

PART-176
Air Navigation Services Training Centers

This part of Jordanian Civil Aviation Regulations is hereby adopted under the authority and provisions of the Civil Aviation Law N0. (41) Dated 2007 and its amendments.



Capt. Haitham Misto
Chief Commissioner/CEO
Civil Aviation Regulatory Commission



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Subpart – A General

176.1 Applicability.

(a) This part prescribes the requirements for certification of Air Navigation Services (ANS) Training Center, its associated curriculum and the general operating rules for the holders of such certificates.

(b) No person may operate as an ANS Training Center without, or in violation of, an ANS Training Center certificate and training specification issued under this part.

176.3 Definitions.

The following definitions are related only to this part:

Aeronautical information management (AIM): The dynamic, integrated management of aeronautical information through the provision and exchange of quality-assured digital aeronautical data in collaboration with all parties.

Air Navigation Services (ANS): a generic term meaning the provision of various services for airspace control including Air Traffic Service, Aeronautical Telecommunication Service, Aeronautical Information Service, Meteorological Service for International Air Navigation, Search and Rescue Service and Procedures for Air Navigation-Aircraft Operations (PANS-OPS).

Air Traffic Control (ATC) Simulator: A machine designed to provide a realistic imitation of the control and operation of the system, used for training purposes approved by CARC.

Curriculum: means a set of courses approved by CARC, for use by a training center consists of training which is required for certification.

Instructor: means a person employed or contracted by a training center and designated to provide instruction in accordance with subpart B of this part.

Training specification: means a document issued to an ANS training center certificate holder by CARC that prescribes that center's training, checking, limitations, and specifies training program requirements.

176.5 Eligibility.

To be eligible for ANS Training Center Certificate, the applicant shall meet the requirements of this part to the satisfaction of CARC and shall submit the following:

(a) Registration in the Ministry of Industry and Commerce according to the applicable national Laws.

(b) Valid Insurance policy with an adequate amount to cover liability in case of accidents, in particular in respect to:

(1) The premises;

(2) Students; and

(3) Employees and Third party.

(c) Ownership or lease agreement for building(s) and workshops appropriate for the ratings applied for and the size of the potential operations. The building(s) must be constructed and established according to a standard acceptable to CARC and at least fulfills the adequate specification of the following aspects:

(1) Location. An applicant ,or holder of a training center certificate shall have available exclusively, for adequate period of time and at a location approved by CARC.

(2) Separation. The building must be separated from other activities and shall be used only for the school purposes. The separation must be adequate enough to assure limited accessibility to the concerned people, and protected against external intruders.

(3) Environment. The building must be designed and constructed to assure appropriate environment to the students in regard to acceptable level of noise and pollution and adequate air conditioning, lighting and ventilation.

(4) Safety. The building must be designed and constructed to ensure adequate safety relevant aspects such as fire escape, fire protection, and enough instruction in case of accidents.

(5) Accommodation and Entertainment. The building must be designed and established to assure an adequate layout and spaces for non-learning students activities.

(d) Ownership and operational control for all tools and equipment appropriate to the rating(s) applied for.

(e) A feasibility study that shows a full self-sustaining financial capability for at least 24 months of operation according to the standards applicable in this part. The study must contain at least the following aspects:

- (1) Marketing plan.
- (2) Financial plan.
- (3) Capital Plan.
- (4) Administrative and operational plan.

176.7 Application for ANS Training Center certificate issuance, or renewal and/or amendment.

(a) An application for the issuance of ANS Training Centers certificate shall be submitted to CARC of not less than 120 days before the beginning of any proposed training.

(b) An application for the renewal of ANS Training Centers certificate shall be submitted to CARC of not less than 30 days before the expiry date of the certificate.

(c) The certificate holder must file an application to amend training center certificate at least 60 calendar days prior to the applicant's proposed effective amendment date.

(d) An application for a training certificate and training specifications under this part shall:

- (1) Be made in a form and in a manner prescribed by CARC;
- (2) Demonstrate to CARC how they will comply with the requirements established in this Part;
- (3) Provide the proposed curriculum for CARC approval; and
- (4) Provide a description and a list of the facilities and materials to be used;

(e) Each applicant for a training center and training specification shall provide:

- (1) A list of its qualified instructors approved by CARC;
- (2) A statement acknowledging that the applicant shall notify CARC within 10 working days of any change made in the assignment of persons in the required management positions and instructors.
- (3) A description of a recordkeeping system that will identify and document the details of training, qualification, and certification of students and instructors.
- (4) A statement of the maximum number of students it expects to teach at any one time.

176.9 Issue of certificate.

An applicant who meets the requirements of this part is entitled to:

- (a) An ANS training center certificate and containing business name, address of the certificate holder, and rating under which the certificate holder may conduct training.
- (b) Training specifications and limitations issued by CARC to the certificate holder containing type of the training authorized including approved courses.

