



FLIGHT OPERATIONS OFFICER LICENCE

AIR NAVIGATION ORDER

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	NAME	DESIGNATION	SIGNATURE
PREPARED BY	PEL TEAM	Various	
REVIEWED BY	KHALID MEHMOOD	Additional Director Licensing Scrutiny & Processing	
	M. NAEEM IQBAL QURESHI	Director Personnel Licensing	
VERIFIED BY	NADIR SHAFI DAR	Dy. Director General (Regulatory)	
APPROVED BY	HASSAN NASIR JAMY	Director General Civil Aviation Authority	
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A. AUTHORITY

A1. This Air Navigation Order (ANO) is issued by the Director General Civil Aviation Authority, Pakistan in pursuance of the powers vested in him under Rules 4, 45, 46, 47, 340, 342, 347, 348, 354, 355, 357, 359, 360 and all other enabling provisions of Civil Aviation Rules, 1994 (CARs, 94).

B. PURPOSE

B1. The purpose of this Air Navigation Order is to provide information and PCAA policy guidelines for Flight Operations Officer (FOO) applicable regulations, qualification, training and licence requirements.

Note: The term "Flight Operations Officer (FOO)" and "Flight Dispatcher (FD)" shall have the same meanings in this ANO.

C. SCOPE

C1. This ANO relates to the rules concerning flight operations officer (FOO) licensing policy and procedures for the issuance, revalidation and renewal under Parts V and XIX of the Civil Aviation Rules, 1994 and ICAO Annex - 1.

C2. All flight operations officer, wishing to be licensed or who are already licensed shall comply with the instructions contained in this ANO and all relevant air navigation orders.

C3. This ANO also relates to the issue and renewal of FOO - Ground Instructor (FGI) Approval.

C4. Unless contrary intention appears, this ANO shall also be read in conjunction with other personnel licensing ANOs, ASCs, PLM and instructions issued by licensing authority from time to time.

D. DESCRIPTION

D1. INTRODUCTION

D1.1 The ANO provide information for the issue of a FOO licence and its associated ratings for a person to act as flight operation officer in a PCAA approved flight dispatch organization.

D1.2 The DG CAA may grant this licence (FOO) subject to being satisfied that the applicant is a fit person to hold an FOO licence and is appropriately qualified to act in the capacity to which the licence relates.

D1.3 Queries on flight dispatcher licensing requirements should be referred to:

Personnel Licensing Directorate,
Civil Aviation Authority, Pakistan
Jinnah International Airport,
Old Terminal, Karachi.
Telephone: 009221-99072658
Fax: 009221-99242776
Email: director.pel@caapakistan.com.pk

D1.4 'Shall' is used to indicate a mandatory requirement and may appear in this ANO and 'Should' is used to indicate a recommendation.

D1.5 D1.5 Whenever licenses, ratings, approvals or certificates are mentioned in this ANO, these are meant to be valid licenses, ratings, approvals or certificates issued in accordance with licensing ANOs. In all other cases, these documents are specified.

D2. **DEFINITIONS**

The following terms shall have the meanings assigned to them hereunder. Any other term not defined here shall have the same meanings as given in Civil Aviation Ordinance, 1960 and Civil Aviation Rules, 1994.

D2.1 **“Aeroplane”** means A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamics reactions on surfaces. Which remain fixed under given conditions of flight.

D2.2 **“Aircraft”** Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth’s surface.

D2.3 **“Aircraft – category”** means classification of aircraft according to specified basic characteristics e.g. aeroplane, helicopter, glider, free balloon.

D2.4 **“Air navigation order”** An order issued by the Director General, Civil Aviation Authority under the Civil Aviation Rules, 1994.

D2.5 **“Air safety circular”** means circulars issued by the Director General, Civil Aviation Authority under the Civil Aviation Rules, 1994.

D2.6 **“Air operator certificate”** (AOC) means certificate of flight operations issued by the Director General, Civil Aviation Authority under the Part XI Section 3 of Civil Aviation Rules, 1994.

D2.7 **“Approved by the authority”** means approved by the Director General, Civil Aviation Authority or delegated / designated representative.

D2.8 **“Approved person”** means a person approved in writing by the competent authority as designated Examiner / Instructor.

D2.9 **“Aviation training organization”** (ATO) means an organization approved by the licensing authority; for the purpose of ground and/or flying training for issue, renewal and re-validation of a personal licenses, certificate, ratings or an endorsement under the Civil Aviation Rules, 94.

D2.10 **“Commercial air transport operation”** means an aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.

D2.11 **“Competency”** A combination of skill, knowledge and attitudes required to perform a task to the prescribed standards.

D2.12 **“Error management”** The process of detecting and responding to errors with counter measures that reduce or eliminate the consequences of errors and mitigate the probability of further errors or undesired state.

D2.13 **“Flight crew member”** A licensed crew-member charged with duties essential to the operation of an aircraft during a flight duty period.

D2.14 **“Flight plan”** Specified information provided to air traffic services units, relative to an intended flight or portion of flight of an aircraft.

D2.15 **“Human performance”** Human capabilities and limitations which haven’t impact on the safety and efficiency of aeronautical operations.

D2.16 **“Ground training organization”** (GTO) A ground training organization imparting training for the issuance and renewal of FOO with a valid approval from PCAA.

D2.17 **“Licensing Authority,”** means the authority designated by a Contracting State as responsible for the licensing of personnel.

Note: *In the provisions of Annex-1, the licensing Authority is deemed to have been given the following responsibilities by the Contracting State:*

- D2.17.1 assessment of an applicant's qualifications to hold a licence or rating;
- D2.17.2 issue and endorsement of licenses and ratings;
- D2.17.3 designation and authorization of approved persons;
- D2.17.4 approval of training courses;
- D2.17.5 approval of the use of flight simulation training devices and authorization for their use in gaining the experience or in demonstrating the skill required for the issue of a licence or rating; and
- D2.17.6 validation of licenses issued by other Contracting States.
- D2.18 **"Pilot-in-command"** (PIC) means the pilot designated by the operator, or in the case of general aviation, owner, as being in command and charged with the safe conduct of flight.
- D2.19 **"Rating"** means an authorization entered on or associated with a licence or certificate and forming part thereof, stating special conditions, privileges or limitations pertaining to such license or certificate.
- D2.20 **"Renewal"** means getting the licence or certificate renewed by meeting the renewal requirements after the expiry of the validity period of licence or certificate.
- D2.21 **"State safety management program"** an integrated set of regulations and activities aimed at improving safety.
- D2.22 **"Threat management"** The process of detecting and responding to threats with counter measures that reduce or eliminate the consequences of threats amid mitigate the probability of errors or undesired states.
- D2.23 **"Revalidation"** means getting the licence or certificate revalidated, before the licence or certificate validity period has expired, by meeting the revalidation requirements.

D3. **APPLICABILITY**

D3.1 This guidance and policy material applies to all Pakistan licensed air operators, foreign operators based in Pakistan, approved training organizations and holders of PCAA flight operations officer licenses. This ANO will also apply to applicants who hold foreign flight dispatcher licence seeking reciprocal recognition in Pakistan.

D4. **BACKGROUND AND OBJECTIVES**

D4.1 A flight dispatcher or flight operations officer is employed to provide supervision of flights and act as a close link between aircraft in flight and the ground services and between aircrew and the operator's ground staff. The PCAA CARs 94 and ICAO Annex 6 – Operations of Aircraft, Part 1 & 3 – international commercial air transport, require that operators only assign or use authorized and licensed flight operations officers to exercise operational control over its flights.

D4.2 To fulfill these requirements, operators and training organization's flight dispatcher's training and qualification program for the issuance of flight operations officer's licence must be approved by the PCAA. The requirements in respect of knowledge, experience and skill and age limits, for the certification of flight dispatcher are in accordance with ICAO, Annex 1. The ICAO Annex 6 specifications will be used as a basis for approving the operator's flight watch systems.

D5. **APPLICABLE REGULATIONS**

D5.1 An organization shall not conduct training for flight operations officers unless the PCAA personnel licensing office have issued an appropriate approval for the conduct of training. The approval shall specify the type of training with regard to initial, recurrent and on-the job training.

D5.2 A person shall not act as a flight operations officer without a valid and appropriate PCAA licence / validation / temporary authorization.

