

FLIGHT OPERATIONS OFFICER/FLIGHT DISPATCHER COURSE¹**INTRODUCTION TO THE COURSE****PRINCIPAL DUTIES OF THE FLIGHT OPERATIONS OFFICER/FLIGHT DISPATCHER**

The principal duties of the flight operations officer/flight dispatcher (FOO/FD) as specified in **Annex 6, Part I**, are:

- a) assist the pilot-in-command in flight preparation and provide the relevant information required;
- b) 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;
- c) furnish the pilot-in-command while in flight, by appropriate means, with information which may be necessary for the safe conduct of the flight; and
- d) in the event of an emergency, initiate such procedures as may be outlined in the operations manual

It must be noted that some States go beyond Annex 6 requirements and prescribe the sharing of responsibility between the pilot-in-command and the FOO/FD for certain elements affecting the safety of flight operations; for example, in one State this is regulated along the following lines:

“Joint responsibility of aircraft dispatcher and pilot-in-command: The aircraft dispatcher and the pilot-in-command shall be jointly responsible for the preflight planning, delay, and dispatch release of the flight in compliance with ... appropriate regulations.”

In both situations, 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 to an aircraft information received after it has become airborne, thus increasing the value of the “in-flight” assistance.

¹ Based on Reglugerð um skírteini nr.400/2008 Chapter 4.6 and ICAO Doc7192-AN/857 Part D-3 „ICAO Training Manual“.

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. 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:

- a) plan conservatively;
- b) failing normal operation, plan so as to give the best alternative service; and
- c) 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 impact the safety of the 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:

- a) consult with the meteorological office and refer to meteorological information, as necessary;
- b) issue information concerning operations plans to the appropriate departments of the operator's organization;
- c) issue such instructions concerning aircraft and crew utilization as are necessary to the appropriate departments of the operator's organization;
- d) consider with the pilot-in-command the existence of, and method of ensuring compliance with, noise abatement procedures;
- e) ascertain load requirements;
- f) determine load availability;
- g) 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;
- h) 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;
- i) determine fuel requirements, aircraft gross weight and balance (the pilot-in-command makes an independent calculation);

- j) 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
- k) 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:

- a) by issuing such instructions concerning revised plans for aircraft and crew utilization as are necessary to the appropriate departments of the operator's organization, if a diversion, flight return, en-route delay, or cancellation occurs;
- b) by recommending revised routes, altitudes and alternates;
- c) 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;
- d) by monitoring adequacy of remaining fuel; and
- e) 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:

- a) How long will the flight be delayed, or when is it expected to operate?
- b) How long can the flight be delayed?

Note: 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.

- c) 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?
- d) How will the delay affect other sections of the airline and can they keep operating on schedule?
- e) Is there an aircraft available to originate the flight at the next terminal ahead and what is the most practical time to so originate?
- f) What is the second best point to originate the flight?
- g) What is the latest time the flight can originate and still allow necessary placement of aircraft?
- h) Is there revenue available at the time origination is most desired?

- i) If necessary to cancel, what is the best time in order to fit in with alternative transportation?
- j) 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 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.

These are some of the factors that normally govern the day-to-day practical work of the FOO/FD. The degree of responsibility given to him varies from State to State and from operator to operator; it varies from the complex level where the FOO/FD is almost considered the counterpart of the pilot-in-command, to a position of limited importance. In the former case he is normally required to be licensed, enabling him to sign and approve operational flight plans, while in the latter case his duties may be limited to clerical assistance only. There is a marked tendency, however, for States and operators to make increased use of FOO/FDs, giving them extensive duties and responsibilities.

To undertake the duties and responsibilities described above, an FOO/FD must be appropriately trained in all the subjects required for adequate control and supervision of aircraft operation. As a specialist, an FOO/FD needs to demonstrate a high sense of responsibility, dependability and the ability to think clearly and to make appropriate decisions as required. The training of FOO/FDs should, invariably, include several stages of selection in order to eliminate trainees lacking the necessary qualities.

MINIMUM QUALIFICATIONS

Reglugerð um skírteini nr.400/2008, specifies the minimum requirements for the issuance of the FOO/FDs license:

Requirements for the issue of the license:

Age: The applicant shall be not less than 21 years of age.

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

Air law

- a) rules and regulations relevant to the holder of a flight operations officer license; appropriate air traffic services practices and procedures;

Aircraft general knowledge

- b) principles of operation of aeroplane powerplants, systems and instruments;
- c) operating limitations of aeroplanes and powerplants;
- d) minimum equipment list;

Flight performance calculation and planning procedures

- e) effects of loading and mass distribution on aircraft performance and flight characteristics; mass and balance calculations;
- f) operational flight planning; fuel consumption and endurance calculations; alternate airport selection procedures; en-route cruise control; extended range operation;
- g) preparation and filing of air traffic services flight plans;
- h) basic principles of computer-assisted planning systems;

Human performance

- i) human performance relevant to dispatch duties;

Note. — Guidance material to design training programmes on human performance can be found in the Human Factors Training Manual (Doc 9683).