176.11 Duration of certificates.

(a) Unless sooner surrendered, suspended, or revoked, an ANS training center certificate expires:

- (1) At the end of the twenty-fourth month after the month in which it was issued or renewed; or
- (2) Upon notice from CARC that the training center has failed to maintain the eligibility of requirements prescribed in this Part, as amended, for certification in excess of 60 continuous days.

(b) The holder of a certificate that is surrendered, suspended, or revoked, shall return the certificate to CARC within 5 working days after being notified that the certificate is suspended, revoked, or terminated.

176.13 Approved Training Courses and competencies.

(a) The following approved training courses are issued under this part:

- (1) Aerodrome control training course;
- (2) Approach control procedural training course;
- (3) Area control procedural training course;
- (4) Approach control surveillance training course;
- (5) Approach precision radar control training course; and
- (6) Area control surveillance training course;

(b) The following competencies are issued under this part:

- (1) Communication Technology;
- (2) Navigation Technology; and
- (3) Surveillance Technology;
- (4) AIS/AIM Training Course; and
- (5) MET for Aviation Training Course.

176.15 thru 176.20 Reserved.**Subpart – B
Certification Requirements****176. 21 Facilities, equipment, and material requirements.**

An applicant for an ANS training center certificate and training specifications shall have at least the facilities, equipment, materials and sufficient number of instructors specified in 176.23 through 176.31 that are appropriate to the terms of approval requested and that:

(a) An applicant for, or holder of a training center certificate shall ensure that:

- (1) Each room, training booth, or other space used for instructional purposes is heated lighted, and ventilated to conform to local building, sanitation, and health codes, and

(2) The facilities used for instruction are not routinely subject to significant distractions caused by flight operations and maintenance operations at the airport.

(b) The records required to be maintained by this part must be located in facilities adequate for that purpose.

(c) An applicant for , or holder of a training center certificate must have availability exclusively adequate flight training equipment and courseware including at least one flight simulator or advanced flight training device approved by CARC.

176. 23 General Curriculum Requirements.

Each applicant for, or holder of, a training center certificate and training specifications shall submit ANS training curriculum to CARC Chief Commissioner for approval:

(a) ANS training curriculum shall include the following:

(1) Basic training.

(2) Advanced training.

(3) Other approved courses (radar, computer, management, search and rescue, PANS-OPSetc).

(b) Air Traffic Control training curriculum shall include the required knowledge specified in Appendix A of this part.

(c) Aeronautical Telecommunication Systems training curriculum shall include the required knowledge specified in Appendix B of this part.

(d) Curriculum of aeronautical information services shall include the required knowledge specified in Appendix C of this part.

(e) MET for aviation training curriculum shall include the required knowledge specified in Appendix D of this part.

(f) CARC may require a certificate holder to make revisions or to renew an approved training curriculum. The required revisions and renewals should be submitted to CARC within 30 calendar days from CARC requested date. CARC may suspend or revoke the certificate if a certificate holder has not committed to CARC requirements.

176.25 Space and instructional equipment requirements.

An applicant for an ANS training center certificate and training specifications or for an amendment of the approved curriculum must have such of the following properly heated, lighted, and ventilated facilities as are appropriate to the curriculum sought and as CARC determines are appropriate for the maximum number of students expected to be taught at any time:

- (a) An enclosed classroom suitable for teaching theory classes;
- (b) Suitable enclosed space for approved simulators;
- (c) Approved Simulators for aerodrome control, approach control, area control and radar control shall include at least the following:
 - (1) Headsets;
 - (2) Microphones;
 - (3) Transceivers;
 - (4) Radio communication with selector panel;
 - (5) Telephone with a selector panel and a handset;
 - (6) Intercom;
 - (7) Recorder;
 - (8) Auto-switch capability selection of either headset or speaker status.
 - (9) Power;
 - (10) Clock;
 - (11) Flight progress boards as appropriate;
 - (12) Fire alarm and extinguishers;
 - (13) Desks and consoles;

- (14) Chairs; and
- (15) Floor and wall sound-absorbing coverings;
- (d) Radio and telephone positions shall have dual connections for training;
- (e) Approved ATC simulator shall include at least two consoles with programmable displays;
- (f) Simulator training room shall be located within the training facility; and
- (g) Every approved ATC simulator shall have the hardware and/or software to represent the air traffic movement in the ground operations and flight operations stages.

176.27 Materials and special tools requirements.

An applicant for an ANS training center certificate shall have an adequate supply of material and special tools as are appropriate to the approved curriculum of the training center to assure that each student will be properly instructed. The special tools and equipment must be in satisfactory working condition for the purpose they are to be used.