D5.3 Flight operations officer licence holders cannot exercise the privileges of their licence has not been renewed prior to the expiry date.

D6. **LICENSING POLICY**

D6.1 **ELIGIBILITY** PCAA flight operations officer licence is issued only to those persons who undergo the complete training at an approved PCAA flight dispatch training organization and meets the knowledge, skill and experience requirements as given in this ANO.

D6.2 **AGE** The applicant shall not be less than 21 years of age.

D6.3 **EDUCATION** The applicant shall hold an educational qualification of at least Higher Secondary School Certificate or equivalent.

D6.4 **ENGLISH LANGUAGE PROFICIENCY** The applicant shall be capable of speaking, reading, writing and understanding English language.

D6.5 **NO OBJECTION CERTIFICATE (NOC)** Serving personnel from armed forces and government departments shall provide NOC from their organization.

D7. **GROUND TRAINING REQUIREMENT**

KNOWLEDGE The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight operations officer licence in at least the following subjects:

D7.1 **AVIATION LAW**

D7.1.1 Rules and regulations relevant to the holder of a flight operations officer licence;

D7.1.2 Appropriate air traffic services practices and procedures enforced in Pakistan; Contents of operations specifications;

D7.2 **AIRCRAFT GENERAL KNOWLEDGE**

D7.2.1 Principles of operation of aeroplane power-plants, systems and instruments;

D7.2.2 Operating limitations of aeroplanes and power-plants;

D7.2.3 Minimum equipment list, MMEL, CDL, DDPG;

D7.3 **FLIGHT PERFORMANCE CALCULATION AND PLANNING PROCEDURES**

D7.3.1 Effects of loading and mass distribution on aircraft performance and flight characteristics; mass and balance calculation;

D7.3.2 Operational flight planning; fuel consumption and endurance calculations, alternate airport selection procedures, en-route cruise control and extended range operation;

D7.3.3 Preparation and filing of air traffic services flight plans;

D7.3.4 Basic principles of computer-assisted planning systems;

D7.3.5 Consultation of aircraft manuals, operations specifications if required;

D7.4 **METEOROLOGY**

D7.4.1 Aeronautical meteorology; the movement of pressure systems; the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing phases;

D7.4.2 Interpretation and application of aeronautical meteorological reports, charts and forecasts; codes, symbols and abbreviations; use of, and procedures for obtaining meteorological information;

D7.5 **NAVIGATION**

D7.5.1 Principles of air navigation with particular reference to instrument flight;

D7.5.2 Knowledge of modern/advance navigation systems and equipment;

D7.6 **OPERATIONAL PROCEDURES**

D7.6.1 Use of aeronautical documentation;

D7.6.2 Operational procedures for the carriage of freight and dangerous goods;

D7.6.3 Procedures relating to aircraft accidents; and incidents; emergency flight procedure;

D7.6.4 Procedures relating to unlawful interference and sabotage of aircraft;

D7.7 **PRINCIPLES OF FLIGHT**

D7.7.1 Principles of flight relating to appropriate category of aircraft;

D7.8 **RADIO COMMUNICATION**

D7.8.1 Procedures for communicating with aircraft and relevant ground stations;

D7.8.2 Knowledge about communication facilities and equipment; and

D7.9 **HUMAN PERFORMANCE**

D7.9.1 Human performance relevant to dispatch duties including principles of threat and error management;

D8. **EXPERIENCE AND EXEMPTION**

D8.1 The applicant shall have gained the following experience:

D8.1.1 Satisfactorily completed a course of approved training;

D8.1.2 The following experience may be accepted by PCAA with or without additional requirements and limitations. When accepted and approved, an applicant shall be required to appear in the final examination (written and oral / practical)

D8.1.2.1 A total of two years of service in any one or in any combination of the capacities specified below, if in any combination of experience the period serviced in any capacity shall be at least one year:

D8.1.2.1.1. A flight crewmember in air transportation; holding or have held a pilot's licence with verifiable experience; a valid and current CPL with IR or ATPL may be accepted for the final examination (written and oral / practical).

D8.1.2.1.2. Applicants with a CPL/IR or ATPL that is not current and valid shall be required to undergo an abridged course followed by the final examination (written and oral / practical)

D8.1.2.1.3. A meteorologist in an organization dispatching aircraft, such applicant shall be required to undergo an abridge course followed by the final examination (written and oral/practical)

D8.1.2.1.4. An air traffic controller (licensed); or a technical supervisor of flight operations, such applicant shall be required to undergo an abridge course followed by the final examination (written and oral/practical)

D8.1.2.1.5. At least two years as an assistant in the aircraft dispatch, such applicant shall be required to undergo an abridge course followed by the final examination (written and oral/practical).

D8.1.3 The under mentioned licence holders shall be exempted from following FOO paper: Aircraft general knowledge and principle of flight; Radio navigation and instrumentation; Instrument procedures; and VFR & IFR communication.

D8.1.3.1 A valid ATPL holder;

D8.1.3.2 A valid CPL holder with IR;

D8.1.3.3 The exemption from the FOO training course shall be withdrawn in case, an applicant fails to clear the PCAA examinations in maximum of three attempts.

D9. **SKILL**

D9.1 The applicant shall have demonstrated the ability to the PCAA in the following areas of knowledge and practical ability:

D9.1.1 **KNOWLEDGE**

D9.1.1.1 Contents of AOC and operations specification;

D9.1.1.2 Content of operations manual;

D9.1.1.3 Knowledge and application of airway manual, AIP;

D9.1.2 **PRACTICAL ABILITY**

D9.1.2.1 Make an accurate and operationally acceptable weather analysis from a series of daily weather maps and weather reports; provide an operationally valid briefing on weather conditions prevailing in the general neighborhood of a specific air route; forecast weather trends pertinent to air transportation with particular reference to destination and alternates.

D9.1.2.2 Determine the optimum flight path for a given segment and create accurate manual or computer generated flight plans.

D9.1.2.3 D8.1.2.3. Provide operating supervision and all other assistance to a flight in actual or simulated adverse weather conditions as appropriate to the duties of a holder of flight operation officer licence

D10. **FOO LICENCE ISSUE REQUIREMENTS**

D10.1 A licence shall only be issued when the following conditions are met;

D10.2 The applicant has successfully completed a course of approved training (initial) and passed the appropriate knowledge and practical tests conducted by PCAA.

D10.3 Has successfully completed a course of approved training (abridged / refresher) and passed the appropriate competency checks. This is applicable only to applicants who meet the experience requirements stated at D7 above. The PCAA personnel licensing office shall decide if the experience of an applicant can be considered for an abridged or refresher course.

D10.4 Has satisfactorily completed the 90 days on the job training before applying for the issue of a flight operations officer licence.

D10.5 The applicant meets the minimum age requirements for the initial issue of the licence, which is 21 years.

D10.6 The applicant must provide a certificate issued by the FDTO/GTO declaring the successful completion of the course.

D10.7 A temporary authorization shall be issued to applicants successfully a PCAA approved flight dispatch training course. The temporary authorization shall permit the applicant to undergo the 90 days on the job training before the issue of the flight dispatcher licence.

D10.8 The applicant provides an OJT completion certificate.

D10.9 The applicant holds an acceptable valid foreign licence for which reciprocal recognition applies, passed a PCAA examination or has successfully attended a recurrent course followed by a competency test conducted by a PCAA approved training organization. PCAA personnel licensing office shall be the only authority to declare if a foreign licence is eligible for foreign recognition.

D10.10 The initial application must be made using CAAF-070-LCXX and accompanied by one colored photograph.

D10.11 The applicant has successfully passed the PCAA final oral assessment test.

D11. **RECIPROCAL RECOGNITION**

D11.1 **ELIGIBILITY**

D11.1.1 The holder of a foreign licence may be granted reciprocal recognition of that licence provided:

D11.1.1.1 The FOO licence is issued by an ICAO Contracting State;

D11.1.1.2 The licence holder must provide a verification letter from the country of origin of licence;

D11.1.1.3 The licence holder has successfully passed PCAA examination and attended a recurrent training course followed by a competency test;

D11.1.1.4 The applicant has a verifiable record of work experience; and

D11.1.1.5 The applicant can read, write, speak and understand the English language.

