appropriate resolution.	4		ALL
ADC ATM 10.2.3	Identify potential solutions to achieve a safe and effective flow of aerodrome traffic.	3		ADC
ADC ATM 10.2.4	Evaluate possible outcomes of different control actions.	5		ADC

ADC ATM 10.2.5	Select an appropriate plan in time to achieve safe and effective flow of aerodrome traffic.	5		ADC
ADC ATM 10.2.6	Ensure an adequate priority of actions.	4		ALL
ADC ATM 10.2.7	Execute plan in a timely manner.	3		ADC
ADC ATM 10.2.8	Ensure a safe and efficient outcome is achieved.	4	Traffic monitoring, adaptability and follow-up	ALL
Subtopic ATM 10.3 - Aeronautical ground lights				
ADC ATM 10.3.1	Select appropriate aeronautical ground lights.	5	ATM Manual	ADC
Subtopic ATM 10.4 - Information to aircraft by aerodrome control tower				
ADC ATM 10.4.1	Provide information related to the operation of aircraft.	4	ATM Manual	ADC
ADC ATM 10.4.2	Provide information on aerodrome conditions.	4	ATM Manual	ADC
Subtopic ATM 10.5 — Runway in use				
ADC ATM 10.5.1	Select the runway in use.	5		ADC
ADC ATM 10.5.2	Coordinate the runway in use.	4	*Optional content: approach control, area control, runway selection, change of runway*	ADC
ADC ATM 10.5.3	Manage traffic in the event of runway-in-use change.	4		ADC
Subtopic ATM 10.6 - Control of aerodrome traffic				
ADC ATM 10.6.1	Predict positions of aircraft in the aerodrome traffic and taxi circuits.	4	ATM Manual	ADC
ADC ATM 10.6.2	Manage traffic on the manoeuvring area.	4	ATM Manual, aircraft, vehicles *Optional content: runway inspection*	ADC
ADC ATM 10.6.3	Manage traffic in accordance with a change to operational procedures.	4	*Optional content: taxiway closure*	ADC
ADC ATM 10.6.4	Balance the workload against personal capacity.	5	*Optional content: replanning, prioritising solutions, denying requests, delaying traffic*	ADC

Subtopic ATM 10.7 - Control of airborne traffic				
ADC ATM 10.7.1	Manage traffic in the traffic circuit.	4	ATM Manual	ADC
ADC ATM 10.7.2	Integrate the change in the serviceability of radio aids in the management of aerodrome traffic.	4	Optional content: limitations, availability and status of ground-based and satellite-based systems	ADC
ADC ATM 10.7.3	Integrate surface conditions into the control of aerodrome traffic.	4	*Optional content: damp, wet, water patches, flooding, snow, slush, ice, braking action*	ADC
ADC ATM 10.7.4	Integrate information about meteorological phenomena into the control of aerodrome traffic.	4	*Optional content: clouds, precipitation, visibility, wind, meteorological hazards*	ADC
ADC ATM 10.7.5	Integrate the information provided by situation displays.	4	Use, advantages, disadvantages	ADC
ADC ATM 10.7.6	Issue missed approach or go-around instruction.	3	*Optional content: obstructed runway*	ADC
Subtopic ATM 10.8 - Departing traffic				
ADC ATM 10.8.1	Manage departing aircraft.	4	ATM Manual, use of situation displays, wake turbulence, appropriate departure clearances, SIDs	ADC
ADC ATM 10.8.2	Integrate departure sequence into the control of aerodrome traffic.	4	ATM Manual	ADC
ADC ATM 10.8.3	Provide appropriate information to departing traffic.	4	ATM Manual, use of situation displays, wake turbulence	ADC
Subtopic ATM 10.9 - Arriving traffic				
ADC ATM 10.9.1	Manage arriving aircraft.	4	ATM Manual, wake turbulence	ADC
ADC ATM 10.9.2	Integrate the approach sequence into the control of aerodrome traffic.	4	ATM Manual	ADC
ADC ATM 10.9.3	Integrate aircraft on visual approach into the aerodrome traffic.	4	ATM Manual	ADC
ADC ATM 10.9.4	Integrate aircraft on missed approach into the aerodrome traffic.	4	use of air traffic monitors	ADC

ADC ATM 10.9.5	Integrate aircraft performing circling approach into the aerodrome traffic.	4	ICAO Doc 8168 Volume II	ADC
ADC ATM 10.9.6	Provide appropriate information to arriving aircraft.	4	ATM Manual	ADC
Subtopic ATM 10.10 - Special VFR (SVFR) operations				
ADC ATM 10.10.1	Manage the suspension of VFR operations.	4		ADC
ADC ATM 10.10.2	Manage SVFR traffic.	4		ADC
Subtopic ATM 10.11 — Low-visibility operations				
ADC ATM 10.11.1	Describe the procedures for low-visibility operations.	3		ADC
Subtopic ATM 10.12 — Aerodrome control service with advanced system support				
ADC ATM 10.12.1	Appreciate the impact of advanced systems on the provision of aerodrome control service.		*Optional content: surface manager (SMAN), departure manager (DMAN), automated conflict/incursion tools, alarms and resolution advisory tools, automated assistance for surface movement planning and routing, enhanced vision technology in low visibility for controllers*	ADC

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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				
ADC MET 1.1.1	Appreciate the impact of different cloud types.	3	Cumulus, cumulonimbus *Optional content: stratus, nimbostratus, etc.*	ADC
ADC MET 1.1.2	Recognise different cloud types.	1		
ADC MET 1.1.3	Appreciate the impact of precipitation.	3	Precipitation and microphysics *Optional content: rain, snow, sleet, hail*	ADC
ADC MET 1.1.4	Appreciate the impact of atmospheric obscurity.	3	*Optional content: advection fog, radiation fog, mixing, evaporation, mist, drizzle*	ADC
ADC MET 1.1.5	Appreciate the effect and impact of wind.	3	Gusting, veering, backing *Optional content: land breezes, sea breezes, Föhn*	ADC
ADC MET 1.1.6	Appreciate the effect and danger of hazardous meteorological phenomena.	3	Wind shear, turbulence, thunderstorms, icing, microbursts	ADC
ADC MET 1.1.7	Appreciate the effect of a frontal system on aerodrome operations.	3		ADC
ADC MET 1.1.8	Integrate data about meteorological phenomena into the provision of ATS.	4	Clearances, instructions and transmitted information *Optional content: relevant meteorological phenomena*	*ALL*

TOPIC MET 2 - SOURCES OF METEOROLOGICAL DATA

Subtopic MET 2.1 - Meteorological instruments				
ADC MET 2.1.1	Extract information from meteorological instruments.	3	*Optional content: anemometer, RVR indicator, cloud base indicator, ceilometer, barometer*	ADC
Subtopic MET 2.2 - Other sources of meteorological data				
ADC MET 2.2.1	Decode information from meteorological data displays.	3		ADC

ADC MET 2.2.2	Use appropriate communication tools and networks to obtain meteorological data.	3		ADC
ADC MET 2.2.3	Relay meteorological information.	3	ATM Manual *Optional content: flight information centre, adjacent ATS unit, ADS-C reports*	*ALL*

SUBJECT 5: NAVIGATION

The subject objective is:

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

TOPIC NAV 1 - MAPS AND AERONAUTICAL CHARTS

Subtopic NAV 1.1 - Maps and charts				
ADC NAV 1.1.1	Decode symbols and information displayed on aeronautical maps and charts.	3	Instrument approach charts, SID charts, aerodrome charts, *Optional content: visual approach charts, military maps and charts*	ADC APP APS
ADC NAV 1.1.2	Use relevant maps and charts.	3		ADC

TOPIC NAV 2 - INSTRUMENT NAVIGATION

Subtopic NAV 2.1 - Navigational systems				
ADC NAV 2.1.1	Describe how the operational status of navigational systems may change.	2	*Optional content: VDF, NDB, VOR, DME, ILS, MLS, ABAS, SBAS, GBAS, RNP*	ADC
ADC NAV 2.1.2	Decode operational status displays of navigational systems.	3	*Optional content: VDF, NDB, VOR, DME, ILS and GBAS*	ADC
ADC NAV 2.1.3	Appreciate the effect of a change on the operational status of navigational systems.	3	*Optional content: precision, limitations, status, degraded procedures*	*ALL*
ADC NAV 2.1.4	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.*	ADC
Subtopic NAV 2.2 - Stabilised approach				
ADC NAV 2.2.1	Describe the concept of stabilised approach.	2	ICAO Doc 8168	ADC APP APS
ADC NAV 2.2.2	Appreciate the effect of late change of runway-in-use for landing aircraft.	3	Cockpit workload *Optional content: impact on vertical profile (CDO), FMS management, crew procedure briefing, missed approach, loss of situational awareness, etc.*	ADC

Subtopic NAV 2.3 - Instrument departures and arrivals				
ADC NAV 2.3.1	Describe relevant SIDs.	2		ADC APP APS
ADC NAV 2.3.2	Describe the phases of an instrument approach procedure.	2		ADC
ADC NAV 2.3.3	Describe the relevant minima applicable for a precision/ non-precision and visual approach.	2	*Optional content: Type A/B operations, CAT I/II/III criteria, LNAV, LNAV/VNAV, LPV, RNP AR APCH minima*	ADC APP APS
Subtopic NAV 2.4 - Satellite-based systems				
ADC NAV 2.4.1	State the different applications of satellite- based systems relevant for aerodrome operations.	1	*Optional content: LNAV, LNAV/VNAV, LPV, RNP minima, precision approach.*	ADC
Subtopic NAV 2.5 - PBN applications				
ADC NAV 2.5.1	State future PBN developments.	1	A-RNP, RNP (AR) DEP *Optional content: RNP 3D, VNAV, 4D, TBO*	ALL

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				
ADC ACFT 1.1.1	Integrate information from aircraft instruments provided by the pilot in the provision of ATS.	4		ALL
ADC ACFT 1.1.2	Explain the operation of aircraft radio equipment.	2	*Optional content: radios (number of), emergency radios*	ALL
ADC ACFT 1.1.3	Explain the operation of on-board surveillance equipment.	2	Transponders: equipment Mode A, Mode C, Mode S, ADS capability	ADC APS ACS

TOPIC ACFT 2 - AIRCRAFT CATEGORIES

Subtopic ACFT 2.1 - Wake turbulence				
ADC ACFT 2.1.1	Explain the wake turbulence effect and associated hazards to succeeding aircraft.	2		ALL
ADC ACFT 2.1.2	Appreciate the techniques used to prevent hazards associated with wake turbulence on succeeding aircraft.	3		ALL
Subtopic ACFT 2.2 - Application of ICAO approach categories				
ADC ACFT 2.2.1	Describe the use of ICAO approach categories.	2	ICAO Doc 8168	ADC APP APS
ADC ACFT 2.2.2	Appreciate the effect of ICAO approach categories on the organisation of traffic.	3		ADC APP APS

TOPIC ACFT 3 - FACTORS AFFECTING AIRCRAFT PERFORMANCE

Subtopic ACFT 3.1 - Take-off factors				
ADC ACFT 3.1.1	Integrate the influence of factors affecting aircraft on take-off.	4	*Optional content: runway conditions, runway slope, aerodrome elevation, wind, temperature, aircraft configuration, airframe contamination and aircraft mass*	ADC

Subtopic ACFT 3.2 - Climb factors				
ADC ACFT 3.2.1	Appreciate the influence of factors affecting aircraft during climb.	3	*Optional content: speed, mass, air density, wind and temperature*	ADC
Subtopic ACFT 3.3 - Final approach and landing factors				
ADC ACFT 3.3.1	Integrate the influence of factors affecting aircraft during final approach and landing.	4	*Optional content: wind, aircraft configuration, mass, runway conditions, runway slope, aerodrome elevation*	ADC
Subtopic ACFT 3.4 - Economic factors				
ADC ACFT 3.4.1	Integrate consideration of economic factors affecting aircraft.	4	*Optional content: starting-up, taxiing, routing, departure sequence*	ADC
Subtopic ACFT 3.5 - Environmental factors				
ADC ACFT 3.5.1	Appreciate the performance restrictions due to environmental constraints.	3	*Optional content: noise-abatement procedures, minimum flight altitudes, bird strike hazard*	ADC

TOPIC ACFT 4 - AIRCRAFT DATA

Subtopic ACFT 4.1 - Recognition of aircraft types				
ADC 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 *Optional content: ICAO approach categories*	ADC
Subtopic ACFT 4.2 - Performance data				
ADC 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	ADC

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 and factors influencing it				
ADC HUM 1.1.1	Describe the human information-processing model.	2	Attention, perception, memory, situational awareness, decision-making, response	ALL
ADC 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
Subtopic HUM 1.2 — Situational awareness				
ADC HUM 1.2.1	Appreciate the effect of human information-processing factors on situational awareness.	3	*Optional content: workload, knowledge, interpersonal relations, distraction, confidence, experience, fatigue, stress*	ALL
Subtopic HUM 1.3 — Decision-making				
ADC HUM 1.3.1	Appreciate the effect of human information-processing factors on decision-making.	3	*Optional content: workload, stress, interpersonal relations, distraction, confidence*	ALL

TOPIC HUM 2 - MEDICAL AND PHYSIOLOGICAL FACTORS

Subtopic HUM 2.1 - FACTORS AFFECTING HEALTH AND WELL-BEING				
ADC HUM 2.1.1	Describe the onset of fatigue.	2	Shift work *Optional content: lack of concentration, listlessness, irritability, frustration, Skybrary Human Behaviour: EUROCONTROL Fatigue and sleep management*	ALL
ADC HUM 2.1.2	Recognise the onset of fatigue in self and in others.	1	*Optional content: Skybrary Human Behaviour: EUROCONTROL Fatigue and sleep management*	ALL
ADC HUM 2.1.3	Describe the appropriate action when recognising fatigue.	2	*Optional content: Skybrary Human Behaviour: EUROCONTROL Fatigue and sleep management*	ALL

Subtopic HUM 2.2 - Stress				
ADC HUM 2.2.1	Recognise the effects of stress on human performance.	1	Stress and its symptoms in self and in others	ALL
ADC HUM 2.2.2	Describe the appropriate action when recognising stress.	2		ALL
ADC HUM 2.2.3	Act to reduce stress.	3		ALL
ADC HUM 2.2.4	Respond to stressful situations by offering, asking for or accepting assistance.	3		ALL
ADC HUM 2.2.5	Recognise the effects of stressful events.	1	Self and others, abnormal situations	ALL
TOPIC HUM 3 - THREAT AND ERROR MANAGEMENT				
Subtopic HUM 3.1 - Threat and error management framework				
ADC HUM 3.1.1	Explain the importance of threat and error management.	2	*Optional content: prevention of incidents, safety improvement, revision of procedures and/or working practices*	ALL
ADC HUM 3.1.2	Explain the threat and error management framework.	2	Threats, errors, undesired states, countermeasures Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control	ALL
ADC HUM 3.1.3	Differentiate between the different types of threats in ATC.	2	Internal, external, airborne, environmental *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL
ADC HUM 3.1.4	Differentiate between the different types of errors in ATC.	2	Equipment, procedural, communication *Optional content: Increase in traffic, changes in procedures, complexities of systems or traffic, weather, unusual occurrences*	
ADC HUM 3.1.5	Differentiate between the different types of undesired states.	2	On the ground, airborne	

ADC HUM 3.1.6	Analyse examples of threat and error management in ATC.	4	Case studies *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	
Subtopic HUM 3.2 - Application of threat and error management				
ADC HUM 3.2.1	Manage threats.	4	Detect and respond Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control	ALL
ADC HUM 3.2.2	Manage errors.	4	Detect and respond *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL
ADC HUM 3.2.3	Manage undesired states.	4	Detect and respond *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL
TOPIC HUM 4 - STRESS				
Subtopic HUM 4.1 - Benefits of teamwork				
ADC HUM 4.1.1	State the benefits of teamwork.	1	Increased safety, efficiency and capacity	ALL
ADC HUM 4.1.1	List the controller's human performance elements affected by teamwork.	1	Situational awareness, communication, decision-making, threat and error management, workload management	ALL
Subtopic HUM 4.2 - Conflict management				
ADC HUM 4.2.1	Identify the reasons for conflict.	3		ALL
ADC HUM 4.2.2	Describe strategies to cope with human conflicts.	2	*Optional content: in your team, in the simulator*	ALL
ADC HUM 4.2.3	Describe actions to prevent human conflicts.	2		ALL

TOPIC HUM 5 - SYSTEMS

Subtopic HUM 5.1 - Concept of systems in ATM/ANS				
ADC HUM 5.1.1	Explain the concept of systems.	2	People; procedures; equipment; ATM in system terms: simple, complicated, and complex systems; system thinking	ALL
ADC HUM 5.1.2	Describe how changes in one part of a system may impact the other parts.	2		ALL
ADC HUM 5.1.3	Describe the role of the human in the system.	2		ALL

TOPIC HUM 6 - COMMUNICATION

Subtopic HUM 6.1 – Effective Communication				
ADC HUM 6.1.1	Explain effective communication in ATC operations.	2	ICAO Doc 9868	ALL
ADC HUM 6.1.2	Explain key strategies used to enable open communication.	2	*Optional content: active listening, active speaking, assertiveness, honesty, relevance, facts, neutrality*	ALL
ADC HUM 6.1.3	Describe the parameters affecting the controller's competence to communicate effectively.	2	Workload, mutual knowledge, controller versus pilot mental picture, distractions, sound, human conflicts *Optional content: communication between and within the team(s), in the simulator, with the pilots, instructors, coordination partners*	ALL
Subtopic HUM 6.2 - Effective feedback				
ADC HUM 6.2.1	Define feedback.	1		ALL
ADC HUM 6.2.2	Explain the purpose of receiving and giving feedback, and its effect on performance.	2		ALL
ADC HUM 6.2.3	Consider the impact of communication styles on feedback and on conflict resolution.	2		ALL

ADC HUM 6.2.4	Integrate feedback into performance.	4	ALL

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				
ADC EQPS 1.1.1	Operate two-way communication equipment.	3	Transmit/receive switches, procedures *Optional content: frequency selection, standby equipment*	ALL
ADC EQPS 1.1.2	Identify indications of operational status of radio equipment.	3	*Optional content: indicator lights, serviceability displays, selector/frequency displays*	ALL
Subtopic EQPS 1.2 - Other voice communications				
ADC EQPS 1.2.1	Operate landline communications.	3	*Optional content: telephone, interphone and intercom equipment*	ALL

TOPIC EQPS 2 - AUTOMATION IN ATS

Subtopic EQPS 2.1 - Aeronautical fixed telecommunication network (AFTN)				
ADC EQPS 2.1.1	Decode AFTN messages.	3	*Optional content: movement and control messages, NOTAMs, SNOWTAMs, BIRDTAMs, etc.*	ALL
Subtopic EQPS 2.2 - Automatic data interchange				
ADC EQPS 2.2.1	Use automatic data transfer equipment where available.	3	*Optional content: sequencing systems, automated information and coordination, OLDI*	ADC APS ACS
ADC EQPS 2.2.2	Explain operational application of CPDLC for departure clearance (DCL) delivery and D-ATIS.	2	ICAO Doc 9694	ADC

TOPIC EQPS 3 - CONTROLLER WORKING POSITION

Subtopic EQPS 3.1 - Operation and monitoring of equipment				
ADC EQPS 3.1.1	Monitor the technical integrity of the controller working position.	3	Notification procedures, responsibilities	ALL

ADC EQPS 3.1.2	Operate the equipment of the controller working position.	3	*Optional content: situation displays, flight progress board, flight data display, radio, telephone, maps and charts, strip- printer, clock, information systems, UDF/VDF*	ALL
ADC EQPS 3.1.3	Operate available equipment in abnormal and emergency situations.	3		ALL
Subtopic EQPS 3.2 - Situation displays and information systems				
ADC EQPS 3.2.1	Use situation displays.	3		ALL
ADC EQPS 3.2.2	Check availability of information.	3		ALL
ADC EQPS 3.2.3	Obtain information from equipment.	3	*Optional content: information from wind direction indicator*	ADC
ADC EQPS 3.2.4	Take account of anti-incursion equipment.	2		ADC
ADC EQPS 3.2.5	Explain the use of ASMGCS.	2		ADC
Subtopic EQPS 3.3 - Flight data systems				
ADC EQPS 3.3.1	Use the flight data information at controller working position.	3		ALL

TOPIC EQPS 4 - FUTURE EQUIPMENT

Subtopic EQPS 4.1 - New developments				
ADC EQPS 4.1.1	Recognise future developments.	1	New advanced systems	ALL

TOPIC EQPS 5 - EQUIPMENT AND SYSTEMS` LIMITATIONS AND DEGRADATION

Subtopic EQPS 5.1 - Reaction to limitations				
ADC EQPS 5.1.1	Take account of the limitations of equipment and systems.	2		ALL
ADC EQPS 5.1.2	Respond to technical deficiencies of the operational position.	3	Notification procedures, responsibilities	ALL

Subtopic EQPS 5.2 - Communication equipment degradation				
ADC EQPS 5.2.1	Identify that communication equipment has degraded.	3	*Optional content: ground-air, ground-ground and landline communications*	ADC
ADC EQPS 5.2.2	Apply contingency procedures in the event of communication equipment degradation.	4	*Optional content: total or partial degradation of ground-air, ground-ground and landline communications; alternative methods of transferring data*	ADC
Subtopic EQPS 5.3 - Navigational equipment degradation				
ADC EQPS 5.3.1	Identify when a navigational equipment failure will affect operational ability.	3	*Optional content: VOR, navigational aids*	ALL
ADC EQPS 5.3.2	Apply contingency procedures in the event of navigational equipment degradation.	3	*Optional content: vertical separation, information to aircraft, navigational assistance, seeking assistance from adjacent units*	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.