176.29 Instructor requirements.

- (a) An applicant for an ANS training center certificate or for an additional curriculum must provide the number of instructors holding appropriate ANS qualifications that CARC determines necessary to provide adequate instruction and supervision of the students, including at least one such instructor for each 20 students in each training course. However, the applicant may provide specialized instructors, who are not certificated as ANS instructors, to teach Meteorological, Search and Rescue, PANS-OPS, Aeronautical Telecommunication, simulator training, and similar subjects. The applicant is required to maintain a list of the names and qualifications of specialized instructors, and upon request, provide a copy of the list to CARC.
- (b) An applicant for an ANS training center certificate must designate a chief instructor for each approved course of training who is qualified and competent to perform the duties to which that instructor is assigned, and must meet the requirements in section 176.31 of this part.

(c) When necessary, an applicant for an ANS training center certificate may designate a person to be an assistant chief instructor for an approved training course, provided that person meets the requirements of chief instructor.

(d) Chief instructor and his assistant shall be designated in writing by the certificated ANS training center.

176.31 Instructor qualifications.

Each person designated as an ANS approved instructor shall meet the following requirements:

(a) Hold a certificate in the field of specialty as appropriate;

(b) Has minimum experience of at least five years in the field of specialty and/or rating competency for the approved course;

(c) Instructional Technique Course;

(d) Successfully completed ON-Job-Training Instructor;

(e) Show proficiency in the training procedures and equipment handling of the approved training course; and

(f) An Instructor approval issued under this part shall be valid for 24 calendar months from the month in which it was issued.

176.33 thru 176.38 Reserved.

Subpart – C Operating Rules

176. 39 Attendance, tests and enrollment.

(a) A certificated ANS training center shall:

(1) Not require any student to attend classes of instruction more than eight hours in any day or more than six days or 40 hours in any seven day period;

(2) Give appropriate tests to each student who completes a unit of instructions as shown in that training center's curriculum;

(3) Not graduate a student unless he has completed all of the appropriate curriculum requirements; and

- (4) Use an approved system for determining final course grades and for recording student attendance. The system must show hours of absence allowed and show how the missed material will be made available to the student.
- (b) A certificated ANS training center shall not accept the application for enrollment nor a person shall enroll for the approved ATC courses in an ANS training center unless he:
- (1) Holds a General Secondary Certificate or equivalent foreign certificate with pass result;
 - (2) Shall Demonstrates proficiency in the English languages at least ICAO level 4; and
 - (3) Hold third class medical certificate.

176.41 Examination and assessment results and certificates

- (a) ANS training Center shall make available to the applicant his/her results of examinations and assessments and, upon applicant's request, issue a certificate with his/her result of examinations and assessments.
- (b) A certificate of completion of the basic ATC training (051) shall only be issued upon request of the applicant if all subjects and topics contained in Appendix A have been completed and the applicant has successfully passed the associated examinations and assessments.

176.43 Records.

- (a) ANS Training Center shall retain detailed records of persons undertaking or having undertaken training to show that all requirements of the training courses have been met.
- (1) Students attendance, grades tests and received on the subject required by this part;
 - (2) The instruction credited to him under 176.39 (a) (2), if any; and
 - (3) The authenticated transcript of his grades from that training center.

- (b) ANS Training Center shall establish and maintain a system for recording the professional qualifications and instructional techniques assessments of instructors and assessors, as well as the subjects they are entitled to teach, where appropriate.
- (c) The records required in points (a) and (b) shall be retained for a minimum period of five years after:
 - (1) the person undertaking training has completed the course; and
 - (2) the instructor or assessor ceases to perform a function for the training organisation, as applicable.
- (d) The archiving process including the format of the records shall be specified in the ANS Training Center management system.
- (e) Records shall be stored in a secure manner.

176.45 Transcripts and graduation certificates.

A certificated ANS training center shall:

- (a) Upon request, provide a transcript of student's grades to each student who is graduated from that training center or who leaves it before being graduated. An official of the training center shall authenticate the transcript. The transcript shall state the curriculum in which the student was enrolled, whether the student satisfactorily completed that curriculum or not, and the final grades the student received.
- (b) Give a graduation certificate or a certificate of completion to each student that he graduates. An official of the training center shall authenticate the certificate. The certificate shall show the date of graduation and the approved curriculum title.

176.47 Maintenance of instructor requirements.

A certificated ANS training center shall, after certification or additional curriculum, continue adhering to the instructor requirements specified in section 176.29 of this part.

176.49 Maintenance of facilities, equipment and material.

A certificated ANS training center shall:

- (a) After certification or additional curriculum, continue providing facilities, equipment and material equal to the standards currently required for the issue of the certification and curriculum that it holds.
- (b) Not make a substantial change in facilities, equipment or material that have been approved for a particular curriculum, unless that change is approved by CARC in advance.

176.51 Maintenance of curriculum requirements.

A certificated ANS training center shall:

- (a) Adhere to its approved curriculum.
- (b) Not change its approved curriculum unless the change is approved by CARC in advance.