D11.2 **VALIDATION AND APPROVAL LETTER**

D11.2.1 To permit a foreign licence holder to exercise the privileges of their foreign licence in the Pakistan without holding a PCAA licence or for a foreign operator to dispatch Pakistan registered aircraft overseas, a letter of validation or approval may be issued by the PCAA. The maximum validity for validation is 90 days whilst for a letter of approval will be normally 24 months.

D11.2.2 A validation may be further extended under extenuating circumstances.

D12. **FLIGHT DISPATCHER TRAINING ORGANIZATION**

D12.1 The flight dispatcher training organization (FDTO/GTO) conducting the initial / abridge / refresher flight dispatcher / operations course shall hold a valid approval from PCAA.

D12.2 The flight dispatch center providing FOO on-job-training (OJT) shall hold a valid approval from PCAA as a flight dispatch center and an additional authorization to conduct the FOO on-job-training (OJT).

D13. **THEORETICAL KNOWLEDGE EXAMINATION**

D13.1 For initial issue of FOO licence, an applicant shall be required to pass all FOO examinations papers.

D13.2 For re-validation of an expired FOO licence, an applicant shall pass FOO revalidation exams.

D13.3 **SYLLABUS OF FOO:** Refer to ANO-002-LCXX for detail information; including syllabus, recommended study and training materials for FOO theoretical knowledge examinations.

D14. **ON JOB TRAINING (OJT)**

D14.1 The applicant for issue of FOO licence shall have completed on the job training (OJT) under supervision of a licensed flight operations officer for at least 90:00 days within 06 months immediately preceding the date of application in an approved flight dispatch centre. A prior authorization is required from the personnel licensing office to commence the on the job training; and the details of the on the job training shall be recorded on form CAAF-075-LCXX.

D14.2 The flight dispatch center authorized to supervise the on the job training of an applicant shall fully satisfy itself with regard to the competency of the applicant before issuing the OJT completion certificate, which is the eligibility criteria for undergoing the final oral/skill test with the PCAA.

D14.3 The flight dispatch center may extend the 90:00 days on the job training period if the knowledge and practical ability of the applicant is not up to the required standard. An unusually high failure rate in the PCAA oral/skill test, following the on the job training, may lead to the cancellation of on the job training approval to the flight dispatch center.

D14.4 The flight dispatch center authorized to supervise the on the job training of an applicant shall ensure that at least ONE OJTI / senior FOO is available in every shift, so that he can monitor the on the job training and progress of trainee.

D14.5 During on the job training, an applicant shall have completed:

D14.5.1 **Domestic Dispatch Operation:** Dispatch under supervision at least five domestic flights;

D14.5.2 **International Dispatch Operation:** Dispatch under supervision at least five international flights.

D15. **ON THE JOB TRAINING INSTRUCTOR**

D15.1 A person having a considerable working experience as a flight operations officer and has been designated as senior FOO / shift In-charge by operator at an approved flight dispatch centre can be considered as OJTI.

D16. **PRIVILEGES OF FLIGHT OPERATION OFFICER LICENCE**

D16.1 The privileges of a FOO licence are to:

D16.1.1 Assist the pilot-in-command in flight preparation and provide the relevant information required; and

D16.1.2 Prepare operational and ATS flight plans, sign the document when applicable and file the ATS flight plan with the appropriate ATS facility; and

D16.1.3 Furnish the pilot-in-command while in flight, by appropriate means, with information that may be necessary for the safe conduct of flight; and

D16.1.4 In the event of an emergency, initiate such procedures as may be outlined in the operations manual.

D17. **LIMITATIONS OF FOO LICENCE**

D17.1 A flight operations officer shall not take any action, except for the safety of the flight that conflicts with the procedures established by:

D17.1.1 Operations manual;

D17.1.2 Operations specifications attached to the air operator certificate;

D17.1.3 Air traffic control service;

D17.1.4 Meteorological service;

D17.1.5 Communications services;

D17.2 Dispatch an aircraft of a type for which he/she has not received performance training;

D17.2 Shall not perform duty unless within the preceding 24 months he/she has received recurrent training (refresher) in accordance with an approved training program conducted by an FGI;

D17.3 Shall not be assigned any duty if he/she has been absent from such duty for 12 consecutive months unless he has received re-current training by the operator; and

D17.4 A flight operations officer shall not dispatch an MNPS flight unless he/she has successfully completed an approved MNPS course with a ground training organization and has dispatched a minimum of 01 MNPS flight under supervision; and

D17.5 A flight operations officer shall not dispatch an ETOPS flight unless he/she has successfully completed an approved ETOPS course with a ground training organization; and has dispatched a minimum of one ETOPS flight under supervision.

D18. **RECOMMENDATIONS**

D18.1 A flight operations officer should not be assigned duty unless that officer has:

D18.1.1 Made within the proceeding 12 months, at least a one-way familiarization flight on the flight deck of an aircraft over any area in which that individual is authorized to dispatch flights. The flight should include landings at as many aerodromes as practicable;

D18.1.2 A flight operation officer assigned to duty should maintain complete familiarization with all features of the operation, which is pertinent to such duties.

D18.2 **MEDICAL:** The operators shall ensure that the FOO employed with them is physically and mentally fit. He shall be able to sit, walk, speak with clarity and be able to work in noisy, humid and non-environmentally controlled conditions. Specific vision abilities shall include near vision, distance vision and color vision.

D18.3 **SECURITY CLEARANCE:** It shall be the responsibility of the operators to ensure that the FOO licence holders employed with them have been security cleared in accordance with government regulations.

D19. **VALIDITY OF FLIGHT OPERATION OFFICER LICENCE**

D19.1 The Flight Operations Officer (FOO) licence shall be valid for 5 years, subject to meeting the licence currency, refresher training and medical fitness requirements.

D20. **FOO LICENCE REVALIDATION REQUIREMENTS**

D20.1 A FOO licence may be revalidated provided the applicant has performed duties as a FOO for a minimum period of 90 days in the preceding 06 months with a recognized flight dispatch centre;

D20.2 Has completed minimum period of 05 days on the job training with a recognized flight dispatch centre. A prior authorization is required from the personnel licensing directorate to commence the on the job training; and the details of on the job training shall be recorded on form CAAF-075-LCXX.

D20.3 The requirements concerning renewal process, lapsed/expired licence procedures, lost or stolen licence and carriage of licence are the same as flight crew licenses requirements.

D21. **FOO LICENCE RENEWAL REQUIREMENTS**

When an FOO licence has expired, the holder shall meet the following requirements:

D21.1 **Within 06 months of expiry of FOO licence:**

D21.1.1 Pass an oral/skill assessment test (CAAF-074-LCXX) and

D21.1.2 Meet the renewal requirements.

D21.2 **More than 06 months from the date of expiry of FOO licence:**

D21.2.1 Pass FOO revalidation exam and

D21.2.2 Meet the renewal requirements.

D21.3 **More than 12 months from the date of expiry of FOO licence:**

D21.3.1 Pass full set of FOO theoretical knowledge exams;

D21.3.2 Pass approved FOO refresher course;

D21.3.3 Complete 15 days of OJT at an approved flight dispatch centre; and

D21.3.4 Meet the licence renewal requirements.

D21.4 Holder of an expired FOO licence but with a verifiable record of continuous job in flight dispatch centre of a recognized foreign operator and holding certificate / licence of the state may be given a relaxation of renewal requirements to one-step lower.

D21.5 Holder of an expired FOO licence for not more than 60 months and holding valid CPL/IR or ATPL shall be required to meet the renewal requirements; and oral/skill assessment test for renewal of his FOO licence.

D21.6 Holder of an expired FOO licence for more than 60 months and holding valid CPL/IR or ATPL may be given relaxation of renewal requirements to one-step lower.

D22. **FOO GROUND INSTRUCTOR (FGI)**

D22.1 **ELIGIBILITY**

D22.1.1 The Applicant shall:

D22.1.1.1 Hold a valid flight operation officer licence or

D22.1.1.2 Hold or has held an airline transport pilot licence or

D22.1.1.3 Hold or has held a commercial pilot licence or

D22.1.1.4 Be a qualified military pilot with appropriate licence and

D22.1.1.5 Minimum three years of working experience as FOO in an approved flight dispatch center /airline.