TOPIC PEN 1 - FAMILIARISATION

Subtopic PEN 1.1 - Study visit to aerodrome				
ADC PEN 1.1.1	Appreciate the functions and provision of operational aerodrome control services.	3	Study visit to TWR	ADC

TOPIC PEN 2 - AIRSPACE USERS

Subtopic PEN 2.1 - Contributors to civil ATS operations				
ADC PEN 2.1.1	Characterise civil ATS activities at aerodrome.	2	Study visit to TWR *Optional content: familiarisation visits to APP, ACC, AIS, RCC*	ADC
ADC PEN 2.1.2	Characterise other parties interfacing with ATS operations.	2	*Optional content: familiarisation visits to engineering services, firefighting and emergency services, airline operations offices*	ALL
Subtopic PEN 2.2 - Contributors to military ATS operations				
ADC PEN 2.2.1	Characterise military ATS activities.	2	*Optional content: familiarisation visits to TWR, APP, ACC, AIS, RCC, Air Defence Units*	ALL

TOPIC PEN 3 - CUSTOMER RELATIONS

Subtopic PEN 3.1 - Provision of services and user requirements				
ADC PEN 3.1.1	Appreciate the role of an air navigation service provider.	3		ALL
ADC PEN 3.1.2	Appreciate ATS users' requirements.	3		ALL

TOPIC PEN 4 - ENVIRONMENTAL PROTECTION

Subtopic PEN 4.1 - Environmental protection				
ADC PEN 4.1.1	Describe the environmental constraints on aerodrome operations.	2	*Optional content: ICAO Doc 10013 — Operational opportunities to reduce fuel burn and emissions*	ADC APP APS

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

SUBJECT 10: ABNORMAL AND EMERGENCY SITUATIONS

The subject objective is:

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

TOPIC ABES 1 - ABNORMAL AND EMERGENCY SITUATIONS (ABES)

Subtopic ABES 1.1 - Overview of ABES				
ADC ABES 1.1.1	List common abnormal and emergency situations.	1	*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*	ALL
ADC ABES 1.1.2	Identify potential or actual abnormal and emergency situations.	3		ALL
ADC ABES 1.1.3	Take into account the procedures for given abnormal and emergency situations.	2	Bird strike, aborted take-off *Optional content: ATM Manual*	ADC
ADC ABES 1.1.4	Take into account that procedures do not exist for all abnormal and emergency situations.	2	*Optional content: real-life examples*	ALL
ADC ABES 1.1.5	Consider how the evolution of a situation may have an impact on safety.	2	*Optional content: separation, information, coordination*	ALL

TOPIC ABES 2 - SKILLS IMPROVEMENT

Subtopic ABES 2.1 - Communication effectiveness				
ADC ABES 2.1.1	Ensure effective communication in all circumstances including the case where standard phraseology is not applicable.	4	Phraseology, vocabulary, readback, radio silence instruction	ALL
ADC ABES 2.1.2	Apply change of radiotelephony call sign.	3	*Optional content: ATM Manual*	ALL
Subtopic ABES 2.2 - Avoidance of mental overload				
ADC ABES 2.2.1	Describe actions to keep control of the situation under control.	2	*Optional content: sector-splitting, holding, flow management, task delegation*	ALL
ADC ABES 2.2.2	Organise priority of actions.	4		ALL

ADC ABES 2.2.3	Ensure effective dissemination of information.	4	*Optional content: between executive and planner/coordinator, with the supervisor, between sectors, between ACC, APP and TWR, with ground staff, etc.*	ALL
ADC ABES 2.2.4	Consider asking for help.	2		ALL
Subtopic ABES 2.3 - Air- ground cooperation				
ADC ABES 2.3.1	Collect appropriate information relevant to the situation.	3		ALL
ADC ABES 2.3.2	Assist the pilot.	3	Pilot workload *Optional content: instructions, information, support, human factors, etc.*	ALL

TOPIC ABES 3 - PROCEDURES FOR ABNORMAL AND EMERGENCY SITUATIONS (ABES)

Subtopic ABES 3.1 - Application of procedures for ABES				
ADC ABES 3.1.1	Apply the procedures for given abnormal and emergency situations.	3		ALL
Subtopic ABES 3.2 - Radio failure				
ADC ABES 3.2.1	Describe the procedures to be followed by a pilot when that pilot experiences complete or partial radio failure.	2	ICAO Doc 7030 *Optional content: ATM Manual, military procedures*	ALL
ADC ABES 3.2.2	Apply the procedures to be followed when a pilot experiences complete or partial radio failure.	3	*Optional content: prolonged loss of communication*	ALL
Subtopic ABES 3.3 - Unlawful interference and aircraft bomb threat				
ADC ABES 3.3.1	Apply ATC procedures associated with unlawful interference and aircraft bomb threat.	3	ATM Manual	ALL
Subtopic ABES 3.4 - Strayed or unidentified aircraft				
ADC ABES 3.4.1	Apply the procedures in the case of strayed aircraft.	3	ATM Manual *Optional content: inside controlled airspace, outside controlled airspace*	ALL
ADC ABES 3.4.2	Apply the procedures in the case of unidentified aircraft.	3	ATM Manual	ALL

ADC ABES 3.4.3	Provide navigational assistance to aircraft.	4	*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, ATM Manual, etc.*	ADC
Subtopic ABES 3.5 - Runway incursion				
ADC ABES 3.5.1	Apply ATC procedures associated with runway incursion.	3	ATM Manual	ADC
Subtopic ABES 3.6 — Interception of civil aircraft				
ADC ABES 3.6.1	Explain the procedures in the event of interception of civil aircraft.		ATM Manual	ALL

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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				
ADC AGA 1.1.1	Define aerodrome data.	1	SCAA applicable documents (Aerodrome Standards) *Optional content: aerodrome elevation, reference point, apron, movement area, manoeuvring area, hot spot*	ADC APP APS
Subtopic AGA 1.2 - Coordination				
ADC AGA 1.2.1	Identify the information that has to be exchanged between Air Traffic Services (ATS) and the aerodrome authority.	3	Aerodrome conditions, fire/rescue category, condition of ground equipment and NAVAIDs, AIRAC, SCAA applicable documents (Aerodrome Standards)	APP APS ADC

TOPIC AGA 2 - MOVEMENT AREA

Subtopic AGA 2.1 - Movement area				
ADC AGA 2.1.1	Describe movement area.	2	SCAA applicable documents (Aerodrome Standards)	ADC APP APS
ADC AGA 2.1.2	Describe the marking of obstacles and unusable or unserviceable areas.	2	Flags, signs on pavement, lights	ADC APP APS
ADC AGA 2.1.3	Identify the information on conditions of the movement area that has to be passed on to aircraft.	3	Essential information on aerodrome conditions	ADC APP APS
Subtopic AGA 2.2 - Manoeuvring area				
ADC AGA 2.2.1	Describe manoeuvring area.	2	SCAA applicable documents (Aerodrome Standards)	ADC APP APS
ADC AGA 2.2.2	Describe taxiway.	2		ADC APP APS
ADC AGA 2.2.3	Describe the daylight marking on taxiways.	2		ADC APP APS

ADC AGA 2.2.4	Describe taxiway lighting.	2		ADC APP APS
Subtopic AGA 2.3 - Runways				
ADC AGA 2.3.1	Describe runway.	2	Runway, runway surface, runway strip, shoulder, runway end safety areas, clearways, stopways	ADC APP APS
ADC AGA 2.3.2	Describe instrument runway.	2	SCAA applicable documents (Aerodrome Standards)	ADC APP APS
ADC AGA 2.3.3	Describe non-instrument runway.	2	SCAA applicable documents (Aerodrome Standards)	*ADC* APP APS
ADC AGA 2.3.4	Explain runway declared distances.	2	TORA, TODA, ASDA, LDA	*ADC* APP APS
ADC AGA 2.3.5	Explain the differences between ACN and PCN.	2	Strength of pavements	*ADC* APP APS
ADC AGA 2.3.6	Describe the daylight markings on runways.	2	*Optional content: runway designator, centre line, threshold, aiming point, fixed distance, touchdown zone, side strip, colour*	*ADC* APP APS
ADC AGA 2.3.7	Describe runway lights.	2	*Optional content: colour, centre line, intensity, edge, touchdown zone, threshold, barettes*	*ADC* APP APS
ADC AGA 2.3.8	Explain the functions of visual landing aids.	2	*Optional content: AVASI, VASI, PAPI*	*ADC* APP APS
ADC AGA 2.3.9	Describe the approach lighting systems.	2	Centre line, cross bars, stroboscopic lights, colours, intensity and brightness	*ADC* APP APS
ADC AGA 2.3.10	Characterise the effect of water/ice on runways.	2		*ADC* APP APS
ADC AGA 2.3.11	Explain braking action.	2	Braking action coefficient	*ADC* APP APS
ADC AGA 2.3.12	Explain the effect of runway visual range on aerodrome operation.	2		*ADC* APP APS

TOPIC AGA 3 - OBSTACLES

Subtopic AGA 3.1 - Obstacle-free airspace around aerodromes				
ADC AGA 3.1.1	Explain the necessity for establishing and maintaining an obstacle-free airspace around aerodromes.	2		ADC APP APS

TOPIC AGA 4 - MISCELLANEOUS EQUIPMENT

Subtopic AGA 4.1 - Location				
ADC AGA 4.1.1	Explain the location of different aerodrome ground equipment.	2	*Optional content: LOC, GP, VDF, radio communication or ATS surveillance systems sensors, stopbars, AVASI, VASI, PAPI*	ADC APP APS

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

APPROACH CONTROL PROCEDURAL RATING (APP) TRAINING — TRAINING OBJECTIVES

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

(b) The ATCO rating training Approach Control Procedural Rating (APP) should contain the following training objectives that are associated with the subjects, topics and subtopics contained in Appendix 4 Approach Control Procedural Rating (APP) to Annex I to R-PEL-006.

(c) Subjects, topics and subtopics from Appendix 4 to Annex I to R-PEL-006 are repeated in this AMC for the convenience of the reader and do not form part of it.

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SUBJECT 1: INTRODUCTION TO THE COURSE

The subject objective is:

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

TOPIC INTR 1 - COURSE MANAGEMENT

Subtopic INTR 1.1 - Course introduction				
APP INTR 1.1.1	Explain the aims and main objectives of the course.	2		ALL
Subtopic INTR 1.2 - Course administration				
APP INTR 1.2.1	State how the course is administered.	1		ALL
Subtopic INTR 1.3 - Study material and training documentation				
APP INTR 1.3.1	Use appropriate documents and their sources for course studies.	3	*Optional content: training documentation, library, CBT library, web, learning management server*	ALL
APP INTR 1.3.2	Integrate appropriate information into course studies.	4	Training documentation *Optional content: supplementary information, library*	ALL

TOPIC INTR 2 - INTRODUCTION TO THE ATC TRAINING COURSE

Subtopic INTR 2.1 - Course content and organisation				
APP INTR 2.1.1	State the different training methods used during the course.	1	Theoretical training, practical training, self-study, types of training events	ALL
APP INTR 2.1.2	State the subjects covered by the course and their purpose.	1		ALL
APP INTR 2.1.3	Describe the organisation of theoretical training.	2	*Optional content: course programme*	ALL
APP INTR 2.1.4	Describe the organisation of practical training.	2	*Optional content: PTP, simulation, briefing, debriefing, course programme*	ALL
Subtopic INTR 2.2 - Training ethos				
APP INTR 2.2.1	Recognise the feedback mechanisms available.	1	Training progress, assessment, briefing, debriefing, learner-instructor feedback, instructor-instructor feedback	ALL

Subtopic INTR 2.3 - Assessment process			
APP INTR 2.3.1	Describe the assessment process.	2	ALL

SUBJECT 2: AVIATION LAW

The subject objective is:

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

TOPIC LAW 1 - ATCO LICENSING/CERTIFICATE OF COMPETENCE

Subtopic LAW 1.1 - Privileges and conditions				
APP LAW 1.1.1	Appreciate the conditions which shall be met to issue an Approach Control Procedural rating.	3	R-PEL-006 *Optional content: national documents*	APP
APP LAW 1.1.2	Explain how to maintain and update professional knowledge and skills to retain competence in the operational environment.	2		ALL
APP LAW 1.1.3	Explain the conditions for suspension/revocation of an ATCO licence.	2	R-PEL-006	ALL

TOPIC LAW 2 - RULES AND REGULATIONS

Subtopic LAW 2.1 - Reports				
APP LAW 2.1.1	Describe the functions of, and processes for, reporting.	2	Reporting culture, air traffic incident report. *Optional content: breach of regulations, watchbook/logbook, records, voluntary reporting*	ALL
APP LAW 2.1.2	Use forms for reporting.	3	SCAA applicable documents (MOR), air traffic incident reporting form(s) *Optional content: routine air reports, breach of regulations, watchbook/logbook, records*	ALL
Subtopic LAW 2.2 - Airspace				
APP LAW 2.2.1	Appreciate airspace classes and structure and their relevance to operations using the Approach Control Procedural rating.	3		APP
APP LAW 2.2.2	Provide planning, coordination and control actions appropriate to the airspace classification and structure of airspace.	4	*Optional content:* SCAA applicable documents *(ATS), international requirements, civil requirements, military requirements, areas of responsibility, sectorization, national requirements*	ALL
APP LAW 2.2.3	Appreciate responsibility for terrain clearance.	3		ALL

TOPIC LAW 3 - ATC SAFETY MANAGEMENT

Subtopic LAW 3.1 - Feedback process				
APP LAW 3.1.1	State the importance of controller contribution to the feedback process.	1	*Optional content: voluntary reporting*	ALL
APP LAW 3.1.2	Describe how reported occurrences are analysed.	2	*Optional content: local procedures*	ALL
APP LAW 3.1.3	Name the means used to disseminate recommendations.	1	*Optional content: safety letters, safety boards web pages*	ALL
APP LAW 3.1.4	Appreciate the 'Just Culture' concept.	3	Benefits, prerequisites, constraints	ALL
Subtopic LAW 3.2 - Safety Investigation				
APP LAW 3.2.1	Describe role and mission of safety investigation in the improvement of safety.	2		ALL

SUBJECT 3: AIR TRAFFIC MANAGEMENT

The subject objective is:

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

TOPIC ATM 1 - PROVISION OF SERVICES

Subtopic ATM 1.1 - Air traffic control (ATC) service				
APP ATM 1.1.1	Appreciate own area of responsibility.	3		APP ACP APS ACS
APP ATM 1.1.2	Provide approach control service.	4	"Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the 'Rules on the Use of Airspace and Flight Operations'.", SCAA applicable documents (AAR-ATS, ATM Manual), ICAO Doc 7030, operation manuals	APP APS
Subtopic ATM 1.2 - Flight information service (FIS)				
APP ATM 1.2.1	Provide FIS.	4	ATM Manual *Optional content: national documents*	ALL
APP ATM 1.2.2	Issue appropriate information concerning the position of conflicting traffic.	3	ATM Manual, traffic information, essential traffic information	APP ACP APS ACS
APP ATM 1.2.3	Appreciate the use of ATIS in the provision of flight information service.	3		APP APS
Subtopic ATM 1.3 - Alerting service (ALRS)				
APP ATM 1.3.1	Provide ALRS.	4	ATM Manual *Optional content: national documents*	ALL
APP ATM 1.3.2	Respond to distress and urgency messages and signals.	3	SCAA applicable documents (AAR-ATS, Aeronautical Communication, ATM Manual)	ALL
Subtopic ATM 1.4 - ATS system capacity and air traffic flow management				
APP ATM 1.4.1	Appreciate the impact of ATS system capacity and air traffic flow management on the controller.	3	*Optional content: ATM Manual, ICAO Doc 9426*	APP ACP APS ACS
APP ATM 1.4.2	Apply flow management procedures in the provision of ATC.	2	*Optional content: ATM Manual, ICAO Doc 9426*	APP ACP

				APS ACS
APP ATM 1.4.3	Organise traffic flows and patterns to take account of airspace boundaries.	4	*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*	APP ACP APS ACS
APP ATM 1.4.4	Organise traffic flows and patterns to take account of areas of responsibility.	4	*Optional content:* SCAA applicable documents *(ATS), ICAO Doc 9426*	APP ACP APS ACS
APP ATM 1.4.5	Inform supervisor of local factors affecting ATS system capacity and air traffic flow management.	3	*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*	APP ACP APS ACS
Subtopic ATM 1.5 — Airspace management (ASM)				
APP ATM 1.5.1	Appreciate the impact of ASM on the controller.	3	*Optional content: FABs, TSAs, CDRs, CBAs, free route airspace*	APP ACP APS ACS
APP ATM 1.5.2	Organise traffic to take account of ASM.	4	*Optional content: CDR, TSA, TRA, CBA, real-time activation, deactivation or reallocation of airspace*	APP ACP

TOPIC ATM 2 - COMMUNICATION

Subtopic ATM 2.1 - Effective communication				
APP ATM 2.1.1	List the means of communication between controllers.	1	Optional content: electronic, written, verbal and non-verbal communication	ALL
APP ATM 2.1.2	Select the most suitable means of communication given the situation.	5		ALL
APP ATM 2.1.3	Use approved phraseology.		SCAA applicable documents (ATS)	ALL

			Optional content: published national/local language phraseology	
APP ATM 2.1.4	Ensure effective communication.	4	Use of plain language when required, communication within the sector/working position, between the sectors/WPs/ATC units readback/verification of readback	ALL
APP ATM 2.1.5	Analyse examples of pilot and controller communication for effectiveness.	4	*Optional content: real-life recordings, situation in the simulator*	ALL

TOPIC ATM 3 - ATC CLEARANCES AND ATC INSTRUCTIONS

Subtopic ATM 3.1 - ATC clearances

APP ATM 3.1.1	Issue appropriate ATC clearances.	3	ATM Manual *Optional content: ATM Manual national documents*	ALL
APP ATM 3.1.2	Integrate appropriate ATC clearances in control service.	4		ALL
APP ATM 3.1.3	Ensure the agreed course of action is carried out.	4		ALL

Subtopic ATM 3.2 - ATC instructions

APP ATM 3.2.1	Issue appropriate ATC instructions.	3	ATM Manual *Optional content: national documents*	ALL
APP ATM 3.2.2	Integrate appropriate ATC instructions in control service.	4		ALL
APP ATM 3.2.3	Ensure the agreed course of action is carried out.	4		ALL

TOPIC ATM 4 - COORDINATION

Subtopic ATM 4.1 - Necessity for coordination

APP ATM 4.1.1	Identify the need for coordination.	3		ALL

Subtopic ATM 4.2 - Tools and methods for coordination				
APP ATM 4.2.1	Use the available tools for coordination.	3	*Optional content: electronic transfer of flight data, telephone, interphone, intercom, direct speech, radiotelephone (RTF), local agreements, automated system coordination*	ALL
Subtopic ATM 4.3 - Coordination procedures				
APP ATM 4.3.1	Initiate appropriate coordination.	3	Delegation/transfer of responsibility for air-ground communications and separation, transfer of control, etc., ATM Manual *Optional content: release point*	ALL
APP ATM 4.3.2	Analyse effect of coordination requested by an adjacent position/unit.	4	*Optional content: delegation/transfer of responsibility for air-ground communications and separation, release point, transfer of control, etc.*	ALL
APP ATM 4.3.3	Select, after negotiation, an appropriate course of action.	5		ALL
APP ATM 4.3.4	Ensure the agreed course of action is carried out.	4		ALL
APP ATM 4.3.5	Coordinate when providing FIS.	4	ATM Manual	ALL
APP ATM 4.3.6	Coordinate when providing ALRS.	4	ATM Manual	ALL

TOPIC ATM 5 - ALTIMETRY AND LEVEL ALLOCATION

Subtopic ATM 5.1 - Altimetry				
APP ATM 5.1.1	Allocate levels according to altimetry data.	4	SCAA applicable documents (AAR-ATS, ATM Manual)	ALL
APP ATM 5.1.2	Ensure separation according to altimetry data.	4	*Optional content: transition level, transition altitude, transition layer, height, flight level, altitude, vertical distance to airspace boundaries*	ALL

Subtopic ATM 5.2 - Terrain clearance				
APP ATM 5.2.1	Provide planning, coordination and control actions appropriate to the rules for minimum safe levels and terrain clearance.	4	*Optional content: terrain clearance dimensions, minimum safe altitudes, transition level, minimum flight level, minimum sector altitude*	APP ACP
TOPIC ATM 6 - SEPARATIONS				
Subtopic ATM 6.1 - Vertical separation				
APP ATM 6.1.1	Provide standard vertical separation.	4	SCAA applicable documents (AAR-ATS, ATM Manual), ICAO Doc 7030, level allocation, during climb/descent, rate of climb/descent, holding pattern	APP APS
APP ATM 6.1.2	Provide increased vertical separation.	4	ATM Manual, ICAO Doc 7030 *Optional content: level allocation, during climb/descent, rate of climb/descent, degraded aircraft performance, non-RVSM aircraft, reported severe turbulence*	APP ACP APS ACS
APP ATM 6.1.3	Appreciate the application of emergency vertical separation.	3	ATM Manual, ICAO Doc 7030	APP ACP APS ACS
Subtopic ATM 6.2 - Horizontal separation				
APP ATM 6.2.1	Provide longitudinal separation.	4	Based on time, based on distance (DME and/or GNSS, RNAV)	APP
APP ATM 6.2.2	Provide lateral separation.	4	ATM Manual, ICAO Doc 7030, holding	APP ACP
APP ATM 6.2.3	Provide track separation.	4		ACP APP
APP ATM 6.2.4	Provide geographical separation.	4	Visual, using navigation aids, area navigation	ACP APP
Subtopic ATM 6.3 - Delegation of separation				
APP ATM 6.3.1	Delegate separation to pilots in the case of aircraft executing successive visual approaches.	4		APP APS

APP ATM 6.3.2	Appreciate the conditions which must be met when delegating separation to pilots to fly maintaining own separation while in VMC.	3	ATM Manual	APP APS

TOPIC ATM 7 - AIRBORNE AND GROUND-BASED SAFETY NETS

Subtopic ATM 7.1 - Airborne safety nets

APP ATM 7.1.1	Recognise the independence of ACAS thresholds from ATC separation standards.	2	ICAO Doc 9863	APP APS
APP ATM 7.1.2	Describe the controller responsibility during and following an ACAS RA reported by pilot.	2	ATM Manual	ALL
APP ATM 7.1.3	Respond to pilot notification of actions based on airborne systems warnings.	3	ACAS, TAWS	APP APS ACP

TOPIC ATM 8 - DATA DISPLAY

Subtopic ATM 8.1 - Data management

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

TOPIC ATM 9 - OPERATIONAL ENVIRONMENT (SIMULATED)

Subtopic ATM 9.1 - Integrity of the operational environment

APP ATM 9.1.1	Obtain information concerning the operational environment.	3	*Optional content: local/simulator operation manuals, briefing, notices, current flight plan data/information displays, pilot*	ALL

			reports, coordination, verification of information	
APP ATM 9.1.2	Ensure the integrity of the operational environment.	4	*Optional content: integrity of displays, verification of the information provided by displays, etc.*	APP ACP APS ACS
Subtopic ATM 9.2 - Verification of the currency of operational procedures				
APP ATM 9.2.1	Check all relevant documentation before managing traffic.	3	*Optional content: briefing, letters of agreement (LoAs), NOTAM, AICs*	ALL
APP ATM 9.2.2	Manage traffic in accordance with a change to operational procedures.	4		APP ACP APS ACS
Subtopic ATM 9.3 - Handover-takeover				
APP ATM 9.3.1	Transfer information to the relieving controller.	3		ALL
APP ATM 9.3.2	Obtain information from the controller handing over.	3		ALL
APP ATM 9.3.3	List possible actions to provide a safe position handover–takeover.	1	Optional content: rigour, preparation, overlap time	ALL
APP ATM 9.3.4	Explain the consequences of a missed position handover–takeover process.	2		ALL
TOPIC ATM 10 - PROVISION OF CONTROL SERVICE				
Subtopic ATM 10.1 - Responsibility and processing of information				
APP ATM 10.1.1	Describe the division of responsibility among air traffic control units.	2	ATM Manual	ALL
APP ATM 10.1.2	Describe the responsibility in regard to military traffic.	2	ATM Manual *Optional content: ICAO Doc 9554*	ALL
APP ATM 10.1.3	Describe the responsibility in regard to unmanned free balloons.	2	ATM Manual	ALL
APP ATM 10.1.4	Interpret operational information.	5		APP ACP APS ACS

APP ATM 10.1.5	Organise forwarding of operational information.	4	*Optional content: including the use of backup procedures*	APP ACP APS ACS
APP ATM 10.1.6	Integrate operational information into control decisions.	4		APP ACP APS ACS
APP ATM 10.1.7	Appreciate the influence of operational requirements.	3	*Optional content: military flying, calibration flights, aerial photography*	ALL
Subtopic ATM 10.2 - Approach control				
APP ATM 10.2.1	Explain the responsibility for the provision of an approach procedural control service.	2	SCAA applicable documents (ATM Manual, AAR-ATS), local operation manuals	APP
APP ATM 10.2.2	Provide planning, coordination and control actions appropriate to VFR, SVFR and IFR traffic in VMC and IMC.	4	SCAA applicable documents (AAR-ATS, ATM Manual)	APP APS
Subtopic ATM 10.3 - Traffic management process				
APP ATM 10.3.1	Ensure that situational awareness is maintained.	4	Information gathering, traffic projection	APP ACP
APP ATM 10.3.2	Detect conflicts in time for appropriate resolution.	4		ALL
APP ATM 10.3.3	Identify potential solutions to achieve a safe and effective traffic flow.	3		APP ACP APS ACS
APP ATM 10.3.4	Evaluate possible outcomes of different planning and control actions.	5		ALL
APP ATM 10.3.5	Select an appropriate plan in time to achieve safe and effective traffic flow.	5		APP ACP APS ACS
APP ATM 10.3.6	Ensure an adequate priority of actions.	4		ALL
APP ATM 10.3.7	Execute selected plan in a timely manner.	3		ALL
APP ATM 10.3.8	Ensure a safe and efficient outcome is achieved.	4	Traffic monitoring, adaptability and follow up	ALL

Subtopic ATM 10.4 - Handling traffic				
APP ATM 10.4.1	Manage arrivals, departures and overflights.	4		APP ACP APS ACS
APP ATM 10.4.2	Balance the workload against personal capacity.	5	*Optional content: rerouting, replanning, prioritising solutions, denying requests, delegating responsibility for separation*	APP ACP APS ACS
APP ATM 10.4.3	Manage traffic on different types of approaches.	4	Precision, non-precision, visual	APP APS
APP ATM 10.4.4	Initiate missed approach.	3	ATM Manual	APP APS
APP ATM 10.4.5	Integrate aircraft on missed approach into the traffic situation.	4		APP APS

TOPIC ATM 11 - HOLDING

Subtopic ATM 11.1 - General holding procedures				
APP ATM 11.1.1	Apply holding procedures.	3	ATM Manual, holding instructions, allocation of holding levels, onward clearance times	APP ACP APS ACS
APP ATM 11.1.2	Appreciate the factors affecting holding patterns.	3	Effect of speed, effect of level used, effect of navigation aid in use, turbulence, aircraft type	APP ACP APS ACS
Subtopic ATM 11.2 - Approaching aircraft				
APP ATM 11.2.1	Issue Expected Approach Times (EATs).	3		APP APS
APP ATM 11.2.2	Organise the traffic landing sequence in a holding pattern.	4	*Optional content: company preference, aircraft performance, aircraft approach capability, ILS categories, flow control management*	APP APS

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SUBJECT 4: METEOROLOGY

The subject objective is:

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

TOPIC MET 1 - METEOROLOGICAL PHENOMENA

Subtopic MET 1.1 - Meteorological phenomena

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

TOPIC MET 2 - SOURCES OF METEOROLOGICAL DATA

Subtopic MET 2.1 - Sources of meteorological information

APP MET 2.1.1	Obtain meteorological information.	3	METAR, TAF, SIGMET, AIRMET *Optional content: AIREP/special AIREP*	APP ACP APS ACS
APP MET 2.1.2	Decode information form meteorological data displays.	3		*ALL*
APP MET 2.1.3	Relay meteorological information.	3	ATM Manual *Optional content: flight information centre, adjacent ATS unit*	*ALL*

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SUBJECT 5: NAVIGATION

The subject objective is:

