

Annex 1

Essential requirements for pilot proficiency

1. Training

1.a *General*

1.a.1 A person undertaking training to fly an aircraft must be sufficiently mature educationally, physically and mentally to acquire, retain and demonstrate the relevant theoretical knowledge and practical skill training.

1.b *Theoretical Knowledge :*

1.b.1 A pilot must have acquired and maintain a level of knowledge appropriate to the functions exercised on the aircraft, including but not limited to the following:

- Air law;
- Aircraft general knowledge;
- Flight performance and planning;
- Human performance and limitations;
- Meteorology;
- Navigation;
- Operational procedures, including resource management;
- Principles of flight; and
- Communications.

1.c *Demonstration of theoretical knowledge*

1.c.1 The acquisition and retention of theoretical knowledge must be demonstrated by continuous assessment during training, and where appropriate, by examinations.

1.d *Practical skill*

1.d.1 A pilot must have acquired and maintain practical skills as pilot of aircraft appropriate to functions exercised on the aircraft, covering the type rating. Such training must contain, if appropriate to the functions exercised on the aircraft, the following:

- pre-flight operations, including mass and balance determination, aircraft inspection and servicing;
- aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
- control of the aircraft by external visual reference;
- flight at critically slow and high airspeeds, and associated "upset" manoeuvres;
- normal and cross-wind take-offs and landings;
- aircraft performance;
- flight by reference solely to instruments;
- operational procedures, including team skills and resource management, as appropriate to the operation, whether single- or multi-crew;
- navigation, using as appropriate, visual reference and/or radio navigation aids;
- emergency operations, including simulated aircraft equipment malfunctions;
- compliance with air traffic services and communications procedures;

- aircraft type or class specific aspects; and
- additional practical skill training that may be required to mitigate risks associated with specific activities.

Emergency abnormal situations must not be simulated when passengers and cargo are being carried.

1.d.2 Synthetic training devices

When pilot training is carried out in a Synthetic Training Device (STD), this STD shall be qualified to a given level of performance, in those areas which are relevant to completing the pilot training process. In particular, the replication of configuration, handling qualities, aircraft performance, and systems behaviour shall adequately represent the aircraft.

1.e *Demonstration of practical skill*

1.e.1 A pilot must demonstrate the ability to perform the procedures and manoeuvres with a degree of competence appropriate to the functions exercised on the aircraft, by :

- operating the aircraft within its limitations;
- completing all manoeuvres with smoothness and accuracy;
- exercising good judgement and airmanship;
- applying aeronautical knowledge; and
- maintaining control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

Emergency abnormal situations must not be simulated when passengers and cargo are being carried.

1.e.2 Synthetic training devices

When pilot skill demonstration is carried out in a Synthetic Training Device (STD), this STD shall be qualified to a given level of performance, in those areas which are relevant to completing the pilot skill demonstration process. In particular, the replication of configuration, handling qualities, aircraft performance, and systems behaviour shall adequately represent the aircraft.

1.f *Language Proficiency*

A pilot must have demonstrated proficiency in English, which must include, but is not limited to:

- the ability to read and understand technical manuals written in English;
- the ability to understand pre-flight planning documents;
- the use of aeronautical en-route, departure and approach charts and associated documents; and
- the ability to communicate with other crew members and air traffic control in English during all phases of flight, including flight preparation.

1.g *Maintenance of theoretical knowledge and practical skill*

1.g.1 An appropriate level of competence in theoretical knowledge and practical skill must be maintained. Compliance must be demonstrated by regular assessment, examinations, tests or checks. The frequency of examinations, tests or checks must be proportionate to the level of risk associated with the activity.

1.g.2 Synthetic training devices

When pilot skill is maintained in a Synthetic Training Device (STD), this STD shall be qualified to a given level of performance, in those areas which are relevant to completing the skill maintenance process. In particular, the replication of configuration, handling qualities, aircraft performance, and systems behaviour shall adequately represent the aircraft.

1.h *Differentiation of theoretical knowledge and practical skill*

The depth and intensity of the theoretical knowledge and practical skill acquired and maintained must be proportionate to the risk linked to the type of activity.

1.i *Training Course*

1.i.1 Training must be executed through a training course.