D22.1.1.6 A part time employee may be employed, with the approval of PCAA, having qualification and experience in any of the specific FOO subjects (e.g. meteorology, theory of flight, navigation, dangerous goods). Such an applicant, if approved, shall impart instruction only in the subject for which he holds the qualification.

D22.2 **APPLICANT STATUS**

D22.2.1 The FDTO/GTO shall have a minimum of two full time employees as FGI for conducting FOO courses. Subject specialist and part-time instructors shall not be considered as FGI.

D23. **FGI APPROVAL REQUIREMENTS**

The applicant shall meet FGI approval requirements in the sequence as given below:

D23.1 Meet the eligibility criteria as given in D21.1;

D23.2 Passed the PCAA instructional technique exam;

D23.3 Passed the FOO theoretical knowledge examination unless already passed, part time employee in a specific subject shall appear only in the specific subject examination;

D23.4 Carry out five days of OJT at an approved on the job training center unless holds a valid FOO licence or is a part time employee on a specific subject;

D23.5 Has successfully undergo the supervised teaching experience;

D23.6 Has been given satisfactory skill assessment test report by the supervising FGI; and

D23.7 Has been successfully assessed for skill level (demonstration lecture / interview by CAA).

D24. **SUPERVISED TEACHING EXPERIENCE FOR FGI**

D24.1 The applicant shall have conducted two FOO initial courses in the following order:

D24.2 The First course, which will be conducted by a qualified instructor, shall be participated on a full time basis by the trainee FGI. During the entire period of the course, the applicant shall assist the qualified instructor in preparing instructional course notes, setting examination questions, and conduct selected portions (20%-30%) of the course syllabus in presence of the supervising FGI.

D24.3 The Second course shall be entirely conducted by the trainee FGI in presence of the supervising FGI, who shall supervise the class on full time basis. This course will be conducted under intimation to the PCAA.

D24.4 After satisfactory completion of the above two courses, the trainee FGI will be issued with a 'Satisfactory skill test report' by the supervising FGI on the basis of which PCAA will approve the FGI after monitoring a demonstration lecture and interview of trainee FGI.

D25. **SUBMISSION OF DOCUMENTS – FGI APPROVAL**

For issue of FGI approval, the FDTO/GTO shall submit the following documents:

- D25.1 Application from the FDTO/GTO (including employment contract);
- D25.2 Photograph of applicant;
- D25.3 Copies of education / qualification / experience certificates as evidence;
- D25.4 Copies of licenses, foreign qualifications and courses, if applicable;
- D25.5 Copy of CNIC;
- D25.6 Copy of passport (foreign nationals only);
- D25.7 No Objection Certificate (NOC) Armed Force / Government Department, if applicable;
- D25.8 Result of CAA instructional technique course;
- D25.9 FOO OJT record (CAAF- 075-LCXX), if applicable;
- D25.10 Skill test report from the supervising FGI; and
- D25.11 Fee voucher / authorization, where applicable.

D26. **PRIVILEGES OF FOO GROUND INSTRUCTOR**

A1.1 A FGI will exercise the privilege of conducting / teaching FOO courses (initial / abridge / refresher) within the conditions and limitations contained in the PCAA approval.

D27. **VALIDITY OF FGI APPROVAL**

D27.1 An FGI approval will be valid for 01 year provided the holder is medically fit and is on a full time employment with a FDTO/GTO. Renewal of FGI approval is subject to assessment and previous year / course appraisal performance.

D28. **SUBMISSION OF DOCUMENTS - FOO LICENCE**

D28.1 **For Issue of FOO licence**

D28.1.1 For issue of FOO licence an applicant shall submit the following documents:

- D28.1.1.1 Application Form CAAF-070-LCXX;
- D28.1.1.2 Copies of educational certificates (duly verified from concerned Board / University);
- D28.1.1.3 Copies of certificates of higher education, other licenses, foreign qualifications and courses may also be attached;
- D28.1.1.4 Copy of CNIC;
- D28.1.1.5 Copy of passport (foreign nationals only);
- D28.1.1.6 Color photographs;
- D28.1.1.7 No Objection Certificate (NOC) Armed Force/Government Department, if applicable;
- D28.1.1.8 Flight dispatch training course completion certificate;
- D28.1.1.9 OJT certificate from flight dispatch centre;

D28.1.1.10 FOO OJT record (CAAF- 075-LCXX).

D28.1.1.11 Skill test report (CAAF-074-LCXX).

D28.1.1.12 Copies of two operational flight plans for the flights dispatched and signed by the applicant and supervisor.

D28.1.1.13 Fee voucher / Authorization where applicable;

D28.2 For Renewal / Revalidation of FOO licence

D28.2.1 For renewal / revalidation of FOO licence an applicant shall submit the following documents:

D28.2.1.1 Application Form CAAF-070-LCXX;

D28.2.1.2 Job experience certificate from an employer or OJT certificate from flight dispatch centre;

D28.2.1.3 OJT record (CAAF- 075-LCXX);

D28.2.1.4 Flight operation officer licence (CAAF-071-LCXX);

D28.2.1.5 Oral / skill test report (CAAF-074-LCXX) or technical result as applicable;

D28.2.1.6 Copies of two operational flight plans for the flights dispatched and signed by the applicant and supervisor;

D28.2.1.7 Fee voucher / Authorization where applicable;

D29. SUSPENSION / REVOCATION / CANCELLATION OF LICENCE AND IMPOSITION OF FINANCIAL PENALTY

D29.1 In case of any violation or failure in compliance of Civil Aviation Rules, 1994 or provision of this ANO, the licence shall be subject to suspension, revocation, cancellation thereof or, in the alternative, imposition of financial penalty as per rules of CARs, 94.

D29.2 Applicant shall not make, either orally or in writing. A statement that is false or misleading.

D29.3 It is the responsibility of the licence holder and operator to ensure the licence and recurrent training requirements remain valid.

D30. FEE SCHEDULE FOR FOO LICENCE

D30.1 The fee schedule for licensing and examination shall be given in Air Navigation Order ANO-021-LCXX.

E. EVIDENCES (ACRONYMS / RECORDS / REFERENCES)

E1. ACRONYMS

ANO	:	AIR NAVIGATION ORDER
AOC	:	AIR OPERATOR CERTIFICATE
ATPL	:	AIRLINE TRANSPORT PILOT LICENCE
ATS	:	AIR TRAFFIC SERVICES
CAAF	:	CAA FORMS
CARs	:	CIVIL AVIATION RULES
CDL	:	CONFIGURATION DEVIATION LIST
CNIC	:	COMPUTERIZED NATIONAL IDENTITY CARD
CPL/IR	:	COMMERCIAL PILOT LICENCE/INSTRUMENT RATING
DDPG	:	DISPATCH DEVIATION PROCEDURE GUIDE
ETOPS	:	EXTENDED RANGE TWIN ENGINE OPERATIONS
FD	:	FLIGHT DISPATCHER

FDTO	:	FLIGHT DISPATCHER TRAINING ORGANIZATION
FGI	:	FOO – GROUND INSTRUCTOR
FOO	:	FLIGHT OPERATIONS OFFICER
GTO	:	GROUND TRAINING ORGANIZATION
ICAO	:	INTERNATIONAL CIVIL AVIATION ORGANIZATION
MEL	:	MINIMUM EQUIPMENT LIST
MMEL	:	MASTER MINIMUM EQUIPMENT LIST
MNPS	:	MINIMUM NAVIGATION PERFORMANCE SPECIFICATION
OJT	:	ON THE JOB TRAINING
OJTI	:	ON JOB TRAINING INSTRUCTOR
PCAA	:	PAKISTAN CIVIL AVIATION AUTHORITY
SMS	:	SAFETY MANAGEMENT SYSTEM
SSP	:	STATE SAFETY PROGRAM

E2. **RECORDS**

E2.1	Application Form	(CAAF-070-LCXX)
E2.2	Flight Operation License	(CAAF-071-LCXX)
E2.3	Oral/Skill Test Report	(CAAF-074-LCXX)
E2.4	OJT Record	(CAAF-075-LCXX)

E3. **REFERENCES**

E3.1	ANO-002-LCXX
E3.2	ANO-007-LCXX
E3.3	ICAO Annex 1 – Personnel Licensing
E3.4	ICAO Annex 6 – Operations of Aircraft, Part 1 & 3
E3.5	ICAO Doc. 7192-Part D-3
E3.6	Civil Aviation Rules, 1994

IMPLEMENTATION

This Air Navigation Order shall be implemented with immediate effect from 1st October 2020 and supersedes ANO-012-LCXX-2.0 dated 20th May 2011.