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

TOPIC NAV 1 - MAPS AND AERONAUTICAL CHARTS

Subtopic NAV 1.1 - Maps and charts				
APP NAV 1.1.1	Decode symbols and information displayed on aeronautical maps and charts.	3	Instrument approach charts, SID & STAR charts, aerodrome charts *Optional content: visual approach charts, military maps and charts*	ADC APP APS
APP NAV 1.1.2	Use relevant maps and charts.	3		*ALL*

TOPIC NAV 2 - INSTRUMENT NAVIGATION

Subtopic NAV 2.1 - Navigational systems				
APP NAV 2.1.1	Manage traffic in case of change in the operational status of navigational systems.	4	*Optional content: limitations, availability and status of ground-based and satellite-based systems*	APP ACP APS ACS
APP NAV 2.1.2	Appreciate the effect of a change in the operational status of navigational systems.	3	*Optional content: presition, limitations, status, degraded procedures*	*ALL*
Subtopic NAV 2.2 - Stabilised approach				
APP NAV 2.2.1	Describe the concept of stabilised approach.	2	ICAO Doc 8168	ADC APP APS
APP NAV 2.2.2	Appreciate the effect of late change of runway-in-use or type of approach for landing aircraft.	3	Cockpit workload *Optional content: impact on vertical profile (CDO), FMS management, crew procedure briefing, missed approach, loss of situational awareness, etc.*	APP APS
APP NAV 2.2.3	Appreciate controller actions that may contribute to unstabilised approach.	3	Delayed descent	APP
Subtopic NAV 2.3 - Instrument departures and arrivals				
APP NAV 2.3.1	Describe relevant SIDs and STARs.	2		ADC APP APS
APP NAV 2.3.2	Describe the types and phases of instrument approach procedures.	2	OPS requirements	APP APS

APP NAV 2.3.3	Describe the relevant minima applicable for a precision/non-precision and visual approach.	2	*Optional content: Type A/B operations, CAT I/II/III criteria, LNAV, LNAV/VNAV, LPV, RNP AR APCH minima*	ADC APP APS
Subtopic NAV 2.4 - Navigational assistance				
APP NAV 2.4.1	Evaluate the necessary information to be provided to pilots in need of navigational assistance.	5	*Optional content: nearest most suitable aerodrome, track, heading, distance, aerodrome information, any other navigational assistance relevant at the time*	APP *ACP* APS *ACS*
Subtopic NAV 2.5 - Satellite-based systems				
APP NAV 2.5.1	State the different applications of satellite-based systems relevant for approach operations.	1	RNP APCH, RNP AR APCH, SBAS, GBAS *Optional content: LNAV, LNAV/VNAV, LPV, RNP minima, precision approach*	APP APS
Subtopic NAV 2.6 - PBN applications				
APP NAV 2.6.1	State the navigation applications used in approach and terminal environments.	1	Approach-RNP APCH/ RNP AR APCH; Terminal-RNAV-1 RNP 1 with RF, rotorcraft option RNP 0.3 *Optional content ICAO Doc 9613*	APP APS
APP NAV 2.6.2	Explain the principles and designation of navigation specifications in use.	2	Performance, functionality, sensors *Optional content: aircrew and controller requirements, accuracy requirements, integrity and continuity*	APP *ACP* APS *ACS*
APP NAV 2.6.3	Describe the differences in turn performance.	2	*Optional content: fly-by, fly-over, RF, ATM Manual*	APP APS
APP NAV 2.6.4	State future PBN developments.	1	A-RNP, RNP (AR) DEP *Optional content: RNP 3D, VNAV, TBO*	*ALL*

SUBJECT 6: AIRCRAFT

The subject objective is:

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

TOPIC ACFT 1 - AIRCRAFT INSTRUMENTS

Subtopic ACFT 1.1 - Aircraft instruments

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

TOPIC ACFT 2 - AIRCRAFT CATEGORIES

Subtopic ACFT 2.1 - Wake turbulence

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

Subtopic ACFT 2.2 - Application of ICAO approach categories

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

TOPIC ACFT 3 - FACTORS AFFECTING AIRCRAFT PERFORMANCE

Subtopic ACFT 3.1 - Climb factors

APP ACFT 3.1.1	Integrate the influence of factors affecting aircraft during climb.	4	*Optional content: speed, mass, air density, cabin pressurisation, wind and temperature*	APP ACP APS ACS
APP ACFT 3.1.2	Describe the influence of factors affecting departing aircraft.	3	*Optional content: runway conditions, runway slope, aerodrome elevation, wind, temperature, aircraft configuration, airframe contamination and aircraft mass*	APP APS

Subtopic ACFT 3.2 - Cruise factors				
APP ACFT 3.2.1	Integrate the influence of factors affecting aircraft during cruise.	4	*Optional content: level, cruising speed, wind, mass, cabin pressurisation*	APP APS
Subtopic ACFT 3.3 - Descent and initial approach factors				
APP ACFT 3.3.1	Integrate the influence of factors affecting aircraft during descent.	4	*Optional content: wind, speed, rate of descent, aircraft configuration, cabin pressurisation*	APP APS
Subtopic ACFT 3.4 - Final approach and landing factors				
APP ACFT 3.4.1	Integrate the influence of factors affecting aircraft during final approach and landing.	4	*Optional content: wind, aircraft configuration, mass, meteorological conditions, runway conditions, runway slope, aerodrome elevation*	APP APS
Subtopic ACFT 3.5 - Economic factors				
APP ACFT 3.5.1	Integrate consideration of economic factors affecting aircraft.	4	*Optional content: routing, level, speed, rate of climb and rate of descent, approach profile*	APP APS
APP ACFT 3.5.2	Use continuous climb techniques where applicable.	3		APP *ACP*
APP ACFT 3.5.3	Use direct routing where applicable.	3		APP *ACP* APS *ACS*
Subtopic ACFT 3.6 - Environmental factors				
APP ACFT 3.6.1	Appreciate the performance restrictions due to environmental considerations.	3	*Optional content: fuel-dumping, noise-abatement procedures, minimum flight levels, bird strike hazard, continuous descent operations*	APP APS

TOPIC ACFT 4 - AIRCRAFT DATA

Subtopic ACFT 4.1 - Performance data				
APP ACFT 4.1.1	Integrate the average performance data of a representative sample of aircraft which will be encountered in the operational/working environment into the provision of control service.	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.

TOPIC HUM 1 - PSYCHOLOGICAL FACTORS

Subtopic HUM 1.1 - Cognition and factors influencing it				
APP HUM 1.1.1	Describe the human information-processing model.	2	Attention, perception, memory, situational awareness, decision-making, response	ALL
APP HUM 1.1.2	Describe the factors which influence human information-processing.	2	Confidence, stress, learning, knowledge, experience, fatigue, alcohol/drugs, distraction, interpersonal relations	ALL
Subtopic HUM 1.2 — Situational awareness				
APP HUM 1.2.1	Appreciate the effect of human information-processing factors on situational awareness.	3	*Optional content: workload, knowledge, interpersonal relations, distraction, confidence, experience, fatigue, stress*	ALL
Subtopic HUM 1.3 — Decision-making				
APP HUM 1.3.1	Appreciate the effect of human information-processing factors on decision-making.	3	*Optional content: workload, stress, interpersonal relations, distraction, confidence*	ALL

TOPIC HUM 2 - MEDICAL AND PHYSIOLOGICAL FACTORS

Subtopic HUM 2.1 - Fatigue				
APP HUM 2.1.1	Describe the onset of fatigue.	1	*Optional content: lack of concentration, listlessness, irritability, frustration, ICAO/IFATCA/CANSO's Fatigue Management Guide for Air Traffic Service Providers*	ALL
APP HUM 2.1.2	Recognise the onset of fatigue in self and in others.	2	*Optional content: ICAO/IFATCA/CANSO's Fatigue Management Guide for Air Traffic Service Providers*	ALL
APP HUM 2.1.3	Describe appropriate action when recognising fatigue.	2		ALL
Subtopic HUM 2.2 - Stress				
APP HUM 2.2.1	Recognise the effects of stress on human performance.	1	Stress and its symptoms in self and in others	ALL

APP HUM 2.2.2	Describe the appropriate action when recognising stress.	2		ALL
APP HUM 2.2.3	Act to reduce stress.	3		ALL
APP HUM 2.2.4	Respond to stressful situations by offering, asking for or accepting assistance.	3		ALL
APP HUM 2.2.5	Recognise the effect of stressful events.	1	Self and others, abnormal situations	ALL

TOPIC HUM 3 - THREAT AND ERROR MANAGEMENT

Subtopic HUM 3.1 - Threat and error management framework

APP HUM 3.1.1	Explain the importance of threat and error management.	2	*Optional content: prevention of incidents, safety improvement, revision of procedures and/or working practices*	ALL
APP HUM 3.1.2	Explain the threat and error management framework.	2	Threats, errors, undesired states, countermeasures *Optional content: teamwork, human error, team roles, stress, decision-making, communication, situational awareness*	ALL
APP HUM 3.1.3	Differentiate between the different types of threats in ATC.	2	Internal, external, airborne, environmental *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL
APP HUM 3.1.4	Differentiate between the different types of errors in ATC.	2	Equipment, procedural, communication *Optional content: increase in traffic, changes in procedures, complexities of systems or traffic, weather, unusual occurrences*	ALL
APP HUM 3.1.5	Differentiate between the different types of undesired states.	2	Equipment, procedural, communication *Optional content: increase in traffic, changes in procedures, complexities of systems or traffic, weather, unusual occurrences*	ALL
APP HUM 3.1.6	Analyse examples of threat and error management in ATC.	4	*Case* studies *Optional content: ICAO Circular 314 — AN/178 Threat and Error*	ALL

			Management (TEM) in Air Traffic Control	
Subtopic HUM 3.2 - Application of threat and error management				
APP HUM 3.2.1	Manage threats.	4	Detect and respond Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control	ALL
APP HUM 3.2.2	Manage errors.	4	Detect and respond *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL
APP HUM 3.2.3	Manage undesired states.	4	Detect and respond *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL

TOPIC HUM 4 - TEAMWORK

Subtopic HUM 4.1 - Benefits of teamwork				
APP HUM 4.1.1	State the benefits of teamwork.	1	Increased safety, efficiency and capacity	ALL
APP HUM 4.1.2	List the controller's human performance elements affected by teamwork.	1	Situational awareness, communication, decision-making, threat and error management, workload management	ALL
Subtopic HUM 4.2 - Conflict management				
APP HUM 4.2.1	Identify the reasons for conflict.	3		ALL
APP HUM 4.2.2	Describe strategies to cope with human conflicts.	2	*Optional content: in your team, in the simulator*	ALL
APP HUM 4.2.3	Describe actions to prevent human conflicts.	2		ALL

TOPIC HUM 5 - SYSTEMS

Subtopic HUM 5.1 - Concept of systems in ATM/ANS				
APP HUM 5.1.1	Explain the concept of systems.	2	People; procedures; equipment; ATM in system terms: simple, complicated, and complex systems; system thinking	ALL

APP HUM 5.1.2	Describe how changes in one part of a system may impact the other parts.	2		ALL
APP HUM 5.1.3	Describe the role of the human in the system.	2		ALL

TOPIC HUM 6 - COLLABORATIVE WORK

Subtopic HUM 6.1 - Effective communication

APP HUM 6.1.1	Use communication effectively in ATC operations.	2	ICAO Doc 9868	ALL
APP HUM 6.1.2	Explain key strategies used to enable open communication.	2	Optional content: active listening, active speaking, assertiveness, honesty, relevance, facts, neutrality	ALL
APP HUM 6.1.3	Describe the parameters affecting the controller's competence to communicate effectively.	2	Workload, mutual knowledge, controller versus pilot mental picture, distractions, sound, human conflicts Optional content: communication between and within the team(s), in the simulator, with the pilots, instructors, coordination partners	ALL

Subtopic HUM 6.2 - Effective feedback

APP HUM 6.2.1	Define feedback.	1		ALL
APP HUM 6.2.2	Explain the purpose of receiving and giving feedback, and its effect on performance.	2		ALL
APP HUM 6.2.3	Consider the impact of communication styles on feedback and on conflict resolution.	2		ALL
APP HUM 6.2.4	Integrate feedback into performance.	4		ALL

SUBJECT 8: EQUIPMENT AND SYSTEMS

The subject objective is:

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

TOPIC EQPS 1 - VOICE COMMUNICATIONS

Subtopic EQPS 1.1 - Radio communications				
APP EQPS 1.1.1	Operate two-way communication equipment.	3	Transmit/receive switches, procedures *Optional content: frequency selection, standby equipment*	ALL
APP EQPS 1.1.2	Identify indications of operational status of radio equipment.	3	*Optional content: indicator lights, serviceability displays, selector/frequency displays*	ALL
APP EQPS 1.1.3	Consider radio range.	2	*Optional content: transfer to another frequency, apparent radio failure, failure to establish radio contact, frequency protection range*	APP ACP APS ACS
Subtopic EQPS 1.2 - Other voice communications				
APP EQPS 1.2.1	Operate landline communications.	3	*Optional content: telephone, interphone and intercom equipment*	ALL

TOPIC EQPS 2 - AUTOMATION IN ATS

Subtopic EQPS 2.1 - Aeronautical fixed telecommunication network (AFTN)				
APP EQPS 2.1.1	Decode AFTN messages.	3	*Optional content: movement and control messages, NOTAM, SNOWTAM, BIRDTAM, etc.*	ALL
Subtopic EQPS 2.2 - Automatic data interchange				
APP EQPS 2.2.1	Use automatic data transfer equipment where available.	3	*Optional content: automated information and coordination, OLDI*	APP ACP

TOPIC EQPS 3 - CONTROLLER WORKING POSITION

Subtopic EQPS 3.1 - Operation and monitoring of equipment				
APP EQPS 3.1.1	Monitor the technical integrity of the controller working position.	3	Notification procedures, responsibilities	ALL
APP EQPS 3.1.2	Operate the equipment of the controller working position.	3	*Optional content: situation displays, flight progress board, flight data display, radio,*	ALL

			telephone, maps and charts, strip- printer, clock, information systems, UDF/VDF	
APP EQPS 3.1.3	Operate available equipment in abnormal and emergency situations.	3		ALL
Subtopic EQPS 3.2 - Situation displays and information systems				
APP EQPS 3.2.1	Use situation displays.	3		ALL
APP EQPS 3.2.2	Check availability of information.	3		ALL
APP EQPS 3.2.3	Obtain information from equipment.	3		APP ACP APS ACS
Subtopic EQPS 3.3 - Flight data systems				
APP EQPS 3.3.1	Use the flight data information at controller working position.	3		ALL

TOPIC EQPS 4 - FUTURE EQUIPMENT

Subtopic EQPS 4.1 - New developments				
APP EQPS 4.1.1	Recognise future developments.	1	New advanced systems	ALL

TOPIC EQPS 5 - EQUIPMENT AND SYSTEMS` LIMITATIONS AND DEGRADATION

Subtopic EQPS 5.1 - Reaction to limitations				
APP EQPS 5.1.1	Take account of the limitations of equipment and systems.	2		ALL
APP EQPS 5.1.2	Respond to technical deficiencies of the operational position.	3	Notification procedures, responsibilities	ALL
Subtopic EQPS 5.2 - Communication equipment degradation				
APP EQPS 5.2.1	Identify that communication equipment has degraded.	3	*Optional content: ground-air and landline communications*	APP ACP APS ACS

APP EQPS 5.2.2	Apply contingency procedures in the event of communication equipment degradation.	3	*Optional content: procedures for total or partial degradation of ground–air and landline communications, alternative methods of transferring data*	APP ACP APS ACS
Subtopic EQPS 5.3 - Navigational equipment degradation				
APP EQPS 5.3.1	Identify when a navigational equipment failure will affect operational ability.	3	*Optional content: VOR, navigational aids*	ALL
APP EQPS 5.3.2	Apply contingency procedures in the event of navigational equipment degradation.	3	*Optional content: vertical separation, information to aircraft, navigational assistance, seeking assistance from adjacent units*	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.

TOPIC PEN 1 - FAMILIARISATION

Subtopic PEN 1.1 - Study visit to approach control unit				
APP PEN 1.1.1	Appreciate the functions and provision of operational approach control service.	3	Study visit to an approach control unit	APP APS

TOPIC PEN 2 - AIRSPACE USERS

Subtopic PEN 2.1 - Contributors to civil ATS operations				
APP PEN 2.1.1	Characterise civil ATS activities in approach control unit.	2	Study visit to an approach control unit *Optional content: familiarisation visits to TWR, ACC, AIS, RCC*	APP APS
APP PEN 2.1.2	Characterise other parties interfacing with ATS operations.	2	*Optional content: familiarisation visits to engineering services, firefighting and emergency services, airline operations offices*	ALL
Subtopic PEN 2.2 - Contributors to military ATS operations				
APP PEN 2.2.1	Characterise military ATS activities.	2	*Optional content: familiarisation visits to TWR, APP, ACC, AIS, RCC, Air Defence Units*	ALL

TOPIC PEN 3 - CUSTOMER RELATIONS

Subtopic PEN 3.1 - Provision of services and user requirements				
APP PEN 3.1.1	Appreciate the role of an air navigation service provider.	3		ALL
APP PEN 3.1.2	Appreciate ATS users' requirements.	3		ALL

TOPIC PEN 4 - ENVIRONMENTAL PROTECTION

Subtopic PEN 4.1 - Environmental protection				
APP PEN 4.1.1	Describe the environmental constraints on aerodrome operations.	2	*Optional content: ICAO 10013 - Operational opportunities to minimise fuel use and reduce emissions*	ADC APP APS

APP PEN 4.1.2	Explain the use of Collaborative Environmental Management (CEM) process at aerodromes.	2		ADC APP APS
APP PEN 4.1.3	Appreciate the mitigation techniques used at aerodrome to minimise aviation's impact on the environment.	3	*Optional content: continuous descent operations (CDO), noise-abatement procedures, noise preferential routes, flight efficiency*	APP APS

SUBJECT 10: ABNORMAL AND EMERGENCY SITUATIONS

The subject objective is:

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

TOPIC ABES 1 - ABNORMAL AND EMERGENCY SITUATIONS (ABES)

Subtopic ABES 1.1 - Overview of ABES

APP ABES 1.1.1	List common abnormal and emergency situations.	1	*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*	ALL
APP ABES 1.1.2	Identify potential or actual abnormal and emergency situations.	3		ALL
APP ABES 1.1.3	Take into account the procedures for given abnormal and emergency situations.	2	*Optional content: ATM Manual*	APP ACP APS ACS
APP ABES 1.1.4	Take into account that procedures do not exist for all abnormal and emergency situations.	2	*Optional content: real-life examples*	ALL
APP ABES 1.1.5	Consider how the evolution of a situation may have an impact on safety.	2	*Optional content: separation, information, coordination*	ALL

TOPIC ABES 2 - SKILLS IMPROVEMENT

Subtopic ABES 2.1 - Communication effectiveness

APP ABES 2.1.1	Ensure effective communication in all circumstances including the case where standard phraseology is not applicable.	4	Phraseology, vocabulary, readback, radio silence instruction	ALL

Subtopic ABES 2.2 - Avoidance of mental overload

APP ABES 2.2.1	Describe actions to keep the situation under control.	2	*Optional content: sector-splitting, holding, flow management, task delegation*	ALL
APP ABES 2.2.2	Organise priority of actions.	4		ALL

APP ABES 2.2.3	Ensure effective dissemination of information.	4	*Optional content: between executive and planner/coordinator, with the supervisor, between sectors, between ACC, APP and TWR, with ground staff, etc.*	ALL
APP ABES 2.2.4	Consider asking for help.	2		ALL
Subtopic ABES 2.3 - Air-ground cooperation				
APP ABES 2.3.1	Collect appropriate information relevant to the situation.	3		ALL
APP ABES 2.3.2	Assist the pilot.	3	Pilot workload *Optional content: instructions, information, support, human factors, etc.*	ALL

TOPIC ABES 3 - PROCEDURES FOR ABNORMAL AND EMERGENCY SITUATIONS

Subtopic ABES 3.1 - Application of procedures for ABES				
APP ABES 3.1.1	Apply the procedures for given abnormal and emergency situations.	3	*Optional content: EATM Guidelines for Controller Training in the Handling of Unusual/Emergency Situations, ambulance flights, ground-based safety nets alerts, airframe failure*	ALL
Subtopic ABES 3.2 - Radio failure				
APP ABES 3.2.1	Describe the procedures to be followed by a pilot when that pilot experiences complete or partial radio failure.	2	ICAO Doc 7030 *Optional content: ATM Manual, military procedures*	ALL
APP ABES 3.2.2	Apply the procedures to be followed when a pilot experiences complete or partial radio failure.	3	*Optional content: prolonged loss of communication*	ALL
Subtopic ABES 3.3 - Unlawful interference and aircraft bomb threat				
APP ABES 3.3.1	Apply ATC procedures associated with unlawful interference and aircraft bomb threat.	3	ATM Manual *Optional content: simulator operation procedures*	ALL
Subtopic ABES 3.4 - Strayed or unidentified aircraft				
APP ABES 3.4.1	Apply the procedures in the case of strayed aircraft.	3	ATM Manual *Optional content: inside controlled airspace, outside controlled airspace*	ALL
APP ABES 3.4.2	Apply the procedures in the case of unidentified aircraft.	3	ATM Manual	ALL

Subtopic ABES 3.5 - Diversions				
APP ABES 3.5.1	Provide navigational assistance to aircraft diverting in emergency.	4	Track/heading, distance, other navigational assistance *Optional content: nearest most suitable aerodrome*	APP ACP APS ACS
Subtopic ABES 3.6— Interception of civil aircraft				
APP ABES 3.6.1	Explain the procedures for interception of civil aircraft.	2	ATM Manual	*ALL*

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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				
APP AGA 1.1.1	Define aerodrome data.	1	SCAA applicable documents (Aerodrome Standards) *Optional content: aerodrome elevation, reference point, apron, movement area, manoeuvring area, hot spot*	ADC APP APS
Subtopic AGA 1.2 - Coordination				
APP AGA 1.2.1	Identify the information that has to be exchanged between Air Traffic Services (ATS) and the aerodrome authority.	3	Aerodrome conditions, fire/rescue category, condition of ground equipment and NAVAIDs, AIRAC, SCAA applicable documents (Aerodrome Standards)	APP APS ADC

TOPIC AGA 2 - MOVEMENT AREA

Subtopic AGA 2.1 - Movement area				
APP AGA 2.1.1	Describe the movement area.	2	SCAA applicable documents (Aerodrome Standards)	ADC APP APS
APP AGA 2.1.2	Describe the marking of obstacles and unusable or unserviceable areas.	2	Flags, signs on pavement, lights	ADC APP APS
APP AGA 2.1.3	Identify the information on conditions of the movement area that has to be passed on to aircraft.	3	Essential information on aerodrome conditions	ADC APP APS
Subtopic AGA 2.2 - Manoeuvring area				
APP AGA 2.2.1	Describe manoeuvring area.	2	SCAA applicable documents (Aerodrome Standards)	ADC APP APS
APP AGA 2.2.2	Describe taxiway.	2		ADC APP APS
APP AGA 2.2.3	Describe daylight marking on taxiways.	2		ADC APP APS

APP AGA 2.2.4	Describe taxiway lighting.	2		ADC APP APS
Subtopic AGA 2.3 - Runways				
APP AGA 2.3.1	Describe runway.	2	Runway, runway surface, runway strip, shoulder, runway-end safety areas, clearways, stopways	ADC APP APS
APP AGA 2.3.2	Describe instrument runway.	2	SCAA applicable documents (Aerodrome Standards)	ADC APP APS
APP AGA 2.3.3	Describe non-instrument runway.	2	SCAA applicable documents (Aerodrome Standards)	ADC APP APS
APP AGA 2.3.4	Explain declared distances.	2	TORA, TODA, ASDA, LDA	ADC APP APS
APP AGA 2.3.5	Explain the differences between ACN and PCN.	2	Strength of pavements	ADC APP APS
APP AGA 2.3.6	Describe the daylight markings on runways.	2	*Optional content: runway designator, centre line, threshold, aiming point, fixed distance, touchdown zone, side strip, colour*	ADC APP APS
APP AGA 2.3.7	Describe runway lights.	2	*Optional content: colour, centre line, intensity, edge, touchdown zone, threshold, barettes*	ADC APP APS
APP AGA 2.3.8	Explain the functions of visual landing aids.	2	*Optional content: AVASI, VASI, PAPI*	ADC APP APS
APP AGA 2.3.9	Describe the approach lighting systems.	2	Centre line, cross bars, stroboscopic lights, colours, intensity and brightness	ADC APP APS
APP AGA 2.3.10	Characterise the effect of water/ice on runways.	2		ADC APP APS
APP AGA 2.3.11	Explain braking action.	2	Braking action coefficient	ADC APP APS
APP AGA 2.3.12	Explain the effect of runway visual range on aerodrome operation.	2		ADC APP APS

TOPIC AGA 3 - OBSTACLES

Subtopic AGA 3.1 - Obstacle-free airspace around aerodromes

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

TOPIC AGA 4 - MISCELLANEOUS EQUIPMENT

Subtopic AGA 4.1 - Location

APP AGA 4.1.1	Explain the location of miscellaneous aerodrome ground equipment.	2	*Optional content: LOC, GP, VDF, radio communication or ATS surveillance systems sensors, stopbars, AVASI, VASI, PAPI*	ADC APP APS

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

AREA CONTROL PROCEDURAL RATING (ACP) TRAINING — 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 training objectives that are associated with the subjects, topics and subtopics contained in Appendix 5 Area Control Procedural Rating (ACP) to Annex I to –R-PEL-006.