176.53 Personnel requirements.

- (a) An applicant for ANS training center certificate shall nominate post holders, acceptable to CARC, who are responsible for the management and supervision of the following areas:
 - (1) The ANS Training Center shall appoint an **accountable manager**, who has full control of the resources, final authority over training courses under the certificate/approval of the organisation and ultimate responsibility and accountability for the establishment, implementation and maintenance of the QMS; Quality policies and the resolution of all safety and quality issues (See Appendix E, Table App E-1 for Assessment Criteria);
 - (2) The ANS Training Center shall nominate persons responsible for the management and supervision of the following:
 - (i) **ANS Training Manager:** - a senior person who is responsible for ensuring that the ANS Training Center comply with the requirements of these regulations (See Appendix E, Table App E-2 for Assessment Criteria); and
 - (ii) **Quality Manager-** the ANS Training Center shall nominate a person or group of persons responsible for the development, maintenance and day-to-

day management of the quality management system. Those persons shall act independently of other managers within the organisation, shall have direct access to the accountable manager and to appropriate management for quality matters and shall be responsible to the accountable manager (See Appendix E, Table App E-3 for Assessment Criteria).

176.55 Display of certificate.

- (a) Each holder of an ANS training center certificate must display that certificate in a place that is normally accessible to public and is not obscured.
- (b) A certificate must be available for inspection upon request by CARC.

176.57 Changes to the ANS Training Center

(a) Changes to ANS Training Center that affect the certificate or the terms of approval of the Training Center or any relevant elements of the Training Center's management systems shall require prior approval by CARC.

(b) Training Center shall agree with CARC on the changes that require prior approval in addition to those specified in point (a).

(c) Training Center shall not make any change in the center's location unless the change is approved in advance. If the holder desires to change the location, the holder shall notify CARC, in writing, at least 30 days before the date the change is contemplated. If the holder changes the location without approval, the certificate is considered revoked.

(d) For any changes requiring prior approval in accordance with points (a), (b) and (c), the Training Center shall apply for and obtain an approval issued by CARC. The application shall be submitted before any such change takes place in order to enable CARC to determine continued compliance with this Regulation and to amend, if necessary, the Training Center certificate and related terms of approval attached to it. Training Center shall provide CARC with all relevant documentation. The change shall only be implemented upon receipt of CARC formal approval. Training Center shall operate under the conditions prescribed by CARC during such changes, as applicable.

- (e) Changes to the elements referred to in point (a) due to unforeseen circumstances shall be notified to CARC without delay in order to obtain approval as necessary.
- (f) All changes not requiring prior approval shall be managed and notified to CARC as defined in the procedure approved by CARC.
- (g) Training Center shall notify CARC when they cease their activities.

176.59 Audit and Inspection.

- (a) CARC may at any time, inspect a certificated ANS training center to determine its compliance with this part to determine if the center continues to meet the requirements under which it was originally certificated.
- (b) After receipt of notification of findings issued by CARC in accordance with point (a) of this paragraph, the ANS Training Center shall:
 - (1) Identify the root cause of the finding;
 - (2) Define a corrective action plan; and
 - (3) Demonstrate the corrective action implementation within the period agreed by ANS inspector.

176.61 Advertising.

- (a) A certificated ANS training center shall not make any statement relating to it self that is false or is designed to mislead any person considering enrollment therein.
- (b) Whenever an ANS training center indicates in advertising that it is a certificated center, it shall clearly distinguish between its approved courses and those that are not approved.
- (c) A certificate holder whose certificate has been surrendered. Suspended, revoked, or terminated must:
 - (1) Promptly remove all indications, including signs, wherever located , that the training center was certificated by CARC

- (2) Promptly cease all advertising indicating that the training center is certificated by CARC.

176.63 Contracted activities

- (a) ANS training center shall ensure that when contracting or purchasing any parts of their activities, the contracted or purchased activity or part of activity conform to the applicable requirements.
- (b) When a training center contracts any part of its activity to an organisation that is not itself certified in accordance with this Regulation to carry out such activity, the contracted organisation shall work under the terms of approval contained in the certificate issued to the contracting training organisation. The contracting training organisation shall ensure that CARC is given access to the contracted organisation to determine continued compliance with the applicable requirements.

Appendix -A Curriculum Subjects for ATC

This appendix lists the general curriculum subjects required in ATC and the subjects that affect the area of ATC responsibility.

(a) General Curriculum Subjects.

Air law: rules and regulations relevant to the air traffic controller;

Air traffic control equipment: principles, use and limitations of equipment used in air traffic control;

General knowledge: principles of flight; principles of operation and functioning of aircraft, power plants and systems; aircraft performance relevant to air traffic control operations;

Human performance: human performance including principles of threat and error management;

Meteorology: aeronautical meteorology; use and appreciation of meteorological documentation and information; origin and characteristics of weather phenomena affecting flight operations and safety; altimetry;

Navigation: principles of air navigation; principle, limitation and accuracy of navigation systems and visual aids; and

Operational procedures: air traffic control, communication, radiotelephony and phraseology procedures (routine, non-routine and emergency); use of the relevant aeronautical documentation; safety practices associated with flight.