(HASSAN NASIR JAMY)
Director General,
Civil Aviation Authority

Dated: September, 2020

(M. NAEEM IQBAL QURESHI)
Director Personnel Licensing

Dated: September, 2020

ATTACHMENT – A

INSTRUCTOR EVALUATION CHECKLIST

Name	Completed By
Date	

Expected Performance	Indications for Performance	Yes	No	Not Applicable
1. Be prepared for Teaching	– Appears organized and confident			
	– Has course materials on hand and is well prepared			
	– Is able to use training media properly			
	– Does not constantly refer to notes			
	– Is able to answer most topic-related questions			
2. Demonstrate Proper Non Verbal Communication Skills	– Shares eye contact with all trainees			
	– Smiles from time to time			
	– Uses unobtrusive gestures to clarify or to give emphasis			
	– Maintains proper posture by standing erect and leaning forward			
3. Demonstrate Proper Vocal Qualities	– Without shouting, is easily heard by all trainees			
	– Maintains good articulation by pronouncing words clearly			
	– Varies voice pitch up and down to maintain trainees attention			
	– Maintains appropriate rate of speech			
	– Maintains a tone conveying positive emotions			
4. Administer the Course as Designed	– Follows the instructor guide conscientiously			
	– Keeps to the schedule of modules			
	– Uses training aids as specified in the guide			
5. Encourage Trainee Participation	– Asks question			
	– Encourages trainee questions			
	– Listens attentively and acknowledges trainee questions and comments			
	– Answer questions graciously without sarcasm			
	– Provides equal opportunities for performance			
	– Rewards good performance			
6. Demonstrate Proper Class Management	– Assist trainees who seem fearful or have difficulties			
	– Is in control of class at all times			
	– Keeps discussions on track and within time Schedule			
	– Maintains order and progress in spite of distractions			
	– Major breaks, start and end times are respected by all			
	– Knows how to manage problem trainees			

ATTACHMENT – B

THE FOO/FD BASIC COURSE

1. **INTRODUCTION:**

This Air Navigation Order provides only a brief introduction to the FOO/FD Basic Ground Course. The FTO/GTO applying for the Approval from the CAA for conducting the FOO/FD Basic Ground Course are advised to consult the ICAO Training Manual Doc 7192-AN/857 Part D-3 that provides the detailed training requirements. The ATO is required to break down the training requirements down to the detailed contents of each lecture.

2. **FUNCTIONS OF A FOO/FD:**

A flight operations officer/flight dispatcher (FOO/FD) is employed to provide supervision of flight and to act as a close link between aircraft in flight and the ground services, and also between the air crew and the operator's ground staff.

3. **TRAINING REQUIREMENTS:**

The principal duties of the flight operations officer/flight dispatcher (FOO/FD) are as under:

Assist the pilot-in-command in flight preparation and provide the relevant information required;

Assist the pilot-in-command in preparing the operational and ATS flight plans, sign when applicable and file the ATS flight plan with the appropriate ATS unit;

Furnish the pilot-in-command while in flight, by appropriate means, with information which may be necessary for the safe conduct of flight; and

In the event of an emergency, initiate such procedures/actions as may be outlined in the operations manual.

The FOO/FD relieves the pilot-in-command of a considerable burden by providing him with the opportunity to consult on critical and non-critical issues with professionals who are familiar with all factors bearing on an operation and have the knowledge of the whole network of operations of which any particular flight is only a part.

During flight, a continued assessment of flight conditions, the monitoring of fuel adequacy and the recommendation of alternative plans such as diversion necessitate an extension of the pre-flight duties throughout the course of the actual flight operation. The advent of improved ground/air communications allows the FOO/FD to relay the concerned information to the aircraft received after it has become airborne, thus increasing the value of the "in-flight" assistance.

The FOO/FD not only contributes to the safety and regularity of flight operations but also makes a positive contribution to the economy and efficiency of aircraft operation by improving the payload, reducing excessive fuel reserve, positioning or repositioning the aircraft more efficiently, and saving flying hours by reducing the number of abortive flights. The FOO/FD must constantly know the position and monitor the progress of all flights in his area, and this involves a constant process of analysis, evaluation, consultation and decision-making. The FOO/FD must at all times have the courage of his convictions and let nothing influence him contrary to his better judgment.

In applying these basic philosophies and, in particular, bearing in mind the need to keep the aircraft operating safely and efficiently, the FOO/FD must always:

- Plan conservatively;
- Failing normal operation, plan so as to give the best alternative service; and
- Keep flights operating on schedule in so far as possible

Planning must be based upon realistic assumptions since the inevitable results of over optimism are delays, inconvenience to passengers and uneconomical utilization of the aircraft, all of which can affect the safety of operation.

In preparing the necessary basic material and criteria that will help the pilot-in-command decide on some of the essential features of each flight, the FOO/FD must:

- Consult with the meteorological office and refer to meteorological information, as necessary.
- Issue information concerning operations plans to the appropriate departments of the operator's organization.
- Issue such instructions concerning aircraft and crew utilization as are necessary to the appropriate departments of the operator's organization.
- Consider with the pilot-in-command the existence of and method of ensuring compliance with, noise abatement procedures.
- Ascertain load requirements.
- Determine load availability.
- Outline to the pilot-in-command what may be expected in the way of en-route and terminal weather, explain how other flights have been planned or what they have encountered en route, indicating their altitude, procedure, ground speed, etc., and offer suggestions that may be of help to the pilot-in-command in his flight planning.
- Advise the pilot-in-command on the routes, altitudes, tracks and technical stops that will be necessary and what alternate aerodromes are considered suitable for the various terminals, and why.
- Determine fuel requirements, aircraft gross weight and balance (the pilot-in-command makes an independent calculation).
- Bring to the pilot-in-command's attention any irregular operation of airport, airway, navigation or communication facilities, with particular regard to noise curfews affecting the availability of airports and
- Outline what may be expected in the way of delays to or irregularities in the flight while en route or what is expected of other flights operating over the route at the same time.
- During the in-flight stage, the FOO/FD must be ready to assist the pilot-in-command, for example:
 - by issuing such instructions concerning revised plans for aircraft and crew utilization as are necessary. The appropriate departments of the operator's organization, if a diversion, flight return, en-route delay, or cancellation occurs.
 - by recommending revised routes, altitudes and alternates.
 - by advising the pilot-in-command of commercial and technical considerations of which he could not be aware and which could influence operational decisions, such as enforced diversion to an alternate destination.
 - by monitoring adequacy of remaining fuel and
 - by supplying or arranging for the supply of supplementary information (including significant weather information, irregularities in operation of navigation and communication facilities, etc.) to the pilot.

When such irregularities in flight operations occur, the FOO/FD must look far ahead and consider the many factors involved in order to determine the most practical plan or solution. Some of the main factors are as follows:

- How long will the flight be delayed or when is it expected to operate?

- How long can the flight be delayed? The exigencies of crew flight time limitation legislation render this consideration one of the critical factors in flight departure delays or flight time extension. The possible need to warn a fresh crew or to revise the flight schedule must be foreseen and planned for.
- In the event that the flight is delayed beyond the maximum limit established or is cancelled, what is the best alternative for passengers and cargo?
- How will the delay affect other sections of the airline and can they keep operating on schedule?
- Is there an aircraft available to originate the flight at the next terminal ahead and what is the most practical time to originate?
- What is the second best point to originate the flight?
- What is the latest time the flight can originate and still allow necessary placement of aircraft?
- Is there revenue available at the time origination is most desired?
- If necessary to cancel, what is the best time in order to fit in with alternative transportation?
- How can the plans of an FOO/FD be integrated by the FOO/FD who will next handle the flight?