(c) Subjects, topics and subtopics from Appendix 5 to Annex I to –R-PEL-006 are repeated in this AMC for the convenience of the reader and do not form part of it.

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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				
ACP INTR 1.1.1	Explain the aims and main objectives of the course.	2		ALL
Subtopic INTR 1.2 - Course administration				
ACP INTR 1.2.1	State how the course is administered.	1		ALL
Subtopic INTR 1.3 - Study material and training documentation				
ACP INTR 1.3.1	Use appropriate documents and their sources for course studies.	3	*Optional content: training documentation, library, CBT library, web, learning management server*	ALL
ACP INTR 1.3.2	Integrate appropriate information into course studies.	4	Training documentation *Optional content: supplementary information, library*	ALL

TOPIC INTR 2 - INTRODUCTION TO THE ATC TRAINING COURSE

Subtopic INTR 2.1 - Course content and organisation				
ACP INTR 2.1.1	State the different training methods used during the course.	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		ALL
ACP INTR 2.1.3	Describe the organisation of theoretical training.	2	*Optional content: course programme*	ALL
ACP INTR 2.1.4	Describe the organisation of practical training.	2	*Optional content: PTP, simulation, briefing, debriefing, course programme*	ALL
Subtopic INTR 2.2 - Training ethos				
ACP INTR 2.2.1	Recognise the feedback mechanisms available.	1	Training progress, assessment, briefing, debriefing, learner-instructor feedback, instructor-instructor feedback	ALL

Subtopic INTR 2.3 - Assessment process			
ACP INTR 2.3.1	Describe the assessment process.	2	ALL

SUBJECT 2: AVIATION LAW

The subject objective is:

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

TOPIC LAW 1 - ATCO LICENSING/CERTIFICATE OF COMPETENCE

Subtopic LAW 1.1 - Privileges and conditions				
ACP LAW 1.1.1	Appreciate the conditions which shall be met to issue an Area Control Procedural rating.	3	R-PEL-006 *Optional content: national documents*	ACP
ACP LAW 1.1.2	Explain how to maintain and update professional knowledge and skills to retain competence in the operational environment.	2		ALL
ACP LAW 1.1.3	Explain the conditions for suspension/revocation of an ATCO licence.	2	R-PEL-006	ALL

TOPIC LAW 2 - RULES AND REGULATIONS

Subtopic LAW 2.1 - Reports				
ACP LAW 2.1.1	Describe the functions of, and processes for, reporting.	1	Reporting culture, forms for mandatory and voluntary occurrence reporting *Optional content: routine air-reports, breach of regulations, watchbook/logbook, records*	ALL
ACP LAW 2.1.2	Use forms for reporting.	3	SCAA applicable documents (MOR), air traffic incident reporting form(s) *Optional content: routine air reports, breach of regulations, watchbook/logbook, records*	ALL
Subtopic LAW 2.2 - Airspace				
ACP LAW 2.2.1	Appreciate airspace classes and structure and their relevance to operation using the Area Control Procedural rating.	3		ACP
ACP LAW 2.2.2	Provide planning, coordination and control actions appropriate to the classification and structure of airspace.	4	*Optional content:* "Resolution No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the 'Rules on the Use of Airspace and Flight Operations'", *SCAA applicable documents (ATS), international requirements, civil requirements, military requirements, areas of responsibility, sectorization, national requirements*	ALL

ACP LAW 2.2.3	Appreciate responsibility for terrain clearance.	3		ALL

TOPIC LAW 3 - ATC SAFETY MANAGEMENT

Subtopic LAW 3.1 - Feedback process				
ACP LAW 3.1.1	State the importance of controller contribution to the feedback process.	1	*Optional content: voluntary reporting*	ALL
ACP LAW 3.1.2	Describe how reported occurrences are analysed.	2	*Optional content: local procedures*	ALL
ACP LAW 3.1.3	Name the means used to disseminate recommendations.	1	*Optional content: safety letters, safety boards web pages*	ALL
ACP LAW 3.1.4	Appreciate the just culture concept.	3	Benefits, prerequisites, constraints	ALL
Subtopic LAW 3.2 - Safety Investigation				
ACP LAW 3.2.1	Describe the role and objectives of safety investigation in the improvement of safety.	2		ALL

SUBJECT 3: AIR TRAFFIC MANAGEMENT

The subject objective is:

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

TOPIC ATM 1 - PROVISION OF SERVICES

Subtopic ATM 1.1 - Air traffic control (ATC) service				
ACP ATM 1.1.1	Appreciate own area of responsibility.	3		APP ACP APS ACS
ACP ATM 1.1.2	Provide area control service.	4	"Rules No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the 'Rules on the Use of Airspace and Flight Operations", SCAA applicable documents (AAR-ATS, ATM Manual), ICAO Doc 7030, operation manuals	ACP ACS
Subtopic ATM 1.2 - Flight information service (FIS)				
ACP ATM 1.2.1	Provide FIS.	4	ATM Manual *Optional content: national documents*	*ALL*
ACP ATM 1.2.2	Issue appropriate information concerning the position of conflicting traffic.	3	ATM Manual, traffic information, essential traffic information	APP ACP *APS* *ACS*
ACP ATM 1.2.3	Appreciate the use of ATIS in the provision of FIS.		ATM Manual	*ALL*
Subtopic ATM 1.3 - Alerting service (ALRS)				
ACP ATM 1.3.1	Provide ALRS.	4	ATM Manual *Optional content: national documents*	ALL
ACP ATM 1.3.2	Respond to distress and urgency messages and signals.	3	"Resolution No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the 'Rules on the Use of Airspace and Flight Operations'.", SCAA applicable documents (Aeronautical Communication, ATM Manual), national documents	ALL

Subtopic ATM 1.4 - ATS system capacity and air traffic flow management (ATFM)				
ACP ATM 1.4.1	Appreciate the impact of ATS system capacity and air traffic flow management on the controller.	3	*Optional content: ATM Manual*	ACP ACS
ACP ATM 1.4.2	Apply flow management procedures in the provision of ATC.	3	*Optional content: ATM Manual*	ACP ACS
ACP ATM 1.4.3	Organise traffic flows and patterns to take account of airspace boundaries.	4	*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*	APP ACP APS ACS
ACP ATM 1.4.4	Organise traffic flows and patterns to take account of areas of responsibility.	4	*Optional content: ATM Manual*	APP ACP APS ACS
ACP ATM 1.4.5	Inform supervisor of local factors affecting ATS system capacity and air traffic flow management.	3	*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*	APP ACP APS ACS
Subtopic ATM 1.5 — Airspace management (ASM)				
ACP ATM 1.5.1	Appreciate the impact of ASM on the controller.	3		APP ACP APS ACS
ACP ATM 1.5.2	Organise traffic to take account of ASM.	4		APP ACP
TOPIC ATM 2 - COMMUNICATION				
Subtopic ATM 2.1 - Effective communication				
ACP ATM 2.1.1	List the means of communication between controllers.	1	*Optional content: electronic, written, verbal and non-verbal communication*	ALL

ACP ATM 2.1.2	Select the most suitable means of communication given the situation.	5		ALL
ACP ATM 2.1.3	Use approved phraseology.	3		ALL
ACP ATM 2.1.4	Ensure effective communication.	4	Use of plain language when required, communication within the sector/working position, between the sectors/WPs/ATC units readback/verification of readback	ALL
ACP ATM 2.1.5	Analyse examples of pilot and controller communication for effectiveness.	4	*Optional content: real-life recordings, situation in the simulator*	ALL

TOPIC ATM 3 - ATC CLEARANCES AND ATC INSTRUCTIONS

Subtopic ATM 3.1 - ATC clearances

ACP ATM 3.1.1	Issue appropriate ATC clearances.	3	ATM Manual *Optional content: national documents*	ALL
ACP ATM 3.1.2	Integrate appropriate ATC clearances in control service.	4		ALL
ACP ATM 3.1.3	Ensure the agreed course of action is carried out.	4		ALL

Subtopic ATM 3.2 - ATC instructions

ACP ATM 3.2.1	Issue appropriate ATC instructions.	3	ATM Manual *Optional content: national documents*	ALL
ACP ATM 3.2.2	Integrate appropriate ATC instructions in control service.	4		ALL
ACP 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

ACP ATM 4.1.1	Identify the need for coordination.	3		ALL

Subtopic ATM 4.2 - Tools and methods for coordination				
ACP ATM 4.2.1	Use the available tools for coordination.	3	*Optional content: electronic transfer of flight data, telephone, interphone, intercom, direct speech, radiotelephone (RTF), local agreements, automated system coordination*	ALL
Subtopic ATM 4.3 - Coordination procedures				
ACP ATM 4.3.1	Initiate appropriate coordination.	3	Delegation/transfer of responsibility for air-ground communications and separation, transfer of control, etc., ATM Manual *Optional content: release point*	ALL
ACP ATM 4.3.2	Analyse effect of coordination requested by an adjacent position/unit.	4	*Optional content: delegation/transfer of responsibility for air-ground communications and separation, release point, transfer of control, etc.*	ALL
ACP ATM 4.3.3	Select, after negotiation, an appropriate course of action.	5		ALL
ACP ATM 4.3.4	Ensure the agreed course of action is carried out.	4		ALL
ACP ATM 4.3.5	Coordinate when providing FIS.	4	ATM Manual	ALL
ACP ATM 4.3.6	Coordinate when providing ALRS.	4	ATM Manual	ALL

TOPIC ATM 5 - ALTIMETRY AND LEVEL ALLOCATION

Subtopic ATM 5.1 - Altimetry				
ACP ATM 5.1.1	Allocate levels according to altimetry data.	4	ICAO Doc 8168, ATM Manual	ALL
ACP ATM 5.1.2	Ensure separation according to altimetry data.	4	*Optional content: transition level, transition altitude, transition layer, height, flight level, altitude, vertical distance to airspace boundaries*	ALL

Subtopic ATM 5.2 - Terrain clearance				
ACP ATM 5.2.1	Provide planning, coordination and control actions appropriate to the rules for minimum safe levels and terrain clearance.	4	*Optional content: terrain clearance dimensions, minimum safe altitudes, transition level, minimum flight level, minimum sector altitude*	APP ACP
TOPIC ATM 6 - SEPARATIONS				
Subtopic ATM 6.1 - Vertical separation				
ACP ATM 6.1.1	Provide standard vertical separation.	4	ATM Manual, ICAO Doc 7030, level allocation, during climb/descent, rate of climb/descent, RVSM, non-RVSM aircraft, holding pattern	ACP ACS
ACP ATM 6.1.2	Provide increased vertical separation.	4	ATM Manual, ICAO Doc 7030 *Optional content: level allocation, during climb/descent, rate of climb/descent, degraded aircraft performance, non-RVSM aircraft, reported severe turbulence*	APP ACP APS ACS
ACP ATM 6.1.3	Appreciate the application of emergency vertical separation.	3	ATM Manual, ICAO Doc 7030	APP ACP APS ACS
Subtopic ATM 6.2 - Horizontal separation				
ACP ATM 6.2.1	Provide longitudinal separation.	4	Based on time, based on distance (DME and/or GNSS, RNAV) *Optional content: based on time with Mach number technique*	ACP
ACP ATM 6.2.2	Provide lateral separation.	4	ATM Manual, ICAO Doc 7030, holding	APP ACP
ACP ATM 6.2.3	Provide track separation.	4		ACP APP
ACP ATM 6.2.4	Provide geographical separation.	4	Visual, using navigation aids, area navigation	ACP APP

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

Subtopic ATM 7.1 - Airborne collision avoidance systems

ACP ATM 7.1.1	Recognise the independence of ACAS thresholds from ATC separation standards.	1	ICAO Doc 9863	ALL
ACP ATM 7.1.2	Describe the controller responsibility during and following an ACAS RA reported by pilot.	2	ATM Manual *Optional content: ICAO Doc 9863*	ALL
ACP ATM 7.1.3	Respond to pilot notification of actions based on airborne systems warnings.	3	ACAS *Optional content: TAWS*	APP APS ACP ACS

TOPIC ATM 8 - DATA DISPLAY

Subtopic ATM 8.1 - Data management

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

ACP ATM 9.1.1	Obtain information concerning the operational environment.	3	*Optional content: local/simulator operation manuals, briefing, notices, current flight plan data/information displays, pilot reports, coordination, verification of information*	ALL

ACP ATM 9.1.2	Ensure the integrity of the operational environment.	4	*Optional content: integrity of displays, verification of the information provided by displays, etc.*	APP ACP APS ACS
Subtopic ATM 9.2 - Verification of the currency of operational procedures				
ACP ATM 9.2.1	Check all relevant documentation before managing traffic.	3	*Optional content: briefing, letters of agreement (LoAs), NOTAMs, AICs*	ALL
ACP ATM 9.2.2	Manage traffic in accordance with a change to operational procedures.	4		APP ACP APS ACS
Subtopic ATM 9.3 - Handover-takeover				
ACP ATM 9.3.1	Transfer information to the relieving controller.	3		ALL
ACP ATM 9.3.2	Obtain information from the controller handing over.	3		ALL
ACP ATM 9.3.3	List possible actions to provide a safe position handover–takeover.	1	Optional content: rigour, preparation, overlap time	ALL
ACP ATM 9.3.4	Explain the consequences of a missed position handover–takeover process.	2		ALL
TOPIC ATM 10 - PROVISION OF CONTROL SERVICE				
Subtopic ATM 10.1 - Responsibility and processing of information				
ACP ATM 10.1.1	Describe the division of responsibility among air traffic control units.	2	ATM Manual	*ALL*
ACP ATM 10.1.2	Describe the responsibility in regard to military traffic.	2	ATM Manual *Optional content: ICAO Doc 9554*	*ALL*
ACP ATM 10.1.3	Describe the responsibility in regard to unmanned free balloons.	2	ATM Manual	*ALL*
ACP ATM 10.1.4	Interpret operational information.	5		APP ACP APS ACS
ACP ATM 10.1.5	Organise forwarding of operational information.	4	*Optional content: including the use of backup procedures*	APP ACP APS ACS

ACP ATM 10.1.6	Integrate operational information into control decisions.	4		APP ACP APS ACS
ACP ATM 10.1.7	Appreciate the influence of operational requirements.	3	*Optional content: military flying, calibration flights, aerial photography*	*ALL*
Subtopic ATM 10.2 - Area control				
ACP ATM 10.2.1	Explain the responsibility for the provision of an area procedural control service.	2	SCAA applicable documents (ATM Manual, AAR- ATS), local operation manuals	ACP
ACP ATM 10.2.2	Provide planning, coordination and control actions appropriate to VFR and IFR traffic in VMC and IMC.	4	SCAA applicable documents (ATM Manual, AAR-ATS)	ACP *ACS*
Subtopic ATM 10.3 - Traffic management process				
ACP ATM 10.3.1	Ensure that situational awareness is maintained.	4	Information gathering, traffic projection	APP ACP
ACP ATM 10.3.2	Detect conflicts in time for appropriate resolution.	4		*ALL*
ACP ATM 10.3.3	Identify potential solutions to achieve a safe and effective traffic flow.	3		APP ACP APS ACS
ACP ATM 10.3.4	Evaluate possible outcomes of different planning and control actions.	5		APP ACP APS ACS
ACP ATM 10.3.5	Select an appropriate plan in time to achieve safe and effective traffic flow.	5		APP ACP APS ACS
ACP ATM 10.3.6	Ensure an adequate priority of actions.	4		*ALL*
ACP ATM 10.3.7	Execute selected plan in a timely manner.	3		APP ACP APS ACS
ACP ATM 10.3.8	Ensure a safe and efficient outcome is achieved.	4	Traffic monitoring, adaptability and follow-up	ALL
Subtopic ATM 10.4 - Handling traffic				
ACP ATM 10.4.1	Manage arrivals, departures and overflights.	4		APP ACP APS ACS

ACP ATM 10.4.2	Balance the workload against personal capacity.	5	*Optional content: rerouting, replanning, prioritising solutions, denying requests, delegating responsibility for separation*	APP ACP APS ACS

TOPIC ATM 11 - HOLDING

Subtopic ATM 11.1 - General holding procedures

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

Subtopic ATM 11.2 - Holding aircraft

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

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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

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

TOPIC MET 2 - SOURCES OF METEOROLOGICAL DATA

Subtopic MET 2.1 - Sources of meteorological information

ACP MET 2.1.1	Obtain meteorological information.	3	METAR, TAF, SIGMET, AIRMET *Optional content: AIREP/special AIREP*	APP ACP APS ACS
ACP MET 2.1.2	Decode information from meteorological data displays.	3		*ALL*
ACP MET 2.1.3	Relay meteorological information.	3	ATM Manual *Optional content: flight information centre, adjacent ATS unit*	*ALL*

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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				
ACP NAV 1.1.1	Use relevant maps and charts.	3		*ALL*
ACP NAV 1.1.2	Decode symbols and information displayed on aeronautical maps and charts.	3	En-route and area charts *Optional content: STAR charts*	ACP ACS

TOPIC NAV 2 - INSTRUMENT NAVIGATION

Subtopic NAV 2.1 - Navigational systems				
ACP NAV 2.1.1	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
ACP NAV 2.1.2	Appreciate the effect of a change in the operational status of navigational systems.	3	*Optional content: precision, limitations, status, degraded procedures*	*ALL*
Subtopic NAV 2.2 - Navigational assistance				
ACP NAV 2.2.1	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
Subtopic NAV 2.3 - PBN applications				
ACP NAV 2.3.1	State the navigation applications used in terminal and en-route environments.	1	Terminal-RNAV-1, En-route-RNAV-5 *Optional content: A-RNP, ICAO Doc 9613*	ACP ACS
ACP NAV 2.3.2	Explain the principles and designation of navigation specifications in use.	2	Performance, functionalities, sensors *Optional content: performance, functionality, sensors, aircrew and controller requirements*	*APP* ACP *APS* ACS
ACP NAV 2.3.3	Describe the differences in turn performance.	2	*Optional content: fly-by, fly-over, FRT, ATM Manual*	ACP ACS

ACP NAV 2.3.4	State future PBN developments.	1	A-RNP, RNP (AR) DEP *Optional content: RNP 3D, VNAV, TBO*	*ALL*

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

TOPIC ACFT 2 - AIRCRAFT CATEGORIES

Subtopic ACFT 2.1 - Wake turbulence				
ACP ACFT 2.1.1	Explain the wake turbulence effect and associated hazards to succeeding aircraft.	2		ALL
ACP ACFT 2.1.2	Appreciate the techniques used to prevent hazards associated with wake turbulence to succeeding aircraft.	3		ALL

TOPIC ACFT 3 - FACTORS AFFECTING AIRCRAFT PERFORMANCE

Subtopic ACFT 3.1 - Climb factors				
ACP ACFT 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
Subtopic ACFT 3.2 - Cruise factors				
ACP ACFT 3.2.1	Integrate the influence of factors affecting aircraft during cruise.	4	Level, cruising speed, wind, mass, cabin pressurisation	APP ACP APS ACS
Subtopic ACFT 3.3 - Descent factors				
ACP ACFT 3.3.1	Integrate the influence of factors affecting aircraft during descent.	4	*Optional content: wind, speed, rate of descent, cabin pressurisation*	ACP ACS
Subtopic ACFT 3.4 - Economic factors				
ACP ACFT 3.4.1	Integrate consideration of economic factors affecting aircraft.	4	*Optional content: routing, level, speed, rate of climb and rate of descent, approach profile, top of descent*	ACP ACS

ACP ACFT 3.4.2	Use continuous climb techniques where applicable.	3		*APP* ACP
ACP ACFT 3.4.3	Use direct routing where applicable.	3		*APP* ACP *APS* ACS
Subtopic ACFT 3.5 - Environmental factors				
ACP ACFT 3.5.1	Appreciate the performance restrictions due to environmental considerations.	3	*Optional content: fuel-dumping, minimum flight levels, continuous descent operations*	ACP ACS

TOPIC ACFT 4 - AIRCRAFT DATA

Subtopic ACFT 4.1 - Performance data				
ACP ACFT 4.1.1	Integrate the average performance data of a representative sample of aircraft which will be encountered in the operational/working environment into the provision of control service.	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.

TOPIC HUM 1 - PSYCHOLOGICAL FACTORS

Subtopic HUM 1.1 - Cognition and factors influencing it				
ACP HUM 1.1.1	Describe the human information-processing model.	2	Attention, perception, memory, situational awareness, decision-making, response	ALL
ACP 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
Subtopic HUM 1.2 — Situational awareness				
ACP HUM 1.2.1	Appreciate the effect of human information-processing factors on situational awareness.	3	*Optional content: workload, knowledge, interpersonal relations, distraction, confidence, experience, fatigue, stress*	ALL
Subtopic HUM 1.3 — Decision-making				
ACP HUM 1.3.1	Appreciate the effect of human information-processing factors on decision-making.	3	*Optional content: workload, stress, interpersonal relations, distraction, confidence*	ALL

TOPIC HUM 2 - MEDICAL AND PHYSIOLOGICAL FACTORS

Subtopic HUM 2.1 - Fatigue				
ACP HUM 2.1.1	Describe the onset of fatigue.	1	*Optional content: lack of concentration, listlessness, irritability, frustration, ICAO/IFATCA/CANSO's Fatigue Management Guide for Air Traffic Service Providers*	ALL
ACP HUM 2.1.2	Recognise the onset of fatigue in self and in others.	2	*Optional content: ICAO/IFATCA/CANSO's Fatigue Management Guide for Air Traffic Service Providers*	ALL
ACP HUM 2.1.3	Describe appropriate action when recognising fatigue.	2		ALL
Subtopic HUM 2.2 - Stress				
ACP HUM 2.2.1	Recognise the effects of stress on human performance.	1	Stress and its symptoms in self and in others	ALL

ACP HUM 2.2.2	Describe the appropriate action when recognising stress.	2		ALL
ACP HUM 2.2.3	Act to reduce stress.	3		ALL
ACP HUM 2.2.4	Respond to stressful situations by offering, asking for or accepting assistance.	3		ALL
ACP HUM 2.2.5	Recognise the effect of stressful events.	1	Self and others, abnormal situations	ALL

TOPIC HUM 3 - THREAT AND ERROR MANAGEMENT

Subtopic HUM 3.1 - Threat and error management framework

ACP HUM 3.1.1	Explain the importance of threat and error management.	2	*Optional content: prevention of incidents, safety improvement, revision of procedures and/or working practices*	ALL
ACP HUM 3.1.2	Explain the threat and error management framework.	2	Threats, errors, undesired states, countermeasures *Optional content: teamwork, human error, team roles, stress, decision-making, communication, situational awareness*	ALL
ACP HUM 3.1.3	Differentiate between the different types of threats in ATC.	2	Internal, external, airborne, environmental *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL
ACP HUM 3.1.4	Differentiate between the different types of errors in ATC.	2	Equipment, procedural, communication *Optional content: increase in traffic, changes in procedures, complexities of systems or traffic, weather, unusual occurrences*	ALL
ACP HUM 3.1.5	Differentiate between the different types of undesired states.	2	Equipment, procedural, communication *Optional content: increase in traffic, changes in procedures, complexities of systems or traffic, weather, unusual occurrences*	ALL
ACP HUM 3.1.6	Analyse examples of threat and error management in ATC.	4	*Case* studies *Optional content: ICAO Circular 314 — AN/178 Threat and Error*	ALL

			Management (TEM) in Air Traffic Control	
Subtopic HUM 3.2 - Application of threat and error management				
ACP HUM 3.2.1	Manage threats.	4	Detect and respond Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control	ALL
ACP HUM 3.2.2	Manage errors.	4	Detect and respond *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL
ACP HUM 3.2.3	Manage undesired states.	4	Detect and respond *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL

TOPIC HUM 4 - TEAMWORK

Subtopic HUM 4.1 - Benefits of teamwork				
ACP HUM 4.1.1	State the benefits of teamwork.	1	Increased safety, efficiency and capacity	ALL
ACP HUM 4.1.2	List the controller's human performance elements affected by teamwork.	1	Situational awareness, communication, decision-making, threat and error management, workload management	ALL
Subtopic HUM 4.2 - Conflict management				
ACP HUM 4.2.1	Identify the reasons for conflict.	3		ALL
ACP HUM 4.2.2	Describe strategies to cope with human conflicts.	2	*Optional content: in your team, in the simulator*	ALL
ACP HUM 4.2.3	Describe actions to prevent human conflicts.	2		ALL

TOPIC HUM 5 - SYSTEMS

Subtopic HUM 5.1 - Concept of systems in ATM/ANS				
ACP HUM 5.1.1	Explain the concept of systems.	2	People; procedures; equipment; ATM in system terms: simple, complicated, and complex systems; system thinking	ALL