1.i.2 A training course must meet the following conditions :

- A syllabus must be developed for each type of course, and
- The training course must comprise a breakdown of theoretical knowledge and practical flight instruction (including synthetic training), if applicable.

1.j *Instructors*

1.j.1 *Theoretical instruction.*

Theoretical instruction must be given by appropriately qualified instructors. They must,:

- have appropriate knowledge and experience of aviation, and
- have received training in instructional techniques;

1.j.2 *Flight instruction.*

Flight instruction must be given by appropriately qualified instructors, who have the following qualifications :

- meet the theoretical knowledge and the experience requirements appropriate for the instruction being given;
- be entitled to act as pilot in command on the aircraft for which instruction is being given;
- have received training in instructional techniques;
- have practised instructional techniques in those flight manoeuvres and procedures in which it is intended to provide flight instruction;

- have demonstrated the ability to instruct in those areas in which flight instruction is to be given, including pre-flight, post-flight and ground instruction; and
- receive regular refresher training to ensure that the instructional standards are maintained.

1.j.3 *Synthetic flight instruction.*

Synthetic Flight instruction must be given by appropriately qualified instructors, who have the following qualifications:

- meet the theoretical knowledge and the experience requirements appropriate for the instruction being given;
- have received training in instructional techniques;
- have practised instructional techniques in those flight manoeuvres and procedures in which it is intended to provide flight instruction;
- have demonstrated the ability to instruct in those areas in which flight instruction is to be given, including pre-flight, post-flight and ground instruction; and
- receive regular refresher training to ensure that the instructional standards are maintained.

1.i *Examiners*

1.i.1 Persons responsible for assessing the competence of pilots must:

- meet the theoretical knowledge and the experience requirements for instructors;
- receive instruction in the assessment of pilot performance and the conduct of flight tests and checks; and,
- maintain skills in the assessment of pilot performance and the conduct of flight tests and checks.

2. Training Organisations

2.a Training Organisation requirements

2.a.1 A training organisation providing pilot training must meet the following requirements:

- have all the means necessary for the scope of responsibilities associated with their activity. These means comprise, but are not limited to, the following: facilities, personnel, equipment, tools and material, documentation of tasks, responsibilities and procedures, access to relevant data and record-keeping;
- implement and maintain a management system relating to safety and the standard of training, and aim for continuous improvement of this system; and
- establish arrangements with other relevant organisations, as necessary, to ensure continuing compliance with these essential requirements for pilot qualification and training.

3. Medical and physical fitness

3.a Fitness

3.a.1 All pilots must periodically demonstrate mental and physical fitness to safely exercise the privileges of their licence and rating. Compliance must be shown by appropriate assessment based on aeromedical best practice, taking into account mental and physical degradation due to age.

This medical Assessment must include the review and evaluation of all the relevant medical evidence including reports of medical examinations and records made by an aeromedical examiner or an aeromedical center to decide on the issue or denial mental and physical fitness to safely exercise the privileges.

Mental and physical fitness means not suffering from any disease or disability which could render the pilot likely to suffer incapacitation, or to become unable:

- to operate an aircraft, or
- to perform assigned duties safely, or
- to perceive correctly due to, e.g. hearing, vision or mental problems.

3.a.2 Where mental or physical fitness cannot be fully demonstrated, mitigation measures that provide equivalent flight safety may be implemented.

3.b *Aeromedical examiners*

3.b.1 An aeromedical examiner must :

- be qualified and licensed in the practice of medicine;
- have received training in aviation medicine and regular refresher training in aviation medicine to ensure that assessment standards are maintained;
- have acquired practical knowledge and experience of the conditions in which flight crew members carry out their duties.

3.c *Aeromedical Centres*

3.c.1 Aeromedical centres must meet the following conditions :

- have all the means necessary for the scope of responsibilities associated with their privileges. These means comprise, but are not limited to, the following: facilities, personnel, equipment, tools and material, documentation of tasks, responsibilities and procedures, access to relevant data and record-keeping;
- implement and maintain a management system relating to safety and the standard of medical assessment, and aim for continuous improvement of this system;
- establish arrangements with other relevant organisations, as necessary, to ensure continuing compliance with these essential requirements for pilot qualification and training.