In the event of a security incident on an aircraft, the FOO/FD assumes significant responsibilities for the operational aspects of any actions initiated from the ground. He must also be prepared to render the pilot-in- command and his crew every possible assistance during the emergency.

Delays in and irregularities of operation often upset crew members and passengers and may significantly affect aircraft cycles. Therefore, it is necessary for the FOO/FD to check closely with the operator's departments responsible for crew and aircraft routing in order to maintain a well- balanced positioning of crew and aircraft for the smooth operation of all flights.

4. **TYPES OF TRAINING:**

To cover the various backgrounds of trainees, it is recommended that training is divided into two phases as follows:

- Phase I consists of basic knowledge; its completion ensures that a trainee has the necessary background to proceed with phase two of the training.
- Phase II consists of applied practical training and route experience.

Trainees who do not have previous aviation experience will have to undergo the complete training program as recommended in phase one. Trainees who have had suitable aviation experience, however, may not need to undertake this complete programme; for example, a professional pilot, a flight navigator, an air traffic controller, or a flight radio operator can be assumed to have, at least, partially completed phase one if they have been actively employed in these occupations within the past few years. In such cases, training institutes, with the approval of the CAA, are encouraged to apply the necessary flexibility in arranging appropriate training courses, emphasizing subjects of particular concern to FOO/FD. The same flexibility can also be applied during re-qualification or recurrent classroom training. Table 1-1 provides an approximate duration for the training of the FOO/FD (phase one). It also contains a shortened training duration to serve as a guideline for the training of experienced personnel and for the re-qualification of FOO/FD.

In using the curriculum recommended for the FOO/FD, local considerations may dictate the advisability of changing the sequence of the subjects. However, the relative importance accorded to each subject should, as much as possible, remain unchanged. The multiplicity of types of aircraft, navigation aids and operational practices throughout the world makes it undesirable to define too rigidly many of the headings of the syllabus, and it is necessary to leave some flexibility to those in charge of the training course. Instructors however, ensure that all items in the training

manual syllabus are adequately covered and any requirements relevant to individual authorities should be treated as additional subjects and not as substitutions for the recommended syllabus. Instructors must also ensure that all items required in the CAA licensing examination are adequately covered. Any choices in the examination itself should be confined to the additional subjects dealing with those practices and procedures, which the trainee is most likely to use in the first period of his duties as an FOO/FD. This choice of additional subjects will very often be made easy by specific requests by operators, and by the type of aircraft used operationally.

5. **STANDARD OF ACCOMPLISHMENT:**

Each training objective is described with reference to the establishment of conditions, performance and a standard of accomplishment. The conditions describe the scenario where trainee performance will be developed and tested while indicating whether actual equipment, mock-ups, or simulators, etc., are to be used. The standard of accomplishment establishes the level of trainee performance that must be attained and may differ from school to school depending on the training equipment available.

In measuring the standard of accomplishment, the use of only two grades, pass and fail, is recommended. It must, however, be noted that many training establishments prefer to use a numerical grading system as trainees strive harder and learn more when rewards increase. If the same grade, pass, is given for a 99 per cent score as for a 75 per cent score, trainees may not strive for perfection.

6. **TRAINING REFERENCE GUIDE:**

Table 1-1 presents the recommended duration (in hours) of the various subjects that need to be covered during phase one training (basic knowledge) for trainees with and without previous aviation experience, and Phase two (applied practical training). In appreciation of the fact that differences in requirements may necessitate changes in the suggested syllabus to allow completion of the course within the period allotted for training, the total hours required for the completion of a subject are given. Instructors should, however ensure that all sections of the syllabus are adequately covered to the necessary degree in order to meet the desired level of accomplishment before the trainees are assigned to phase two training.

In addition, the various parts of the course have been marked with a coding from 1 to 4 indicating an increasing degree of expertise to clarify understanding of the desired level of accomplishment.

- 1 — denotes a basic knowledge of a subject. Trainees should have a basic understanding of the subject but are not expected to apply that knowledge.
- 2 — denotes knowledge of the subject and the ability, where applicable, to apply it in practice with the help of reference materials and instructions.
- 3 — denotes a thorough knowledge of the subject and the ability to apply it with speed and accuracy.
- 4 — denotes extensive knowledge of the subject and the ability to apply procedures derived from it with judgment appropriate to the circumstances.

7. **CONTENTS OF THE COURSE:**

Introduction

- Training Principle
- Regulatory requirements
- Training requirements

Air law

- Civil air law and regulations

- Introduction
- Training objectives
- Required knowledge, skill and attitude

Aviation indoctrination

- Introduction
- Regulatory
- Aviation terminology and terms of reference
- Theory of flight and flight operations
- Aircraft propulsion systems
- Aircraft systems

Aircraft mass (weight) and performance

- Introduction
- Basic principles for flight safety
- Basic mass and speed limitations
- Take-off runway requirements
- Climb performance requirements.
- Landing runway requirements
- Buffet boundary speed limitation.

Navigation

- Introduction
- Training objectives
- Required knowledge, skill and attitude
- The CNS/ATM concept

Air Traffic Management

- Introduction
- Training objectives
- Required knowledge, skill and attitude

Meteorology

- Introduction
- Training objectives
- Required knowledge, skill and attitude

Mass (Weight and Balance)

- Introduction
- Training objectives
- Required knowledge, skill and attitude

Transportation of Dangerous Goods by Air

- Introduction
- Training Objective
- Required knowledge, skill and attitude

Flight Planning

- Introduction

- Training Objective
- Required knowledge, skill and attitude

Flight Monitoring

- Introduction
- Training Objective
- Required knowledge, skill and attitude

Communications – Radio

- Introduction
- Training Objective
- Required knowledge, skill and attitude

Human Factors

- Introduction
- The meaning of Human Factors
- Threat and Error Management
- Dispatch resource management (DRM)
- Awareness
- Practice and feedback
- Reinforcement
- Training Objectives
- Required knowledge, skill and attitude

Security (Emergencies and abnormal situations)

- Introduction
- Training Objective
- Required knowledge, skill and attitude

Practical Experience

- Introduction
- Applied practical flight operations
- Simulator LOFT observation and synthetic flight training
- Flight dispatch practices (On the Job Training)
- Route familiarization

8. **MINIMUM TRAINING HOURS REQUIREMENT:**

There will be two phases of training as follows namely phase one (Basic Knowledge) and phase two (Applied Practical Knowledge).

9. **PHASE ONE - BASIC KNOWLEDGE:**

Recommended duration and degree of expertise for phase one and phase two training.

Subject Matter	Recommended Duration (Hours)		Degree of expertise
	Trainees without previous aviation experience	Training with previous aviation experience	
Civil air law and regulations	30	18	
Certification of operators			2
The Convention on International Civil Aviation (The Chicago Convention)			2
International air transport issues addressed by the Chicago Convention			2
The International Civil Aviation Organization (ICAO)			2
Responsibility for aircraft airworthiness			3
Regulatory provisions of the flight manual			3
The aircraft minimum equipment list (MEL)			3
The operations Manual			3
Aviation indoctrination	12	6	
Regulatory			3
Aviation terminology and terms of reference			3
Theory of flight and flight operations			2
Aircraft propulsion systems			2
Aircraft systems			2
Aircraft mass (weight) and performance	27	15	
Basic principles for flight safety			3
Basic mass (weight) and speed limitations			3
Take-off runway requirements			3
Climb performance requirements			3
Landing runway requirements			3
Buffet boundary speed limitations			3
Navigation	24	12	
Position and distance; time			3
True, magnetic and compass direction; gyro heading reference and grid direction			2

Subject Matter	Recommended Duration (Hours)		Degree of expertise
	Trainees without previous aviation experience	Training with previous aviation experience	
Introduction to chart projections: The gnomonic projection; the Mercator projection; great circles on Mercator charts; other cylindrical projection; Lambert conformal conic projection; the polar stereographic projection.			2
ICAO chart requirements			3
Charts used by typical operator			3
Measurement of airspeeds; track and ground speed			3
Use of slide-rules, computers and scientific calculators			3
Measurement of aircraft altitude			3
Point of no return; critical point; general determination of aircraft position			3
Introduction to radio navigation; ground-based radar and direction-finding stations; relative bearings; VOR/DME- type radio navigation; instrument landing systems			2
Navigation procedures			1
Air Traffic management	39	21	
Introduction to air traffic management			2
Controlled airspace & types of airspace			3
Type of Airspace & Flight Rules			3
ATC clearance; ATC requirements for flight plan; aircraft reports			3
Flight information service (FIS)			3
Alerting service and search and rescue			3
Telecommunications service (Mobile, fixed)			3
Aeronautical information service (AIS)			3
Aerodrome and airport services			3
Meteorology	42	21	
Atmosphere; atmospheric temperature and humidity			2
Atmospheric pressure; pressure – wind relationships			2
Winds near the Earth's surface; wind in the free atmosphere; turbulence			3