ACP HUM 5.1.2	Describe how changes in one part of a system may impact the other parts.	2		ALL
ACP HUM 5.1.3	Describe the role of the human in the system.	2		ALL

TOPIC HUM 6 - COLLABORATIVE WORK

Subtopic HUM 6.1 - Effective communication

ACP HUM 6.1.1	Explain effective communication in ATC operations.	2	ICAO Doc 9868	ALL
ACP HUM 6.1.2	Explain key strategies used to enable open communication.	2	Optional content: active listening, active speaking, assertiveness, honesty, relevance, facts, neutrality	ALL
ACP HUM 6.1.3	Describe the parameters affecting the controller's competence to communicate effectively.	2	Workload, mutual knowledge, controller versus pilot mental picture, distractions, sound, human conflicts Optional content: communication between and within the team(s), in the simulator, with the pilots, instructors, coordination partners	ALL

Subtopic HUM 6.2 - Effective feedback

ACP HUM 6.2.1	Define feedback.	1		ALL
ACP HUM 6.2.2	Explain the purpose of receiving and giving feedback, and its effect on performance.	2		ALL
ACP HUM 6.2.3	Consider the impact of communication styles on feedback and on conflict resolution.	2		ALL
ACP HUM 6.2.4	Integrate feedback into performance.	4		ALL

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				
ACP EQPS 1.1.1	Operate two-way communication equipment.	3	Transmit/receive switches, procedures *Optional content: frequency selection, standby equipment*	ALL
ACP EQPS 1.1.2	Identify indications of operational status of radio equipment.	3	*Optional content: indicator lights, serviceability displays, selector/frequency displays*	ALL
ACP EQPS 1.1.3	Consider radio range.	2	*Optional content: transfer to another frequency, apparent radio failure, failure to establish radio contact, frequency protection range*	APP ACP APS ACS
Subtopic EQPS 1.2 - Other voice communications				
ACP EQPS 1.2.1	Operate landline communications.	3	*Optional content: telephone, interphone and intercom equipment*	ALL

TOPIC EQPS 2 - AUTOMATION IN ATS

Subtopic EQPS 2.1 - Aeronautical fixed telecommunication network (AFTN)				
ACP EQPS 2.1.1	Decode AFTN messages.	3	*Optional content: movement and control messages, NOTAMs, SNOWTAMs, BIRDTAMs, etc.*	ALL
Subtopic EQPS 2.2 - Automatic data interchange				
ACP EQPS 2.2.1	Use automatic data transfer equipment where available.	3	*Optional content: automated information and coordination, OLDI*	APP ACP

TOPIC EQPS 3 - CONTROLLER WORKING POSITION

Subtopic EQPS 3.1 - Operation and monitoring of equipment				
ACP EQPS 3.1.1	Monitor the technical integrity of the controller working position.	3	Notification procedures, responsibilities	ALL

ACP EQPS 3.1.2	Operate the equipment of the controller working position.	3	*Optional content: situation displays, flight progress board, flight data display, radio, telephone, maps and charts, strip-printer, clock, information systems, UDF/VDF*	ALL
ACP EQPS 3.1.3	Operate available equipment in abnormal and emergency situations.	3		ALL
Subtopic EQPS 3.2 - Situation displays and information systems				
ACP EQPS 3.2.1	Use situation displays.	3		ALL
ACP EQPS 3.2.2	Check availability of information.	3		ALL
ACP EQPS 3.2.3	Obtain information from equipment.	3		APP ACP APS ACS
Subtopic EQPS 3.3 - Flight data systems				
ACP EQPS 3.3.1	Use the flight data information at controller working position.	3		ALL

TOPIC EQPS 4 - FUTURE EQUIPMENT

Subtopic EQPS 4.1 - New developments				
ACP EQPS 4.1.1	Recognise future developments.	1	New advanced systems	ALL

TOPIC EQPS 5 - EQUIPMENT AND SYSTEMS` LIMITATIONS AND DEGRADATION

Subtopic EQPS 5.1 - Reaction to limitations				
ACP EQPS 5.1.1	Take account of the limitations of equipment and systems.	2		ALL
ACP EQPS 5.1.2	Respond to technical deficiencies of the operational position.	3	Notification procedures, responsibilities	ALL
Subtopic EQPS 5.2 - Communication equipment degradation				
ACP EQPS 5.2.1	Identify that communication equipment has degraded.	3	*Optional content: ground-air and landline communications*	APP ACP APS ACS

ACP EQPS 5.2.2	Apply contingency procedures in the event of communication equipment degradation.	3	*Optional content: procedures for total or partial degradation of ground–air and landline communications, alternative methods of transferring data*	ALL
Subtopic EQPS 5.3 - Navigational equipment degradation				
ACP EQPS 5.3.1	Identify when a navigational equipment failure will affect operational ability.	3	*Optional content: VOR, navigational aids*	ALL
ACP EQPS 5.3.2	Apply contingency procedures in the event of a navigational equipment degradation.	3	*Optional content: vertical separation, information to aircraft, navigational assistance, seeking assistance from adjacent units*	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.

TOPIC PEN 1 - FAMILIARISATION

Subtopic PEN 1.1 - Study visit to area control centre				
ACP PEN 1.1.1	Appreciate the functions and provision of an operational area control service.	3	Study visit to an area control centre	ACP ACS

TOPIC PEN 2 - AIRSPACE USERS

Subtopic PEN 2.1 - Contributors to civil ATS operations				
ACP PEN 2.1.1	Characterise civil ATS activities in area control centre.	2	Study visit to an area control centre *Optional content: familiarisation visits to TWR, APP, AIS, RCC*	ACP ACS
ACP PEN 2.1.2	Characterise other parties interfacing with ATS operations.	2	*Optional content: familiarisation visits to engineering services, firefighting and emergency services, airline operations offices*	ALL
Subtopic PEN 2.2 - Contributors to military ATS operations				
ACP PEN 2.2.1	Characterise military ATS activities.	2	*Optional content: familiarisation visits to TWR, APP, ACC, AIS, RCC, Air Defence Units*	ALL

TOPIC PEN 3 - CUSTOMER RELATIONS

Subtopic PEN 3.1 - Provision of services and user requirements				
ACP PEN 3.1.1	Appreciate the role of an air navigation service provider.	3		ALL
ACP PEN 3.1.2	Appreciate ATS users` requirements.	3		ALL

TOPIC PEN 4 - ENVIRONMENTAL PROTECTION

Subtopic PEN 4.1 - Environmental protection				
ACP PEN 4.1.1	Appreciate the mitigation techniques used en-route to minimise the aviation's impact on the environment.	3	*Optional content: free route airspace (FRA), night/weekend routes, ICAO Doc 10013 — Operational Opportunities to reduce fuel burn and emissions*	ACP

SUBJECT 10: ABNORMAL AND EMERGENCY SITUATIONS

The subject objective is:

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

TOPIC ABES 1 - ABNORMAL AND EMERGENCY SITUATIONS (ABES)

Subtopic ABES 1.1 - Overview of ABES				
ACP ABES 1.1.1	List common abnormal and emergency situations.	1	*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*	ALL
ACP ABES 1.1.2	Identify potential or actual abnormal and emergency situations.	3		ALL
ACP ABES 1.1.3	Take into account the procedures for given abnormal and emergency situations.	2	*Optional content: ATM Manual*	APP ACP APS ACS
ACP ABES 1.1.4	Take into account that procedures do not exist for all abnormal and emergency situations.	2	*Optional content: real-life examples*	ALL
ACP ABES 1.1.5	Consider how the evolution of a situation may have an impact on safety.	2	*Optional content: separation, information, coordination*	ALL

TOPIC ABES 2 - SKILLS IMPROVEMENT

Subtopic ABES 2.1 - Communication effectiveness				
ACP ABES 2.1.1	Ensure effective communication in all circumstances including the case where standard phraseology is not applicable.	4	Phraseology, vocabulary, readback, radio silence instruction	ALL
ACP ABES 2.1.2	Apply change of radiotelephony call sign.	3	*Optional content: ATM Manual*	
Subtopic ABES 2.2 - Avoidance of mental overload				
ACP ABES 2.2.1	Describe actions to keep the situation under control.	2	*Optional content: sector-splitting, holding, flow management, task delegation*	ALL
ACP ABES 2.2.2	Organise priority of actions.	4		ALL

ACP ABES 2.2.3	Ensure effective dissemination of information.	4	*Optional content: between executive and planner/coordinator, with the supervisor, between sectors, between ACC, APP and TWR, with ground staff, etc.*	ALL
ACP ABES 2.2.4	Consider asking for help.	2		ALL
Subtopic ABES 2.3 - Air-ground cooperation				
ACP ABES 2.3.1	Collect appropriate information relevant to the situation.	3		ALL
ACP ABES 2.3.2	Assist the pilot.	3	Pilot workload *Optional content: instructions, information, support, human factors, etc.*	ALL

TOPIC ABES 3 - PROCEDURES FOR ABNORMAL AND EMERGENCY SITUATIONS

Subtopic ABES 3.1 - Application of procedures for ABES				
ACP ABES 3.1.1	Apply the procedures for given abnormal and emergency situations.	3	*Optional content: EATM Guidelines for Controller Training in the Handling of Unusual/Emergency Situations, ambulance flights, ground-based safety nets alerts, airframe failure*	ALL
Subtopic ABES 3.2 - Radio failure				
ACP ABES 3.2.1	Describe the procedures to be followed by a pilot when that pilot experiences complete or partial radio failure.	2	ICAO Doc 7030 *Optional content: ATM Manual, military procedures*	ALL
ACP ABES 3.2.2	Apply the procedures to be followed when a pilot experiences complete or partial radio failure.	3	*Optional content: prolonged loss of communication*	ALL
Subtopic 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	ATM Manual	ALL
Subtopic ABES 3.4 - Strayed or unidentified aircraft				
ACP ABES 3.4.1	Apply the procedures in the case of strayed aircraft.	3	ATM Manual *Optional content: inside controlled airspace, outside controlled airspace*	ALL
ACP ABES 3.4.2	Apply the procedures in the case of unidentified aircraft.	3	ATM Manual	ALL

Subtopic ABES 3.5 - Diversions				
ACP ABES 3.5.1	Provide navigational assistance to aircraft diverting in emergency.	4	Track/heading, distance, other navigational assistance *Optional content: nearest most suitable aerodrome*	APP ACP APS ACS

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

APPROACH CONTROL SURVEILLANCE RATING (APS) TRAINING — TRAINING OBJECTIVES

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

(b) The ATCO Rating training Approach Control Surveillance Rating (APS) should contain the following training objectives that are associated with the subjects, topics and subtopics contained in Appendix 6 Approach Control Surveillance Rating (APS) to Annex I to –R-PEL-006.

(c) Subjects, topics and subtopics from Appendix 6 to Annex I to –R-PEL-006 are repeated in this AMC for the convenience of the reader and do not form part of it.

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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				
APS INTR 1.1.1	Explain the aims and main objectives of the course.	2		ALL
Subtopic INTR 1.2 - Course administration				
APS INTR 1.2.1	State how the course administered.	1		ALL
Subtopic INTR 1.3 - Study material and training documentation				
APS INTR 1.3.1	Use appropriate documents and their sources for course studies.	3	*Optional content: training documentation, library, CBT library, web, learning management server*	ALL
APS INTR 1.3.2	Integrate appropriate information into course studies.	4	Training documentation *Optional content: supplementary information, library*	ALL

TOPIC INTR 2 - INTRODUCTION TO THE ATC TRAINING COURSE

Subtopic INTR 2.1 - Course content and organisation				
APS INTR 2.1.1	State the different training methods used during the course.	1	Theoretical training, practical training, self-study, types of training events	ALL
APS INTR 2.1.2	State the subjects covered by the course and their purpose.	1		ALL
APS INTR 2.1.3	Describe the organisation of theoretical training.	2	*Optional content: course programme*	ALL
APS INTR 2.1.4	Describe the organisation of practical training.	2	*Optional content: PTP, simulation, briefing, debriefing, course programme*	ALL
Subtopic INTR 2.2 - Training ethos				
APS INTR 2.2.1	Recognise the feedback mechanisms available.	1	Training progress, assessment, briefing, debriefing, learner-instructor feedback, instructor-instructor feedback	ALL

Subtopic INTR 2.3 - Assessment process			
APS INTR 2.3.1	Describe the assessment process.	2	ALL

SUBJECT 2: AVIATION LAW

The subject objective is:

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

TOPIC LAW 1 - ATCO LICENSING/CERTIFICATE OF COMPETENCE

Subtopic LAW 1.1 - Privileges and conditions				
APS LAW 1.1.1	Appreciate the conditions which shall be met to issue an Approach Control Surveillance rating.	3	R-PEL-006 *Optional content: national documents*	APS
APS LAW 1.1.2	Explain how to maintain and update professional knowledge and skills to retain competence in the operational environment.	2		ALL
APS LAW 1.1.3	Explain the conditions for suspension/revocation of an ATCO licence.	2	R-PEL-006	ALL

TOPIC LAW 2 - RULES AND REGULATIONS

Subtopic LAW 2.1 - Reports				
APS LAW 2.1.1	Describe the functions of, and processes for, reporting.	1	Reporting culture, forms for mandatory and voluntary occurrence reporting *Optional content: routine air-reports, breach of regulations, watchbook/logbook, records*	ALL
APS LAW 2.1.2	Use forms for reporting.	3	SCAA applicable documents (MOR), air traffic incident reporting form(s) *Optional content: routine air reports, breach of regulations, watchbook/logbook, records*	ALL
Subtopic LAW 2.2 – Airspace				
APS LAW 2.2.1	Appreciate classes and structure of airspace and their relevance to Approach Control Surveillance rating operations.	3		APS
APS LAW 2.2.2	Provide planning, coordination and control actions appropriate to the classification and structure of given airspace.	4	*Optional content: Rules* "Resolution No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the 'Rules on the Use of Airspace and Flight Operations'.", *SCAA applicable documents (*AAR-*ATS, ATM Manual), international requirements, civil requirements, military requirements, areas of*	ALL

			responsibility, sectorization, national requirements	
APS LAW 2.2.3	Appreciate responsibility for terrain clearance.	3		ALL

TOPIC LAW 3 - ATC SAFETY MANAGEMENT

Subtopic LAW 3.1 - Feedback process				
APS LAW 3.1.1	State the importance of controller contribution to the feedback process.	1	*Optional content: voluntary reporting*	ALL
APS LAW 3.1.2	Describe how reported occurrences are analysed.	2	*Optional content: local procedures*	ALL
APS LAW 3.1.3	Name the means used to disseminate recommendations.	1	*Optional content: safety letters, safety boards web pages*	ALL
APS LAW 3.1.4	Appreciate the just culture concept.	3	Benefits, prerequisites, constraints	ALL
Subtopic LAW 3.2 - Safety Investigation				
APS LAW 3.2.1	Describe the role and objectives of safety investigation in the improvement of safety.	2		ALL

SUBJECT 3: AIR TRAFFIC MANAGEMENT

The subject objective is:

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

TOPIC ATM 1 - PROVISION OF SERVICES

Subtopic ATM 1.1 - Air traffic control (ATC) service				
APS ATM 1.1.1	Appreciate own area of responsibility.	3		APP ACP APS ACS
APS ATM 1.1.2	Provide approach control service.	4	SCAA applicable documents (AAR-ATS, ATM Manual), ICAO Doc 7030, operation manuals	APP APS
Subtopic ATM 1.2 - Flight information service (FIS)				
APS ATM 1.2.1	Provide FIS.	4	ATM Manual *Optional content: national documents*	ALL
APS ATM 1.2.2	Use ATS surveillance system for the provision of FIS.	3	ATM Manual, information to identified aircraft concerning: traffic, navigation *Optional content: weather*	APS ACS
APS ATM 1.2.3	Issue appropriate information concerning the location of conflicting traffic.	3	ATM Manual, traffic information, essential traffic information	APS ACS *APP ACP*
APS ATM 1.2.4	Appreciate the use of ATIS for the provision of flight information service by approach controller.	3		*ALL*
Subtopic ATM 1.3 - Alerting service (ALRS)				
APS ATM 1.3.1	Provide ALRS.	4	ATM Manual *Optional content: national documents*	ALL
APS ATM 1.3.2	Respond to distress and urgency messages and signals.	3	Rules of No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the “Rules on the Use of Airspace and Flight Operations”, SCAA applicable documents (AAR-ATS, Aeronautical Communication, ATM Manual)	ALL
APS ATM 1.3.3	Use ATS surveillance system for the provision of ALRS.	3		APS ACS

Subtopic ATM 1.4 - ATS system capacity and air traffic flow management (ATFM)				
APS ATM 1.4.1	Appreciate the impact of the ATS system capacity and air traffic flow management on the controller.	3	*Optional content: ATM Manual*	APP ACP APS ACS
APS ATM 1.4.2	Take account of flow management procedures in the provision of ATC.	3	*Optional content: ATM Manual*	APP ACP APS ACS
APS ATM 1.4.3	Organise traffic flows and patterns to take account of airspace boundaries.	4	*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*	APP ACP APS ACS
APS ATM 1.4.4	Organise traffic flows and patterns to take account of areas of responsibility.	4	*Optional content: ATM Manual*	APP ACP APS ACS
APS ATM 1.4.5	Inform the supervisor of local factors affecting the ATS system capacity and air traffic flow management.	3	*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*	APP ACP APS ACS
APS ATM 1.4.6	Organise traffic flows and patterns to take account of ATS surveillance system capability.	4		APS ACS

TOPIC ATM 2 - COMMUNICATION

Subtopic ATM 2.1 - Effective communication				
APS ATM 2.1.1	List the means of communication between controllers.	1	*Optional content: electronic, written, verbal and non-verbal communication*	ALL
APS ATM 2.1.2	Select the most suitable means of communication given the situation.	5	Communication techniques, readback/verification of readback	ALL
APS ATM 2.1.3	Use approved phraseology.	3	*Optional content: published national/local language phraseology*	ALL

APS ATM 2.1.4	Ensure effective communication.	4	Use of plain language when required, communication within the sector/working position, between the sectors/WPs/ATC units, readback/verification of readback	ALL
APS ATM 2.1.5	Analyse examples of pilot–controller communication for effectiveness.	4	*Optional content: real-life recordings, situation in the simulator*	ALL

TOPIC ATM 3 - ATC CLEARANCES AND ATC INSTRUCTIONS

Subtopic ATM 3.1 - ATC clearances

APS ATM 3.1.1	Issue appropriate ATC clearances.	3	ATM Manual *Optional content: national documents*	ALL
APS ATM 3.1.2	Integrate appropriate ATC clearances in control service.	4		ALL
APS ATM 3.1.3	Ensure the agreed course of action is carried out.	4		ALL

Subtopic ATM 3.2 - ATC instructions

APS ATM 3.2.1	Issue appropriate ATC instructions.	3	ATM Manual *Optional content: national documents*	ALL
APS ATM 3.2.2	Integrate appropriate ATC instructions in control service.	4		ALL
APS 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

APS ATM 4.1.1	Identify the need for coordination.	3		ALL

Subtopic ATM 4.2 - Tools and methods for coordination

APS ATM 4.2.1	Use the available tools for coordination.	3	*Optional content: electronic transfer of flight data, telephone, interphone, intercom, direct speech, radiotelephone (RTF), local agreements, automated system coordination*	ALL

Subtopic ATM 4.3 - Coordination procedures

APS ATM 4.3.1	Initiate appropriate coordination.	3	Delegation/transfer of responsibility for air-ground communications and separation, transfer of control, etc. ATM Manual *Optional content: release point*	ALL
APS ATM 4.3.2	Analyse effect of coordination requested by an adjacent position/unit.	4	*Optional content: delegation/transfer of responsibility for air-ground communications and separation, release point, transfer of control, etc.*	ALL
APS ATM 4.3.3	Select, after negotiation, an appropriate course of action.	5		ALL
APS ATM 4.3.4	Ensure the agreed course of action is carried out.	4		ALL
APS ATM 4.3.5	Coordinate in the provision of FIS.	4	ATM Manual	ALL
APS ATM 4.3.6	Coordinate in the provision of ALRS.	4	ATM Manual	ALL

TOPIC ATM 5 - ALTIMETRY AND LEVEL ALLOCATION

Subtopic ATM 5.1 - Altimetry

APS ATM 5.1.1	Allocate levels according to altimetry data.	4	ICAO Doc 8168, ATM Manual	ALL
APS ATM 5.1.2	Ensure separation according to altimetry data.	4	*Optional content: transition level, transition altitude, transition layer, height, flight level, altitude, vertical distance to airspace boundaries*	ALL

Subtopic ATM 5.2 - Terrain clearance

APS ATM 5.2.1	Provide planning, coordination and control actions appropriate to the rules for minimum safe levels and terrain clearance.	4	*Optional content: minimum vectoring altitude, terrain clearance dimensions, minimum safe altitudes, transition level, minimum flight level, minimum sector altitude*	APS ACS

TOPIC ATM 6 - SEPARATIONS

Subtopic ATM 6.1 - Vertical separation

APS ATM 6.1.1	Provide standard vertical separation.	4	ATM Manual, ICAO Doc 7030, level allocation, during climb/descent, rate of climb/descent, holding pattern	APP APS
APS ATM 6.1.2	Provide increased vertical separation.	4	ATM Manual, ICAO Doc 7030 *Optional content: level allocation, during climb/descent, rate of climb/descent*	APP ACP APS ACS
APS ATM 6.1.3	Appreciate the application of vertical emergency separation.	3	ATM Manual, ICAO Doc 7030	APP ACP APS ACS
APS ATM 6.1.4	Provide vertical separation in a surveillance environment.	4	Pressure altitude-derived information, pilot level reports *Optional content: into/out of ATS surveillance system coverage*	APS ACS
Subtopic ATM 6.2 - Longitudinal separation in a surveillance environment				
APS ATM 6.2.1	Provide longitudinal separation in a surveillance environment.	4	Successive departures, successive arrivals, overflights, speed control, silent transfer, ATM Manual	APS
Subtopic ATM 6.3 - Delegation of separation				
APS ATM 6.3.1	Delegate separation to pilots in the case of aircraft executing successive visual approaches.	4		APP APS
APS ATM 6.3.2	Appreciate the conditions which must be met when delegating separation to pilots to fly maintaining own separation while in VMC.	3	ATM Manual	APP APS
Subtopic ATM 6.4 - Wake turbulence distance-based separation				
APS ATM 6.4.1	Provide distance-based wake turbulence separation.	4	ATM Manual *Optional content: national documents*	APS *ACS*
Subtopic ATM 6.5 - Separation based on ATS surveillance systems				
APS ATM 6.5.1	Describe how separation based on ATS surveillance systems is applied.	2	ATM Manual	APS *ACS*
APS ATM 6.5.2	Provide horizontal separation.	4	ATM Manual, ICAO Doc 7030, local operation manuals, holding	APS *ACS*
APS ATM 6.5.3	Provide horizontal separation by vectoring in a variety of situations.	4	*Optional content: transit, meteorological phenomena, vectoring for approach, departure vs transit vs arrival*	APS *ACS*

APS ATM 6.5.4	Ensure horizontal or vertical separation from airspace boundaries.	4	Adjacent sectors, PRD, TSAs.	APS *ACS*

TOPIC ATM 7 - AIRBORNE AND GROUND-BASED SAFETY NETS

Subtopic ATM 7.1 - Airborne safety nets

APS ATM 7.1.1	Recognise the independence of ACAS thresholds from ATC separation standards.	2	ICAO Doc 9863	APP APS
APS ATM 7.1.2	Describe the controller responsibility during and following an ACAS RA reported by pilot.	2	ATM Manual *Optional content: ATM Manual*	ALL
APS ATM 7.1.3	Respond to pilot notification of actions based on airborne systems warnings.	3	ACAS *Optional content: TAWS*	ALL

Subtopic ATM 7.2 - Ground-based safety nets

APS ATM 7.2.1	Describe the controller responsibility during and following safety net warnings.	2	ATM Manual *Optional content: STCA, MSAW, APW, APM*	APS ACS
APS ATM 7.2.2	Respond to ground-based safety net warnings.	3	*Optional content: STCA, MSAW, APW, APM*	APS ACS

TOPIC ATM 8 - DATA DISPLAY

Subtopic ATM 8.1 - Data management

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

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

Subtopic ATM 9.2 - Verification of the currency of operational procedures

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

Subtopic ATM 9.3 - Handover-takeover

APS ATM 9.3.1	Transfer information to the relieving controller.	3		ALL
APS ATM 9.3.2	Obtain information from the controller handing over.	3		ALL
APS ATM 9.3.3	List possible actions to provide a safe position handover–takeover.	1	*Optional content: rigour, preparation, overlap time*	ALL
APS ATM 9.3.4	Explain the consequences of a missed position handover–takeover process.	2		ALL