Meteorology

- j) 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 conditions;

- k) interpretation and application of aeronautical meteorological reports, charts and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information;

Navigation

- l) principles of air navigation with particular reference to instrument flight;

Operational procedures

- m) use of aeronautical documentation;
- n) operational procedures for the carriage of freight and dangerous goods;
- o) procedures relating to aircraft accidents and incidents; emergency flight procedures;
- p) procedures relating to unlawful interference and sabotage of aircraft;

Principles of flight

- q) principles of flight relating to the appropriate category of aircraft; and

Radio communication

- r) procedures for communicating with aircraft and relevant ground stations.

Experience

The applicant shall have gained the following experience:

- a) a total of two years' service in any one or in any combination of the capacities specified in 1) to 3) inclusive, provided that in any combination of experience the period serviced in any capacity shall be at least one year:
 - 1) a flight crew member in air transportation; or
 - 2) a meteorologist in an organization dispatching aircraft in air transportation;**OR**
 - 3) an air traffic controller; or a technical supervisor of flight operations officers or air transportation flight operations systems;

OR

- b) at least one year as an assistant in the dispatching of air transport;

OR

- c) have satisfactorily completed a course of approved training.

The applicant shall have served under the supervision of a flight operations officer for at least 90 working days within the six months immediately preceding the application.

Skill

The applicant shall have demonstrated the ability to:

- a) 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;
- b) determine the optimum flight path for a given segment, and create accurate manual and/or computer generated flight plans; and
- c) provide operating supervision and all other assistance to a flight in actual or simulated adverse weather conditions, as appropriate to the duties of the holder of a flight operations officer license.

Special requirements (Icelandic)²**Reglusemi**

Synja skal skírteinis þeim manni sem dæmdur hefur verið fyrir refsiverða hegðun er veitir ástæðu til að ætla að hann misfari með skírteinið.

Annað

Umsækjandi skal vera:

- a) íslenskur ríkisborgari, eða
- b) eiga lögheimili á Íslandi, eða
- c) hafa stundað nám á Íslandi til þeirra réttinda sem sótt er um, eða
- d) njóta réttar hér á landi samkvæmt ákvæðum samningsins um Evrópska efna-hagssvæðið eða stofnsamnings fríverslunarsamtaka Evrópu eða fríverslunar-samninga við einstök ríki.

Privileges of the holder of the license and the conditions to be observed in exercising such privileges:

Subject to compliance with the requirements specified, the privileges of the holder of a flight operations officer license shall be to serve in that capacity with responsibility for each area for which the applicant meets the requirements specified in Annex 6.

² Reglugerð um skírteini nr. 400/2008

Although **Annex 1** does not provide direct guidance on the qualifications required (e.g. educational level) for admittance to training school for FOO/FDs, experience has shown that successful completion of training generally requires:

- ✓ a minimum age of 20 years;
- ✓ a functional knowledge of the English language;
- ✓ a medical fitness for duty; and
- ✓ a minimum educational level of successful completion of high school (10 years of schooling or more).

TYPES OF TRAINING

Annex 1 mentions various forms of past aviation experience that are adequate for the FOO/FD, and many companies select their FOO/FD trainees from personnel who have had such aviation experience. However, others have found it necessary to train persons who do not have such previous experience and who must, therefore, be trained from the very beginning and allowed to obtain the necessary experience either during their training or immediately after it. It is obvious that the training requirements of these two groups of trainees will vary.

To cover the various backgrounds of trainees, the training will be divided into two phases as follows:

Phase one consists of basic knowledge; its completion ensures that a trainee has the necessary background to proceed with phase two of the training. The basic training syllabus covered in Chapters 3 to 15 of Doc7192-AN/857 (ICAO FOO/FD Training Manual) needs to be covered during this phase.

Phase two consists of applied practical training and route experience. An applied practical training syllabus for this phase is detailed in Chapter 16 of ICAO FOO/FD Training Manual and guidance on training duration is provided in the syllabus.

Trainees who do not have previous aviation experience will have to undergo the complete training programme 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 State authorities, are encouraged to apply the necessary flexibility in arranging appropriate training courses, emphasizing subjects of particular concern to FOO/FDs. The same flexibility can also be applied during requalification or recurrent classroom training.

The FOO Basic Syllabus 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 requalification of FOO/FDs.

In using the curriculum, 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 must, 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 syllabus recommended in this manual. Instructors must also ensure that all items required in their State's 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.

STANDARD OF ACCOMPLISHMENT

Each training objective in the ICAO FOO/FD Training Manual 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 minimum grade is 75% for a closed book examination and 85% for an open book examination. If a student fails a specific subject or a progress test, he will be allowed another attempt. If he scores higher than 75%, regardless of the actual score on that test, the grade will be 75%.

TRAINING REFERENCE GUIDE

The syllabus 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.