Subject Matter	Recommended Duration (Hours)		Degree of expertise
	Trainees without previous aviation experience	Training with previous aviation experience	
Vertical motion in the atmosphere; formation of clouds and precipitation			2
Thunderstorms; upper-air observations; station model			3
Visibility and RVR; volcanic ash			3
Surface observation; upper-air observations; station model			3
Air mass and fronts; frontal depressions			2
Weather at fronts and other parts of the frontal depression; other types of pressure systems			2
General climatology; weather in the tropics			1
Aeronautical meteorological reports; analysis of surface and upper-air charts			3
Prognostic charts; aeronautical forecasts			3
Meteorological service for international air navigation			4
Field trip to local meteorological office			2
Mass (weight) and balance control	27	15	
Introduction to mass and balance			3
Load planning			3
Calculation of payload and loadsheet preparation			3
Aircraft balance and longitudinal stability			3
Moments and balance			3
The structural aspects of aircraft loading			3
Dangerous goods, other special cargo & sinology			3
Issuing loading instructions			3
Transport of dangerous goods by air	9	9	
Introduction and coding			
Dangerous goods, emergency and abnormal situations			3
Source documents			3
Responsibilities			3
Emergency procedures			3
Flight planning	18	9	
Introduction of flight planning			2

Subject Matter	Recommended Duration (Hours)		Degree of expertise
	Trainees without previous aviation experience	Training with previous aviation experience	
Turbo-jet aircraft cruise control methods			3
Flight planning charts and tables for turbo-jet aircraft			3
Calculation of flight time and minimum fuel for turbo-jet aircraft			3
Route selection			3
Flight planning situations			3
Re-clearance			3
The final phases			3
Documents to be carried on flights			3
Flight planning exercises			3
Threats and hijacking			3
ETOPS			2
Flight monitoring	16	16	
Position of aircraft			3
Effects of ATC routes			3
Flight equipment failures			3
En-route weather changes			3
Emergency situations			3
Flight monitoring resources			3
Position reports			3
Ground resource availability			3
Communications-Radio	18	6	
International aeronautical telecommunications services			2
Elementary radio theory			2
Aeronautical fixed service			2
Aeronautical mobile service			2
Radio navigation service			2
Automated aeronautical service			2
Human Factors	16	16	
The meaning of Human Factors			3
Dispatch resource management (DRM)			4
Awareness			3
Practice and feedback			3
Reinforcement			3
Security (emergencies and abnormal situations)	16	16	
Familiarity			3
Security measures			3
Procedures for handling threats bomb scares, etc.			3

Subject Matter	Recommended Duration (Hours)		Degree of expertise
	Trainees without previous aviation experience	Training with previous aviation experience	
Emergency due to dangerous goods			3
Hijacking and unruly passengers			3
Emergency procedures			3
Personal security for the FOO/FD			3

PHASE TWO - APPLIED PRACTICAL TRAINING

Subject Matter	Recommended Duration
Applied Practical Training	
Applied practical flight operations	25 hours
Simulator LOFT observation and synthetic flight training	4 hours
Flight Dispatch practices (on-the-job training)	13 hours
Route familiarization	1 week

10. GENERAL RECOMMENDATIONS:

Class rooms and equipment.

The range of "ideal" space for each adult in a classroom varies from a low of 1.4 m² to a high of m². The reason for the wide range in "ideal" figures is that classroom designers either envision different classroom environments or account for certain spaces within the classroom, such as aisles and front setback, differently.

The sizes of classrooms are affected by:

- number of trainees in a class;
- trainee workstation size;
- class configuration;
- size of aisles; and
- use of media (in particular, projected media and hands-on projects). ICAO recommends that the ratio of trainees per instructor be taken into account when planning the classroom size. In order to provide for sufficient supervision and control, a ratio of one instructor for every 15 trainees and 2 instructors for every 25 trainees is recommended.

The use of media and hands-on experiments is an important factor in determining the amount of common space required in a classroom. The most commonly used visual media are slides, chalk/marker boards, overhead projectors, video tape and flip charts. The use of projected media (slides, overheads, TV, etc.) has considerable impact on room size and should be taken into consideration when assigning class rooms.

In planning for space requirements for the training of FOO/FD training managers must take into consideration the trainee workstations, area required for hands-on training, faculty workstations and storage area.

Trainee workstation space includes the trainee's work surface, any additional equipment (terminal, audio/visual, etc.), a chair, and the space for chair pushback and maneuverability. The concept of Workstation space is important when sizing rooms for classes containing different numbers of trainees. The total area allowed in a classroom for each trainee varies with the size of the class. An adequate work surface within the workspace is very important. The large amount of reference material used in the training of FOO/FD requires considerably larger work surfaces than would be provided by the attached writing surface of an auditorium chair.

Computers can also be considered as useful training aids for FOO/FD. Used as instructional media, computers usually take the form of desktop micro-computers with keyboard and monitor. They can communicate verbal and graphic information and can accept verbal as well as manual or tactile responses. Computers may be used for drills, computer-managed instruction, testing and simulations.

11. **THE LEARNING ENVIRONMENT:**

The key to a good learning environment is the elimination of discomforts and other undesirable characteristics. Ten primary factors have been identified:

- the climate must be comfortable
- lighting must be of adequate level for work or viewing;
- distracting noise must be kept to a minimum;
- work areas must be aesthetically pleasing;
- workstations must be comfortable;
- work space must be adequate;
- work area must be reasonably clean;
- training equipment must be adequate;
- visual media must be visible; and
- audio media must be audible.

If any of these factors are unsatisfactory, the result can be distraction from the task at hand and fatigue can result from the effort required by the trainee to adapt to a poor environment. One of the most widely recognized factors listed is that of the comfort of workstations which includes the comfort of the chair.

12. **PERFORMANCE EVALUATION (TESTS):**

Performance evaluation (tests) is an integral part of the training process. Tests should always be prepared with the sole purpose of measuring whether or not the trainee has achieved the training objective. Trainees must always be informed on how they are going to be evaluated, so they can orient their efforts. The information must include the conditions that will exist during the test, the performance that is expected from the trainees, the standards of accomplishment that have to be met and the consequences of an inadequate performance. It is recommended that error on knowledge exams and skill tests be reviewed with trainees to reflect corrections to achieve 100 per cent. Trainees must be informed of the result of their evaluation and instructors must offer correction of improper responses.

Time and resource constraints may limit the amount of testing that can be given to each objective. However, the criticality of the subject and the performance difficulties, which can be encountered, should give some indication as to when, how and what performance evaluation should be required. Generally speaking, performance measurement is undertaken to evaluate whether or not courses taught have been understood by the trainees at the desired level.

- Skills are best tested by performance tests (the trainee performs the task described in the objective under real or simulated conditions).

- Knowledge is best tested by Oral/Skill or written tests.
- Attitudes are tested by observations of performance or by means of questionnaires.

13. **APPROVAL OF FOO/FD COURSE:**

The case for initial Approval of a Course, from CAA, shall include, but is not necessarily limited to, at least the following details:

- Title of the Course
- Objectives of the Course
- Frequency of the Course
- Planned intake of the Course
- Location where Course is to be conducted
- Duration of the Course
- Eligibility Criterion of the Students
- Phase/Subject wise course contents
- Planned periods/hours for each phase/subject
- Duration of each period/break
- External/ICAO Documents to be used
- Internal Documents to be used
- Study Material/Course ware to be provided to students
- Number of Instructors to be used
- Instructors Qualification criterion
- Aircraft, if applicable, to be used with Instruments/Aids detail.
- Audio/Visual training aids to be used
- Simulation Devices to be used, if applicable
- Logistics support details, where applicable
- Details of On Job or field experience, if applicable
- Details of study tour/visits, if applicable
- System of progress/training reports
- Type and frequency of Examinations/Skill Tests to be conducted
- Number/type of questions in Examinations
- Pass criterion to be used for academic/Skill test, as applicable
- Assessment Forms/Contents of Personal Folders
- Specimen Course completion Certificate to be issued
- Sample advertisement for course
- Any other pertinent information required by CAA.