TOPIC ATM 10 - PROVISION OF CONTROL SERVICE

Subtopic ATM 10.1 - Responsibility and processing of information

APS ATM 10.1.1	Describe the division of responsibility between air traffic control units.	2	ATM Manual	*ALL*
APS ATM 10.1.2	Describe the responsibility in regard to military traffic.	2	ATM Manual *Optional content: ICAO Doc 9554*	*ALL*
APS ATM 10.1.3	Describe the responsibility in regard to unmanned free balloons.	2	ATM Manual	*ALL*
APS ATM 10.1.4	Interpret operational information.	5		APP ACP APS ACS

APS ATM 10.1.5	Organise forwarding of operational information.	4	*Optional content: including the use of backup procedures*	APP ACP APS ACS
APS ATM 10.1.6	Integrate operational information into control decisions.	4		APP ACP APS ACS
APS ATM 10.1.7	Appreciate the influence of operational requirements.	3	*Optional content: military flying, calibration flights, aerial photography*	ALL
Subtopic ATM 10.2 - ATS surveillance service				
APS ATM 10.2.1	Explain the responsibility for the provision of an ATS surveillance service appropriate to APS rating.	2	ATM Manual, SCAA applicable documents (ATS), local operation manuals	APS
APS ATM 10.2.2	Explain the functions that may be performed with the use of ATS surveillance systems derived information presented on a situation display.	2	ATM Manual	APS ACS
APS ATM 10.2.3	Provide planning, coordination and control actions appropriate to the VFR, SVFR and IFR in VMC and IMC.	4	SCAA applicable documents (ATM Manual, AAR-ATS)	APS APP
APS ATM 10.2.4	Apply the procedures for termination of ATS surveillance service.	3	ATM Manual *Optional content: transfer of control, termination or interruption of ATS surveillance service*	APS ACS
Subtopic ATM 10.3 - Traffic management process				
APS ATM 10.3.1	Ensure that situational awareness is maintained.	4	Information gathering, scanning, traffic projection	APS ACS
APS ATM 10.3.2	Detect conflicts in time for appropriate resolution.	4		*ALL*
APS ATM 10.3.3	Identify potential solutions to achieve a safe and effective traffic flow.	3		APP ACP APS ACS
APS ATM 10.3.4	Evaluate possible outcomes of different planning and control actions.	5		*ALL*
APS ATM 10.3.5	Select an appropriate plan in time to achieve safe and effective traffic flow.	5		APP ACP APS ACS
APS ATM 10.3.6	Ensure an adequate priority of actions.	4		*ALL*

APS ATM 10.3.7	Execute selected plan in a timely manner.	3		*ALL*
APS ATM 10.3.8	Ensure a safe and efficient outcome is achieved.	4	Traffic monitoring, adaptability and follow up	*ALL*
Subtopic ATM 10.4 - Handling traffic				
APS ATM 10.4.1	Manage arrivals, departures and overflights.	4		APP ACP APS ACS
APS ATM 10.4.2	Balance the workload against personal capacity.	5	*Optional content: re-routing, re-planning, prioritising solutions, denying requests, delegating responsibility for separation*	APP ACP APS ACS
APS ATM 10.4.3	Define flight path monitoring and vectoring.	1	ATM Manual	APS ACS
APS ATM 10.4.4	Explain the requirements for vectoring and termination of vectoring.	2	ATM Manual	APS ACS
APS ATM 10.4.5	Provide vectoring.	4	ATM Manual *Optional content: separation, expediting arrivals, departures and/or climb to cruising levels, aircraft leaving the hold, navigation assistance, uncontrolled airspace, etc.*	APS ACS
APS ATM 10.4.6	Apply the procedures for termination of vectoring.	3	ATM Manual	APS ACS
APS ATM 10.4.7	Manage traffic on different types of approaches.	4	Precision, non-precision, visual	*APP* APS
APS ATM 10.4.8	Initiate missed approach.	3	ATM Manual	*APP* APS
APS ATM 10.4.9	Integrate aircraft on missed approach into the traffic situation.	4		*APP* APS
Subtopic ATM 10.5 - Control service with advanced system support				
APS ATM 10.5.1	Appreciate the impact of advanced systems on the provision of approach control service.	3	*Optional content: sequencing systems, arrival management, departure management, automated holding lists, vertical traffic displays, conflict detection and decision-making tools, automated information and coordination tools*	APS

TOPIC ATM 11 - HOLDING

Subtopic ATM 11.1 - General holding procedures				
APS ATM 11.1.1	Apply holding procedures.	3	ATM Manual, holding instructions, allocation of holding levels, onward clearance times	APP ACP APS ACS
APS ATM 11.1.2	Appreciate the factors affecting holding patterns.	3	Effect of speed, effect of level used, effect of navigation aid in use, turbulence, aircraft type	APP ACP APS ACS
Subtopic ATM 11.2 - Approaching aircraft				
APS ATM 11.2.1	Issue Expected Approach Times (EATs).	3		APP APS
APS ATM 11.2.2	Organise the traffic landing sequence in a holding pattern.	4	*Optional content: company preference, aircraft performance, aircraft approach capability, ILS categories, flow control management*	APP APS
Subtopic ATM 11.3 - Holding in a surveillance environment				
APS ATM 11.3.1	Organise traffic to separate other aircraft from holding aircraft.	4		APS ACS
APS ATM 11.3.2	Integrate system support, when available.	4	*Optional content: arrival management system, automated holding lists, vertical traffic displays*	APS ACS

TOPIC ATM 12 - IDENTIFICATION

Subtopic ATM 12.1 - Establishment of identification				
APS ATM 12.1.1	Appreciate the precautions when establishing identification.	3		APS ACS
APS ATM 12.1.2	Identify aircraft.	3	*Optional content: PSR, SSR or ADS identification method*	APS ACS
APS ATM 12.1.3	Apply procedures in the case of misidentification.	3	ATM Manual *Optional content: local/simulator operation manuals*	APS ACS
Subtopic ATM 12.2 - Maintenance of identification				
APS ATM 12.2.1	Appreciate the necessity to maintain identification.	3		APS ACS

Subtopic ATM 12.3 - Loss of identity				
APS ATM 12.3.1	Appreciate when an aircraft identification is lost or in doubt.	3	*Optional content: out of ATS surveillance system coverage, failure of ATS surveillance system, weather clutter, other clutter, garbling, holding, etc.*	APS ACS
APS ATM 12.3.2	Apply methods to re-establish identification.	3		APS ACS
APS ATM 12.3.3	Respond to loss/doubt concerning identification.	3	*Optional content: procedural separation*	APS ACS
Subtopic ATM 12.4 - Position Information				
APS ATM 12.4.1	Appreciate the circumstances when position information should be passed to the aircraft.	3		APS ACS
APS ATM 12.4.2	State the format in which position information can be passed to aircraft.	1	ATM Manual	APS ACS
Subtopic ATM 12.5 - Transfer of identity				
APS ATM 12.5.1	Apply the methods of transfer of identification.	3		APS ACS
APS ATM 12.5.2	Appreciate the precautions when transferring identification.	3		APS ACS

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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

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

TOPIC MET 2 - SOURCES OF METEOROLOGICAL DATA

Subtopic MET 2.1 - Sources of meteorological information

APS MET 2.1.1	Obtain meteorological information	3	METAR, TAF, SIGMET, AIRMET *Optional content: AIREP/AIREP Special*	APP ACP APS ACS
APS MET 2.1.2	Decode information from meteorological data displays.			*ALL*
APS MET 2.1.3	Relay meteorological information.	3	ATM Manual *Optional content: flight information centre, adjacent ATS unit*	*ALL*

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

TOPIC NAV 2 - INSTRUMENT NAVIGATION

Subtopic NAV 2.1 - Navigational systems				
APS NAV 2.1.1	Manage traffic in case of change in the operational status of navigational systems.	4	*Optional content: limitations, status of ground-based and satellite-based systems*	APP ACP APS ACS
APS NAV 2.1.2	Appreciate the effect of precision, limitations and change of the operational status of navigational systems.	3	*Optional content: limitations, status, degraded procedures*	*ALL*
Subtopic NAV 2.2 - Stabilised approach				
APS NAV 2.2.1	Describe the concept of stabilised approach.	2	ICAO Doc 8168	ADC APP APS
APS NAV 2.2.2	Appreciate the effect of late change of runway-in-use or type of approach for landing aircraft.	3		APP APS
APS NAV 2.2.3	Appreciate controller actions that may contribute to unstabilised approach.	3	Inappropriate speed control, vectoring for short final, vectoring for approach with significant tailwind, glide path interception from above, lack or incorrect distance to touchdown information, delayed descent	APS
Subtopic NAV 2.3 - Instrument departures and arrivals				
APS NAV 2.3.1	Describe relevant SIDs and STARs.	2		APP APS

APS NAV 2.3.2	Describe the types and phases of instrument approach procedures.	2	OPS Requirements	APP APS
APS NAV 2.3.3	Describe the relevant minima applicable for a precision/ non-precision and visual approach.	2		ADC APP APS
Subtopic NAV 2.4 - Navigational assistance				
APS NAV 2.4.1	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*
APS NAV 2.4.2	Assist aircraft in navigation when required.	3	Aircraft observed to be deviating from its known intended route, on request	APS *ACS*
Subtopic NAV 2.5 - Satellite-based systems				
APS NAV 2.5.1	State the different applications of satellite-based systems relevant for approach operations.	1	*Optional content: NPA, APV-baro VNAV, APV, LPV, precision approach, ICAO Doc 8168 Vol.2*	APP APS
Subtopic NAV 2.6 - PBN applications				
APS NAV 2.6.1	State the navigation applications used in approach and terminal environments.	1	Approach-RNP APCH/ RNP AR APCH; Terminal-RNAV-1 (≈P-RNAV) *Optional content: A-RNP, PBN Implementing Rule, ICAO Doc 9613*	APP APS
APS NAV 2.6.2	Explain the principles and designation of navigation specifications in use.	2	*Optional content: performance, functionality, sensors, aircrew and controller requirements*	APP *ACP* APS *ACS*
APS NAV 2.6.3	Describe the differences in turn performance.	2	*Optional content: fly-by, fly-over, RF, ATM Manual*	APP APS
APS NAV 2.6.4	State future PBN developments.	1	A-RNP, RNP (AR) DEP *Optional content: RNP 3D, RNP 4D, VNAV*	*ALL*

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

APS ACFT 1.1.1	Integrate information from aircraft instruments provided by the pilot in the provision of ATS.	4		ALL
APS ACFT 1.1.2	Explain the operation of aircraft radio equipment.	2	*Optional content: radios (number of), emergency radios*	ALL
APS ACFT 1.1.3	Explain the operation of on-board surveillance equipment.	2	Transponders: equipment Mode A, Mode C, Mode S, ADS capability	ADC APS ACS

TOPIC ACFT 2 - AIRCRAFT CATEGORIES

Subtopic ACFT 2.1 - Wake turbulence

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

Subtopic ACFT 2.2 - Application of ICAO approach categories

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

TOPIC ACFT 3 - FACTORS AFFECTING AIRCRAFT PERFORMANCE

Subtopic ACFT 3.1 - Climb factors

APS ACFT 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

APS ACFT 3.1.2	Appreciate the influence of factors affecting aircraft on take-off.	3	*Optional content: runway conditions, runway slope, aerodrome elevation, wind, temperature, aircraft configuration, airframe contamination and aircraft mass*	APP APS
Subtopic ACFT 3.2 - Cruise factors				
APS ACFT 3.2.1	Integrate the influence of factors affecting aircraft during cruise.	4	Level, cruising speed, wind, mass, cabin pressurisation	APP ACP APS ACS
Subtopic ACFT 3.3 - Descent and initial approach factors				
APS ACFT 3.3.1	Integrate the influence of factors affecting aircraft during descent.	4	*Optional content: wind, speed, rate of descent, aircraft configuration, cabin pressurisation*	APP APS
Subtopic ACFT 3.4 - Final approach and landing factors				
APS ACFT 3.4.1	Integrate the influence of factors affecting aircraft during final approach and landing.	4	*Optional content: wind, aircraft configuration, mass, meteorological conditions, runway conditions, runway slope, aerodrome elevation*	APP APS
Subtopic ACFT 3.5 - Economic factors				
APS ACFT 3.5.1	Integrate consideration of economic factors affecting aircraft.	4	*Optional content: routing, level, speed, rate of climb and rate of descent, approach profile*	APP APS
APS ACFT 3.5.2	Use continuous climb techniques where applicable.	3		APP *ACP* APS *ACS*
APS ACFT 3.5.3	Use direct routing where applicable.	3		APP *ACP* APS *ACS*
Subtopic ACFT 3.6 - Environmental factors				
APS ACFT 3.6.1	Appreciate the performance restrictions due to environmental constraints.	3	*Optional content: fuel dumping, noise abatement procedures, minimum flight levels, bird hazard, continuous descent operations*	APP APS

TOPIC ACFT 4 - AIRCRAFT DATA

Subtopic ACFT 4.1 - Performance data

APS ACFT 4.1.1	Integrate the average performance data of a representative sample of aircraft which will be encountered in the operational/working environment into the provision of a control service.	4	Performance data under a representative variety of circumstances	*ALL*

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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 - Cognition and factors influencing it				
APS HUM 1.1.1	Describe the human information-processing model.	2	Attention, perception, memory, situational awareness, decision-making, response	ALL
APS 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
Subtopic HUM 1.2 — Situational awareness				
APS HUM 1.2.1	Appreciate the effect of human information-processing factors on situational awareness.	3	*Optional content: workload, knowledge, interpersonal relations, distraction, confidence, experience, fatigue, stress*	ALL
Subtopic HUM 1.3 — Decision-making				
APS HUM 1.3.1	Appreciate the effect of human information-processing factors on decision-making.	3	*Optional content: workload, stress, interpersonal relations, distraction, confidence*	ALL

TOPIC HUM 2 - MEDICAL AND PHYSIOLOGICAL FACTORS

Subtopic HUM 2.1 - Fatigue				
APS HUM 2.1.1	Describe the onset of fatigue.	1	*Optional content: lack of concentration, listlessness, irritability, frustration, ICAO/IFATCA/CANSO's Fatigue Management Guide for Air Traffic Service Providers*	ALL
APS HUM 2.1.2	Recognise the onset of fatigue in self and in others.	2	*Optional content: ICAO/IFATCA/CANSO's Fatigue Management Guide for Air Traffic Service Providers*	ALL
APS HUM 2.1.3	Describe appropriate action when recognising fatigue.	2		ALL
Subtopic HUM 2.2 - Stress				
APS HUM 2.2.1	Recognise the effects of stress on human performance.	1	Stress and its symptoms in self and in others	ALL

APS HUM 2.2.2	Describe the appropriate action when recognising stress.	2		ALL
APS HUM 2.2.3	Act to reduce stress.	3		ALL
APS HUM 2.2.4	Respond to stressful situations by offering, asking for or accepting assistance.	3		ALL
APS HUM 2.2.5	Recognise the effect of stressful events.	1	Self and others, abnormal situations	ALL

TOPIC HUM 3 - THREAT AND ERROR MANAGEMENT

Subtopic HUM 3.1 - Threat and error management framework

APS HUM 3.1.1	Explain the importance of threat and error management.	2	*Optional content: prevention of incidents, safety improvement, revision of procedures and/or working practices*	ALL
APS HUM 3.1.2	Explain the threat and error management framework.	2	Threats, errors, undesired states, countermeasures *Optional content: teamwork, human error, team roles, stress, decision-making, communication, situational awareness*	ALL
APS HUM 3.1.3	Differentiate between the different types of threats in ATC.	2	Internal, external, airborne, environmental *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL
APS HUM 3.1.4	Differentiate between the different types of errors in ATC.	2	Equipment, procedural, communication *Optional content: increase in traffic, changes in procedures, complexities of systems or traffic, weather, unusual occurrences*	ALL
APS HUM 3.1.5	Differentiate between the different types of undesired states.	2	Equipment, procedural, communication *Optional content: increase in traffic, changes in procedures, complexities of systems or traffic, weather, unusual occurrences*	ALL
APS HUM 3.1.6	Analyse examples of threat and error management in ATC.	4	*Case* studies *Optional content: ICAO Circular 314 — AN/178 Threat and Error*	ALL

			Management (TEM) in Air Traffic Control	
Subtopic HUM 3.2 - Application of threat and error management				
APS HUM 3.2.1	Manage threats.	4	Detect and respond Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control	ALL
APS HUM 3.2.2	Manage errors.	4	Detect and respond *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL
APS HUM 3.2.3	Manage undesired states.	4	Detect and respond *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL

TOPIC HUM 4 - TEAMWORK

Subtopic HUM 4.1 - Benefits of teamwork				
APS HUM 4.1.1	State the benefits of teamwork.	1	Increased safety, efficiency and capacity	ALL
APS HUM 4.1.2	List the controller's human performance elements affected by teamwork.	1	Situational awareness, communication, decision-making, threat and error management, workload management	ALL
Subtopic HUM 4.2 - Conflict management				
APS HUM 4.2.1	Identify the reasons for conflict.	3		ALL
APS HUM 4.2.2	Describe strategies to cope with human conflicts.	2	*Optional content: in your team, in the simulator*	ALL
APS HUM 4.2.3	Describe actions to prevent human conflicts.	2		ALL

TOPIC HUM 5 - SYSTEMS

Subtopic HUM 5.1 - Concept of systems in ATM/ANS				
APS HUM 5.1.1	Explain the concept of systems.	2	People; procedures; equipment; ATM in system terms: simple, complicated, and complex systems; system thinking	ALL

APS HUM 5.1.2	Describe how changes in one part of a system may impact the other parts.	2		ALL
APS HUM 5.1.3	Describe the role of the human in the system.	2		ALL

TOPIC HUM 6 - COLLABORATIVE WORK

Subtopic HUM 6.1 - Effective communication

APS HUM 6.1.1	Use communication effectively in ATC operations.	2	ICAO Doc 9868	ALL
APS HUM 6.1.2	Explain key strategies used to enable open communication.	2	Optional content: active listening, active speaking, assertiveness, honesty, relevance, facts, neutrality	ALL
APS HUM 6.1.3	Describe the parameters affecting the controller's competence to communicate effectively.	2	Workload, mutual knowledge, controller versus pilot mental picture, distractions, sound, human conflicts Optional content: communication between and within the team(s), in the simulator, with the pilots, instructors, coordination partners	ALL

Subtopic HUM 6.2 - Effective feedback

APS HUM 6.2.1	Define feedback.	1		ALL
APS HUM 6.2.2	Explain the purpose of receiving and giving feedback, and its effect on performance.	2		ALL
APS HUM 6.2.3	Consider the impact of communication styles on feedback and on conflict resolution.	2		ALL
APS HUM 6.2.4	Integrate feedback into performance.	4		ALL

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				
APS EQPS 1.1.1	Operate two-way communication equipment.	3	Transmit/receive switches, procedures *Optional content: frequency selection, standby equipment*	ALL
APS EQPS 1.1.2	Identify indications of operational status of radio equipment.	3	*Optional content: indicator lights, serviceability displays, selector/frequency displays*	ALL
APS EQPS 1.1.3	Consider radio range.	2	*Optional content: transfer to another frequency, apparent radio failure, failure to establish radio contact, frequency protection range*	APP ACP APS ACS
Subtopic EQPS 1.2 - Other voice communications				
APS EQPS 1.2.1	Operate landline communications.	3	*Optional content: telephone, interphone and intercom equipment*	ALL

TOPIC EQPS 2 - AUTOMATION IN ATS

Subtopic EQPS 2.1 - Aeronautical fixed telecommunication network (AFTN)				
APS EQPS 2.1.1	Decode AFTN messages.	3	*Optional content: movement and control messages, NOTAM, SNOWTAM, BIRDTAM, etc.*	ALL
Subtopic EQPS 2.2 - Automatic data interchange				
APS EQPS 2.2.1	Use automatic data transfer equipment where available.	3	*Optional content: sequencing systems, automated information and coordination, OLDI*	ADC APS ACS

TOPIC EQPS 3 - CONTROLLER WORKING POSITION

Subtopic EQPS 3.1 - Operation and monitoring of equipment				
APS EQPS 3.1.1	Monitor the technical integrity of the controller working position.	3	Notification procedures, responsibilities	ALL

APS EQPS 3.1.2	Operate the equipment of the controller working position.	3	*Optional content: situation displays, flight progress board, flight data display, radio, telephone, maps and charts, strip-printer, clock, information systems, UDF/VDF*	ALL
APS EQPS 3.1.3	Operate available equipment in abnormal and emergency situations.	3		ALL
Subtopic EQPS 3.2 - Situation displays and information systems				
APS EQPS 3.2.1	Use situation displays.	3		ALL
APS EQPS 3.2.2	Check availability of information material.	3		ALL
APS EQPS 3.2.3	Obtain information from equipment.	3		APP ACP APS ACS
Subtopic EQPS 3.3 - Flight data systems				
APS EQPS 3.3.1	Use the flight data information at controller working position.	3		ALL
Subtopic EQPS 3.4 - Use of ATS surveillance system				
APS EQPS 3.4.1	Use the ATS surveillance system functions.	3		APS ACS
APS EQPS 3.4.2	Analyse the information provided by the ATS surveillance system.	4		APS ACS
APS EQPS 3.4.3	Assign codes.	4		APS ACS
APS EQPS 3.4.4	Appreciate the use of advanced surveillance technology.	3	*Optional content: Mode S, ADS-B, MLAT*	APS ACS
Subtopic EQPS 3.5 - Advanced systems				
APS EQPS 3.5.1	Appreciate the use of controller pilot datalink communications when available.	3		APS ACS
APS EQPS 3.5.2	Appreciate the use of information provided by advanced systems.	3	MTCD, AMAN, DMAN *Optional content: trajectory-based information, MTCD, MONA, etc.*	APS ACS

TOPIC EQPS 4 - FUTURE EQUIPMENT

Subtopic EQPS 4.1 - New developments				
APS EQPS 4.1.1	Recognise future developments.	1	New advanced systems	ALL

TOPIC EQPS 5 - EQUIPMENT AND SYSTEMS LIMITATIONS AND DEGRADATION

Subtopic EQPS 5.1 - Reaction to limitations				
APS EQPS 5.1.1	Take account of the limitations of equipment and systems.	2		ALL
APS EQPS 5.1.2	Respond to technical deficiencies of the operational position.	3	Notification procedures, responsibilities	ALL
Subtopic EQPS 5.2 - Communication equipment degradation				
APS EQPS 5.2.1	Identify that communication equipment has degraded.	3	*Optional content: ground-air and landline communications*	APP ACP APS ACS
APS EQPS 5.2.2	Apply contingency procedures in the event of communication equipment degradation.	3	Procedures for total or partial degradation of ground-air and landline communications, alternative methods of transferring data	APP ACP APS ACS
Subtopic EQPS 5.3 - Navigational equipment degradation				
APS EQPS 5.3.1	Identify when a navigational equipment failure will affect operational ability.	3	*Optional content: VOR, navigational aids*	ALL
APS EQPS 5.3.2	Apply contingency procedures in the event of a navigational equipment degradation.	3	*Optional content: vertical separation, information to aircraft, navigational assistance, seeking assistance from adjacent units*	ALL
Subtopic EQPS 5.4 - Surveillance equipment degradation				
APS EQPS 5.4.1	Identify that surveillance equipment has degraded.	3	Partial power failure, loss of certain facilities, total failure	APS ACS
APS EQPS 5.4.2	Apply contingency procedures in the event of surveillance equipment degradation.	3	*Optional content: inform adjacent sectors, inform aircraft, apply vertical separation (emergency), increased horizontal separation, reduce the number of aircraft entering area of responsibility, transfer aircraft to another unit*	APS ACS

Subtopic EQPS 5.5 - ATC processing system degradation				
APS EQPS 5.5.1	Identify a processing system degradation.	3	*Optional content: FDPS, SDPS, software processing of situation display*	APS ACS
APS EQPS 5.5.2	Apply contingency procedures in the event of a processing system degradation.	3		APS ACS

SUBJECT 9: PROFESSIONAL ENVIRONMENT

The subject objective is:

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

TOPIC PEN 1 - FAMILIARISATION

Subtopic PEN 1.1 - Study visit to approach control unit				
APS PEN 1.1.1	Appreciate the functions and provision of an operational approach control service.	3	Study visit to an approach control unit	APP APS

TOPIC PEN 2 - AIRSPACE USERS

Subtopic PEN 2.1 - Contributors to civil ATS operations				
APS PEN 2.1.1	Characterise civil ATS activities in approach control unit.	2	Study visit to an approach control unit *Optional content: familiarisation visits to TWR, ACC, AIS, RCC*	APP APS
APS PEN 2.1.2	Characterise other parties interfacing with ATS operations.	2	*Optional content: familiarisation visits to engineering services, fire and emergency services, airline operations offices*	ALL
Subtopic PEN 2.2 - Contributors to military ATS operations				
APS PEN 2.2.1	Characterise military ATS activities.	2	*Optional content: familiarisation visits to TWR, APP, ACC, AIS, RCC, Air Defence Units*	ALL

TOPIC PEN 3 - CUSTOMER RELATIONS

Subtopic PEN 3.1 - Provision of services and user requirements				
APS PEN 3.1.1	Appreciate the role of an air navigation service provider.	3		ALL
APS PEN 3.1.2	Appreciate ATS users` requirements.	3		ALL