(b) Curriculum Subjects that affect the area of ATC responsibility.**(1) aerodrome control rating:**

- 1) aerodrome layout; physical characteristics and visual aids;
- 2) airspace structure;
- 3) applicable rules, procedures and source of information;
- 4) air navigation facilities;
- 5) air traffic control equipment and its use;
- 6) terrain and prominent landmarks;
- 7) characteristics of air traffic;
- 8) weather phenomena; and
- 9) emergency and search and rescue plans;

Minimum theoretical hours (390 hours)

Practical hours for each trainee (42 hours)

(2) approach control procedural and area control procedural ratings:

- 1) airspace structure;
- 2) applicable rules, procedures and source of information;
- 3) air navigation facilities;
- 4) air traffic control equipment and its use;
- 5) terrain and prominent landmarks;
- 6) characteristics of air traffic and traffic flow;
- 7) weather phenomena; and
- 8) emergency and search and rescue plans.

Minimum hours for Approach or Area control procedural (300 hours) for 6 trainees

Minimum hours for combined course of Approach and Area control procedural (490 hours) for 6 trainees

(3) approach control surveillance, approach precision radar control and area control surveillance ratings:

The applicant shall meet the requirements specified in (b)(2) in so far as they affect the area of responsibility, and shall have demonstrated a level of knowledge appropriate to the privileges granted, in at least the following additional subjects:

- 1) Principles, use and limitations of applicable ATS surveillance systems and associated equipment; and
- 2) Procedures for the provision of ATS surveillance service, as appropriate, including procedures to ensure appropriate terrain clearance.

Minimum hours for Approach or control surveillance (240 hours) for 6 trainees

Minimum hours for combined course of Approach and Area control surveillance (385 hours) for 6 trainee.

Appendix-B**Curriculum Subjects for Communication, Navigation and Surveillance (CNS)**

This appendix lists the general curriculum subjects required of each CNS course.

Each course shall be designed to acquaint participants with up to date aviation communication concepts, the technical and operational in the field of CNS, the knowledge of operation, troubleshooting and repair of the elements constituent of the system, and aims at enhancing their knowledge in ICAO Annex 10, SARPs in the field of Aeronautical Telecommunication.

(a) Air-ground Communication VHF and UHF

Minimum Hours (60 hours)

Method of training

Group training presentations conducted in classroom formal lectures by subject experts constitute the theoretical foundations of the course, and fault finding and troubleshooting through practices

Contents

- Principles of communication
- Transmitter and receiver technical description
- Fault findings of the transmitter and receiver
- Transmitter and receiver fault repairs
- Diagnose and repair Antenna element fault
- Diagnose and repair power supply system fault
- ICAO Standards for Radio Communication VHF.

(b) Radar Technology

Minimum Hours (150 hours)

Methods of Training

Group training presentations conducted in classroom formal lectures by subject experts constitute the theoretical foundations of the course, and site visit.

Contents

- Concepts common to Primary and Secondary Radar
- Radar Waveguide theory and devices
- Radar microwave Sources
- Primary Surveillance Radar
- Radar Transmitters and Receivers
- Radar Signal Processing and plot extraction
- Radar Display
- Radar Antennas
- Electronic Waveform (ECM & ECCM)
- Conventional and Monopulse Secondary Surveillance Radar
- ICAO Standards for Primary and Secondary Surveillance Radar

(c) Instrument Landing System (ILS) Principles and Operation Training Course

Minimum Hours (60 hours)

Methods of Training

Group training presentations conducted in classroom formal lectures by subject experts constitute the theoretical foundations of the course, and site visit.

Course Outline

- Introduction to Nav aids Systems
- ILS in Brief
- ILS Approach and Landing
- Modulation Concepts and Principles: Amplitude Modulation (AM), Phasor representation of AM, Power in AM Signals, Double Side Band Suppressed Carrier (DSB-SC), Power in DSB-SC Signals.
- ILS Waveforms
- ILS Signal Development and Space Modulation
- Difference in Depth of Modulation (DDM) Definition: Normal and Abnormal Cases
- Sum in Depth of Modulation (SDM) Definition
- Carrier with Side Band (CSB), Side Band Only (SBO) Signals requirements: Amplitude, Low Frequency (LF) Phase, Radio Frequency (RF) Phase.
- Antenna Radiation Concept
- Multiple Antenna Pairs and Image Theory
- Localizer Antenna: Log Periodic Dipole Antenna, Beam Bend Potential
- Null Reference Glide Slope, Side band Reference Glide Slope
- Proximity Effect for Glide Slope, Antenna Offsets, Forward Slope, Sideway Slope.
- Capture Effect Phenomenon
- Capture Effect Glide Slope: Principles and Antenna Power Distribution
- Glide Slope Antenna heights Calculation
- Collocating DME with ILS, Interlocking Two ILS Systems
- Monitoring: Localizer Monitoring, Glide Slope Monitoring
- ICAO Standards for ILS.