ATTACHMENT – C

CONDUCT OF TRAINING

1 **INTRODUCTION:**

This Air Navigation Order provides guidelines for conduct of FOO/FD Basic Ground Course. The GTO/FTO applying for the Approval from the CAA for conducting FOO/FD Ground Course are advised to follow the CAA ANO-007-LCXX that provides the detailed information about approval process.

2 **GROUND TRAINING ORGANIZATIONS (GTO):**

Ground Training Organizations (GTO), as described in this ANO, are aviation-training centers for training of aviation related personnel for issuance of Licence, Certificate and Ratings.

A GTO may be authorized by the Authority to conduct Flight Operations Officer Course provided it meets the prescribed requirements for conducting such a course.

A Ground Training Organization providing ground training for the issue of different licences shall meet all the requirements of a Flying Training Organization (FTO) except those requirements that are relevant only to actual operation of the aircraft.

Safety Audit Checklist for GTO, (CAAF-045-LCXX).

3 **GTO APPROVAL PROCESS:**

A GTO shall establish procedures acceptable to the Authority to ensure compliance with relevant CAA Regulations. After consideration of the application, the GTO will be inspected to ensure that it meets the prescribed requirements. Subject to satisfactory inspection, approval of the GTO will be granted for a period of one year. Renewal of the approval may be granted every year subject to a 'Satisfactory' Audit.

All training courses shall be approved by the CAA.

The CAA will monitor course standards. During such audits, access shall be given by the GTO to training records, authorizations, lectures, study notes and briefings; and to any other relevant material.

A GTO may make training arrangements with other training /service organizations as part of its overall training subject to the approval of the CAA.

It will be the responsibility of the GTO to ensure that during the period of validity of the approval, capability of the institute is not degraded in any way. Authority may carry out random spot checks or safety audit of the organization at any time.

Approval may be varied, suspended or revoked by the CAA if any of the approval requirements or standards cease to be maintained to the approval minima.

The approval request documents of a GTO, containing evidence of the requirements as stipulated in these paragraphs, shall be submitted to the CAA for evaluation and approval.

4 **CONDUCT OF COURSES:**

Unless otherwise specified, a GTO shall invariably seek prior approval from the CAA before initiating a formal course of training for a new batch.

The case for initial Approval of a Course, from CAA, shall include, but not necessarily limited to, at least the following details:

- 1) Title of the Course;

- 2) Objectives of the Course;
- 3) Frequency of the Course;
- 4) Planned intake of the Course;
- 5) Location where Course is to be conducted;
- 6) Duration of the Course;
- 7) Eligibility Criterion of the Students;
- 8) Phase/Subject wise course contents;
- 9) Planned periods/hours for each phase/subject;
- 10) Duration of each period/break;
- 11) External/ICAO Documents to be used;
- 12) Internal Documents to be used;
- 13) Study Material/Course ware to be provided to students;
- 14) Number of Instructors to be used;
- 15) Instructors Qualification criterion;
- 16) Audio/Visual training aids to be used;
- 17) Logistics support details, where applicable;
- 18) Details of On Job or field experience, if applicable;
- 19) Details of study tour/visits, if applicable;
- 20) System of progress/training reports;
- 21) Type and frequency of Examinations/Skill Tests to be conducted;
- 22) Number/type of questions in Examinations/Examination policy;
- 23) Pass criterion to be used for academic/Skill test, as applicable;
- 24) Assessment Forms/Contents of Personal Folders;
- 25) Specimen Course completion Certificate to be issued;
- 26) Any other relevant information.

5 **GTO REQUIREMENTS:**

A GTO is an organization staffed, equipped and operated in a suitable environment offering theoretical knowledge instruction for specific training program.

A GTO wishing to offer approved training to meet CAA Licensing requirements shall obtain the approval of the CAA; and shall have:

- 1) A well equipped library having ICAO Annexes with latest amendments, aviation journals and periodicals, literature, upto date Civil Aviation Rules, Air Navigation Orders, Air Safety Circulars, relevant Airworthiness Notices, Aircraft Manuals, AIP, Navigation Charts, relevant course study material and necessary route maps.
- 2) Infrastructure (Lecture Rooms, Library, Training Aids, etc)
- 3) Qualified human resource (CGI, Instructors, Administrators etc)
- 4) Documentation (Approved Operations Training Manuals covering all courses offered)

MANAGEMENT AND STAFFING:

The management structure shall ensure supervision of all grades of staff by persons having the experience and qualities necessary to ensure the maintenance of high standards. Details of the management structure, indicating individual duties and responsibilities, shall be included in the GTO's Operations Manual.

The training record of instructors and the competency credentials shall be accessible to the CAA Inspectors at all times.

The FTO shall satisfy the Authority that an adequate number of qualified and competent staff is hired. Two persons (FGI) on the staff shall be employed full time in the following positions:

CHIEF GROUND INSTRUCTOR (CGI):

The CGI shall have practical background in aviation and shall have undergone training in instructional techniques or have had extensive previous experience in giving theoretical knowledge instruction.

The privileges of a CGI include conduct of all theoretical knowledge instruction, standardization of all theoretical ground instruction and the supervision of all ground instructors.

GTO shall submit the contract / working agreement between the FGI and GTO, to safeguard the interest of course participants.

THEORETICAL KNOWLEDGE INSTRUCTORS:

Theoretical Knowledge Instructors shall have appropriate experience in aviation and shall before appointment give proof of their competency by giving a demonstration lecture to the CAA – Assessment Board, based on material they have developed for the subjects they are to teach.

The number of part time instructors in relation to the scope of training offered shall be acceptable subject to approval by the CAA

6 TRAINING RECORDS:

A GTO shall maintain and retain the following records for a period of at least 5 years using appropriate administrative staff:

- 1) Details of ground training given to individual students;
- 2) Detailed and regular progress reports from instructors including assessments, regular progress tests and examinations; and
- 3) Personal information e.g., course eligibility details, expiry dates of medical certificates, ratings, etc.
- 4) The format of the student training records shall be as prescribed in CAA Regulations.
- 5) The GTO shall submit training records and reports as required by the CAA.

7 TRAINING PROGRAM:

A training program shall be developed for each type of course offered. This program shall include a breakdown of theoretical knowledge instruction in a week-by-week or a phase presentation and a list of standard exercises and a syllabus summary. In particular, theoretical knowledge instruction shall be phased in such a manner as to ensure that students shall be able to apply to practical exercises. Arrangements shall be made so that problems encountered in instruction can be resolved during subsequent training. The content and sequence of the training program should be acceptable to the Authority.

8 TRAINING MANUAL AND OPERATIONS MANUAL:

A GTO shall prepare and maintain a Training Manual and Operations Manual containing information and instructions to enable staff to perform their duties; and to give guidance to students on how to comply with course requirements.

A GTO shall make available to staff and, where appropriate, to students the information contained in the Training Manual, the Operations Manual and the GTO's approval documentation.

The amendment procedure shall be stated and amendments properly controlled.

The Training Manuals shall state the standards, objectives and training goals for each phase of training that the students are required to comply with and shall include the following:

Part 1 - The Training Plan Part 2 - Briefing and Exercises

Part 3 - Theoretical Knowledge Instruction

9 **REQUIREMENTS FOR ENTRY TO TRAINING:**

A student accepted for training shall possess the appropriate course eligibility criteria and shall meet the entrance requirements set by the GTO as approved by the Authority.

10 **FINANCIAL:**

The FTO shall provide to the Authority satisfactory evidence that it is in a financially healthy condition to conduct ground training, as and when such information is required during the Audit process.

11 **ADVERTISEMENT:**

A GTO shall give advertisement in the media strictly confined to the scope of its approval by the CAA and its capability. Complete details of such advertisements shall be made available to the authority during the Audit process, if required.