TOPIC PEN 4 - ENVIRONMENTAL PROTECTION

Subtopic PEN 4.1 - Environmental protection				
APS PEN 4.1.1	Describe the environmental constraints on aerodrome operations.	2	*Optional content: ICAO Circular 303 - Operational opportunities to minimise fuel use and reduce emissions*	ADC APP APS

APS PEN 4.1.2	Explain the use of Collaborative Environmental Management (CEM) process at airports.	2		ADC APP APS
APS PEN 4.1.3	Appreciate the mitigation techniques used to minimise aviation's impact on the environment.	3	*Optional content: continuous descent operations (CDO), noise abatement procedures, noise preferential routes, flight efficiency*	APP APS

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				
APS ABES 1.1.1	List common abnormal and emergency situations.	1	*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*	ALL
APS ABES 1.1.2	Identify potential or actual abnormal and emergency situations.	3		ALL
APS ABES 1.1.3	Take into account the procedures for given abnormal and emergency situations.	2	*Optional content: ATM Manual*	APP ACP APS ACS
APS ABES 1.1.4	Take into account that procedures do not exist for all abnormal and emergency situations.	2	*Optional content: real life examples*	ALL
APS ABES 1.1.5	Consider how the evolution of a situation may have an impact on safety.	2	*Optional content: separation, information, coordination*	ALL

TOPIC ABES 2 - SKILLS IMPROVEMENT

Subtopic ABES 2.1 - Communication effectiveness				
APS ABES 2.1.1	Ensure effective communication in all circumstances including the case where standard phraseology is not applicable.	4	Phraseology, vocabulary, readback, silence instruction	ALL
APS ABES 2.1.2	Apply change of radiotelephony call sign.	3	ATM Manual	ALL
Subtopic ABES 2.2 - Avoidance of mental overload				
APS ABES 2.2.1	Describe actions to keep control of the situation.	2	*Optional content: sector splitting, holding, flow management, task delegation*	ALL
APS ABES 2.2.2	Organise priority of actions.	4		ALL

APS ABES 2.2.3	Ensure effective circulation of information.	4	*Optional content: between executive and planner/coordinator, with the supervisor, between sectors, between ACC, APP and TWR, with ground staff, etc.*	ALL
APS ABES 2.2.4	Consider asking for help.	2		ALL
Subtopic ABES 2.3 - Air / ground cooperation				
APS ABES 2.3.1	Collect appropriate information relevant to the situation.	3		ALL
APS ABES 2.3.2	Assist the pilot.	3	Pilot workload *Optional content: instructions, information, support, human factors, etc.*	ALL

TOPIC ABES 3 - PROCEDURES FOR ABNORMAL AND EMERGENCY SITUATIONS

Subtopic ABES 3.1 - Application of procedures for ABES				
APS ABES 3.1.1	Apply the procedures for given abnormal and emergency situations.	3		ALL
Subtopic ABES 3.2 - Radio failure				
APS ABES 3.2.1	Describe the procedures followed by a pilot when he/she experiences complete or partial radio failure.	2	ICAO Doc 7030 *Optional content: military procedures*	ALL
APS ABES 3.2.2	Apply the procedures to be followed when a pilot experiences complete or partial radio failure.	3	*Optional content: prolonged loss of communication*	ALL
Subtopic ABES 3.3 - Unlawful interference and aircraft bomb threat				
APS ABES 3.3.1	Apply ATC procedures associated with unlawful interference and aircraft bomb threat.	3	ATM Manual	ALL
Subtopic ABES 3.4 - Strayed or unidentified aircraft				
APS ABES 3.4.1	Apply the procedures in the case of strayed aircraft.	3	ATM Manual *Optional content: inside controlled airspace, outside controlled airspace*	ALL
APS ABES 3.4.2	Apply the procedures in the case of unidentified aircraft.	3	ATM Manual	ALL
Subtopic ABES 3.5 - Diversions				

APS ABES 3.5.1	Provide navigational assistance to diverting emergency aircraft.	4	Track/heading, distance, other navigational assistance *Optional content: nearest most suitable aerodrome*	APP ACP APS ACS
Subtopic ABES 3.6 - Transponder failure				
APS ABES 3.6.1	Apply procedures in the event of an SSR transponder failure.	3	ATM Manual, ICAO Doc 7030 *Optional content: total/partial failure, impact on ADS-B/Mode S capability*	APS ACS
Subtopic ABES 3.7 — Interception of civil aircraft				
APS ABES 3.7.1	Explain the procedures in the event of interception of civil aircraft.			*ALL*

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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				
APS AGA 1.1.1	Define aerodrome data.	1	SCAA applicable documents (Aerodrome Standards) *Optional content: aerodrome elevation, reference point, apron, movement area, manoeuvring area, hot spot*	ADC APP APS
Subtopic AGA 1.2 - Coordination				
APS 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, SCAA applicable documents (Aerodrome Standards)	APP APS ADC

TOPIC AGA 2 - MOVEMENT AREA

Subtopic AGA 2.1 - Movement area				
APS AGA 2.1.1	Describe movement area.	2	SCAA applicable documents (Aerodrome Standards)	ADC APP APS
APS AGA 2.1.2	Describe the marking of obstacles and unusable or unserviceable areas.	2	Flags, signs on pavement, lights	ADC APP APS
APS 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	ADC APP APS
Subtopic AGA 2.2 - Manoeuvring area				
APS AGA 2.2.1	Describe manoeuvring area.	2	SCAA applicable documents (Aerodrome Standards)	ADC APP APS
APS AGA 2.2.2	Describe taxiway.	2		ADC APP APS
APS AGA 2.2.3	Describe the daylight marking on taxiways.	2		ADC APP APS
APS AGA 2.2.4	Describe taxiway lighting.	2		ADC APP APS
Subtopic AGA 2.3 – Runways				

APS AGA 2.3.1	Describe the runway.	2	Runway, runway surface, runway strip, shoulder, runway end safety areas, clearways, stopways	ADC APP APS
APS AGA 2.3.2	Describe the instrument runway.	2	SCAA applicable documents (Aerodrome Standards)	ADC APP APS
APS AGA 2.3.3	Describe the non-instrument runway.	2	SCAA applicable documents (Aerodrome Standards)	*ADC* APP APS
APS AGA 2.3.4	Explain declared distances.	2	TORA, TODA, ASDA, LDA	*ADC* APP APS
APS AGA 2.3.5	Explain the differences between ACN and PCN.	2	Strength of pavements	*ADC* APP APS
APS AGA 2.3.6	Describe the daylight markings on runways.	2	*Optional content: runway designator, centre line, threshold, aiming point, fixed distance, touchdown zone, side strip, colour*	*ADC* APP APS
APS AGA 2.3.7	Describe runway lights.	2	*Optional content: colour, centre line, intensity, edge, touchdown zone, threshold, barettes*	*ADC* APP APS
APS AGA 2.3.8	Explain the functions of visual landing aids.	2	*Optional content: AVASI, VASI, PAPI*	*ADC* APP APS
APS AGA 2.3.9	Describe the approach lighting systems.	2	Centre line, cross bars, stroboscopic lights, colours, intensity and brightness	*ADC* APP APS
APS AGA 2.3.10	Characterise the effect of water/ice on runways.	2		*ADC* APP APS
APS AGA 2.3.11	Explain braking action.	2	Braking action coefficient	*ADC* APP APS
APS AGA 2.3.12	Explain the effect of runway visual range on aerodrome operation.	2		*ADC* APP APS

TOPIC AGA 3 – OBSTACLES

Subtopic AGA 3.1 - Obstacle-free airspace around aerodromes

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

TOPIC AGA 4 - MISCELLANEOUS EQUIPMENT

Subtopic AGA 4.1 – Location				
APS AGA 4.1.1	Explain the location of different aerodrome ground equipment.	2	*Optional content: LLZ, GP, VDF, radio communication or ATS surveillance systems sensors, stopbars, AVASI, VASI, PAPI*	ADC APP APS

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

AREA CONTROL SURVEILLANCE RATING (ACS) TRAINING — TRAINING OBJECTIVES

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

(b) ATCO Rating training Area Control Surveillance Rating (ACS) should contain the following subject objectives and training objectives that are associated with the subjects, topics and subtopics contained in Appendix 7 Area Control Surveillance Rating (ACS) to Annex I to R-PEL-006

(c) .

(d) Subjects, topics and subtopics from Appendix 7 to Annex I to –R-PEL-006 are repeated in this AMC for the convenience of the reader and do not form part of it.

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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				
ACS INTR 1.1.1	Explain the aims and main objectives of the course.	2		ALL
Subtopic INTR 1.2 - Course administration				
ACS INTR 1.2.1	State course administration.	1		ALL
Subtopic INTR 1.3 - Study material and training documentation				
ACS INTR 1.3.1	Use appropriate documentation and their sources for course studies.	3	*Optional content: training documentation, library, CBT library, web, learning management server*	ALL
ACS INTR 1.3.2	Integrate appropriate information into course studies.	4	Training documentation *Optional content: supplementary information, library*	ALL

TOPIC INTR 2 - INTRODUCTION TO THE ATC TRAINING COURSE

Subtopic INTR 2.1 - Course content and organisation				
ACS INTR 2.1.1	State the different training methods applied in the course.	1	Theoretical training, practical training, self-study, types of training events	ALL
ACS INTR 2.1.2	State the subjects of the course and their purpose.	1		ALL
ACS INTR 2.1.3	Describe the organisation of theoretical training.	2	*Optional content: course programme*	ALL
ACS INTR 2.1.4	Describe the organisation of practical training.	2	*Optional content: PTP, simulation, briefing, debriefing, course programme*	ALL
Subtopic INTR 2.2 - Training ethos				
ACS INTR 2.2.1	Recognise the feedback mechanisms available.	1	Training progress, assessment, briefing, debriefing, learner/instructor feedback, instructor/instructor feedback	ALL

Subtopic INTR 2.3 - Assessment process			
ACS INTR 2.3.1	Describe the assessment process.	2	ALL

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				
ACS LAW 1.1.1	Appreciate the conditions which shall be met to issue an Area Control Surveillance rating.	3	R-PEL-006	ACS
ACS LAW 1.1.2	Explain how to maintain and update professional knowledge and skills to retain competence in the operational environment.	2		ALL
ACS LAW 1.1.3	Explain the conditions for suspension/revocation of ATCO licence.	2	R-PEL-006	ALL

TOPIC LAW 2 - RULES AND REGULATIONS

Subtopic LAW 2.1 – Reports				
ACS LAW 2.1.1	Describe the functions of, and processes for, reporting.	2	Reporting culture, air traffic incident report *Optional content: breach of regulations, watch/log book, records, voluntary reporting*	ALL
ACS LAW 2.1.2	Use forms for reporting.	3	SCAA applicable documents (MOR), air traffic incident reporting form(s) *Optional content: routine air reports, breach of regulations, watch/log book, records*	ALL
Subtopic LAW 2.2 - Airspace				
ACS LAW 2.2.1	Appreciate classes and structure of airspace and their relevance to Area Control Surveillance rating operations.	3		ACS
ACS LAW 2.2.2	Provide planning, coordination and control actions appropriate to the airspace classification and structure.	4	*Optional content: Rules of No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the 'Rules on the Use of Airspace and Flight Operations'.", SCAA applicable documents (ATS), international requirements, civil requirements, military requirements, areas of responsibility, sectorization, national requirements*	ALL

ACS LAW 2.2.3	Appreciate responsibility for terrain clearance.	3		ALL

TOPIC LAW 3 - ATC SAFETY MANAGEMENT

Subtopic LAW 3.1 - Feedback process				
ACS LAW 3.1.1	State the importance of controller contribution to the feedback process.	1	*Optional content: voluntary reporting*	ALL
ACS LAW 3.1.2	Describe how reported occurrences are analysed.	2	*Optional content: local procedures*	ALL
ACS LAW 3.1.3	Name the means used to disseminate recommendations.	1	*Optional content: safety letters, safety boards web pages*	ALL
ACS LAW 3.1.4	Appreciate the just culture concept.	3	Benefits, prerequisites, constraints	ALL
Subtopic LAW 3.2 - Safety Investigation				
ACS LAW 3.2.1	Describe the role and objectives of safety investigation in the improvement of safety.	2		ALL

SUBJECT 3: AIR TRAFFIC MANAGEMENT

The subject objective is:

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

TOPIC ATM 1 - PROVISION OF SERVICES

Subtopic ATM 1.1 - Air traffic control (ATC) service				
ACS ATM 1.1.1	Appreciate own area of responsibility.	3		APP ACP APS ACS
ACS ATM 1.1.2	Provide area control service.	4	Rules of No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the 'Rules on the Use of Airspace and Flight Operations'.", SCAA applicable documents (AAR-ATS, ATM Manual), ICAO Doc 7030, operation manuals	ACP ACS
Subtopic ATM 1.2 - Flight information service (FIS)				
ACS ATM 1.2.1	Provide FIS.	4	ATM Manual *Optional content: national documents*	*ALL*
ACS ATM 1.2.2	Use ATS surveillance system for the provision of FIS.	3	ATM Manual, information to identified aircraft concerning: traffic, navigation *Optional content: weather*	APS ACS
ACS ATM 1.2.3	Issue appropriate information concerning the location of conflicting traffic.	3	ATM Manual, traffic information, essential traffic information	APS ACS *APP* *ACP*
ACS ATM 1.2.4	Appreciate the use of ATIS in the provision of FIS.			*ALL*
Subtopic ATM 1.3 - Alerting service (ALRS)				
ACS ATM 1.3.1	Provide ALRS.	4	ATM Manual *Optional content: national documents*	ALL
ACS ATM 1.3.2	Respond to distress and urgency messages and signals.	3	Rules of No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the 'Rules on the Use of Airspace and Flight Operations'.", SCAA applicable documents (Aeronautical Communication, ATM Manual)	ALL

ACS ATM 1.3.3	Use ATS surveillance system for the provision of ALRS.	3		APS ACS
Subtopic ATM 1.4 - ATS system capacity and air traffic flow management				
ACS ATM 1.4.1	Appreciate principles of ATS system capacity and air traffic flow management.	3	*Optional content: ATM Manual*	APP ACP APS ACS
ACS ATM 1.4.2	Apply flow management procedures in the provision of ATC.	3	*Optional content: ATM Manual*	APP ACP APS ACS
ACS ATM 1.4.3	Organise traffic flows and patterns to take account of airspace boundaries.	4	*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*	APP ACP APS ACS
ACS ATM 1.4.4	Organise traffic flows and patterns to take account of areas of responsibility.	4	*Optional content: ATM Manual*	APP ACP APS ACS
ACS ATM 1.4.5	Inform the supervisor of local factors affecting the ATS system capacity and air traffic flow management.	3	*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*	APP ACP APS ACS
ACS ATM 1.4.6	Organise traffic flows and patterns to take account of ATS surveillance system capability.	4		APS ACS
Subtopic ATM 1.5 — Airspace management (ASM)				
ACS ATM 1.5.1	Appreciate the impact of ASM on the controller.	3	*Optional content: FABs, EUROCONTROL Specification for the application of FUA, TSAs, CDRs, CBAs, free route airspace*	APP ACP APS ACS
ACS ATM 1.5.2	Organise traffic to take account of ASM.	4	Real-time activation, deactivation or reallocation of airspace	APS ACS

			Optional content: CDR, TSA, TRA, CBA	

TOPIC ATM 2 - COMMUNICATION

Subtopic ATM 2.1 - Effective communication

ACS ATM 2.1.1	List the means of communication between controllers.	1	*Optional content: electronic, written, verbal and non-verbal communication*	ALL
ACS ATM 2.1.2	Select the most suitable means of communication given the situation.	5		ALL
ACS ATM 2.1.3	Use approved phraseology.	3	*Optional content: published national/local language phraseology*	ALL
ACS ATM 2.1.4	Ensure effective communication.	4	Use of plain language when required, communication within the sector/working position, between the sectors/WPs/ATC units, readback/verification of readback	ALL
ACS ATM 2.1.5	Analyse examples of pilot–controller communication for effectiveness.	4	*Optional content: real-life recordings, situation in the simulator*	ALL

TOPIC ATM 3 - ATC CLEARANCES AND ATC INSTRUCTIONS

Subtopic ATM 3.1 - ATC clearances

ACS ATM 3.1.1	Issue appropriate ATC clearances.	3	ATM manual *Optional content: national documents*	ALL
ACS ATM 3.1.2	Integrate appropriate ATC clearances in control service.	4		ALL
ACS ATM 3.1.3	Ensure the agreed course of action is carried out.	4		ALL

Subtopic ATM 3.2 - ATC instructions

ACS ATM 3.2.1	Issue appropriate ATC instructions.	3	ATM Manual *Optional content: national documents*	ALL
ACS ATM 3.2.2	Integrate appropriate ATC instructions in control service.	4		ALL
ACS 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				
ACS ATM 4.1.1	Identify the need for coordination.	3		ALL
Subtopic ATM 4.2 - Tools and methods for coordination				
ACS ATM 4.2.1	Use the available tools for coordination.	3	*Optional content: electronic transfer of flight data, telephone, interphone, intercom, direct speech, radiotelephone (RTF), local agreements, automated*	ALL
Subtopic ATM 4.3 - Coordination procedures				
ACS ATM 4.3.1	Initiate appropriate coordination.	3	Delegation/transfer of responsibility for air-ground communications and separation, transfer of control, etc. ATM Manual *Optional content: release point*	ALL
ACS ATM 4.3.2	Analyse effect of coordination requested by an adjacent position/unit.	4	*Optional content: delegation/transfer of responsibility for air-ground communications and separation, release point, transfer of control, etc.*	ALL
ACS ATM 4.3.3	Select, after negotiation, an appropriate course of action.	5		ALL
ACS ATM 4.3.4	Ensure the agreed course of action is carried out.	4		ALL
ACS ATM 4.3.5	Coordinate in the provision of FIS.	4	ATM Manual	ALL
ACS ATM 4.3.6	Coordinate in the provision of ALRS.	4	ATM Manual	ALL

TOPIC ATM 5 - ALTIMETRY AND LEVEL ALLOCATION

Subtopic ATM 5.1 - Altimetry				
ACS ATM 5.1.1	Allocate levels according to altimetry data.	4	ICAO Doc 8168, ATM Manual	ALL

ACS ATM 5.1.2	Ensure separation according to altimetry data.	4	*Optional content: transition level, transition altitude, transition layer, height, flight level, altitude, vertical distance to airspace boundaries*	ALL
Subtopic ATM 5.2 - Terrain clearance				
ACS ATM 5.2.1	Provide planning, coordination and control actions appropriate to the rules for minimum safe levels and terrain clearance.	4	*Optional content: minimum vectoring altitude, terrain clearance dimensions, minimum safe altitudes, transition level, minimum flight level, minimum sector altitude*	APS ACS

TOPIC ATM 6 - SEPARATIONS

Subtopic ATM 6.1 - Vertical separation				
ACS ATM 6.1.1	Provide standard vertical separation.	4	ATM Manual, ICAO Doc 7030, level allocation, during climb/descent, rate of climb/descent, RVSM, non-RVSM aircraft, holding pattern	ACP ACS
ACS ATM 6.1.2	Provide increased vertical separation.	4	ATM Manual, ICAO Doc 7030 *Optional content: level allocation, during climb/descent, rate of climb/descent*	APP ACP APS ACS
ACS ATM 6.1.3	Appreciate the application of vertical emergency separation.	3	ATM Manual, ICAO Doc 7030	APP ACP APS ACS
ACS ATM 6.1.4	Provide vertical separation in a surveillance environment.	4	Pressure altitude-derived information, pilot level reports *Optional content: into/out of ATS surveillance system coverage*	APS ACS
Subtopic ATM 6.2 - Longitudinal separation in a surveillance environment				
ACS ATM 6.2.1	Provide longitudinal separation in a surveillance environment.	4	Successive departures, successive arrivals, overflights, speed control, Mach number techniques, silent transfer, ATM Manual	ACS
Subtopic ATM 6.3 - Wake turbulence distance-based separation				
ACS ATM 6.3.1	Provide distance-based wake turbulence separation.	4	ATM Manual *Optional content: national documents*	*APS* ACS

Subtopic ATM 6.4 - Separation based on ATS surveillance systems				
ACS ATM 6.4.1	Describe how separation based on ATS surveillance systems is applied.	2	ATM Manual	*APS* ACS
ACS ATM 6.4.2	Provide horizontal separation.	4	ATM Manual, ICAO Doc 7030, local operation manuals, holding	*APS* ACS
ACS ATM 6.4.3	Provide horizontal separation by vectoring in a variety of situations.	4	*Optional content: transit, meteorological phenomena, vectoring for approach, departure vs transit vs arrival*	*APS* ACS
ACS ATM 6.4.4	Ensure horizontal or vertical separation from airspace boundaries.	4	Adjacent sectors, PRD, TSAs.	*APS* ACS

TOPIC ATM 7 - AIRBORNE AND GROUND-BASED SAFETY NETS

Subtopic ATM 7.1 - Airborne safety nets				
ACS ATM 7.1.1	Recognise the independence of ACAS thresholds from ATC separation standards.	2	ICAO Doc 9863	ACP ACS
ACS ATM 7.1.2	Describe the controller responsibility during and following an ACAS RA reported by pilot.	2	ATM Manual	ALL
ACS ATM 7.1.3	Respond to pilot notification of actions based on airborne systems warnings.	3	ACAS *Optional content: TAWS*	ALL
Subtopic ATM 7.2 - Ground-based safety nets				
ACS ATM 7.2.1	Describe the controller responsibility during and following safety net warnings.	2	ATM Manual *Optional content: STCA, MSAW, APW, APM*	APS ACS
ACS ATM 7.2.2	Respond to ground-based safety net warnings.	3	*Optional content: STCA, MSAW, APW, APM*	APS ACS

TOPIC ATM 8 - DATA DISPLAY

Subtopic ATM 8.1 - Data management				
ACS ATM 8.1.1	Update the data display to accurately reflect the traffic situation.	3	*Optional content: information displayed, strip marking procedures, electronic information data displays, actions based on traffic display information, calculation of EETs*	ALL
ACS ATM 8.1.2	Analyse pertinent data on data displays.	4		ALL

ACS ATM 8.1.3	Organise pertinent data on data displays.	4		ALL
ACS ATM 8.1.4	Obtain flight plan information.	3	CPL, supplementary information *Optional content: FPL, AFIL,*	ALL
ACS 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

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

Subtopic ATM 9.2 - Verification of the currency of operational procedures

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

Subtopic ATM 9.3 - Handover-takeover

ACS ATM 9.3.1	Transfer information to the relieving controller.	3		ALL
ACS ATM 9.3.2	Obtain information from the controller handing over.	3		ALL
ACS ATM 9.3.3	List possible actions to provide a safe position handover–takeover.	1	*Optional content: rigour, preparation, overlap time*	ALL
ACS ATM 9.3.4	Explain the consequences of a missed position handover–takeover.	2		ALL

TOPIC ATM 10 - PROVISION OF CONTROL SERVICE

Subtopic ATM 10.1 - Responsibility and processing of information

ACS ATM 10.1.1	Describe the division of responsibility between air traffic control units.	2	ATM Manual	*ALL*

ACS ATM 10.1.2	Describe the responsibility in regard to military traffic.	2	ATM Manual *Optional content: ICAO Doc 9554*	*ALL*
ACS ATM 10.1.3	Describe the responsibility in regard to unmanned free balloons.	2	ATM Manual	*ALL*
ACS ATM 10.1.4	Interpret operational information.	5		APP ACP APS ACS
ACS ATM 10.1.5	Organise forwarding of operational information.	4	*Optional content: including the use of backup procedures*	APP ACP APS ACS
ACS ATM 10.1.6	Integrate operational information into control decisions.	4		APP ACP APS ACS
ACS ATM 10.1.7	Appreciate the influence of operational requirements.	3	*Optional content: military flying, calibration flights, aerial photography*	*ALL*
Subtopic ATM 10.2 - ATS surveillance service				
ACS ATM 10.2.1	Explain the responsibility for the provision of ATS surveillance service appropriate to ACS rating.	2	ATM Manual, SCAA applicable documents (ATS), local operation manuals	ACS
ACS ATM 10.2.2	Explain the functions that may be performed with the use of ATS surveillance systems derived information presented on a situation display.	2	ATM Manual	APS ACS
ACS ATM 10.2.3	Provide planning, coordination and control actions appropriate to the VFR and IFR in VMC and IMC.	4	Rules of No. 198 of the Cabinet of Ministers of the Republic of Azerbaijan, dated 4 July 2025, approving the 'Rules on the Use of Airspace and Flight Operations'.", SCAA applicable documents (AAR-ATS), ATM Manual	ACS *ACP*
ACS ATM 10.2.4	Apply the procedures for termination of ATS surveillance service.	3	ATM Manual *Optional content: transfer of control, termination or interruption of ATS surveillance service*	APS ACS
Subtopic ATM 10.3 - Traffic management process				
ACS ATM 10.3.1	Ensure that situational awareness is maintained.	4	Information gathering, scanning, traffic projection	APS ACS
ACS ATM 10.3.2	Detect conflicts in time for appropriate resolution.	4		*ALL*