Appendix-C

Curriculum Subjects for Aeronautical Information Services/Management (AIS/AIM)

This appendix lists the general curriculum subjects required of AIS/AIM course. The course shall be designed to acquaint participants with up to date aviation Aeronautical Information Services/Management concepts, and aims to enhance their knowledge in ICAO Annex 15, SARPs in the field of Aeronautical Information Services/Management.

A. General

- Definition;
- Common reference systems for air navigation; and
- Miscellaneous specifications.

B. Responsibilities and functions

- State responsibility;
- AIS responsibilities and functions;
- Exchange of aeronautical data and aeronautical information;
- Copyright; and
- Cost recovery.

C. Aeronautical information management (AIM)

- Information management requirements;
- Aeronautical data and aeronautical information validation and verification;
- Data quality specifications;
- Metadata;
- Data protection;
- Use of automation;
- Quality management system; and
- Human factors considerations.

D. Aeronautical Information Publications (AIP)

- Contents;
- General specifications;
- Specifications for AIP Amendments;
- Specifications for AIP Supplements;
- Distribution; and
- Electronic AIP (eAIP).

E. NOTAM

- Origination;
- General specifications; and
- Distribution.

F. Aeronautical Information Regulation and Control (AIRAC)

- General specifications;
- Provision of information in paper copy form; and
- Provision of information as electronic media.

G. Aeronautical Information Circulars (AIC)

- Origination;
- General specifications; and
- Distribution.

H. Pre-flight and post-flight information

- Pre-flight information;
- Automated pre-flight information systems; and
- Post-flight information.

I. Telecommunication requirements**J. Electronic terrain and obstacle data**

- Coverage areas and requirements for data provision;
- Terrain data set — content, numerical specification and structure;
- Obstacle data set — content, numerical specification and structure; and
- Terrain and obstacle data product specifications.

K. Aerodrome mapping data

- Aerodrome mapping data — requirements for provision;
- Aerodrome mapping data product specification; and
- Aerodrome mapping database — data set content and structure.

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Appendix-D
Curriculum Subject Metrological (MET) for Aviation

This appendix lists the general curriculum subjects required of MET for Aviation training course. The course shall be designed to acquaint participants with up to date aviation MET concepts, and aims to enhance their knowledge in ICAO Annex 3, SARPs in the field of aviation MET.

(A) Definition abbreviation and symbols used.

- Definitions
- Terms used with a limited meaning.

(B) General provisions

- Objective, determination and provision of meteorological service;
- Supply, use, quality management and interpretation of meteorological; and information
- Notifications required from operators.

(C) World area forecast system and meteorological offices

- Objective of the world area forecast system;
- World area forecast centers;
- Aerodrome meteorological offices;
- Meteorological watch offices;
- Volcanic ash advisory centers;
- State volcano observatories; and
- Tropical cyclone advisory centers.

(D) Meteorological observations and reports

- Aeronautical meteorological stations and observations;
- Agreement between meteorological authorities and air traffic services authorities;
- Routine observations and reports;
- Special observations and reports;
- Contents of reports;
- Observing and reporting meteorological elements;
- Reporting meteorological information from automatic observing systems; and
- Observations and reports of volcanic activity.

(E) Aircraft observations and reports

- Obligations of States;
- Types of aircraft observations;
- Routine aircraft observations — designation;
- Routine aircraft observations — exemptions;
- Special aircraft observations;
- Other non-routine aircraft observations;
- Reporting of aircraft observations during flight;
- Relay of air-reports by air traffic services units; and
- Recording and post-flight reporting of aircraft observations of volcanic activity.

(F) Forecasts

- Use of forecasts;
- Aerodrome forecasts;
- Landing forecasts;
- Forecasts for take-off; and
- Area forecasts for low-level flights.

(G) SIGMET and AIRMET information, aerodrome warnings and wind shear warnings and alerts

- SIGMET information;
- AIRMET information;
- Aerodrome warnings; and
- Wind shear warnings and alerts.

(H) Aeronautical climatological information

- General provisions;
- Aerodrome climatological tables;
- Aerodrome climatological summaries; and
- Copies of meteorological observational data.

(J) Service for operators and flight crew members

- General provisions;
- Briefing, consultation and display;
- Flight documentation;
- Automated pre-flight information systems for briefing, consultation, flight planning and flight documentation; and
- Information for aircraft in flight.

(K) Information for air traffic services, search and rescue services and aeronautical information services

- Information for air traffic services units;
- Information for search and rescue services units; and
- Information for aeronautical information services units.