ACS ATM 10.3.3	Identify potential solutions to achieve a safe and effective traffic flow.	3		APP ACP APS ACS
ACS ATM 10.3.4	Evaluate possible outcomes of different planning and control actions.	5		ALL
ACS ATM 10.3.5	Select an appropriate plan in time to achieve safe and effective traffic flow.	5		APP ACP APS ACS
ACS ATM 10.3.6	Ensure an adequate priority of actions.	4		*ALL*
ACS ATM 10.3.7	Execute selected plan in a timely manner.	3		*ALL*
ACS ATM 10.3.8	Ensure a safe and efficient outcome is achieved.	4	Traffic monitoring, adaptability and follow up	*ALL*
Subtopic ATM 10.4 - Handling traffic				
ACS ATM 10.4.1	Manage arrivals, departures and overflights.	4		APP ACP APS ACS
ACS ATM 10.4.2	Balance the workload against personal capacity.	5	*Optional content: re-routing, re-planning, prioritising solutions, denying requests, delegating responsibility for separation*	APP ACP APS ACS
ACS ATM 10.4.3	Define flight path monitoring and vectoring.	1	ATM Manual	APS ACS
ACS ATM 10.4.4	Explain the requirements for vectoring and termination of vectoring.	2	ATM Manual	APS ACS
ACS ATM 10.4.5	Provide vectoring.	4	ATM Manual *Optional content: separation, expediting arrivals, departures and/or climb to cruising levels, aircraft leaving the hold, navigation assistance, uncontrolled airspace, etc*.	APS ACS
ACS ATM 10.4.6	Apply the procedures for termination of vectoring.	3	ATM Manual	APS ACS

Subtopic ATM 10.5 - Control service with advanced system support				
ACS ATM 10.5.1	Appreciate the impact of advanced systems on the provision of area control service.	3	*Optional content: sequencing systems, automated holding lists, vertical traffic displays, conflict detection and decision making tools, automated information and coordination tools*	ACS
TOPIC ATM 11 - HOLDING				
Subtopic ATM 11.1 - General holding procedures				
ACS ATM 11.1.1	Apply holding procedures.	3	ATM Manual, holding instructions, allocation of holding levels, onward clearance times	APP ACP APS ACS
ACS ATM 11.1.2	Appreciate the factors affecting holding patterns.	3	Effect of speed, effect of level used, effect of navigation aid in use, turbulence, aircraft type	APP ACP APS ACS
Subtopic ATM 11.2 - Holding aircraft				
ACS ATM 11.2.1	Issue expected onward clearance times.	3		ACP ACS
Subtopic ATM 11.3 - Holding in a surveillance environment				
ACS ATM 11.3.1	Organise traffic to separate other aircraft from holding aircraft.	4		APS ACS
ACS ATM 11.3.2	Integrate system support, when available.	4	*Optional content: arrival management system, automated holding lists, vertical traffic displays*	APS ACS
TOPIC ATM 12 - IDENTIFICATION				
Subtopic ATM 12.1 - Establishment of identification				
ACS ATM 12.1.1	Appreciate the precautions when establishing identification.	3		APS ACS
ACS ATM 12.1.2	Identify aircraft.	3	*Optional content: PSR, SSR or ADS identification method*	APS ACS
ACS ATM 12.1.3	Apply procedures in the case of misidentification.	3	ATM Manual *Optional content: local/simulator operation manuals*	APS ACS

Subtopic ATM 12.2 - Maintenance of identification				
ACS ATM 12.2.1	Appreciate the necessity to maintain identification.	3		APS ACS
Subtopic ATM 12.3 - Loss of identity				
ACS ATM 12.3.1	Appreciate when an aircraft identification is lost or in doubt.	3	*Optional content: out of ATS surveillance system coverage, failure of ATS surveillance system, weather clutter, other clutter, garbling, holding, etc.*	APS ACS
ACS ATM 12.3.2	Apply methods to re-establish identification.	3		APS ACS
ACS ATM 12.3.3	Respond to loss/doubt concerning identification.	3	*Optional content: procedural separation*	APS ACS
Subtopic ATM 12.4 - Position Information				
ACS ATM 12.4.1	Appreciate the circumstances when position information should be passed to the aircraft.	3		APS ACS
ACS ATM 12.4.2	State the format in which position information can be passed to aircraft.	1	ATM Manual	APS ACS
Subtopic ATM 12.5 - Transfer of identity				
ACS ATM 12.5.1	Apply the methods of transfer of identification.	3		APS ACS
ACS ATM 12.5.2	Appreciate the precautions when transferring identification.	3		APS ACS

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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

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

TOPIC MET 2 - SOURCES OF METEOROLOGICAL DATA

Subtopic MET 2.1 - Sources of meteorological information

ACS MET 2.1.1	Obtain meteorological information	3	METAR, TAF, SIGMET, AIRMET *Optional content: AIREP/AIREP Special*	APP ACP APS ACS
ACS MET 2.1.2	Decode information from meteorological data displays.			*ALL*
ACS MET 2.1.3	Relay meteorological information.	3	ATM Manual *Optional content: flight information centre, adjacent ATS unit*	*ALL*

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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				
ACS NAV 1.1.1	Use relevant maps and charts.	3		*APP* ACP *APS* ACS
ACS NAV 1.1.2	Decode symbols and information displayed on aeronautical maps and charts.	3	En-route and area charts *Optional content: STAR charts*	ACP ACS

TOPIC NAV 2 - INSTRUMENT NAVIGATION

Subtopic NAV 2.1 - Navigational systems				
ACS NAV 2.1.1	Manage traffic in case of change in the operational status of navigational systems.	4	*Optional content: limitations, status of ground-based and satellite-based systems*	APP ACP APS ACS
ACS NAV 2.1.2	Appreciate the effect of precision, limitations and change of the operational status of navigational systems.	3	*Optional content: limitations, status, degraded procedures*	*ALL*
Subtopic NAV 2.2 - Navigational assistance				
ACS NAV 2.2.1	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
ACS NAV 2.2.2	Assist pilots with navigation when required	3	Aircraft observed to be deviating from its known intended route, on request	*APS* ACS
Subtopic NAV 2.3 - PBN applications				
ACS NAV 2.3.1	State the navigation applications used in terminal and en-route environments.	1	Terminal-RNAV-1, En-route-RNAV-5 *Optional content: A-RNP, EC PBN Implementing Rule, ICAO Doc 9613*	ACP ACS
ACS NAV 2.3.2	Explain the principles and designation of navigation specifications in use.	2	*Optional content: performance, functionality, sensors, aircrew and controller requirements*	*APP* ACP *APS* ACS

ACS NAV 2.3.3	Describe the differences in turn performance.		*Optional content: fly-by, fly-over, FRT, ATM Manual*	ACP ACS
ACS NAV 2.3.4	State future PBN developments.	1	A-RNP, APV *Optional content: RNP 3D, RNP 4D*	*ALL*

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				
ACS ACFT 1.1.1	Integrate information from aircraft instruments provided by the pilot in the provision of ATS.	4		ALL
ACS ACFT 1.1.2	Explain the operation of aircraft radio equipment.	2	*Optional content: radios (number of), emergency radios*	ALL
ACS ACFT 1.1.3	Explain the operation of on-board surveillance equipment.	2	Transponders: equipment Mode A, Mode C, Mode S, ADS capability	ADC APS ACS

TOPIC ACFT 2 - AIRCRAFT CATEGORIES

Subtopic ACFT 2.1 - Wake turbulence				
ACS ACFT 2.1.1	Explain the wake turbulence effect and associated hazards to the succeeding aircraft.	2		ALL
ACS 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 - Climb factors				
ACS ACFT 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
Subtopic ACFT 3.2 - Cruise factors				
ACS ACFT 3.2.1	Integrate the influence of factors affecting aircraft during cruise.	4	Level, cruising speed, wind, mass, cabin pressurisation	ACP ACS
Subtopic ACFT 3.3 - Descent factors				
ACS ACFT 3.3.1	Integrate the influence of factors affecting aircraft during descent.	4	*Optional content: wind, speed, rate of descent, cabin pressurisation*	ACP ACS

Subtopic ACFT 3.4 - Economic factors				
ACS ACFT 3.4.1	Integrate consideration of economic factors affecting aircraft.	4	*Optional content: routing, level, speed, rate of climb and rate of descent, approach profile, top of descent*	ACP ACS
ACS ACFT 3.4.2	Provide continuous climb/descent whenever possible.	4		*APS* ACS
ACS ACFT 3.4.3	Use direct routing where applicable.	3		*APP* ACP *APS* ACS
ACS ACFT 3.4.4	Appreciate controller's actions that may contribute to pilot's ability to fly an optimum continuous descent.	3	*Optional content: level instructions, speed control, vertical speed control, vectoring, distance-to-touchdown information*	ACS APS
Subtopic ACFT 3.5 - Environmental factors				
ACS ACFT 3.5.1	Appreciate the performance restrictions due to environmental constraints.	3	*Optional content: fuel dumping, minimum flight levels, continuous descent operations*	ACP ACS

TOPIC ACFT 4 - AIRCRAFT DATA

Subtopic ACFT 4.1 - Performance data				
ACS ACFT 4.1.1	Integrate the average performance data of a representative sample of aircraft which will be encountered in the operational/working environment into the provision of a control service.	4	Performance data under a representative variety of circumstances	APP ACP APS ACS

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 - Cognition and factors influencing it				
ACS HUM 1.1.1	Describe the human information-processing model.	2	Attention, perception, memory, situational awareness, decision-making, response	ALL
ACS 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
Subtopic HUM 1.2 — Situational awareness				
ACS HUM 1.2.1	Appreciate the effect of human information-processing factors on situational awareness.	3	*Optional content: workload, knowledge, interpersonal relations, distraction, confidence, experience, fatigue, stress*	ALL
Subtopic HUM 1.3 — Decision-making				
ACS HUM 1.3.1	Appreciate the effect of human information-processing factors on decision-making.	3	*Optional content: workload, stress, interpersonal relations, distraction, confidence*	ALL

TOPIC HUM 2 - MEDICAL AND PHYSIOLOGICAL FACTORS

Subtopic HUM 2.1 - Fatigue				
ACS HUM 2.1.1	Describe the onset of fatigue.	1	*Optional content: lack of concentration, listlessness, irritability, frustration, ICAO/IFATCA/CANSO's Fatigue Management Guide for Air Traffic Service Providers*	ALL
ACS HUM 2.1.2	Recognise the onset of fatigue in self and in others.	2	*Optional content: ICAO/IFATCA/CANSO's Fatigue Management Guide for Air Traffic Service Providers*	ALL
ACS HUM 2.1.3	Describe appropriate action when recognising fatigue.	2		ALL
Subtopic HUM 2.2 - Stress				
ACS HUM 2.2.1	Recognise the effects of stress on human performance.	1	Stress and its symptoms in self and in others	ALL

ACS HUM 2.2.2	Describe the appropriate action when recognising stress.	2		ALL
ACS HUM 2.2.3	Act to reduce stress.	3		ALL
ACS HUM 2.2.4	Respond to stressful situations by offering, asking for or accepting assistance.	3		ALL
ACS HUM 2.2.5	Recognise the effect of stressful events.	1	Self and others, abnormal situations	ALL

TOPIC HUM 3 - THREAT AND ERROR MANAGEMENT

Subtopic HUM 3.1 - Threat and error management framework

ACS HUM 3.1.1	Explain the importance of threat and error management.	2	*Optional content: prevention of incidents, safety improvement, revision of procedures and/or working practices*	ALL
ACS HUM 3.1.2	Explain the threat and error management framework.	2	Threats, errors, undesired states, countermeasures *Optional content: teamwork, human error, team roles, stress, decision-making, communication, situational awareness*	ALL
ACS HUM 3.1.3	Differentiate between the different types of threats in ATC.	2	Internal, external, airborne, environmental *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL
ACS HUM 3.1.4	Differentiate between the different types of errors in ATC.	2	Equipment, procedural, communication *Optional content: increase in traffic, changes in procedures, complexities of systems or traffic, weather, unusual occurrences*	ALL
ACS HUM 3.1.5	Differentiate between the different types of undesired states.	2	Equipment, procedural, communication *Optional content: increase in traffic, changes in procedures, complexities of systems or traffic, weather, unusual occurrences*	ALL
ACS HUM 3.1.6	Analyse examples of threat and error management in ATC.	4	*Case* studies *Optional content: ICAO Circular 314 — AN/178 Threat and Error*	ALL

			Management (TEM) in Air Traffic Control	
Subtopic HUM 3.2 - Application of threat and error management				
ACS HUM 3.2.1	Manage threats.	4	Detect and respond Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control	ALL
ACS HUM 3.2.2	Manage errors.	4	Detect and respond *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL
ACS HUM 3.2.3	Manage undesired states.	4	Detect and respond *Optional content: ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control*	ALL

TOPIC HUM 4 - TEAMWORK

Subtopic HUM 4.1 - Benefits of teamwork				
ACS HUM 4.1.1	State the benefits of teamwork.	1	Increased safety, efficiency and capacity	ALL
ACS HUM 4.1.2	List the controller's human performance elements affected by teamwork.	1	Situational awareness, communication, decision-making, threat and error management, workload management	ALL
Subtopic HUM 4.2 - Conflict management				
ACS HUM 4.2.1	Identify the reasons for conflict.	3		ALL
ACS HUM 4.2.2	Describe strategies to cope with human conflicts.	2	*Optional content: in your team, in the simulator*	ALL
ACS HUM 4.2.3	Describe actions to prevent human conflicts.	2		ALL

TOPIC HUM 5 - SYSTEMS

Subtopic HUM 5.1 - Concept of systems in ATM/ANS				
ACS HUM 5.1.1	Explain the concept of systems.	2	People; procedures; equipment; ATM in system terms: simple, complicated, and complex systems; system thinking	ALL

ACS HUM 5.1.2	Describe how changes in one part of a system may impact the other parts.	2		ALL
ACS HUM 5.1.3	Describe the role of the human in the system.	2		ALL

TOPIC HUM 6 - COLLABORATIVE WORK

Subtopic HUM 6.1 - Effective communication

ACS HUM 6.1.1	Use communication effectively in ATC operations.	2	ICAO Doc 9868	ALL
ACS HUM 6.1.2	Explain key strategies used to enable open communication.	2	Optional content: active listening, active speaking, assertiveness, honesty, relevance, facts, neutrality	ALL
ACS HUM 6.1.3	Describe the parameters affecting the controller's competence to communicate effectively.	2	Workload, mutual knowledge, controller versus pilot mental picture, distractions, sound, human conflicts Optional content: communication between and within the team(s), in the simulator, with the pilots, instructors, coordination partners	ALL

Subtopic HUM 6.2 - Effective feedback

ACS HUM 6.2.1	Define feedback.	1		ALL
ACS HUM 6.2.2	Explain the purpose of receiving and giving feedback, and its effect on performance.	2		ALL
ACS HUM 6.2.3	Consider the impact of communication styles on feedback and on conflict resolution.	2		ALL
ACS HUM 6.2.4	Integrate feedback into performance.	4		ALL

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

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

Subtopic EQPS 1.2 - Other voice communications

ACS EQPS 1.2.1	Operate landline communications.	3	*Optional content: telephone, interphone and intercom equipment*	ALL

TOPIC EQPS 2 - AUTOMATION IN ATS

Subtopic EQPS 2.1 - Aeronautical fixed telecommunication network (AFTN)

ACS EQPS 2.1.1	Decode AFTN messages.	3	*Optional content: movement and control messages, NOTAM, SNOWTAM, BIRDTAM, etc.*	ALL

Subtopic EQPS 2.2 - Automatic data interchange

ACS EQPS 2.2.1	Use automatic data transfer equipment where available.	3	*Optional content: sequencing systems, automated information and coordination, OLDI*	ADC APS ACS

TOPIC EQPS 3 - CONTROLLER WORKING POSITION

Subtopic EQPS 3.1 - Operation and monitoring of equipment

ACS EQPS 3.1.1	Monitor the technical integrity of the controller working position.	3	Notification procedures, responsibilities	ALL

ACS EQPS 3.1.2	Operate the equipment of the controller working position.	3	*Optional content: situation displays, flight progress board, flight data display, radio, telephone, maps and charts, strip- printer, clock, information systems, UDF/VDF*	ALL
ACS EQPS 3.1.3	Operate the available equipment in abnormal and emergency situations.	3		ALL
Subtopic EQPS 3.2 - Situation displays and information systems				
ACS EQPS 3.2.1	Use situation displays.	3		ALL
ACS EQPS 3.2.2	Check the availability of information.	3		ALL
ACS EQPS 3.2.3	Obtain information from equipment.	3		APP ACP APS ACS
Subtopic EQPS 3.3 - Flight data systems				
ACS EQPS 3.3.1	Use the flight data information at controller working position.	3		ALL
Subtopic EQPS 3.4 - Use of ATS surveillance system				
ACS EQPS 3.4.1	Use the ATS surveillance system functions.	3		APS ACS
ACS EQPS 3.4.2	Analyse the information provided by the ATS surveillance system.	4		APS ACS
ACS EQPS 3.4.3	Assign codes.	4		APS ACS
ACS EQPS 3.4.4	Appreciate the use of advanced surveillance technology.	3	*Optional content: Mode S, ADS-B, MLAT*	APS ACS
Subtopic EQPS 3.5 - Advanced systems				
ACS EQPS 3.5.1	Appreciate the use of controller pilot datalink communications when available.	3		APS ACS
ACS EQPS 3.5.2	Appreciate the use of information provided by advanced systems.	2	MTCD, AMAN, DMAN *Optional content: trajectory-based information, MONA, etc.*	APS ACS

TOPIC EQPS 4 - FUTURE EQUIPMENT

Subtopic EQPS 4.1 - New developments				
ACS EQPS 4.1.1	Recognise future developments.	1	New advanced systems	ALL

TOPIC EQPS 5 - EQUIPMENT AND SYSTEMS LIMITATIONS AND DEGRADATION

Subtopic EQPS 5.1 - Reaction to limitations				
ACS EQPS 5.1.1	Take account of the limitations of equipment and systems.	2		ALL
ACS EQPS 5.1.2	Respond to technical deficiencies of the operational position.	3	Notification procedures, responsibilities	ALL
Subtopic EQPS 5.2 - Communication equipment degradation				
ACS EQPS 5.2.1	Identify that communication equipment has degraded.	3	*Optional content: ground-air and landline communications*	APP ACP APS ACS
ACS EQPS 5.2.2	Apply contingency procedures in the event of communication equipment degradation.	3	*Optional content: procedures for total or partial degradation of ground–air and landline communications, alternative methods of transferring data*	ALL
Subtopic EQPS 5.3 — Navigational equipment degradation				
ACS EQPS 5.3.1	Identify when a navigational equipment failure will affect operational ability.	3	*Optional content: navigational aids*	ALL
ACS EQPS 5.3.2	Apply contingency procedures in the event of navigational equipment degradation.	3	*Optional content: vertical separation, information to aircraft, navigational assistance, seeking assistance from adjacent units*	ALL
Subtopic EQPS 5.4 - Surveillance equipment degradation				
ACS EQPS 5.4.1	Identify that surveillance equipment has degraded.	3	Partial power failure, loss of certain facilities, total failure	APS ACS
ACS EQPS 5.4.2	Apply contingency procedures in the event of surveillance equipment degradation.	3	*Optional content: inform adjacent sectors, inform aircraft, apply vertical separation (emergency), increased horizontal separation, reduce the number of aircraft entering area of responsibility, transfer aircraft to another unit*	APS ACS

Subtopic EQPS 5.5 - ATC processing system degradation				
ACS EQPS 5.5.1	Identify a processing system degradation.	3	*Optional content: FDPS, SDPS, software processing of situation display*	APS ACS
ACS EQPS 5.5.2	Apply contingency procedures in the event of a processing system degradation.	3		APS ACS

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 area control centre				
ACS PEN 1.1.1	Appreciate the functions and provision of an operational area control service.	3	Study visit to area control centre	ACP ACS

TOPIC PEN 2 - AIRSPACE USERS

Subtopic PEN 2.1 - Contributors to civil ATS operations				
ACS PEN 2.1.1	Characterise civil ATS activities in area control centre.	2	Study visit to an area control centre *Optional content: familiarisation visits to TWR, APP, AIS, RCC*	ACP ACS
ACS PEN 2.1.2	Characterise other parties interfacing with ATS operations.	2	*Optional content: familiarisation visits to engineering services, fire and emergency services, airline operations offices*	ALL
Subtopic PEN 2.2 - Contributors to military ATS operations				
ACS PEN 2.2.1	Characterise military ATS activities.	2	*Optional content: familiarisation visits to TWR, APP, ACC, AIS, RCC, Air Defence Units*	ALL

TOPIC PEN 3 - CUSTOMER RELATIONS

Subtopic PEN 3.1 - Provision of services and user requirements				
ACS PEN 3.1.1	Appreciate the role of an air navigation service provider.	3		ALL
ACS PEN 3.1.2	Appreciate ATS users` requirements.	3		ALL

TOPIC PEN 4 - ENVIRONMENTAL PROTECTION

Subtopic PEN 4.1 - Environmental protection				
ACS PEN 4.1.1	Appreciate the mitigation techniques used en-route to minimise the aviation's impact on the environment.	3	*Optional content: free route airspace (FRA), night/weekend routes, ICAO Doc 10013 — Operational Opportunities to reduce fuel burn and emissions*	ACS

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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				
ACS ABES 1.1.1	List common abnormal and emergency situations.	1		ALL
ACS ABES 1.1.2	Identify potential or actual abnormal and emergency situations.	3		ALL
ACS ABES 1.1.3	Take into account the procedures for given abnormal and emergency situations.	2	*Optional content: ATM Manual*	APP ACP APS ACS
ACS ABES 1.1.4	Take into account that procedures do not exist for all abnormal and emergency situations.	2	*Optional content: real life examples*	ALL
ACS ABES 1.1.5	Consider how the evolution of a situation may have an impact on safety.	2	*Optional content: separation, information, coordination*	ALL

TOPIC ABES 2 - SKILLS IMPROVEMENT

Subtopic ABES 2.1 - Communication effectiveness				
ACS ABES 2.1.1	Ensure effective communication in all circumstances including the case where standard phraseology is not applicable.	4	Phraseology, vocabulary, readback, silence instruction	ALL
ACS ABES 2.1.2	Apply change of radiotelephony call sign.	3	ATM Manual	ALL
Subtopic ABES 2.2 - Avoidance of mental overload				
ACS ABES 2.2.1	Describe actions to keep control of the situation.	2	*Optional content: sector splitting, holding, flow management, task delegation*	ALL
ACS ABES 2.2.2	Organise priority of actions.	4		ALL
ACS ABES 2.2.3	Ensure the effective dissemination of information.	4	*Optional content: between executive and planner/coordinator, with the supervisor, between sectors, between ACC, APP and TWR, with ground staff, etc.*	ALL

ACS ABES 2.2.4	Consider asking for help.	2		ALL
Subtopic ABES 2.3 - Air / ground cooperation				
ACS ABES 2.3.1	Collect appropriate information relevant to the situation.	3		ALL
ACS ABES 2.3.2	Assist the pilot.	3	Pilot workload *Optional content: instructions, information, support, human factors, etc.*	ALL

TOPIC ABES 3 - PROCEDURES FOR ABNORMAL AND EMERGENCY SITUATIONS

Subtopic ABES 3.1 - Application of procedures for ABES				
ACS ABES 3.1.1	Apply the procedures for given abnormal and emergency situations.	3	*Optional content: EATM Guidelines for Controller Training in the Handling of Unusual/Emergency Situations, ambulance flights, ground-based safety nets alerts, airframe failure*	ALL
Subtopic ABES 3.2 - Radio failure				
ACS ABES 3.2.1	Describe the procedures followed by a pilot when he/she experiences complete or partial radio failure.	2	ICAO Doc 7030 *Optional content: military procedures*	ALL
ACS ABES 3.2.2	Apply the procedures to be followed when a pilot experiences complete or partial radio failure.	3	*Optional content: prolonged loss of communication*	ALL
Subtopic ABES 3.3 - Unlawful interference and aircraft bomb threat				
ACS ABES 3.3.1	Apply ATC procedures associated with unlawful interference and aircraft bomb threat.	3	ATM Manual	ALL
Subtopic ABES 3.4 - Strayed or unidentified aircraft				
ACS ABES 3.4.1	Apply the procedures for strayed aircraft.	3	ATM Manual *Optional content: inside controlled airspace, outside controlled airspace*	ALL
ACS ABES 3.4.2	Apply the procedures for unidentified aircraft.	3	ATM Manual	ALL
Subtopic ABES 3.5 - Diversion				
ACS ABES 3.5.1	Provide navigational assistance to diverting emergency aircraft.	4	Track/heading, distance, other navigational assistance *Optional content: nearest most suitable aerodrome*	APP ACP APS ACS

Subtopic ABES 3.6 - Transponder failure				
ACS ABES 3.6.1	Apply procedures in the event of an SSR transponder failure.	3	ATM Manual, ICAO Doc 7030 *Optional content: total/partial failure, impact on ADS-B/Mode S capability*	APS ACS

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