(L) Requirements for and use of communications

- Requirements for communications;
- Use of aeronautical fixed service communications and the public Internet — meteorological bulletins;
- Use of aeronautical fixed service communications — world area forecast system products;
- Use of aeronautical mobile service communications;
- Use of aeronautical data link service — contents of D-VOLMET; and
- Use of aeronautical broadcasting service — contents of VOLMET broadcasts.

APPENDIX- E

Guidance Material on Personnel Requirements

Note: this Appendix support the Personnel Requirements included in JCAR Part 176 Paragraph **176.53**

1 Nominated Persons

1.1 Acceptance from CARC will be required for all persons nominated as ANS Training Centers (ANS-TC) Managers.

1.2 CARC acceptance of nominated ANS-TC Managers is based on the applicable Assessment Criteria in Tables APP E-2 and APP E- 3 and the applicant's demonstration of knowledge of the applicable regulations and an understanding of the proposed position.

1.3 Selection of the Managers is the responsibility of the applicable ANS Training Centers. The revised regulation and Guidance Material aims to assist ANS Training Centers to be satisfied that persons within the management structure possess the relevant operational safety competence, and be able to identify any gaps that may exist in the areas of competence for their particular ANS-TC. The size, complexity and scale of training of an ANS-TC will be a component of the training's assessment process. The detailed scope of Managers accountabilities and responsibilities are likely to be affected by this assessment, which shall be aligned with the ANS-TC's QMS.

1.4 Cases for interviews with nominated ANS-TC Managers include the following:

- a) start of trained courses before issuing the first ANS-TC Certificate; or
- b) change of ANS-TC Managers at a Certified ANS-TC.

1.5 Purpose of the interview between CARC and the nominated ANS-TC Post Holder is as follows:

- a) Exchange of information between the intended nominated persons and CARC for the latter to acquire information on the intended work areas and the applicant's competence level so as to verify their suitability for the post(s);
- b) To create good contact and understanding between the both parties, and to come to a mutual conclusion on, if necessary, possible solutions for training and personal development over time; and
- c) CARC process in acceptance of Managers is based on the applicant demonstrating knowledge of the applicable regulations, having an understanding of the role applied for and of the standards required by CARC. The process includes a review of the submitted details to determine the suitability of the person for the role.

2 Competence of Personnel

With focus on the competency of ANS-TC Managers, Assessment Criteria as included in Tables App-C - 1 through 3 have been designed.

- Determination of Personnel Needs and Qualifications

- a) The ANS-TC shall determine the number of required personnel for the planned training.
- b) The ANS-TC shall determine the required personnel qualifications, in accordance with the applicable requirements. A documented system with defined responsibilities shall be in place, in order to identify any need for changes with regard to personnel qualifications.
- c) Documentation shall define the method by which staffing levels are determined in relation to the training courses, maintenance and management of the ANS-TC.
- d) Procedures shall include the mechanisms that ensure only trained and competent personnel undertake the planned tasks and activities assigned to them.

3 Gap Analysis: Personnel Requirements

The ANS-TC shall conduct gap analysis in order to provide an assessment and demonstration of the following:

- a) That the ANS-TC has a sufficient number of qualified personnel for the planned training courses and activities being performed.
- b) Sufficient number of supervisors assigned for defined duties and responsibilities, taking into account the structure of the organisation and the number of personnel employed.
- c) Those personnel involved in the training, maintenance, quality and safety management of the ANS-TC are adequately trained in accordance with the organization's training programme.

Table App E-1
Assessment Criteria for ANS-TC Post Holder:
Accountable Manager

Performance Criteria

- Full control of the human resources required for the training courses authorised to be conducted under the ANS-TC Certificate;
- Full control of the technical resources required for the maintenance and operations authorised to be conducted under the ANS-TC Certificate;
- Full control of the financial resources required for the operations authorised to be conducted under the ANS-TC Certificate;
- Ultimate responsibility and accountability for the establishment, implementation and maintenance of the Quality Management System;
- Authority and accountability for establishment, implementation, communication and promotion of the Quality policy; and
- Authority and accountability for establishment, implementation and maintenance of the organization's competence to learn from the analysis of data collected through its Quality reporting system.

Knowledge Criteria

- Knowledge and understanding of the documents that prescribe relevant ANS-TC Quality standards;
- Understanding of the requirements for competence of ANS-TC management personnel, so as to ensure that competent persons are in place;
- Knowledge and understanding of safety, and quality management systems related principles and practices, and how these are applied within the organisation;
- Knowledge Jordan regulatory framework (Civil Aviation Law No. 8-2018 as amendment);
- Knowledge CARC ANS-TC Certification Process;
- Knowledge CARC Enforcement Process **Supporting Documents** Organisational Structure; and
- Other relevant documents as requested by Authority.

Table App E-2
Assessment Criteria for ANS-TC Post Holder:
ANS training Manager

Performance Criteria

- Manage, monitor and control all the activities at the training center to meet the standards required by JCAR 176;
- Prepare, develop and evaluate the training activities conducted at the training center;
- Upgrade the training methods by applying new training technologies and technique;
- Ensure that sufficient staff with appropriate qualifications are selected and trained;
- Ensure that all instructors are fully trained regularly for competence and that all records pertaining to these personnel are kept up to date;
- Ensure that the exposition manual is amended as required.

Knowledge Criteria

- Should have minimum B.A degree in the related subject;
- Have at least 10 years ATC experience in the field.
- Have a good experience demonstrating strong technical skills with ATC simulation system & procedure.
- Successfully completed an approved OJT and instructor's course;
- Has completed an approved Instructor Training Course (ITC) or equivalent;
- Shall demonstrate the ability to speak English language without accent or impediment as minimum ICAO English Proficiency level 4;
- Be familiar with the relevant Jordanian Civil Aviation Regulations and related ICAO Annexes.
- Understanding of the requirements for competence of ANS-TC management personnel, so as to ensure that competent persons are in place;
- Knowledge Jordan regulatory framework (Civil Aviation Law No. 8-2018 as amendment); and
- Knowledge CARC Enforcement Process **Supporting Documents** Organizational Structure;

Supporting Documents

- Curriculum Vitae;
- Job Description; and
- Proof of relevant Training and Qualifications.

Table App E-3
Assessment Criteria for ANS-TC Post Holder:
Quality Manager

Performance Criteria

- define the quality policy in such a way as to meet the needs of different users as closely as possible;
- set up a quality assurance programme that contains procedures designed to verify that all Training Courses are being conducted in accordance with the applicable requirements, standards and procedures, including the relevant requirements of JCAR Part 176 as amended;
- provide evidence of the functioning of the quality system by means of manuals and monitoring documents;
- Ensure that processes needed for the QMS are established, implemented and maintained;
- Reportable directly to the Accountable Manager on the performance of the QMS and on any need for improvement;

Knowledge Criteria

- Should have minimum B.A degree in the related subject;
- Practical experience and expertise in ANS-TC data, as well as its quality management system with regard to Air Navigation Services provision activities;
- Knowledge of the Exposition Manual;
- Comprehensive knowledge of the applicable requirements in the area of ANSP; and
- CARC Regulatory framework;

Supporting Documents

- Curriculum Vitae;
- Job Description; and
- Proof of relevant Training and Qualifications.



**The Hashemite Kingdom Of Jordan
Civil Aviation Regulatory Commission
Application for Issue or Renewal and/or Amendment ANS Training Centre
Certificate**



1 Organization Details

Legal Name of Organization: (The certificate will be issued in this name)			
Address for Service: (ie, a physical address)			
Tel:		Fax:	
Email:			
Your reference: (order number/contact person or other reference)			

2 Reason for Application - Mark Appropriate Box

Initial issue:

Renewal:

Amendment:

3 Training Courses applied for (check appropriate)

Name of Course		Name of Course		Name of Course		Name of Course	
BASIC AERODROME TRAINING		AERODROME CONTROL TRAINING		APPROACH CONTROL PROCEDURAL TRAINING		AREA CONTROL PROCEDURAL TRAINING	
APPROACH CONTROL SURVEILLANCE TRAINING		AREA CONTROL SURVEILLANCE TRAINING		AIR-GROUND COMMUNICATION TRAINING		SURVEILLANCE TECHNOLOGY TRAINING	
NAVIGATION AIDS TECHNOLOGY TRAINING		AERONAUTICAL INFORMATION SERVICES (AIS) TRAINING		MET. FOR AVIATION TRAINING		OTHERS (SPECIFY)	

4. List of Instructor Persons and their areas of Training

Name	Area Of Training
1.	
2.	
3.	
4.	

Name	Area Of Training
5.	
6.	
7.	
8.	
9.	
10.	

5. Declaration

This application is made for and on behalf of the identified above. I certify that I am empowered by the to ensure that all activities undertaken by the can be financed and carried out to the standard required by the Jordan Civil Aviation Regulatory Commission.

I, the undersigned, certify that all information given in this form "or application" and in any documents and forms attached is true, correct and complete

Full name of (nominated) Accountable Manager:

Signature of (nominated) Accountable Manager:

Date of application:

The completed application together with the appropriate fee and supporting documentation should be submitted to:

**Chief Executive
Civil Aviation Regulatory Commission
Jordan**

6. CARC USE ONLY

1. Received by (Name and signature):	2. Date Received:	3. Date Proposed for Inspection:
4. CARC ANS Inspector (Name and signature):	Signature:	5. Date Inspection Completed:
6. Recommended For: <input type="radio"/> Modification <input type="radio"/> Certificate <input type="radio"/> Disapproval		
7. Date:	8. Invoice No.	ANSSD Director Sig.:

9. Remarks: